Undergraduate Academic Board
Agenda

April 18, 2014
2:00-5:00
ADM 204

I. Roll
( ) Alberta Harder (FS)
( ) Soren Orley (FS)
( ) Francisco Miranda (CAS, Chair)
( ) Barbara Harville (CAS)
( ) Mari Ippolito (CAS)
( ) Len Smiley (CAS)
( ) Dave Fitzgerald (CBPP)
( ) Eileen Weatherby (COH)
( ) Irasema Ortega (COE)
( ) Cheryl Smith (CTC)
( ) Utpal Dutta (SOE)
( ) Michael Hawfield (KPC)
( ) Sheri Denison (Mat-su)
( ) Kathrynn Hollis Buchanan (Kod)
( ) Christina Stuive (ADV)

Ex-Officio Members
( ) Susan Kalina
( ) Lora Volden
( ) Scheduling and Publications

II. Approval of the Agenda (pg. 1-4)

III. Approval of Meeting Summary (pg. 5-7)

IV. Administrative Report
A. Vice Provost for Undergraduate Academic Affairs Susan Kalina
B. University Registrar Lora Volden

V. Chair’s Report
A. UAB Chair- Francisco Miranda
B. GERC

VI. Program/Course Action Request- Second Readings
Chg Associate of Applied Science, Nursing (pg. 8-14)
Add URS A121 Methods of Inquiry (GER)(3 cr)(2+2)(pg. 15-20)
Chg CSCE A222 Object-Oriented Programming I (3 cr)(3+0)(pg. 21-26)

VII. Program/Course Action Request- First Readings
Add AKNS A230 Oral Traditions of Alaska Native People (3 cr)(3+0)(pg. 27-31)
Chg BIOL A288 Principles of Evolution (3 cr)(3+0)(pg. 32-36)
Chg BIOL A298 Individual Research (1-6 cr)(0+3-18)(pg. 37-39)
Chg BIOL A310 Principles of Animal Physiology (3 cr)(3+0)(pg. 40-43)
Chg BIOL A316 Principles of Plant Physiology (3 cr)(3+0)(pg. 44-47)
Add BIOL A320 Vertebrate Biology (3 cr)(3+0)(pg. 48-51)
Add BIOL A321 Experiential Learning: Vertebrate Biology (2 cr)(1+2)(pg. 52-55)
Add BIOL A330  Plant Biology (3 cr)(3+0)(pg. 56-59)
Add BIOL A332  Experiential Learning: Plant Biology (3 cr)(1+2)(pg. 60-64)
Del BIOL A333  Biology of Non-Vascular Plants (4 cr)(3+3)(pg. 65)
Del BIOL A334  Biology of Vascular Plants (4 cr)(3+3)(pg. 66)
Chg BIOL A340  Microbial Biology (3 cr)(3+0)(pg. 67-69)
Add BIOL A342  Experiential Learning: Microbial Biology (3 cr)(2+4)(pg. 70-73)
Chg BIOL A365  Astrobiology (GER)(cross-listed w/ASTR A365)(3 cr)(3+0)(pg. 74-78)
Chg ASTR A365  Astrobiology (GER)(cross-listed w/BIOL A365)(3 cr)(3+0)(pg. 79-83)
Chg BIOL A403  Experiential Learning: Microscopical Tissue Techniques (6 cr)(3+9)(pg. 84-90)
Add BIOL A406  Experiential Learning: Biostatistics (4 cr)(2+4)(pg. 91-94)
Add BIOL A408  Experiential Learning: Scanning Electron Microscopy (SEM) (6 cr)(3+9)(pg. 95-102)
Add BIOL A412  Behavioral Endocrinology (3 cr)(3+0)(pg. 103-106)
Add BIOL A413  Neurophysiology (3 cr)(3+0)(pg. 107-111)
Add BIOL A414  Chronobiology (3 cr)(3+0)(pg. 112-115)
Add BIOL A416  Exercise Physiology (3 cr)(3+0)(pg. 116-119)
Add BIOL A418  Fish Physiology (3 cr)(3+0)(pg. 120-123)
Chg BIOL A423  Ichthyology (3 cr)(3+0)(pg. 124-127)
Del BIOL A425  Mammalogy (4 cr)(3+0)(pg. 128)
Del BIOL A426  Ornithology (4 cr)(3+0)(pg. 129)
Chg BIOL A427  Marine Invertebrate Biology (3 cr)(3+0)(pg. 130-133)
Chg BIOL A430  Marine Mammals and Seabirds (3 cr)(3+0)(pg. 134-137)
Chg BIOL A431  Plant Diversity and Evolution (3 cr)(3+0)(pg. 138-142)
Chg BIOL A441  Animal Behavior (3 cr)(3+0)(pg. 143-147)
Add BIOL A442  Experiential Learning: Animal Behavior (3 cr)(1+4)(pg. 148-151)
Chg BIOL A451  Microbial Biotechnology (3 cr)(3+0)(pg. 152-155)
Add BIOL A454  Experiential Learning: Microbial Biotechnology (4 cr)(2+4)(pg. 161-165)
Add BIOL A455  Experiential Learning: Bioinformatics (4 cr)(2+4)(pg. 166-171)
| Add | BIOL A463 | Molecular Biology of Cancer (3 cr)(3+0)(pg. 172-175) |
| Add | BIOL A464 | Metals in Biology (3 cr)(3+0)(pg. 176-180) |
| Chg | BIOL A471 | Immunology (Crosslisted with CHEM A471)(3 cr)(3+0)(pg. 181-186) |
| Chg | CHEM A471 | Immunology (Crosslisted with BIOL A471)(3 cr)(3+0)(pg. 187-192) |
| Chg | BIOL A472 | Biogeography (3 cr)(3+0)(pg. 193-196) |
| Chg | BIOL A473 | Conservation Biology (GER)(3 cr)(3+0)(pg. 197-201) |
| Add | BIOL A474 | Ecotoxicology (GER)(3 cr)(3+0)(pg. 202-205) |
| Add | BIOL A476 | Wildlife Population Dynamics and Management (3 cr)(3+0)(pg. 206-210) |
| Add | BIOL A480 | Ecological and Conservation Genetics (3 cr)(3+0)(pg. 211-215) |
| Chg | BIOL A481 | Marine Biology (GER)(3 cr)(3+0)(pg. 216-220) |
| Add | BIOL A482 | Spatial Ecology (3 cr)(3+0)(pg. 221-225) |
| Add | BIOL A483 | Exploration Ecology (2 cr)(2+0)(pg. 226-230) |
| Add | BIOL A484 | Experiential Learning: Exploration Ecology Field Study (4 cr)(0+8)(pg. 231-235) |
| Add | BIOL A486 | Evolutionary Ecology (3 cr)(3+0)(pg. 236-240) |
| Chg | BIOL A487 | Comparative Anatomy of Vertebrates (3 cr)(3+0)(pg. 241-243) |
| Chg | BIOL A488 | Experiential Learning: Development Biology (4 cr)(2+4)(pg. 244-247) |
| Chg | BIOL A489 | Population Genetics and Evolutionary Processes (GER)(3 cr)(3+0)(pg. 248-252) |
| Chg | BIOL A495 | Instructional Practicum: Laboratory (1 cr)(0+3)(pg. 253-255) |
| Chg | Bachelor of Arts, Biological Sciences (pg. 256-257) |
| Chg | Bachelor of Science, Biological Sciences (pg. 258-279) |
| Chg | Bachelor of Science, Natural Sciences (pg. 280-306) |
| Chg | DNCE A170 | Dance Appreciation (GER)(3 cr)(3+0)(pg. 307-312) |
| Chg | THR A141 | Stagecraft I (3 cr)(2+2)(pg. 313-316) |
| Chg | THR A243 | Scene Design (3 cr)(3+0)(pg. 317-320) |
| Chg | THR A257 | Costume Design (3 cr)(3+0)(pg. 321-324) |
| Chg | THR A321 | Meisner Acting Technique (3 cr)(2+3)(pg. 325-328) |
| Chg | THR A325 | Theatre Speech and Dialects (3 cr)(3+0)(pg. 329-332) |
| Chg | THR A328 | Acting Shakespeare (3 cr)(2+3)(pg. 333-336) |
| Chg | THR A347 | Lighting Design (3 cr)(3+0)(pg. 337-340) |
VIII. Old Business

IX. New Business
   A. Physics Automatic Prerequisite Checking Memo (pg. 378)
   B. Curriculum Handbook Changes from AAC (pg. 379-582)

X. Informational Items and Adjournment
   A.
I. Roll
(x) Alberta Harder (FS) (x) Dave Fitzgerald (CBPP) (x) Michael Hawfield (KPC)
(x) Soren Orley (FS) (x) Eileen Weatherby (COH) (x) Sheri Denison (Mat-su)
(x) Francisco Miranda (CAS, Chair) (e) Irasema Ortega (COE) (x) Kathryn Hollis Buchanan (Kod)
(x) Barbara Harville (CAS) ( ) Cheryl Smith (CTC) (e) Christina Stuive (ADV)
(x) Mari Ippolito (CAS) (x) Utpal Dutta (SOE) (x) Kevin Keating (LIB)
(x) Len Smiley (CAS)

II. Approval of the Agenda (pg. 1-3)
Approved

III. Approval of Meeting Summary (pg. 4-6)
Approved

IV. Administrative Report
A. Vice Provost for Undergraduate Academic Affairs Susan Kalina
   Marriage and Family Therapy Graduate Certificate was approved by BOR

B. University Registrar Lora Volden
   Registration period was successful and the response to the scheduling software was positive

V. Chair’s Report
A. UAB Chair- Francisco Miranda

B. GERC

VI. Program/Course Action Request- Second Readings
Add  PSY A447 Behavioral Treatment of Autism Spectrum Disorder (stacked with PSY A647)
      (3 cr)(3+0)(pg. 7-22)
Chg   PSY A455 Interventions for Challenging Behavior (stacked with PSY A655)
      (3 cr)(3+0)(pg. 23-40)
Add  PSY A467 Organizational Behavior Management (stacked with PSY A667)
      (3 cr)(3+0)(pg. 41-51)
Add  PSY A478 Advanced Applications of Behavior Analysis (stacked with PSY A678)
      (3 cr)(3+0)(pg. 52-63)

All PSY courses were unanimously approved

Chg   AE A403 Arctic Engineering (Stacked with AE A603)(3 cr)(3+0)(pg. 64-71)
      Postponed until initiator can be present

Chg   BS, Geological Science (pg. 72-82)
      Unanimously Approved

VII. Program/Course Action Request- First Readings
Add  Prefix, Undergraduate Research & Scholarship (URS)(pg. 83-84)
      Waive first reading, approve for second
Add URS A121 Methods of Inquiry (GER)(3 cr)(2+2)(pg. 85-91)
Accepted for first reading, going to GERC

Chg CSCE A222 Object-Oriented Programming I (3 cr)(3+0)(pg. 92-97)
Accepted for first reading

Chg CSCE A248 Computer Organization and Assembly Language Programming (3 cr)(3+0)(pg. 98-103)
Waive first reading, approve for second

Chg CSCE A302 Object-Oriented Programming II (3 cr)(3+0)(pg. 104-107)
Waive first reading, approve for second

Add GER A432 Topics in Literatures and Cultures of the German-speaking Countries (3 cr)(3+0)(pg. 108-113)
Waive first reading, approve for second

Add AKNS A218 Alaska Native Drummaking Techniques (Cross listed w/MUS A218) (3 cr)(1+2)(pg. 114-117)
Add MUS A218 Alaska Native Drummaking Techniques (Cross listed w/AKNS A218) (3 cr)(1+2)(pg. 118-121)

Accepted for first reading, may split into two courses 218A and 218B

Add AKNS A261 Alaska Native Art History (3 cr)(3+0)(pg. 122-126)
Waive first reading, approve for second

Add AKNS A356 Yup’ik Music & Dance Ensemble (cross listed w/MUS A356) (2 cr)(2+0)(pg. 127-130)
Add MUS A356 Yup’ik Music & Dance Ensemble (cross listed w/AKNS A356) (2 cr)(2+0)(pg. 131-134)
Waive first reading, approve for second

Add AKNS A357 Inupiaq Music & Dance Ensemble (Cross listed w/MUS A357) (2 cr)(2+0)(pg. 135-138)
Add MUS A357 Inupiaq Music & Dance Ensemble (Cross listed w/MUS A357) (2 cr)(2+0)(pg. 139-142)
Waive first reading, approve for second

Chg Minor, Alaska Native Studies (pg. 143-147)
Waive first reading, approve for second

Chg Bachelor of Music, Music Education Emphasis (pg. 148-150)
Chg Bachelor of Music, Music Performance (pg. 151)
Chg Bachelor of Arts, Music (pg. 152-168)
Waive first reading, approve for second

Chg Tier II: Disciplinary Areas (pg. 169-170)
Waive first reading, approve for second

Accepted for first reading, going to GERC

Del BIOL A115 Fundamentals of Biology I (4 cr)(3+3)(pg. 177-179)
Waive first reading, approve for second

Del BIOL A116 Fundamentals of Biology II (4 cr)(3+3)(pg. 180-181)
Waive first reading, approve for second
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**VIII. Old Business**

**IX. New Business**

A. Error on CAR and CCG for GEO A410 (pg. 256)

*Unanimously Approved*

B. Curriculum Handbook Changes from AAC (pg. 257-460)

**X. Informational Items and Adjournment**

A.
1a. School or College
   CH College of Health

1b. Department
   Nursing

2. Complete Program Title/Prefix
   Associate of Applied Science, Nursing

3. Type of Program
   Choose one from the appropriate drop down menu: Undergraduate: Choose one or Graduate: Associate of Applied Science
   This program is a Gainful Employment Program: Yes or No

4. Type of Action: PROGRAM

4. Type of Action: PREFIX
   Add
   Change
   Delete

5. Implementation Date (semester/year)
   From: Fall/2015 To: 999/9999

6a. Coordination with Affected Units
   AMSC
   Initiator Name (typed): Kathleen Stephenson
   Initiator Signed Initials: 
   Date:

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)
   Date: March 8, 2013

6c. Coordination with Library Liaison
   Date: March 8, 2013

7. Title and Program Description - Please attach the following:
   √ Cover Memo
   √ Catalog Copy in Word using the track changes function

8. Justification for Action
   Changes math prerequisite from Elementary Algebra or "MATH A055" to Intermediate Algebra or "MATH A105." This level math is necessary for successful completion of the program and for professional practice. This requirement may be waived with an appropriate score on the SAT, ACT or UAA approved placement test such as the Accuplacer.

   √ Approved
   √ Disapproved

   Initiator (faculty only) Date
   Dean/Director of School/College Date

   Initiator (TYPE NAME)
   √ Approved
   √ Disapproved
   Department Chair Date
   Undergraduate/Graduate Academic Board Chair Date
   √ Approved
   Disapproved
   √ Approved
   Provost or Designee Date
Bachelor of Science in Nursing

Graduates of the Bachelor of Science in Nursing program are prepared to use the nursing process to provide effective nursing services to individuals receiving care in inpatient settings and in structured outpatient settings. The academic program provides students with a closely related mix of theory and clinical practice; students gain experience in hospitals, nursing homes, clinics, and community agencies.

Program Student Learning Outcomes

Students graduating with a Bachelor of Science in Nursing will be able to:

- Utilize critical thinking skills to assess and diagnose nursing needs and to prioritize, plan, implement, and evaluate care for patients and their families in institutional and community based settings.
- Effectively communicate verbally, in writing, and electronically with health team members, patients, and their families.
- Plan, implement, and evaluate care that is safe, evidence-based, caring, and developmentally and culturally sensitive within ethical, legal, and professional standards.
- Coordinate care of small groups of patients in collaboration with other members of the health care team.
- Develop a plan for lifelong learning and continuing professional development.

Admission Requirements

Students may complete the Bachelor of Science in Nursing program in two academic years (four semesters). Admission to the nursing program is determined by a ranking process. Admission is selective, and admission requirements must be completed prior to February 1 for fall admission, and prior to July 1 for spring admission (see items 1-6 below). Students are encouraged to submit an application to the university 4 to 6 months before the deadline to ensure complete processing of application and transcript evaluation by February 1. Students are encouraged to complete corequisite courses while waiting for admission to the clinical sequence.

In order to have a student file ranked for possible admission to the BSN Nursing Program, submit or complete the following no later than February 1:

1. UAA Certificate of Admission from the Office of Admissions, including transcripts from both high school/GED and college, with transcript evaluations (if any). Documentation from transcripts must show successful completion of the following courses with a minimum grade of C: intermediate algebra, biology with laboratory, and chemistry with laboratory. Courses may have been taken at the high school or college level. Equivalent college-level courses in lieu of high school classes are: MATH A105, BIOL A102 and BIOL A103, and CHEM A055.
2. School of Nursing Application and Confidential Required Information Form sent to the School of Nursing coordinator of student affairs.
3. Three letters of reference sent to the School of Nursing coordinator of student affairs.
4. The National League for Nursing Pre-admission Exam (PAX-RN), taken through the Advising and Testing Center. Call (907) 786-4500 for specific dates and to sign up.
5. Upon completion of items 1-6, student’s file is ranked based on a point system.

Please contact the department for further details. Students are contacted in March with the results.

Once admitted to associate degree clinical nursing courses, students are required to provide the following before beginning clinical coursework:

1. Evidence of:
   a. Immunity to rubella and rubeola, confirmed by titer;
   b. Immunity to hepatitis A and hepatitis B, confirmed by titer (first-semester clinical students may be in the process of completing the immunization series; for those students, documentation of immunity by titer is required prior to entry into second-year courses);
   c. Immunity to chicken pox documented by history, titer or current immunization;
   d. Diphtheria/tetanus vaccination within the past 10 years (with booster required at the time of expiration);
   e. Freedom from active tuberculosis, documented annually by negative PPD skin test or by health examination by a nurse practitioner, physician, or physician’s assistant;
f. Documentation of HIV testing annually (results not required).

2. Current Health Provider Certification in Cardiopulmonary Resuscitation for infants, children, and adults. First year students will have until the third week of the semester to complete this certification, which then must be kept current until graduation.

3. Professional liability insurance in the amount of $1 million/$3 million; insurance must be maintained throughout the duration of the student’s enrollment in clinical nursing courses. Specific information regarding acceptable professional liability insurance policies may be obtained directly from the program.

4. Results of a national-level criminal background check.

Students enrolled in clinical courses must provide their own transportation to clinical assignments and will be required to purchase uniforms and specialized equipment. The school assumes no responsibility for illnesses and injuries experienced by students in conjunction with their clinical experiences; students who are injured while completing clinical assignments are responsible for all associated medical costs. It is strongly recommended that students maintain personal medical insurance.

**Academic Progress**

In order to progress within the Associate of Applied Science Nursing program, students must earn a passing grade (C or higher or P) in all nursing courses. Students who are unable to earn a passing grade in a nursing course during their initial enrollment may attempt to earn a passing grade one additional time on a space-available basis. Students enrolled in one course must be concurrently enrolled in all courses with that common number (NURS A120 and NURS A120L; NURS A125 and NURS A125L; NURS A220 and NURS A220L; NURS A222 and NURS A222L; NURS A225 and NURS A225L; NURS A250 and NURS A250L).

The four-semester AAS nursing program, which begins with NURS A120/NURS A120L must be completed within four years.

**General University Requirements**

1. Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

2. Complete the Associate of Applied Science General Degree Requirements (15 credits) located at the beginning of this chapter.

**Major Requirements**

1. Complete the following required courses: 58 credits

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<td>Psychiatric Nursing Laboratory</td>
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<tr>
<td>NURS A255</td>
<td>Staff Nurse: Legal, Ethical, and Organizational Issues</td>
<td>1</td>
</tr>
<tr>
<td>PSY A150</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
</tbody>
</table>
Social Science Elective chosen from General Education Requirement List 3

2. A total of 70 credits is required for the degree.
Associate of Applied Science, Nursing

Graduates of the Associate of Applied Science Nursing program are prepared to use the nursing process to provide effective nursing services to individuals receiving care in inpatient settings and in structured outpatient settings. The academic program provides students with a closely related mix of theory and clinical practice; students gain experience in hospitals, nursing homes, clinics, and community agencies.

Program Student Learning Outcomes

Students graduating with an Associate of Applied Science in Nursing will be able to:

- Utilize critical thinking skills to assess and diagnose nursing needs and to prioritize, plan, implement, and evaluate care for patients and their families in institutional and community-based settings.
- Effectively communicate verbally, in writing, and electronically with health team members, patients, and their families.
- Plan, implement, and evaluate care that is safe, evidence-based, caring, and developmentally and culturally sensitive within ethical, legal, and professional standards.
- Coordinate care of small groups of patients in collaboration with other members of the health care team.
- Develop a plan for lifelong learning and continuing professional development.

Admission Requirements

Students may complete the Associate of Applied Science Nursing program in two academic years (four semesters). Admission to the clinical sequence nursing program is determined by a ranking process. Admission is selective, and admission requirements must be completed prior to February 1 for fall admission, and prior to July 1 for spring admission (see items 1-6 below). Students are encouraged to submit an application to the university by August 1 to 6 months before the deadline to ensure complete processing of application and transcript evaluation by February 1. Students are encouraged to complete corequisite courses while waiting for admission to the clinical sequence.

In order to have a student file ranked for possible admission to the nursing sequence AAS Nursing Program, the following items must be completed by August 1 to 6 months before the deadline no later than February 1:

1. UAA Certificate of Admission from the Office of Admissions, including transcripts from both high school/GED and college, with transcript evaluations (if any). Documentation from transcripts must show successful completion of the following courses with a minimum grade of C or above: intermediate algebra, biology with laboratory, and chemistry with laboratory. Courses may have been taken at the high school or college level. Equivalent college-level courses in lieu of high school classes are: MATH A055A105, BIOL A102 and BIOL A103, and CHEM A055.
2. Student attends an advising session with the coordinator of student affairs, School of Nursing. Call (907) 786-4560 for a recorded message.
3. School of Nursing Application and Confidential Required Information Form sent to the School of Nursing coordinator of student affairs, School of Nursing.
4. Three letters of reference sent to the School of Nursing coordinator of student affairs, School of Nursing.
5. Upon completion of items 1-4, student has an interview with a member of the AAS Admissions Committee.
6. Take The National League for Nursing Pre-admission Exam (PAX-RN), taken through the Advising and Testing Center. Call (907) 786-4500 for specific dates and to sign up.
7. Upon completion of items 1-6, student’s file is ranked based on a point system.

Please contact the department for further details. Students are contacted in March with the results.

Once admitted to associate degree clinical nursing courses, students are required to provide the following before beginning clinical coursework:

1. Evidence of:
   a. Immunity to rubella and rubeola, confirmed by titer;
   b. Immunity to hepatitis A and hepatitis B, confirmed by titer (first-semester clinical students may be in the process of completing the immunization series; for those students, documentation of immunity by titer is required prior to entry into second-year courses);
c. Immunity to chicken pox documented by history, titer or current immunization;
d. Diphtheria/tetanus vaccination within the past 10 years (with booster required at the time of expiration);
e. Freedom from active tuberculosis, documented annually by negative PPD skin test or by health examination by a nurse practitioner, physician, or physician’s assistant;
f. Documentation of HIV testing annually (results not required).

2. Current Health Provider Certification in Cardiopulmonary Resuscitation for infants, children, and adults. First year students will have until the third week of the semester to complete this certification, which then must be kept current until graduation.

3. Professional liability insurance in the amount of $1 million/$3 million; insurance must be maintained throughout the duration of the student’s enrollment in clinical nursing courses. Specific information regarding acceptable professional liability insurance policies may be obtained directly from the program.

4. Results of a national-level criminal background check.

Students enrolled in clinical courses must provide their own transportation to clinical assignments and will be required to purchase uniforms and specialized equipment. The school assumes no responsibility for illnesses and injuries experienced by students in conjunction with their clinical experiences; students who are injured while completing clinical assignments are responsible for all associated medical costs. It is strongly recommended that students maintain personal medical insurance.

**Academic Progress**

In order to progress within the Associate of Applied Science Nursing program, students must earn a **satisfactory passing** grade (C or higher or P) in all nursing courses. Students who are unable to earn an **acceptable passing** grade in a nursing course during their initial enrollment may attempt to earn a **satisfactory passing** grade one additional time on a space-available basis. Students enrolled in one course must be concurrently enrolled in all courses with that common number (NURS A120 and NURS A120L; NURS A125 and NURS A125L; NURS A220 and NURS A220L; NURS A222 and NURS A222L; NURS A225 and NURS A225L; NURS A250 and NURS A250L).

The four-semester clinical course sequence [AAS nursing program](#), which begins with NURS A120/NURS A120L must be completed within four years.

**General University Requirements**

1. Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Degree Requirements (15 credits) located at the beginning of this chapter.

**Major Requirements**

1. Complete the following required courses: **58 credits**
   
<table>
<thead>
<tr>
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<tbody>
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<td>BIOL A112</td>
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</tr>
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<td>Introductory Microbiology for Health Sciences</td>
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<td>DN A203</td>
<td>Nutrition for Health Sciences</td>
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<td>NURS A120</td>
<td>Nursing Fundamentals</td>
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<td>NURS A125L</td>
<td>Adult Nursing I Laboratory</td>
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<td>NURS A180</td>
<td>Basic Nursing Pharmacology</td>
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<td>NURS A221</td>
<td>Advanced Parenteral Therapy Laboratory</td>
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Social Science Elective chosen from General Education Requirement List 3

2. A total of 70 credits is required for the degree.
**Course Action Request**

**University of Alaska Anchorage**

Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
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<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<th>5b. Contact Hours</th>
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<tr>
<td>URS</td>
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<td>(Lecture + Lab)</td>
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**Complete Course Title**

Methods of Inquiry

**Abbreviated Title for Transcript (30 character)**

**7. Type of Course**

- [x] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

**8. Type of Action:**

- [x] Add
- [ ] Change
- [ ] Delete

**9. Repeat Status**

- # of Repeats: n/a
- Max Credits: n/a

**10. Grading Basis**

- [x] A-F
- [ ] P/NP
- [ ] NG

**11. Implementation Date**

- From: Fall/2014
- To: 99/9999

**12. Cross Listed with**

**13a. Impacted Courses or Programs:**

List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

<table>
<thead>
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<th>Impacted Program/Course</th>
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</tbody>
</table>

Initiator Name (typed): Kenrick Mock

Initiator Signed Initials: [ ]

Date: [ ]

**13b. Coordination Email**

Date: 3/27/14

submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

**13c. Coordination with Library Liaison**

Date: 3/27/14

**14. General Education Requirement**

Mark appropriate box:

- [ ] Oral Communication
- [x] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [ ] Integrative Capstone

**15. Course Description**

(suggested length 20 to 50 words)

Introduces students to the ways that knowledge is both discovered and generated in multiple disciplines. Covers the tools and study of the different means, materials, methods, nature, and ethics of academic inquiry. Teaches skills and techniques in critical thinking, empirical and quantitative analysis, qualitative analysis, investigation, problem solving, learning, and research appropriate to the acquisition of knowledge in varying fields of study.

**16a. Course Prerequisite(s):**

(list prefix and number or test code and score)

(MATH A105 or MATH A107 or MATH A109 or MATH A200 or MATH A201) and (ENGL A111 or ENGL A211 or ENGL A212 or ENGL A213 or ENGL A214) or concurrent enrollment with a minimum grade of C

**16b. Co-requisite(s):**

(concurrent enrollment required)

n/a

**16c. Other Restriction(s):**

- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

**16d. Registration Restriction(s):**

(non-codable)

n/a

**17. Mark if course has fees**

**18. Mark if course is a selected topic course**

**19. Justification for Action**

Undergraduate research is a high-impact practice that has been shown to increase student success. This course is UAA’s offering as a 100-level introductory course to be taught at all three UA MAU’s with a common core of student learning outcomes centered around the principles involved in undergraduate research and scholarly/creative activity. The course will motivate students by presenting exciting research in multiple disciplines, focused on the social sciences, while preparing the students to conduct research in subsequent courses or co-curricular activities.
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</table>
Methods of Inquiry:
How do we know what we know?

Course Content Guide
University of Alaska Anchorage

I. Revision Date: April 12, 2014

II. Course Information
A. College:
B. Course Subject/Number: URS A121
C. Credits: 3
D. Contact Hours: \((2 + 2) \times 30\) contact lecture hours (2 contact lecture hours/week x 15 weeks = 30) plus 30 lab hours (2 contact lab hours/week x 15 weeks = 30) plus 60 hours outside work (4 hours outside lecture/week x 15 weeks = 60) plus 15 hours outside work (1 hour outside lab/week x 15 weeks = 15) for a total of 135 hours
E. Course Title: Methods of Inquiry
F. Repeat Status: No
G. Grading Basis: A-F
H. Course Description: Introduces students to the ways that knowledge is both discovered and generated in multiple disciplines. Covers the tools and study of the different means, materials, methods, nature, and ethics of academic inquiry. Teaches skills and techniques in critical thinking, empirical and quantitative analysis, qualitative analysis, investigation, problem solving, learning, and research appropriate to the acquisition of knowledge in varying fields of study.
I. Course Prerequisites: [(MATH A105 or MATH A107 or MATH A108 or MATH A109 or MATH A200 or MATH A201) and (ENGL A111 or ENGL A211 or ENGL A212 or ENGL A213 or ENGL A214)] or concurrent enrollment with a minimum grade of C
J. Fees: No
K. Cross-listed: No

III. Course Level Justification

This course is taught at the 100-level as a foundational course to prepare students for further research/creative activity.
IV. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. The instructor(s) will:

1. Guide student discovery of the generation and development of knowledge through various fields of inquiry, with an emphasis on the social sciences.

2. Describe how questions are formulated and investigations conducted within various fields of inquiry.

3. Describe the differences among (a) subjective, non-scientific ideas about natural and social science phenomena, (b) scientifically-derived hypotheses, and (c) empirically-supported conclusions.

4. Describe how the scientific method is applied, introducing the advantages and limitations of different methods of inquiry (e.g., case studies, surveys, correlational studies, and experiments) and different approaches to data collection (e.g., naturalistic observation and obtrusive observation).

5. Demonstrate the means, materials, and methods of inquiry in science and compare and contrast these means, materials, and methods with a variety of other non-science disciplines.

B. Student Learning Outcomes. Students will be able to:

1. Explain different methods of inquiry used in critical and creative investigations across various disciplines and cultures.

2. Demonstrate and use general research and scholarly methods, including the scientific method.

3. Identify, formulate, compare, contrast, evaluate, and effectively communicate, in writing and orally, scientific theories and approaches to solve a problem or issue.

4. Evaluate and utilize information resources in the context of research and creative scholarship.

5. Use both qualitative and quantitative research methods including the knowledge, experiences, and values of communities and social groups as the basis for academic inquiry.

6. Discuss ethical research conduct as a framework for the knowledge generated by academic inquiry.

7. Engage in collaborative learning with peers and faculty.

Assessment method

Inquiry Project, Exam, Research Exercises/Assignments

Inquiry Project, Exam, Research Exercises/Assignments

Inquiry Project

Inquiry Project, Research Exercises/Assignments

Inquiry Project, Exam, Research Exercises/Assignments

CITI certification, Inquiry Project, Exam, Research Exercises/Assignments

Inquiry Project, Research Exercises/Assignments

V. Guidelines for Evaluation

A. Exams

B. Group Inquiry project (includes oral presentation, written paper, and poster)

1. Each group will be expected to complete a written inquiry paper that addresses one academic question from a social science and other perspectives-e.g., natural
sciences, business, art, etc. For example, a project on global warming could study the topic from climatic, economic, political, and social perspectives.

2. The paper should address the methodology used to look for answers/solutions, including the process used to gather information; the justification for a solution or answer; and a discussion of the analysis and synthesis of the results, to include a discussion of the merits of the results, the credibility, usefulness, and significance of the outcome of the inquiry, particularly in regard to the community at large and specific social groups.

3. Students are encouraged to use print, websites, places, people, papers, objects and artifacts, still images and video as sources. Particular attention should be paid to the information resources that specific communities and social groups may provide. Final papers may include videos, images, and performances.

C. Participatory research laboratory exercises/assignments

D. CITI certification

VI. Topical Course Outline

A. Overview of inquiry, research methods, and scholarly/creative activity. The Logic Model as a contextual framework for a common process of inquiry

```
Feedback
Inputs ➔ Activities ➔ Outputs ➔ Outcomes
```

B. Overview of the scientific method

1. Hypothesis testing
2. Research design: Descriptive, correlational, and experimental
3. Research analysis: Basic statistical methods

C. How to conduct a literature review

1. Orientation to library and information resources
2. The student should be able to distinguish and evaluate between different types of sources: peer-reviewed journal article, edited book, academic vs. popular book, different types of research reports, archival, online sources, etc.
3. Overview of bibliographic software and its use
4. Overview of citation and bibliographic styles

D. Ethical considerations in conducting research

1. CITI Certification
2. Use of animals in research
3. Plagiarism and data falsification
4. Authorship

E. Selected research topics

1. Specific topics will vary by instructor. Examples include:
   I. Complex systems including social networks
II. Evolutionary ecology and conservation biology using the stickleback as a model system
III. The biomechanical behavior of spinal-pelvic fixation assemblies
IV. Eye tracking, security, and privacy
V. Contra-power harassment in higher education

2. Investigation of a research topic from the perspective of multiple disciplines. For example, on climate change, investigating: ecosystems, economics, engineering, public health, cultural survival

F. Practical skills
1. How to write a project proposal
2. How to give a project presentation

VII. Video Library and Laboratory Sessions
A. Video Library
1. A unique feature of this class is a digital video library of TED-style research presentations by UAA, UAF, or UAS faculty and/or national researchers on a variety of research topics, including the social sciences. The video presentations will introduce students to applicable research tools, materials, and methods for a research problem in an academic discipline
2. The library will be developed prior to the offering of the course and provide the instructor with weekly course content

B. Laboratory Sessions
1. Research activities that reinforce how research design and scholarly methods/creative activities are conducted in the field of inquiry
2. Participatory discussion linked to the week’s topic

VIII. Suggested Text


IX. Bibliography

## Course Action Request

### University of Alaska Anchorage

**Proposal to Initiate, Add, Change, or Delete a Course**

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
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<table>
<thead>
<tr>
<th>2. Course Prefix</th>
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<tr>
<td>CSCE</td>
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<tr>
<th>4. Previous Course Prefix &amp; Number</th>
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<table>
<thead>
<tr>
<th>5b. Contact Hours</th>
<th>1c. Department</th>
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<tr>
<td>(Lecture + Lab)</td>
<td>Computer Science and Engineering</td>
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<tr>
<th>6. Complete Course Title</th>
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</thead>
<tbody>
<tr>
<td>Object-Oriented Programming I</td>
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**Abbreviated Title for Transcript (30 character)**

### Type of Course
- [x] Academic  
- [ ] Preparatory/Development  
- [ ] Non-credit  
- [ ] CEU  
- [ ] Professional Development

### Type of Action
- [ ] Add  
- [ ] Change  
- [x] Delete

**Mark if course is a selected topic course**

**Mark if course is a Preparatory/Development course**

**Mark if course is a Non-credit course**

**Mark if course is a CEU course**

**Mark if course is a Professional Development course**

**Mark if course has fees**

**Mark if course is a selected topic course**

**Mark if course has fees**

**Mark if course has fees**

**Mark if course has fees**

**Mark if course has fees**

### Course Description

In-depth coverage of object-oriented programming in the Java programming language. Topics include: inheritance, abstraction, interfaces, references, polymorphism, dynamic binding, class hierarchies, container classes, random access file Input/Output (I/O), serializability, graphical applications, event handling, Unified Modeling Language (UML), and object-oriented design.

### Co-requisites

- CSCE A201 with a minimum grade of C.

### Registration Restriction(s)

- Cross Listed
- Stacked

### Repeat Status

- No
- # of Repeats
- Max Credits

### Implementation Date

- From: Spring/2015  
- To: 99/9999

### Registration Restrictions

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

### Other Restriction(s)

- Class  
- Level  
- College  
- Major

### Impacted Courses or Programs

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

### Initiate Name (typed): Kirk Scott

**Initiator Signed Initials:** _________

**Date:**

### Coordination Email

(submitted to Faculty Listserv: )

**Date:**

### Coordination with Library Liaison

**Date:**

### General Education Requirement

**Mark appropriate box:**

- Oral Communication  
- Written Communication  
- Quantitative Skills  
- Humanities  
- Fine Arts  
- Social Sciences  
- Natural Sciences  
- Integrative Capstone

### Course Prerequisite(s)

- CSCE A201 with a minimum grade of C.

### Other Restriction(s)

- [x] Mark if course has fees Yes, standard SOE fee

### Mark if course is a selected topic course

### Justification for Action

Course renumbered to better reflect when this course should be taken in the recommended sequence. Title updated to tie in with follow-up course, Object-Oriented Programming II.

**Initiator (faculty only):** Kirk Scott

**Initiator Signed Initials:** _________

**Date:**

### Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
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<tbody>
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<td>Kirk Scott</td>
<td></td>
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</table>

**Initiator (TYPE NAME)**

**Approved**

**Disapproved**

**Dean/Director of School/College**

**Date**

**Undergraduate/Graduate Academic**

**Date**

**Board Chair**

**Date**

**Provost or Designee**

**Date**

---

21
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<th>Impacted Program or Course</th>
<th>Date of Notification</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>BA Computer Science</td>
<td>10/26/13</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>BS Computer Science</td>
<td>10/26/13</td>
<td>Kenrick Mock</td>
</tr>
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<td>CAS BS Computer Programming Requirement</td>
<td>11/25/13</td>
<td>Patty Linton</td>
</tr>
<tr>
<td>BS Natural Sciences Environmental Sciences Option</td>
<td>11/25/13</td>
<td>Khrys Duddleston</td>
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<tr>
<td>CSCE A302</td>
<td>10/26/13</td>
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<tr>
<td>CSCE A305</td>
<td>10/26/13</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>CSCE A360</td>
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<td>Kenrick Mock</td>
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</table>
Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Computer Science and Engineering

I. **Initiation Date:** Spring 2015

II. **Course Information**
   A. **College:** School of Engineering
   B. **Course Subject/Number:** CSCE A222
   C. **Credits:** 3
   D. **Contact Hours:** (3+0) 45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours
   E. **Course Title:** Object-Oriented Programming I
   F. **Repeat Status:** No
   G. **Grading Basis:** A-F
   H. **Course Description:** In-depth coverage of object-oriented programming in the Java programming language. Topics include: inheritance, abstraction, interfaces, references, polymorphism, dynamic binding, class hierarchies, container classes, random access file Input/Output (I/O), serializability, graphical applications, event handling, Unified Modeling Language (UML), and object-oriented design.
   I. **Course Prerequisites:** CSCE A201 with a minimum grade of C.
   J. **Fees:** Yes, standard SOE fee

III. **Course Level Justification**

This course is being offered at the sophomore level as the second in the introductory sequence of courses required for a computer science major.

IV. **Instructional Goals and Student Learning Outcomes**

<table>
<thead>
<tr>
<th>A. <strong>Instructional Goals.</strong></th>
<th>The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Demonstrate core principles of object-oriented programming.</td>
</tr>
<tr>
<td>2.</td>
<td>Introduce students to the techniques of writing event-driven programs and programs with graphical user interfaces.</td>
</tr>
<tr>
<td>3.</td>
<td>Introduce students to programming involving multiple, cooperating classes and class hierarchies.</td>
</tr>
<tr>
<td>4.</td>
<td>Provide students with the background needed to pursue object-oriented design, analysis, and modeling methodologies which are covered in subsequent software development courses.</td>
</tr>
</tbody>
</table>
### Student Learning Outcomes

| 1. | Write class hierarchies exhibiting characteristics of overloading and polymorphism. | Assignments, Exams, Project |
| 2. | Write programs in which objects of one class act as clients, making use of services provided by other classes. | Assignments, Exams, Project |
| 3. | Write programs that make use of system provided classes, such as arrays, in order to organize and manipulate multiple instances of objects. | Assignments, Exams, Project |
| 4. | Write programs that do I/O with external files. | Assignments, Exams, Project |
| 5. | Write classes that implement interfaces, and classes with inner classes. | Assignments, Exams, Project |
| 6. | Write applications which produce or present graphical material on the screen. | Assignments, Exams, Project |
| 7. | Write applications that do I/O with dialog boxes in windows and which are controlled by menu options. | Assignments, Exams, Project |
| 8. | Write classes or programs which are able to respond to user events. | Assignments, Exams, Project |

### Guidelines for Evaluation

| A. | Assignments |
| B. | Exams |
| C. | Project |

### Topical Course Outline

1. Basic Concepts
   - Inheritance
   - Abstraction
   - Interfaces
   - References
   - Cloning

2. Definition of Class Hierarchies
   - Overloading methods
   - Overriding methods
   - Polymorphism
3. Use of Class Hierarchies
   a. File I/O classes
   b. Random access file I/O
   c. Persistent objects, serializability
   d. Container classes
   e. Containers for objects in applications

4. Event Driven Programming
   a. Event handling
   b. Listeners
   c. Inner classes
   d. Associating events and application objects

5. Graphical User Interfaces
   a. Associating graphics with application objects
   b. Text areas and scroll bars
   c. Buttons and labels
   d. Keystrokes and menus
   e. Focus and threads

6. Object-Orientation and Complex Applications
   a. Object-oriented design
   b. UML
   c. A machine simulation
   d. Larger scale programming project

VII. Suggested Texts


VIII. Bibliography

### Course Action Request

**University of Alaska Anchorage**

**Proposal to Initiate, Add, Change, or Delete a Course**

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
<tr>
<td>AS CAS</td>
<td>AHUM Division of Humanities</td>
<td>AKNS</td>
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</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<tr>
<td>AKNS</td>
<td>A230</td>
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<td>3</td>
<td>(3+0)</td>
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<table>
<thead>
<tr>
<th>6. Complete Course Title</th>
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</thead>
<tbody>
<tr>
<td>Oral Traditions of Alaska Native People</td>
</tr>
<tr>
<td>Oral Trad of AK Natives</td>
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</table>

**Initiator Name (typed): Maria Williams**

**Initiator Signed Initials:** ____________________________

**Date:** ____________________________

<table>
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<tr>
<th>7. Type of Course</th>
<th>8. Type of Action:</th>
<th>9. Repeat Status No</th>
<th># of Repeats</th>
<th>Max Credits</th>
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<tr>
<th>10. Grading Basis</th>
<th>11. Implementation Date</th>
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<tbody>
<tr>
<td>☑ A-F</td>
<td>Semester/year</td>
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<table>
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<tr>
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<tbody>
<tr>
<td>☐ Stacked</td>
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**Cross-Listed Coordination Signature:** ____________________________

**Date of Coordination:** 11/20/12

**Chair/Coordinator Contacted:** Dr. Maria Williams

**Date:** 05/15/2013

**Chair/Coordinator Contacted:** ____________________________

**Date:** ____________________________

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<tr>
<th>13a. Impacted Courses or Programs:</th>
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<td>List any programs or college requirements that require this course.</td>
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**Impacted Program/Course**

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<td>11/20/12</td>
<td>Dr. Maria Williams</td>
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**Initiator Signed Initials:** ____________________________

**Date:** ____________________________

**Initiator (faculty only) Maria Williams**

**Initiator (TYPE NAME):** ____________________________

**Date:** ____________________________

**13b. Coordination Email:** ____________________________

<table>
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<tr>
<th>Date: 2/24/14</th>
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**Date:** ____________________________

**Submit to Faculty Listserv:** (uaa-faculty@lists.uaa.alaska.edu)

**13c. Coordination with Library Liaison**

<table>
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<th>Date: 05/15/2013</th>
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**Date:** ____________________________

**14. General Education Requirement**

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<th>Mark appropriate box:</th>
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<tr>
<td>Oral Communication</td>
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<tr>
<td>Written Communication</td>
</tr>
<tr>
<td>Quantitative Skills</td>
</tr>
<tr>
<td>Humanities</td>
</tr>
<tr>
<td>Integrative Capstone</td>
</tr>
</tbody>
</table>

**15. Course Description**

*An introduction to Alaska Native oral traditions—both the stories told by different Alaska Native cultures and the indigenous languages that convey those stories. Topics include the role of oral traditions in sharing knowledge and beliefs in Alaska Native cultures, the importance of indigenous languages in conveying ideas that are difficult to translate outside the original language, the translation of oral traditions into recorded or printed media, and contemporary settings where oral traditions continue.*

**16a. Course Prerequisite(s) (list prefix and number)**

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**16b. Test Score(s)**

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<th>16c. Co-requisite(s) (concurrent enrollment required)</th>
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**16d. Other Restriction(s)**

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<th>☐ Class</th>
<th>☐ Level</th>
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**16e. Registration Restriction(s) (non-codable)**

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<tr>
<th>☐ Mark if course has fees</th>
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**17. ☑ Mark if course is a selected topic course**

**18. ☐ Mark if course is a selected topic course**

**19. Justification for Action**

*Previously offered as a 290 Selected topics course, it is time to make it a permanent course.*

**Initiator (faculty only) Maria Williams**

**Initiator (TYPE NAME):** ____________________________

**Date:** ____________________________

<table>
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<th>Disapproved</th>
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<tr>
<td>Dean/Director of School/College</td>
<td>Date</td>
</tr>
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</table>

**Approved | Disapproved |
| Undergraduate/Graduate Academic | Date |

**Approved | Disapproved |
| Board Chairperson | Date |

**Approved | Disapproved |
| Provost or Designee | Date |

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**27**
I. Date Initiated
   April 14, 2014

II. Course Information
   College/School: College of Arts and Sciences
   Department: Alaska Native Studies
   Program: Alaska Native Studies
   Course Title: Oral Traditions of Alaska Native People
   Course Number: AKNS A230
   Credits: 3
   Contact Hours: 3 + 0
   Grading Basis: A-F
   Course Description: An introduction to Alaska Native oral traditions—both the stories told by different Alaska Native cultures and the indigenous languages that convey those stories. Topics include the role of oral traditions in sharing knowledge and beliefs in Alaska Native cultures, the importance of indigenous languages in conveying ideas that are difficult to translate outside the original language, the translation of oral traditions into recorded or printed media, and contemporary settings where oral traditions continue.
   Course Prerequisites: None
   Registration Restrictions: None
   Fees: Yes

III. Course Activities
   In general, this course will involve a combination of:
   A. Readings
   B. Audio and video recordings of oral tradition
   C. Discussions
   D. Response papers
   E. Guest speakers
   F. Student presentations on oral traditions

IV. Course Level Justification
   This 200-level course is an introductory survey course of Alaska Native oral traditions and does not require background knowledge.

V. Course Evaluation
   Grades are based on participation, class exercises, student presentations and response papers.

VI. Course Outline
As an introductory course to Alaska Native oral traditions, students will study the stories of different Alaska Native cultures and gain an understanding of the unique features of the original Indigenous language that conveyed those stories. Topics include:

A. Athabascan oral traditions  
B. Yup’ik oral traditions  
C. Inupiaq oral traditions  
D. Unangax oral traditions  
E. Alutiiq oral traditions  
F. Eyak oral traditions  
G. Tlingit oral traditions  
H. Haida oral traditions  
I. Tsimshian oral traditions  
J. The history of language loss and language revitalization  
K. Translation of oral traditions into audio, video and print recordings  
L. Contemporary settings for Alaska Native oral tradition

VII. Instructional Goals and Student Learning Outcomes

A. Instructional Goals.  
The instructor will:

1. Introduce students to oral traditions of Alaska Native peoples, including the stories and languages used by different Alaska Native cultures.

2. Engage students through course materials and discussion, bringing the subject matter to a level within their comprehension.

3. Facilitate student interaction with guest speakers who are knowledgeable about Alaska Native oral traditions.

4. Aid students in the development of a final research project that records or investigates an oral tradition of their choosing.

B. Student Learning Outcomes.  
Students will be able to:  

<table>
<thead>
<tr>
<th>Assessment Method</th>
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<tbody>
<tr>
<td>1. Discuss the diversity of oral traditions and languages of Alaska Native people.</td>
</tr>
<tr>
<td>Class discussions, student presentations, response papers</td>
</tr>
<tr>
<td>2. Analyze the differences between oral and written traditions.</td>
</tr>
<tr>
<td>Class discussions, student presentations, response papers</td>
</tr>
<tr>
<td>3. Articulate the importance of Indigenous languages in conveying knowledge and the efforts to revitalize Indigenous languages.</td>
</tr>
<tr>
<td>Class discussions, presentations</td>
</tr>
</tbody>
</table>
4. Analyze the translation issues inherent in recording oral traditions in print, audio or video formats.

Class discussions, presentations

5. Present an oral tradition of their choice and articulate its relationship to issues studied in class over the course of the semester.

Final project, presentation

VIII. Suggested Text

There is no single text for this course. Instead, students will read from a variety of sources and consult audio and video recordings of Alaska Native tradition bearers.

IX. Selected Bibliography


### Course Action Request

**University of Alaska Anchorage**

Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
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<th>5b. Contact Hours</th>
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<td>A288</td>
<td>A308</td>
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<td>(Lecture + Lab)</td>
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<th>6. Complete Course Title</th>
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<td>Principles of Evolution</td>
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Abbreviated Title for Transcript (30 character)

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If a change, mark appropriate boxes:

- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Automatic Restrictions
- Other Update CCG (please specify)

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<td>☐ P/NC</td>
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Cross-Listed Coordination Signature

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<tr>
<th>13a. Impacted Courses or Programs:</th>
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<tbody>
<tr>
<td>List any programs or college requirements that require this course.</td>
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Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

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<th>Chair/Coordinator Contacted</th>
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<td>1. Environment and Society, BA</td>
<td>6Jan14</td>
<td>Dorn VanDommelen, <a href="mailto:dvandommelen@uaa.alaska.edu">dvandommelen@uaa.alaska.edu</a></td>
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<tr>
<td>2. Environment and Society, BS</td>
<td>6Jan14</td>
<td>Dorn VanDommelen, <a href="mailto:dvandommelen@uaa.alaska.edu">dvandommelen@uaa.alaska.edu</a></td>
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Initiator Name (typed): Khrys Duddleston  
Initiator Signed Initials: _________  
Date: __________________

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<tr>
<td>☑ Integrative Capstone</td>
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<table>
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<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
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<tbody>
<tr>
<td>An introduction to the basic principles and mechanisms of the evolution of living systems, with emphasis on the evidence supporting modern understanding of the patterns and processes associated with individual and population variability, transmission of genetic information, lineage diversification, and biological change.</td>
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<table>
<thead>
<tr>
<th>16a. Course Prerequisite(s) (list prefix and number or test code and score)</th>
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<tr>
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<th>16c. Automatic Restriction(s)</th>
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<td>☐ Major</td>
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<tr>
<td>☐ Level</td>
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<th>18. Mark if course is a selected topic course</th>
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<th>19. Justification for Action</th>
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<tbody>
<tr>
<td>The course level is being changed to reflect content and the use of this course as a pre-requisite for numerous upper division courses in BIOL. This change is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree, and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)</td>
</tr>
<tr>
<td>Role</td>
</tr>
<tr>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Initiator (faculty only)</td>
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<tr>
<td>Khrys Duddleston</td>
</tr>
<tr>
<td>Initiator (TYPE NAME)</td>
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<tr>
<td>Dean/Director of School/College</td>
</tr>
<tr>
<td>Department Chair</td>
</tr>
<tr>
<td>Undergraduate/Graduate Academic</td>
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<tr>
<td>Board Chair</td>
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<tr>
<td>College/School Curriculum Committee Chair</td>
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I. Date of Initiation: Spring 2014

II. Curriculum Action Request
   A. College: College of Arts and Sciences.
   B. Course Prefix: BIOL
   C. Course Number: A288
   D. Number of Credits: 3
   E. Contact Hours: 3+0
   F. Course Title: Principles of Evolution
   G. Grading Basis: A-F
   H. Implementation Date: Fall 2014
   I. Cross-listed/Stacked: N/A
   J. Course Description: An introduction to the basic principles and mechanisms of the evolution of living systems, with emphasis on the evidence supporting modern understanding of the patterns and processes associated with individual and population variability, transmission of genetic information, lineage diversification, and biological change.
   K. Course Prerequisites: BIOL A108 with minimum grade of C.
   L. Course Co-requisites: N/A
   M. Other Restrictions: N/A
   N. Registration Restrictions: N/A
   O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
   A. Instructional Goals. The instructor will:
      1. Provide students with the principal concepts and processes important to understanding the study of evolution.
      2. Guide students in their ability to apply evolutionary theory to interpretation of biological patterns and processes

   B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Integrate core concepts of biological sciences by investigating and applying the fundamental constructs of evolutionary theory</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Articulate theory and processes of natural selection, sexual selection, models of speciation, and current evolutionary thought.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>3. Describe patterns of phylogeny and evolution using molecular and cladistic data sets.</td>
<td>Written assignments and examinations</td>
</tr>
</tbody>
</table>
4. Model evolutionary processes using simulations and computer-based applications

Written laboratory reports and simulation modeling

IV. Course Level Justification
Designed for Biological and Natural Sciences majors as a core undergraduate course comparable to 200-level courses offered at other universities. These topics are essential to the student’s ability to succeed in upper division courses in more specific disciplines within the biological sciences.

V. Topical Course Outline

A. Historical Perspectives on Evolution
   1. Darwinian Revolution
   2. Evolutionary Thinking

B. Sources of Variation
   1. Variation Among Individuals
   2. Mendelian Genetics in Populations
   3. Evolution at multiple Loci

C. Genes in Populations

D. Adaptations
   1. Evolutionary Analysis of Form and Function
   2. Evolution of Social Behavior

E. Selection
   1. Natural Selection Revisited
   2. Sexual Selection

F. Persistence of Variability

G. Geographic Variation
   1. Macroevolution
   2. Biogeography

H. Origin of New Species
   1. Modes of Speciation
   2. Mechanisms of Divergence

I. Hybridism and Polyploidy
   1. Gene Flow Between Species
   2. Mechanisms of Isolation

J. Geologic Record and Evolutionary Lineages and Trends
   1. Nature of the Fossil Record
   2. Evolution in the Fossil Record

K. Evolutionary Lineages and Trends
   1. Taxonomic Diversity Over Time
   2. Morphological Diversification
   3. Evolution of Complexity

L. Evo-Devo
   1. Divorce and Reconciliation of Development and Evolution
   2. Post Hox: Homology or Homoplasy

M. Extinction
   1. Mass Extinctions
2. Background Extinctions
N. Patterns of Regularity in Macroevolution
O. Morphology, Phylogeny, and Classification
   1. Parsimony and Cladistics
   2. Likelihood and Joining Techniques
P. Origin and Early Evolution of Life
Q. Human Evolution
   1. Relationship Among Humans and Extant Apes
   2. Recent Ancestry of Humans
   3. The Evolution of Distinctive Human Traits

VI. Suggested Texts


VII. Bibliography


### Course Action Request

**University of Alaska Anchorage**  
Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS CAS</td>
<td>AMSC Division of Math Science</td>
<td>Biological Sciences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours</th>
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<tbody>
<tr>
<td>BIOL</td>
<td>A298</td>
<td>N/A</td>
<td>1 to 6</td>
<td>(Lecture + Lab) (0+3 - 18)</td>
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</table>

<table>
<thead>
<tr>
<th>6. Complete Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Research</td>
</tr>
<tr>
<td>Individual Research</td>
</tr>
</tbody>
</table>

**Abbreviated Title for Transcript (30 character)**: Individual Research

<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>8. Type of Action:</th>
<th>9. Repeat Status</th>
<th># of Repeats</th>
<th>Max Credits</th>
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<tr>
<td>Academic</td>
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<td>Preparatory/Development</td>
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<tr>
<td>Non-credit</td>
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<td>Professional Development</td>
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<tr>
<th>10. Grading Basis</th>
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<tr>
<td>A-F</td>
<td>semester/year</td>
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<th>12. Cross Listed with</th>
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<tbody>
<tr>
<td>Stacked</td>
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<table>
<thead>
<tr>
<th>13a. Impacted Courses or Programs: List any programs or college requirements that require this course.</th>
<th>13b. Coordination Email</th>
<th>13c. Coordination with Library Liaison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at <a href="http://www.uaa.alaska.edu/governance">www.uaa.alaska.edu/governance</a>.</td>
<td>Date: 6Jan2013</td>
<td>Date: 6Jan13</td>
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<table>
<thead>
<tr>
<th>Initiator Name (typed): Khrys Duddleston</th>
<th>Initiator Signed Initials:</th>
<th>Date:</th>
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<table>
<thead>
<tr>
<th>14. General Education Requirement</th>
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<tr>
<td>Mark appropriate box:</td>
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<tr>
<td>[ ] Oral Communication</td>
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<tr>
<td>[ ] Written Communication</td>
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<tr>
<td>[ ] Quantitative Skills</td>
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<td>[ ] Humanities</td>
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<td>[ ] Fine Arts</td>
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<tr>
<td>[ ] Social Sciences</td>
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<tr>
<td>[ ] Natural Sciences</td>
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<tr>
<td>[ ] Integrative Capstone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab and field investigations on specific subjects in biology. Topic for study to be approved and directed by a faculty member in Biological Sciences. Special Note: May be repeated once for a maximum of 6 credits.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16a. Course Prerequisite(s) (list prefix and number or test code and score)</th>
<th>16b. Co-requisite(s) (concurrent enrollment required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL A108 with minimum grade of C.</td>
<td>Instructor permission</td>
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</table>

<table>
<thead>
<tr>
<th>16c. Automatic Restriction(s)</th>
<th>16d. Registration Restriction(s) (non-codable)</th>
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<td>[ ] Major</td>
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<td>[ ] Level</td>
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<tr>
<th>17. Mark if course has fees</th>
<th>18. Mark if course is a selected topic course</th>
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<tbody>
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<table>
<thead>
<tr>
<th>19. Justification for Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updating pre-requisites</td>
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<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
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<tbody>
<tr>
<td>Khrys Duddleston</td>
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<thead>
<tr>
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<th>Dean/Director of School/College</th>
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<th>Board Chair</th>
<th>Date</th>
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<tr>
<th>Provost or Designee</th>
<th>Date</th>
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</tbody>
</table>

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**Course Action Request Form**

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**University of Alaska Anchorage**  
Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>Initiator Name (typed): Khrys Duddleston</th>
<th>Initiator Signed Initials:</th>
<th>Date:</th>
</tr>
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<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A298
D. Number of Credits: 1 to 6
E. Contact Hours: 0+3-18
F. Course Title: Individual Research
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Lab and field investigations on specific subjects in biology. Topic for study to be approved and directed by a faculty member in Biological Sciences. Special Note: May be repeated once for a maximum of 6 credits.
K. Course Prerequisites: N/A
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: Instructor permission
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide an opportunity for student to participate in the conduct of original research and to gain an appreciation for the excitement, challenge, repetition, rigor and other aspects of a biology research project.
   2. Provide the necessary instruction in technical or analytical skills needed to conduct research.
   3. Supervise the student’s laboratory and/or field work.
   4. Assist the student with the design, conduct, analysis and presentation of their research project.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Design, conduct, analyze and present a biological research project.</td>
<td>Interact one-on-one with the faculty mentor, write a research paper and give an oral research presentation.</td>
</tr>
</tbody>
</table>

IV. Course Level Justification
This course provides appropriate recognition for undergraduate students who complete mentored research projects in the biological sciences but have not yet completed the 200-level
courses in their major.

V. Topical Course Outline
Students work with mentors to design an individual research project. Therefore there is no course outline.

VI. Suggested Texts (American Medical Association style bibliography)
Students are provided with materials relevant and appropriate to their specific research project.

VII. Bibliography
Students are provided with materials relevant and appropriate to their specific research project.
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College  
AS CAS

1b. Division  
AMSC Division of Math Science

1c. Department  
Biological Sciences

2. Course Prefix  
BIOL

3. Course Number  
A310

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
3

5b. Contact Hours  
(Lecture + Lab) (3+0)

6. Complete Course Title  
Principles of Animal Physiology

   Abbreviated Title for Transcript (30 character)  

7. Type of Course  
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  
☐ Add  ☐ Change  ☐ Delete

If a change, mark appropriate boxes:
☐ Prefix  ☐ Credits  ☐ Title  ☐ Course Number  ☐ Contact Hours  ☐ Repeat Status  ☐ Grading Basis  ☐ Course Prerequisites  ☐ Cross-Listed/Stacked  ☐ Registration Restrictions  ☐ General Education Requirement  ☐ Class  ☐ Level  ☐ College  ☐ Major  ☐ Other CCG (please specify)

9. Repeat Status No  # of Repeats  Max Credits

10. Grading Basis  
☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  
From: Fall/2015  To: Fall/9999

12. ☐ Cross Listed with  ☐ Stacked with

   Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chemistry, BS</td>
<td>6Jan14</td>
<td>Eric Holmberg, <a href="mailto:egholmberg@uaa.alaska.edu">egholmberg@uaa.alaska.edu</a></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Initiator Name (typed): Khrys Duddleston  Initiator Signed Initials: _______  Date: __________

13b. Coordination Email  
submitted to Faculty Listserv:  
(uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 6Jan14

14. General Education Requirement  
Mark appropriate box:
☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities  ☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

   Fundamental principles of cellular and system physiology of animals with emphasis on vertebrate and, in particular, human physiology

16a. Course Prerequisite(s) (list prefix and number or test code and score)

   BIOL A242 with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)

   ☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action

   We are removing the laboratory portion of this course. This change is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)

Initiator (faculty only)  
Khrys Duddleston

Initiator (TYPE NAME)

Approved  Disapproved

☐ Approved  ☐ Disapproved  ☐ Approved  ☐ Disapproved  ☐ Approved  ☐ Disapproved  ☐ Approved  ☐ Disapproved

Dean/Director of School/College  Date

Undergraduate/Graduate Academic  Date

Board Chair  Date

Provost or Designee  Date

Date
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A310
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Principles of Animal Physiology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Fundamental principles of cellular and system physiology of animals with emphasis on vertebrate and, in particular, human physiology
K. Course Prerequisites: BIOL A242 with minimum grade of C
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Familiarize students with the fundamental biochemical and cellular processes that underpin organ, system and whole animal physiology.
   2. Familiarize students with core physiological systems. These will include the endocrine system, the nervous system, the muscular system, the circulatory system, the respiratory system, the systems that regulate water and ion balance, the digestive system and the thermoregulatory system.
   3. Illustrate each core physiological system studied with both human and non-human examples.
   4. Integrate instruction on biochemical and cellular physiology with instruction on systems physiology, so that students are made aware of the importance of integrated multi-level approaches to the understanding of physiology.
   5. Demonstrate the integrated nature of different physiological systems, so that students are made aware of the integrated manner in which the different systems work within a body and are able to apply this in the study of whole human or whole animal biology.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Explain the core concepts and principles of cellular and systems physiology and their</td>
<td>Written exams</td>
</tr>
<tr>
<td>Application to humans and non-human vertebrates.</td>
<td>Research essay, Reading assignments</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>2. Critically read primary literature in physiology.</td>
<td>Research essay, Reading assignments</td>
</tr>
<tr>
<td>3. Apply the principles of physiology in the critically assess the physiological aspects of a current scientific and/or medical area of research.</td>
<td></td>
</tr>
</tbody>
</table>

IV. Course Level Justification
The exercises and content of this course are designed for upper-division BA and BS students majoring in biology. They are designed to prepare these students for 400-level offerings in animal physiology and to prepare interested students for the physiological sections of the Graduate Record Examinations (GREs) tests and the Medical College Admissions Test (MCAT).

V. Topical Course Outline
A. Chemistry of Life
   1. Energy
   2. Properties of water
   3. Biomolecules
   4. Enzymes
B. Cellular Metabolism and Physiology
   1. Anaerobic metabolism
   2. Aerobic metabolism
   3. Membrane structure
   4. Membrane transport
C. Endocrine system
   1. Signal transduction pathways
   2. Hypothalamus and Pituitary gland
   3. Growth hormone
   4. Adrenal gland
   5. Thyroid gland
   6. Pancreas
   7. Hormonal regulation of reproduction
D. Nervous system
   1. Neuron structure
   2. Generation and transmission of action potentials
   3. Synaptic transmission
   4. Functional organization of the nervous system: peripheral nervous system
   5. Functional organization of the nervous system: central nervous system
E. Muscular system
   1. Muscle cell structure
   2. Excitation-contraction coupling
   3. Muscle function
   4. Regulation of muscle function
   5. Aerobic and anaerobic exercise
F. Circulatory system
   1. Components of circulatory systems
   2. The heart: Cardiac muscle
3. The heart: Cardiac cycle
4. The heart: control of contraction

G. Respiratory system
   1. Physics of respiration
   2. Ventilation and gas exchange
   3. Oxygen transport
   4. Carbon dioxide transport
   5. Regulation of respiration

H. Ion and water balance
   1. Strategies for ionic and osmotic regulation
   2. Role of epithelia
   3. Nitrogen excretion
   4. The kidney: structure and function

I. Digestive system
   1. Nutrition: nutrients
   2. Nutrition: energy acquisition
   3. The digestive system: form and function
   4. Regulation of digestion

J. Thermoregulation
   1. Physics of heat exchange
   2. Endothermy
   3. Physiological responses to cold environments
   4. Physiological responses to hot environments

VI. Suggested Texts

VII. Bibliography

### Course Action Request
#### Proposal to Initiate, Add, Change, or Delete a Course

1. **School or College**
   - AS CAS

2. **Course Prefix**
   - BIOL

3. **Course Number**
   - A316

4. **Previous Course Prefix & Number**
   - N/A

5. **Credits/CEUs**
   - 3

6. **Division**
   - AMSC Division of Math Science

7. **Department**
   - Biological Sciences

8. **Complete Course Title**
   - *Principles of Plant Physiology*

9. **Abbreviated Title for Transcript**
   - *Principles of Plant Physiology*

10. **Type of Course**
    - Academic

11. **Type of Action:*** Change

12. **Repeat Status No       # of Repeats             Max Credits**

13. **Grading Basis**
    - A-F

14. **Implementation Date**
    - From: Fall/2015
    - To: Fall/9999

15. **Cross Listed with**

16. **Course Description**
    - Physiology of vascular plants: Growth, development, photosynthesis, transpiration, uptake of water and nutrients, transportation of materials, and metabolism.

17. **Co-requisite(s)**
    - BIOL A242

18. **Mark if course is a selected topic course**

19. **Justification for Action**
    - We are changing the title to align with our new curriculum/course naming plan. This change is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).

---

**Initiator Name (typed):** Khrys Duddleston

**Initiator Signed Initials:**

**Date:**

---

**13a. Impacted Courses or Programs**

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.aaa.alaska.edu/governance](http://www.aaa.alaska.edu/governance).

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<td>3</td>
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</tr>
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</table>

**Initiator Email**

Submitted to Faculty Listserv: (aaa-faculty@lists.aaa.alaska.edu)

**Date:** 6Jan14

**13c. Coordination with Library Liaison**

**Date:** 6Jan14

---

**14. General Education Requirement**

Mark appropriate box:

- Oral Communication
- Written Communication
- Quantitative Skills
- Humanities
- Fine Arts
- Social Sciences
- Natural Sciences
- Integrative Capstone

**15. Course Description** *(suggested length 20 to 50 words)*

---

**16a. Course Prerequisite(s)** *(list prefix and number or test code and score)*

- BIOL A242

**16b. Co-requisite(s)** *(concurrent enrollment required)*

**16c. Automatic Restriction(s)**

- College
- Major
- Class
- Level

**16d. Registration Restriction(s)** *(non-codable)*

**17. Mark if course has fees**

**18. Mark if course is a selected topic course**

---

**Initiator (faculty only)**

**Date:**

---

**Approved**

**Disapproved**

**Dean/Director of School/College**

**Date:**

---

**Approved**

**Disapproved**

**Undergraduate/Graduate Academic**

**Date:**

---

**Approved**

**Disapproved**

**Board Chair**

**Date:**

---

**Approved**

**Disapproved**

**Provost or Designee**

**Date:**

---

44
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A316
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Principles of Plant Physiology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Physiology of vascular plants: Growth, development, photosynthesis, transpiration, uptake of water and nutrients, transportation of materials, and metabolism
K. Course Prerequisites: BIOL A242 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide to the students a framework for understanding plant physiology
   2. Describe and elaborate the fundamental physics and chemistry relating to plant structure and function.
   3. Explain the variation between plant functional groups in regard to form and function and show how they are interrelated.
   4. Examine the external driving forces on plants, qualitatively and quantitatively.
   5. Provide examples of functional responses to instantaneous, diurnal, seasonal, multi-year variation in environmental conditions

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define terminology and explain concepts well enough to read research articles in the field</td>
<td>Student presentations on selected topics, classroom discussion and examinations</td>
</tr>
<tr>
<td>2. Design proper experiments and evaluate data using appropriate graphics and numerical analyses</td>
<td>Class analyses of published papers and examinations</td>
</tr>
<tr>
<td>3. Criticize faulty experimental design and analyses</td>
<td>Published papers</td>
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</table>
IV. Course Level Justification

This course requires a background of knowledge in both cell and organismal biology.

V. Topical Course Outline

A. Introduction:
   1. External Plant Structure
   2. Plant Anatomy and Development

B. The Plant Cell
   1. Overall Function
   2. Energy and Energetics
   3. Enzymes

C. Water Uptake and Transport
   1. Water and Plants
   2. Water Movements
   3. Water Relations
   4. Controlled Water Loss
   5. Water Loss and Energy Balance

D. Mineral Nutrition
   1. Essential Nutrients
   2. Nutrient Acquisition
   3. Nutrient Deficiency and Plant Response

E. Movement of Organic Substances within Plants
   1. Transport Pathway for Organic Compounds
   2. Mechanisms of Translocation
   3. The Chemistry of Carbohydrates and Other Translocated Compounds
   4. What Plants Eat and How

F. Photosynthesis Overview
   1. The Chloroplast
   2. Light Harvesting
   3. The Photosynthetic Apparatus

G. Basic Carbon Fixation
   1. Oxidation-Reduction
   2. Carbon Fixation-Calvin Cycle

H. Variations and Complications
   1. The Photorespiration Pathway
   2. Alternative Fixation pathways
   3. Assimilate transformation and use

I. Primary Biosynthesis Pathways
   1. How and Why Carbon Fixation Pathways Vary
   2. Structure of C-3, C-4, and CAM Plants
3. Differential Response Pathways

J. Physiology and Ecology of Photosynthesis
   1. Plant Respiration
   2. Whole organ Respiration
   3. Respiratory Pathways
   4. Lipid Respiration

K. Nitrogen Fixation, Transport, and Use
   1. Nitrogen Assimilation
   2. Nitrogen Fixation in Prokaryotes
   3. Symbiotic Fixation
   4. Sulfur and Phosphate Acquisition and Assimilation

L. Plant Protection
   1. Sealing
   2. Secondary Plant Products
   3. Phenolics and Nitrogen Containing Compounds

M. Growth and Development
   1. Patterns
   2. Morphogenesis
   3. Plant Hormones
   4. Plant Timing
   5. Phytochrome
   6. Light and Flowering
   7. Temperature and Flowering

VI. Suggested Texts:
    Taiz, L. And Zeiger, E. Plant Physiology. Sinauer, latest edition

VII. Bibliography:
    Selected papers from the following journals:
    Plant physiology, Physiologia Plantarum
Course Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course

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<th>1c. Department</th>
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<td>Vertebrate Biology</td>
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<tr>
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<td>Integrative Capstone</td>
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<th>16b. Co-requisite(s) (concurrent enrollment required)</th>
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<th>19. Justification for Action</th>
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<td>Replaces Mammalogy and Ornithology, which have been deleted. The addition of this course is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vison and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).</td>
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Initiator (faculty only)  
Khrys Duddleston  
Initiator (TYPE NAME)  
Approved  
Disapproved  
Department Chair  
Approved  
Disapproved  
College/School Curriculum Committee Chair  
Approved  
Disapproved  
Dean/Director of School/College  
Approved  
Disapproved  
Undergraduate/Graduate Academic  
Approved  
Disapproved  
Board Chair  
Approved  
Disapproved  
Provost or Designee  
Approved  
Disapproved  

48
University of Alaska Anchorage  
College of Arts and Sciences  
Course Content Guide

I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A320
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Vertebrate Biology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: A survey of vertebrates of the world, with emphasis on their evolution, diversity and biogeography, and on comparative morphology, physiology, ecology, and behavior
K. Course Prerequisites: BIOL A288 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide a framework for understanding the evolutionary development of vertebrate organisms, and where these organisms fit into the tree of life on Earth
   2. Describe and exemplify the evolutionary history and paleogeography of vertebrates.
   3. Explain the morphology and physiology of vertebrates in an evolutionary context, and show the students how form and function are interrelated.
   4. Examine the ecology and biogeography of vertebrates in relation to instructional goal 2.
   5. Provide the background and opportunity for students to explore the evolution of complexity in the context of vertebrates and vertebrate ecological systems.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>1. Describe the evolutionary history of vertebrates</td>
<td>Written assignments, classroom discussion, and examinations</td>
</tr>
<tr>
<td>2. Identify the principle morphological and physiological adaptations of vertebrates and explain and compare their evolutionary significance</td>
<td>Written assignments and examinations</td>
</tr>
</tbody>
</table>
3. Recognize and classify/describe the principle taxonomic groups of vertebrates

4. Describe the relationships between climate, geology, diversity and extinction patterns in vertebrates

5. Evaluate the patterns of evolution and extinction of vertebrates and speculate on the future of vertebrates in the near future.

| 3. Recognize and classify/describe the principle taxonomic groups of vertebrates | Examinations |
| 4. Describe the relationships between climate, geology, diversity and extinction patterns in vertebrates | Examinations and classroom discussion |
| 5. Evaluate the patterns of evolution and extinction of vertebrates and speculate on the future of vertebrates in the near future. | Classroom discussion and Examinations |

IV. Course Level Justification
This course is similar to other junior-level courses in vertebrate biology offered at other universities. It requires a background of knowledge of organismal biology (including metabolism, physiology and morphology) and a solid background in evolution for maximum benefit by the students.

V. Topical Course Outline
A. Introduction:
   1. Review of phylogenetic principles
   2. Geologic Time
   3. What is a vertebrate? Basics of Morphology and Anatomy
B. Evolution of Vertebrates - Aquatic Lifestyles
   1. Origins of Chordates
   2. Jawless Vertebrates
   3. Ecology and Physiology of Fish
   4. The Biology of Chondrichthyes
   5. The Bony Fish
C. The Rise of Terrestrial Vertebrates - the late Paleozoic
   1. Living on Land
   2. Origin of Tetrapods and Amniotes
   3. The Amphibians
   4. Physiology and Ecology of Amphibians
D. Rise of the Amniotes - two styles of terrestrial living
   1. Synapsid and Diapsids
   2. The Turtles
   3. The Lepidosaurus: Lizards and Snakes
E. Ectotherms to Endotherms
   1. Physiology of Ectotherms
   2. The Mesozoic - The transition to "modern" birds, mammals, and reptiles
   3. Mesozoic Diapsids - Dinosaurs and Birds
   4. Aves - For the Birds
   5. The Mammals
F. Mammal Evolution, Adaptation, and Beyond
   1. The Cenozoic Radiations
   2. Evolution of Aquatic Life in Mammals
   3. Endothermy
VI. **Suggested Texts**


VII. **Bibliography**

An extensive collection of recent primarily literature covering the topics listed above are available and will be used in the class. In addition, new discoveries are emerging monthly regarding the evolution, physiology, and ecology of vertebrates, and will be included as topics of reading and discussion. Further information on references are available from D. Spalinger (afdes@uaa.alaska.edu) upon request. The following is only a small example of materials to be used:


<table>
<thead>
<tr>
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<td>N/A</td>
<td>2</td>
<td>(Lecture + Lab) (1+2)</td>
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6. Complete Course Title
Experiential Learning: Vertebrate Biology
EL: Vertebrate Biology
Abbreviated Title for Transcript (30 character)

7. Type of Course
- [ ] Academic
- [X] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

8. Type of Action:
- [X] Add
- [ ] Change
- [ ] Delete

If a change, mark appropriate boxes:
- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [ ] Course Description
- [ ] Test Score Prerequisites
- [ ] Automatic Restrictions
- [ ] Other

9. Repeat Status No
- [ ] # of Repeats
- [ ] Max Credits

10. Grading Basis
- [X] A-F
- [ ] P/NP
- [ ] NG

11. Implementation Date
- [ ] semester/year
- From: Fall/2015
- To: Fall/9999

12. Cross Listed
- [ ] with
- [ ] Stacked
- [ ] with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

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Initiator Name (typed): Khrys Duddleston
Initiator Signed Initials: __________
Date: __________________

13b. Coordination Email
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 6Jan14

14. General Education Requirement
Mark appropriate box:
- [ ] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [ ] Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
Theory and practice in vertebrate biology including laboratory activities focusing on the evolution, diversity and biogeography, and comparative morphology, physiology, ecology, and behavior

16a. Course Prerequisite(s) (list prefix and number or test code and score)
[BIOL A320 or concurrent enrollment] or [BIOL A487 or concurrent enrollment]

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)
- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

16d. Registration Restriction(s) (non-codable)

17. Mark if course has fees

18. [ ] Mark if course is a selected topic course

19. Justification for Action
This is a companion laboratory-based course to BIOL A320. This addition is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)
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II. **Curriculum Action Request**

A. **College:** College of Arts and Sciences  
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C. **Course Number:** A321  
D. **Number of Credits:** 2  
E. **Contact Hours:** 1+2  
F. **Course Title:** Experiential Learning: Vertebrate Biology  
G. **Grading Basis:** A-F  
H. **Implementation Date:** Fall 2015  
I. **Cross-listed/Stacked:** N/A  
J. **Course Description:** Theory and practice in vertebrate biology including laboratory activities focusing on the evolution, diversity and biogeography, and comparative morphology, physiology, ecology, and behavior  
K. **Course Prerequisites:** [BIOL A320 or concurrent enrollment] or [BIOL A487 or concurrent enrollment]  
L. **Course Co-requisites:** N/A  
M. **Other Restrictions:** N/A  
N. **Registration Restrictions:** N/A  
O. **Course Fees:** Yes

III. **Instructional Goals and Student Learning Outcomes**

A. **Instructional Goals:** The instructor will, in a laboratory setting:  
   1. Describe and exemplify the evolutionary history and paleogeography of vertebrates.  
   2. Explain the morphology and physiology of vertebrates in an evolutionary context, and show the students how form and function are interrelated.  
   3. Examine the ecology and biogeography of vertebrates in relation to instructional goal 2.  
   4. Provide the background and opportunity for students to explore the evolution of complexity in the context of vertebrates and vertebrate ecological systems.

B. **Student Learning Outcomes and Assessment Measures**

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</table>
IV. **Course Level Justification**
This course requires a background of knowledge of organismal biology (including metabolism, physiology and morphology) and a grounding in evolution for maximum benefit by the students.

V. **Topical Course Outline**
A. Relatives of the Vertebrates
   1. Protochordates and other Deuterostomes
B. Evolution of Vertebrates - Aquatic Lifestyles
   1. Jawless Vertebrates
   2. Cartilagenous Fish
   3. Bony Fish
C. Evolution of Vertebrates - Terrestrial Lifestyles
   1. Amphibians
   2. Diapsids and Synapsids
D. Vertebrate development
E. Comparative and Functional Morphology: the skeleton
   1. the skull
   2. the axial skeleton
   3. the appendicular skeleton
F. Comparative and Functional Morphology: the integument (skin)
G. Comparative and Functional Morphology: the muscular system
H. Comparative and Functional Morphology: Respiration and Circulation

VI. **Suggested Texts**

VII. **Bibliography**

Plant Biology

Exploration of plant anatomy, morphology, basic physiology, ecology, evolution, and relationship of humans to plants.

This course replaced BIOL A333 and A334 (biology of non-vascular and vascular plants, respectively). This addition is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A330
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Plant Biology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: An exploration of plant anatomy, morphology, basic physiology, ecology, evolution, and relationship of humans to plants.
K. Course Prerequisites: BIOL A288 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Explain primary aspects of plant structure and function.
   2. Explain growth, tissue differentiation, and reproduction of plants
   3. Contrast morphology, anatomy, and ecology of algae, lichens, bryophytes, ferns, gymnosperms, and angiosperms
   4. Present important themes about the relationship of humans to plants

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Contrast structures and functions of plant morphology and anatomy</td>
<td>Examinations and/or written assignments</td>
</tr>
<tr>
<td>2. Explain patterns of growth, differentiation, and reproduction in plants</td>
<td>Examinations and/or written assignments</td>
</tr>
<tr>
<td>3. Contrast morphological, anatomical, and ecological features of major plant lineages</td>
<td>Examinations and/or written assignments</td>
</tr>
<tr>
<td>4. Discuss the important relationships of humans to plants</td>
<td>Examinations and/or written assignments</td>
</tr>
</tbody>
</table>
IV. Course Level Justification
This course is similar to 300-level courses in plant biology offered at other universities. It course builds on fundamental elements of biology learned in 100- and 200 level biology courses.

V. Topical Course Outline
A. Introduction: Plants and Humans
B. Plant Cells
   1. Molecules & Plant Cells
   2. Plant Cells and Organelles
   3. Plant Cell Division
C. Photosynthesis and Respiration
D. Translocation
E. Plant Structure
   1. Growth
   2. Root Morphology and Anatomy
   3. Stem Morphology and Anatomy
   4. Leaf Morphology and Anatomy
F. Plant Behavior
   1. Response to Stimulus
   2. Plant Hormones
G. Plant Reproduction
   1. Sexual Reproduction
   2. Pollination Biology
   3. Asexual Reproduction
H. Plant Evolution and Classification
   1. General Evolutionary Patterns
I. Algae
J. Non-Vascular Land Plants
K. Gymnosperms
L. Angiosperms
M. Plant Ecology
   1. Principles of Plant Ecology
   2. Plant-Animal and Fungi Coevolution
   3. Biome Survey and Associated Patterns in Plants

VI. Suggested Texts

VII. Bibliography
Journal articles from the primary literature (American Journal of Botany, Annals of Botany, Oikos, Oecologia, etc.).
# Course Action Request

## University of Alaska Anchorage

### Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
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<tr>
<th>6. Complete Course Title</th>
<th>Abbreviated Title for Transcript (30 character)</th>
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<tr>
<td>Experiential Learning: Plant Biology</td>
<td>EL: Plant Biology</td>
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| 7. Type of Course | | |
|------------------|------------------|
| Academic | Preparatory/Development | Non-credit | CEU | Professional Development |

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If a change, mark appropriate boxes:

- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Automatic Restrictions
- Other

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<tr>
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<td>Stacked with</td>
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Cross-Listed Coordination Signature

### 13a. Impacted Courses or Programs:

List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

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Initiator Name (typed): Khrys Duddleston  
Initiator Signed Initials: __________  
Date: ______________

### 13b. Coordination Email

submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

### 13c. Coordination with Library Liaison

Date: 6Jan14

### 14. General Education Requirement

Mark appropriate box:

- Oral Communication
- Written Communication
- Quantitative Skills
- Humanities
- Fine Arts
- Social Sciences
- Natural Sciences
- Integrative Capstone

### 15. Course Description (suggested length 20 to 50 words)

Hands-on applications in plant biology. The course is taught in laboratory and field contexts with emphasis on relevant ecological questions and techniques, and learning the floristic diversity of Alaska.

### 16a. Course Prerequisite(s) (list prefix and number or test code and score)

BIOL A271 with minimum grade of C and [BIOL A330 or concurrent enrollment]

### 16b. Co-requisite(s) (concurrent enrollment required)

### 16c. Automatic Restriction(s)

- College
- Major
- Class
- Level

### 16d. Registration Restriction(s) (non-codable)

### 17. Mark if course has fees

### 18. Mark if course is a selected topic course

### 19. Justification for Action

This is a companion laboratory and field-based course to BIOL A330. This addition is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)
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<th>Provost or Designee</th>
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I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A332
D. Number of Credits: 2
E. Contact Hours: 1+2
F. Course Title: Experiential Learning: Plant Biology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Hands-on applications in plant biology. The course is taught in laboratory and field contexts with emphasis on relevant ecological questions and techniques, and learning the floristic diversity of Alaska.
K. Course Prerequisites: BIOL A271 with minimum grade of C and [BIOL A330 or concurrent enrollment]
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: Yes

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide a basis for understanding the principles of plant biology through experimentation and research.
   2. Support the development and implementation of investigative projects aimed at: reinforcing the fundamentals of experimental design; practical lab and field plant ecology skills; and allowing students to explore plant biology topics.
   3. Present foundational and contemporary studies for discussion.
   4. Provide hands-on exposure to plant research techniques.
   5. Teach the fundamentals of plant classification
   6. Teach the regional floristic diversity.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
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</thead>
<tbody>
<tr>
<td>1. Demonstrate an understanding of the principles of plant biology.</td>
<td>Written and oral assignments and/or examinations.</td>
</tr>
<tr>
<td>2. Evaluate foundational and contemporary research in plant biology.</td>
<td>Discussions and/or student presentations.</td>
</tr>
<tr>
<td>3. Demonstrate competency in fundamental techniques in botanical research.</td>
<td>Weekly lab write ups and written report(s).</td>
</tr>
<tr>
<td>4. Demonstrate skills in data analysis, including use of summary statistics and graphical analysis.</td>
<td>Written and oral assignments and/or examinations.</td>
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<tr>
<td>5. Communicate, to an audience of scientific peers, their project as primary scientific research.</td>
<td>Primary research report and oral presentation.</td>
</tr>
<tr>
<td>6. Identify, compare and contrast elements of the regional floristic diversity.</td>
<td>Written assignments and/or examinations.</td>
</tr>
</tbody>
</table>

**IV. Course Level Justification**

This course is equivalent to 300-level courses in plant biology offered at other universities. It builds upon concepts learned in 100- and 200-level courses in the biological sciences.

**V. Topical Course Outline**

A. Introduction and Approaches to Botanical Research
   1. Working with plants in the lab, greenhouse, and field
   2. Hypothesis testing
   3. Quantitative analysis
   4. Statistics
      i) Summary statistics
      ii) Measures of variance
      iii) Correlation and regression analysis
   5. Graphical analysis

B. Plant Cells
   1. Laboratory Application

C. Plant Morphology and Anatomy
   1. Laboratory or Field Application

D. Plant Physiology – photosynthesis, respiration, and translocation

E. Introduction to Field Research
   1. Laboratory or Field Application

F. Plant Behavior
   1. Laboratory or Field Application

G. Plant Reproduction
   1. Laboratory or Field Application

H. Plant Diversity – Algae and Non-Vascular Land Plants
   1. Laboratory or Field Application

I. Plant Diversity – Ferns and Gymnosperms
   1. Laboratory Application or Field Application

J. Plant Diversity – Angiosperms Part I
   1. Laboratory or Field Application

K. Plant Diversity – Angiosperms Part II
   1. Laboratory or Field Application

L. Plant Ecology
   1. Laboratory or Field Application

M. Student Projects
   1. Student Projects: student groups choose a project based on the previous topic areas in the applications A-K above. Projects will involve greater depth and scope than the applications. Topic areas are not necessarily distinct and students will be encouraged to work/collaborate across topic areas where appropriate.
VI. **Suggested Texts**  


VII. **Bibliography**  
Journal articles from the primary literature (American Journal of Botany, Annals of Botany, Oikos, Oecologia, etc.).

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<th>5b. Contact Hours (Lecture + Lab)</th>
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6. Complete Course Title
Biology of Non-Vascular Plants
Abbreviated Title for Transcript (30 character)

7. Type of Course
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  ☐ Add  or  ☒ Change  or  ☐ Delete

If a change, mark appropriate boxes:
☐ Prefix  ☐ Credits  ☐ Title  ☐ Grading Basis  ☐ Course Description  ☐ Test Score Prerequisites  ☐ Course Prerequisites  ☐ Contact Hours  ☐ Repeat Status  ☐ Cross-Listed/Stacked  ☐ Registration Restrictions

9. Repeat Status No  # of Repeats  Max Credits

10. Grading Basis
☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date
From: Fall/2015  To: Fall/9999

12. ☐ Cross Listed with
☐ Stacked with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

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Initiator Name (typed): Khrys Duddleston  Initiator Signed Initials: _______  Date: __________

13b. Coordination Email
Date: 6Jan14
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  Date: __________

14. General Education Requirement
Mark appropriate box:
☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities
☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

16a. Course Prerequisite(s) (list prefix and number or test code and score)

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)
☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
As part of an overall revision of the B.S. in Biological Sciences degree, topics presented in this course are being folded into a new Plant Biology course which covers both vascular and non-vascular plants.

Initiator (faculty only)
Khrys Duddleston
Initiator (TYPE NAME)  Date

☐ Approved  ☐ Disapproved

Dean/Director of School/College  Date

☐ Approved  ☐ Disapproved

Undergraduate/Graduate Academic  Date

Board Chair  Date

☐ Approved  ☐ Disapproved

Provost or Designee  Date

Department Chair  Date

College/School Curriculum Committee Chair  Date

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Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College
AS CAS

1b. Division
AMSC Division of Math Science

1c. Department
Biological Sciences

2. Course Prefix
BIOL

3. Course Number
A334

4. Previous Course Prefix & Number
N/A

5a. Credits/CEUs
4

5b. Contact Hours
(Lecture + Lab)
(3+3)

6. Complete Course Title
Biology of Vascular Plants

Abbreviated Title for Transcript (30 character)

7. Type of Course
☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action:
☐ Add or ☒ Change or ☐ Delete

If a change, mark appropriate boxes:
☐ Prefix ☑ Course Number ☐ Contact Hours ☐ Repeat Status ☐ Grading Basis ☐ Cross-Listed/Stacked
☐ Title ☐ Course Prerequisites ☐ Co-requisites ☐ Course Description ☐ Registration Restrictions
☐ Credits ☐ Test Score Prerequisites ☐ General Education Requirement ☐ Grading Basis ☐ Other
☐ Grading Basis ☐ Credits ☐ Contact Hours ☐ Title ☐ Credits ☐ Level ☐ College ☐ Major
☐ Grading Basis ☐ Credits ☐ Level ☐ College ☐ Major (please specify)

9. Repeat Status No ☐ # of Repeats ☐ Max Credits

10. Grading Basis
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date
semester/year
From: Fall/2015 To: Fall/9999

12. ☐ Cross Listed with
☐ Stacked with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
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Initiator Name (typed): Khrys Duddleston Initiator Signed Initials: _________ Date: __________

13b. Coordination Email
Date: 6Jan14
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 6Jan15

14. General Education Requirement
Mark appropriate box:
☐ Oral Communication ☐ Written Communication ☐ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☐ Natural Sciences ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

16a. Course Prerequisite(s) (list prefix and number or test code and score)

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
As part of an overall revision of the B.S. in Biological Sciences degree, topics presented in this course are being folded into a new Plant Biology course which covers both vascular and non-vascular plants.

Initiator (faculty only) Date
Khrys Duddleston

Initiator (TYPE NAME) Date

☑ Approved ☐ Disapproved
Dean/Director of School/College Date

☐ Approved ☐ Disapproved
Undergraduate/Graduate Academic Date

☐ Approved ☐ Disapproved
Board Chair Date

☐ Approved ☐ Disapproved
Provost or Designee Date

Department Chair Date

College/School Curriculum Committee Chair Date

66
### Course Action Request

**University of Alaska Anchorage**

Proposal to Initiate, Add, Change, or Delete a Course

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6. **Complete Course Title**

Microbial Biology

**Abbreviated Title for Transcript (30 character)**

Microbial Biology

7. **Type of Course**

- [x] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

8. **Type of Action:**

- [ ] Add
- [x] Change
- [ ] Delete

If a change, mark appropriate boxes:

- [x] Prefix
- [x] Credits
- [x] Title
- [ ] Contact Hours
- [ ] Repeat Status
- [ ] Grading Basis
- [x] A-F
- [ ] P/NP
- [ ] NG

9. **Repeat Status**

- [ ] No
- [ ] # of Repeats
- [ ] Max Credits

10. **Grading Basis**

- [x] A-F
- [ ] P/NP
- [ ] NG

11. **Implementation Date**

- [ ] semester/year

From: Fall/2015 To: Fall/9999

12. **Cross Listed with**

- [ ] Stacked with

Cross-Listed Coordination Signature

13a. **Impacted Courses or Programs:** List any programs or college requirements that require this course.

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</table>

Initiator Name (typed): Khrys Duddleston

Initiator Signed Initials: _________ Date: __________________

13b. **Coordination Email**

- [ ] submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

Date: 6Jan14

13c. **Coordination with Library Liaison**

Date: 6Jan14

14. **General Education Requirement**

Mark appropriate box:

- [ ] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [ ] Integrative Capstone

15. **Course Description (suggested length 20 to 50 words)**

The biology of microorganisms with a focus on diversity, physiology, genetics and ecology

16a. **Course Prerequisite(s)**

(list prefix and number or test code and score)

- [ ] BIOL A242 and BIOL A252 with minimum grade of C

16b. **Co-requisite(s)**

(concurrent enrollment required)

16c. **Automatic Restriction(s)**

- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

16d. **Registration Restriction(s)**

(non-codable)

17. **Mark if course has fees**

18. **Mark if course is a selected topic course**

19. **Justification for Action**

We are removing the laboratory portion of the course and renaming the class in keeping with our new course naming plan. This change is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)

Initiator (faculty only) (TYPE NAME)

Initiator: Khrys Duddleston

Date

Approved

Disapproved

Dean/Director of School/College

Date

Approved

Disapproved

Undergraduate/Graduate Academic

Date

Approved

Disapproved

Board Chair

Date

Approved

Disapproved

Provost or Designee

Date
University of Alaska Anchorage  
College of Arts and Sciences  
Course Content Guide

I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A340
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Microbial Biology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: The biology of microorganisms with a focus on diversity, physiology, genetics and ecology.
K. Course Prerequisites: [BIOL A242 and BIOL A252] with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide a basis for understanding microbial phylogeny and evolution, and the central role microorganisms play in Earth’s evolution
   2. Build upon concepts in cell biology and genetics to teach students about microbial structure-function relationships and information flow, exchange and storage
   3. Describe the vast diversity of pathways through which microbes transform energy and matter
   4. Provide a basis for understanding the role microorganisms play in health and disease

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Classify microorganisms based on structural, genetic and metabolic characteristics</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Describe the evolutionary history of microorganisms and their impact on evolution of life on Earth</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>3. Describe and explain microbial metabolic strategies and their influence on ecosystem structure and function</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>4. Illustrate relationships between</td>
<td>Written assignments and examinations</td>
</tr>
</tbody>
</table>
IV. **Course Level Justification**
This course expands upon principles of cell biology and genetics that are introduced in BIOL A242 and BIOL A252. It is comparable to junior-level microbiology courses offered at other universities.

V. **Topical Course Outline**
A. **Microbial Diversity**
   1. Evolution, systematics and phylogenetic diversity
   2. Comparative cell structure and function in Bacteria and Archaea
B. **Metabolic Diversity**
   1. Nutritional
   2. Bioenergetics
C. **Microbial Growth**
   1. Patterns
   2. Environmental determinants
   3. Control
D. **Microbial Genetics**
   1. Microbial molecular biology
   2. Genetics and regulation
E. **Host-microbe Interactions**
   1. Mutualism
   2. Commensalism
   3. Parasitism
F. **Virology**
G. **Microbial ecology**
   1. Methods
   2. Ecosystems
   3. Biogeochemical cycles

VI. **Suggested Texts**


VII. **Bibliography**
Selected Journal Articles from:
**Course Action Request**

**University of Alaska Anchorage**

**Proposal to Initiate, Add, Change, or Delete a Course**

---

**1a. School or College**

AS CAS

**1b. Division**

AMSC Division of Math Science

**1c. Department**

Biological Sciences

---

**2. Course Prefix**

BIOL

**3. Course Number**

A342

**4. Previous Course Prefix & Number**

N/A

**5a. Credits/CEUs**

4

**5b. Contact Hours**

(Lecture + Lab) (2+4)

---

**6. Complete Course Title**

Experiential Learning: Microbial Biology

EL: Microbial Biology

Abbreviated Title for Transcript (30 character)

---

**7. Type of Course**

☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

---

**8. Type of Action:**

☒ Add ☐ Change ☐ Delete

---

**9. Repeat Status No # of Repeats Max Credits**

---

**10. Grading Basis**

☒ A-F ☐ P/NP ☐ NG

---

**11. Implementation Date**

From: Fall/2015 To: Fall/9999

---

**12. Cross Listed with**

Stacked with

---

**13a. Impacted Courses or Programs:**

List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

<table>
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<th>Impacted Program/Course</th>
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Initiator Name (typed): Khrys Duddleston

Initiator Signed Initials: __________ Date: __________

---

**13b. Coordination Email**

Date: 6Jan14 submitted to Faculty Listerv: (uaa-faculty@lists.uaa.alaska.edu)

---

**13c. Coordination with Library Liaison**

Date: 6Jan14

---

**14. General Education Requirement**

Mark appropriate box:

- ☒ Oral Communication
- ☐ Written Communication
- ☐ Quantitative Skills
- ☐ Humanities
- ☐ Fine Arts
- ☐ Social Sciences
- ☐ Natural Sciences
- ☐ Integrative Capstone

---

**15. Course Description** *(suggested length 20 to 50 words)*

Theory and practical laboratory application in microbial diversity, growth, ecology and identification of environmental and medically-important microorganisms. Emphasizes experimental design, scientific writing and oral presentation skills.

---

**16a. Course Prerequisite(s)** *(list prefix and number or test code and score)*

[BIOL A243 or BIOL A273] with minimum grade of C and [BIOL A340 or concurrent enrollment]

**16b. Co-requisite(s)** *(concurrent enrollment required)*

---

**16c. Automatic Restriction(s)**

☐ College ☐ Major ☐ Class ☐ Level

---

**16d. Registration Restriction(s)** *(non-codable)*

---

**17. ☐ Mark if course has fees**

---

**18. ☐ Mark if course is a selected topic course**

---

**19. Justification for Action**

This course replaces the laboratory component of BIOL A340, which was changed to a lecture only course. This change is part of our overall curriculum revision, which seeks to align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)

---

Initiator (faculty only) Khrys Duddleston

Initiator (TYPE NAME) __________ Date

Approved ☐ Disapproved ☐

Dean/Director of School/College Date

Approved ☐ Disapproved ☐

Undergraduate/Graduate Academic Date

Approved ☐ Disapproved ☐

Board Chair Date

Approved ☐ Disapproved ☐

Provost or Designee Date
I. **Date of Initiation:** Spring 2014

II. **Curriculum Action Request**
   A. **College:** College of Arts and Sciences
   B. **Course Prefix:** BIOL
   C. **Course Number:** A342
   D. **Number of Credits:** 4
   E. **Contact Hours:** 2+4
   F. **Course Title:** Experiential Learning: Microbial Biology
   G. **Grading Basis:** A-F
   H. **Implementation Date:** Fall 2015
   I. **Cross-listed/Stacked:** N/A
   J. **Course Description:** Theory and practical laboratory application in microbial diversity, growth, ecology and identification of environmental and medically-important microorganisms. Emphasizes experimental design, scientific writing and oral presentation skills.
   K. **Course Prerequisites:** [BIOL A243 or BIOL A273] with minimum grade of C and [BIOL A340 with minimum grade of C or concurrent enrollment]
   L. **Course Co-requisites:** N/A
   M. **Other Restrictions:** N/A
   N. **Registration Restrictions:** N/A
   O. **Course Fees:** Yes

III. **Instructional Goals and Student Learning Outcomes**
   A. **Instructional Goals.** The instructor will:
      1. Present theory of and instruction in microbiological techniques, including (but not limited to) aseptic technique, microbial isolation, selective and differential media, staining, microscopy, data analysis, etc.
      2. Teach students to read and interpret scientific literature, synthesize information and maintain a scientific lab notebook.
      3. Teach students to present data in both oral and written formats.
      4. Support students as they develop group projects that identify and characterize microorganisms from the environment and/or investigate microbial community physiology by facilitating discussion of research topics and providing guidance in experimental design, and data collection and analysis.
      5. Provide review and critical analysis of student proposals guide students in student-to-student peer review.

   B. **Student Learning Outcomes and Assessment Measures**

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perform and interpret general techniques in microbiology.</td>
<td>Written assignments, examinations, projects</td>
</tr>
</tbody>
</table>
2. Develop an experimental research plan, including research aims, experimental design and data analysis. Project work, group discussion and/or written assignments.

3. Demonstrate competency in microbiology laboratory techniques including: Staining, Aseptic Technique, Enumeration, Isolation, Diversity analysis. Written assignments, examinations and/or projects.

4. Communicate their investigative research project(s) to an audience of scientific peers, Oral Presentation, primary research paper, and/or written presentation materials.

IV. Course Level Justification
This experiential learning course is designed for Biological and Natural Sciences majors as an undergraduate course comparable to 300-level microbiology laboratory courses offered at other universities.

V. Topical Course Outline
A. Safety and best practices in the Microbiology laboratory.
   1. Safety training.
   2. Basic microbiology techniques (Aseptic Technique, Microscope Use, etc.).

B. Measuring Microbial Diversity
   1. Methods of measuring microbial diversity (Culture-based, Sequence-based).
   4. Selective and Differential media
   5. Enrichment culture (e.g. BIOLOG ECOplates)
   6. DNA analysis techniques (16S microbial ID and/or pyrosequencing)
   7. Data Collection, Analysis.

C. Microbial Growth.
   1. Methods of measuring microbial growth
   2. Microbial physiology and growth.
   3. Microbial nutrition and growth.
   4. Environmental effects on growth.
   5. Student Data collection, Analysis

D. Identification of microbial organisms
   1. Methods of identifying microorganisms.
   2. Differentiating/Identifying the Enterobacteriaceae
   3. Differentiating/Identifying the Staphylococci/Streptococci
   4. Isolating and identifying unknown bacteria from mixed samples

E. Applications in Microbiology
   1. Food Microbiology and Metabolism
   2. Methods in Applied Microbiology

VI. Suggested Texts


A selection of journal articles relevant to course content chosen from primary literature (Science, Nature, Journal of Bacteriology, Microbial Ecology, Call, EMBO, PNAS, etc.).
VII. Bibliography

Journal Articles from primary literature (Science, Nature, Journal of Bacteriology, Microbial Ecology, Cell, EMBO, PNAS, etc.).

Web-based resources for project development and data analysis, including (but not limited to) DNA sequence analysis (EZ-Taxon, NCBI BLAST toolkit, NCBI genomic data information), Microbial ID analysis tools (API online resources) and image analysis platforms (Image J).


Bergey’s Manual of Systematic Bacteriology. Volumes 1 through 5:


# Course Action Request

University of Alaska Anchorage

Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tr>
<td>AS CAS</td>
<td>AMSC Division of Math Science</td>
<td>Biological Sciences</td>
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</tbody>
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<table>
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<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<tbody>
<tr>
<td>BIOL</td>
<td>A365</td>
<td>N/A</td>
<td>3</td>
<td>(3+0)</td>
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</tbody>
</table>

### 6. Complete Course Title
**Astrobiology**

Abbreviated Title for Transcript (30 character)

**Astrobiology**

### 7. Type of Course
- [ ] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

### 8. Type of Action:
- [ ] Add
- [x] Change
- [ ] Delete

#### If a change, mark appropriate boxes:
- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [ ] Course Description
- [ ] Test Score Prerequisites
- [ ] Automatic Restrictions
- [ ] Other CCG (please specify)
- [ ] Course Number
- [ ] Contact Hours
- [ ] Repeat Status
- [ ] Cross-Listed/Stacked
- [ ] Course Prerequisites
- [ ] Registration Restrictions
- [ ] General Education Requirement
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major

### 9. Repeat Status No
- # of Repeats
- Max Credits

### 10. Grading Basis
- [x] A-F
- [ ] P/NP
- [ ] NG

### 11. Implementation Date
- Semester/year
  - From: Fall/2015
  - To: Fall/9999

### 12. Cross Listed with
- ASTR A365

### 13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

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Initiator Name (typed): Khrys Duddleston
Initiator Signed Initials: ____________________
Date: __________________

### 13b. Coordination Email
- Date: 6Jan14
  - submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

### 13c. Coordination with Library Liaison
- Date: 6Jan14

### 14. General Education Requirement
Mark appropriate box:
- [ ] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [x] Integrative Capstone

### 15. Course Description (suggested length 20 to 50 words)
A comprehensive examination of the possibility of the existence of life (microbial and advanced) outside of the Earth (star and planet formation rates, habitability zones, origin of life, evolution, and formation of intelligence), the probability of discovery of extraterrestrial life (methods of planet detection, chemical signatures of microbial life, and contact with advanced life), and the scientific and cultural implications of such a discovery. Special Fees.

### 16a. Course Prerequisite(s) (list prefix and number or test code and score)
- BIOL A108
- [PHYS A123 or PHYS A211]

### 16b. Co-requisite(s) (concurrent enrollment required)

### 16c. Automatic Restriction(s)
- [ ] College
- [ ] Major
- [x] Class
- [ ] Level

### 16d. Registration Restriction(s) (non-codable)
- Junior standing; completion of all GER Tier 1 courses required

### 17. Mark if course has fees

### 18. Mark if course is a selected topic course

### 19. Justification for Action
Update of BIOL prerequisite in response to changes in BIOL courses and curriculum.

Initiator (faculty only)
Khrys Duddleston
Initiator (TYPE NAME)

Approved
Disapproved

Dean/Director of School/College
Date

Undergraduate/Graduate Academic
Board Chair
Date

Provost or Designee
Date

Approved
Disapproved

Department Chair
Date

Approved
Disapproved
College/School Curriculum Committee Chair
Date

Approved
Disapproved

Intent (faculty only)

Approved
Disapproved

Department Chair
Date

Approved
Disapproved
College/School Curriculum Committee Chair
Date

Approved
Disapproved

Dean/Director of School/College
Date
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A365
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Astrobiology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: ASTR A365
J. Course Description: A comprehensive examination of the possibility of the existence of life (microbial and advanced) outside of the Earth (star and planet formation rates, habitability zones, origin of life, evolution, and formation of intelligence), the probability of discovery of extraterrestrial life (methods of planet detection, chemical signatures of microbial life, and contact with advanced life), and the scientific and cultural implications of such a discovery. Special Fees.
K. Course Prerequisites: BIOL A108 and [PHYS A123 or PHYS A211]
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: Junior standing; completion of all GER Tier 1 courses is required.
O. Course Fees: Yes

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide a basic description of the physical, chemical and geological properties necessary for the origin and sustainability of life on Earth.
   2. Build on this conceptual framework to describe how other moon, planet and star systems have zones of habitability in which life can exist.
   3. Discuss the physical features of other worlds within our Solar System and beyond which may allow life to develop.
   4. Describe how life evolves in tandem with its changing environment. Provide detailed examples of how the physiological straits of organisms are uniquely linked to their habitat, and of how changes in that habitat may influence species diversity and abundance through impacts on physiological properties.
   5. Discuss the techniques used to search for extraterrestrial planets on which life could exist. Explore future missions and technologies that will search for the chemical signatures of simple life forms on these worlds.
6. Discuss the role of intelligence in the evolution of life, and its implications for the likelihood of advanced extraterrestrial life forms capable of communicating with us.
7. Examine the techniques used to search for advanced life in the Universe, and explore the scientific and cultural implications of such a discovery.
8. Teach students how to evaluate and integrate information from a variety of different sources and perspectives.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Articulate in depth the processes of the origins and evolution of life in different ecosystems. Conceptually link the chemistry and physiology of living organisms with the physical and biological aspects of their environment.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Critically integrate information read from scientific articles provided in lecture and textbook assignments, and apply this information to evaluate the scientific accuracy of popular press (TV, newspaper, magazine, web) reports related to astrobiology.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>3. Effectively describe the likelihood of &quot;contact&quot; with an advanced civilization, and discuss the scientific and cultural impacts of such a discovery.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>4. Assess the long-term prospects for the habitability for life of the Earth. In particular, explore the nature of human impacts on ecosystems through in depth study of current 'hot topics' such as global warming.</td>
<td>Written assignments and examinations</td>
</tr>
</tbody>
</table>

IV. Course Level Justification

Students are required to learn and integrate information from a variety of scientific disciplines as it relates to astrobiology, to read, understand, and apply ideas conveyed by primary scientific literature, to synthesize astrophysical, chemical, geological and biological knowledge and social considerations; and to apply course materials to this topic.

GER Integrative Capstone Justification:
Justifications for designating BIOL A365 Astrobiology as a GER Integrative Capstone course include its emphases on:

1. Knowledge Integration / Interrelationships and synergy among GER disciplines:
Astrobiology’s relationship to the other natural and social sciences is an overall theme of the course. This course focuses on the interfaces between physical sciences (astronomy, chemistry, physics, geology), biological sciences (molecular biology, origins of life, evolutionary biology),
and the social sciences, particularly as they relate to the implications of the discovery of extraterrestrial life.

2. Effective communication skills: Course success demands effective communication through essay examinations, individual classroom presentations, brief reports (oral and written) on hot topics from the local media, and a final research paper.

3. Critical Thinking: Students will succeed in this class if they are able to integrate information across disciplines, and critically evaluate the reliability of data and positions presented in lecture, texts, scientific, and popular viewpoints. Students' ability to critically evaluate diverse materials will be determined based on writing assignments, class presentations, and exams.

4. Information literacy: Students are expected to achieve and demonstrate computer and Internet skills for acquiring information relevant to current topics in astrobiology. This will involve both research in the primary scientific literature (via library and internet resources) and the collection of information from more 'public' sources such as TV, Web, popular press magazines and newspapers, and advocacy organizations. Students must show that they can critically and appropriately evaluate scientific content in 'public' sources based on knowledge gleaned from 'scientific' sources.

5. Quantitative Perspectives: A critical understanding of astrobiology requires that students grasp quantitative concepts such as how a star's mass affects the size and longevity of a habitability zone, and how cell size affects metabolic and reproductive rates. In addition, students must be able to read and interpret scientific graphs (quantitative data, graphically displayed), and to generate graphs showing the relationship between different properties (such as the temperature and luminosity of a star). Exams will specifically test on these skills.

5. Evolving realities of the 21st Century: The growing knowledge that understanding the possibility and probability of life on another planet is to understand how life originated on ours. It creates a special perspective on the uniqueness of life on Earth, and its fragility. This is particularly relevant in the context that humans are having large and potentially irreversible impacts on the habitability of the Earth for many forms of life, which has been a recent focus of scientific and political discussions.

V. Topical Course Outline
   A. An Introduction to Life in the Universe
      1. The Possibilities of Life Beyond Earth
      2. The Scientific Context of the Search
      3. The New Science of Astrobiology
   B. The Habitability of the Earth
      1. Geology and Life
      2. Habitability
      3. Climate Regulation and Change
   C. The Nature of Life on Earth
      1. Defining Life
      2. Cells: The Basic Units of Life
      3. Metabolism
      4. DNA and Heritability
   D. Origin and Evolution of Life on Earth
      1. Searching for the Origin of Life
      2. The Evolution of Life
3. Impacts and Extinctions

E. Life in the Solar System
   1. The Inner Solar System
   2. The Outer Solar System
   3. Spacecraft and Exploration

F. Mars
   1. Fantasies of Martian Civilization
   2. Modern Portrait of Mars
   3. The Climate History of Mars
   4. Searching for Life on Mars

G. The Jovian Moons
   1. Life on the Galilean Moons
   2. Life on Saturn and Beyond

H. The Nature and Evolution of Habitability
   1. The Concept of a Habitable Zone
   2. Venus and Mars: Examples in Potential Habitability
   3. The Future of Life on Earth
   4. Global Warming

I. Habitability Outside the Solar System
   1. Extrasolar Planets
   2. Stellar Classification
   3. Rare Earth?

J. The Search for Extraterrestrial Intelligence
   1. The Drake Equation
   2. The Question of Intelligence
   3. Searching for Intelligence

K. Interstellar Travel
   1. The Challenge of Interstellar Travel
   2. Building a Spaceship for Interstellar Travel
   3. Fermi's Paradox

VI. Suggested Texts


VII. Bibliography


Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

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<td>AS CAS</td>
<td>AMSC Division of Math Science</td>
<td>Physics/Astronomy</td>
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<tr>
<td>ASTR</td>
<td>A365</td>
<td>N/A</td>
<td>3</td>
<td>(Lecture + Lab) (3+0)</td>
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</table>

6. Complete Course Title
Astrobiology
Abbreviated Title for Transcript (30 character)

7. Type of Course
☐ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action:
☐ Add ☐ Change ☐ Delete

If a change, mark appropriate boxes:
- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Automatic Restrictions
- Other CCG (please specify)

9. Repeat Status No
# of Repeats: ☐ Max Credits

10. Grading Basis
☐ A-F ☐ P/NP ☐ NG

11. Implementation Date
From: Fall/2015 To: Fall/9999

12. Cross Listed with
BIOL A365

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

13b. Coordination Email
Date: 6Jan14
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 6Jan14

14. General Education Requirement
Mark appropriate box:
- Oral Communication
- Written Communication
- Quantitative Skills
- Humanities
- Fine Arts
- Social Sciences
- Natural Sciences
- Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
A comprehensive examination of the possibility of the existence of life (microbial and advanced) outside of the Earth (star and planet formation rates, habitability zones, origin of life, evolution, and formation of intelligence), the probability of discovery of extraterrestrial life (methods of planet detection, chemical signatures of microbial life, and contact with advanced life), and the scientific and cultural implications of such a discovery. Special Fees.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
BIOL A108 and [PHYS A123 or PHYS A211]

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)
☐ College ☐ Major ☒ Class ☐ Level

16d. Registration Restriction(s) (non-codable)
Junior standing; completion of all GER Tier 1 courses required

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Update of BIOL prerequisite in response to changes in BIOL courses and curriculum.

Initiator (faculty only)
Khrys Duddleston/Travis Rector
Initiator Signed Initials: _________ Date:

Initiator (TYPE NAME)

Approved
Disapproved

Dean/Director of School/College
Date

Undergraduate/Graduate Academic
Date

Board Chair

Provost or Designee

Date
University of Alaska Anchorage  
College of Arts and Sciences  
Course Content Guide

I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: ASTR
C. Course Number: A365
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Astrobiology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: BIOL A365
J. Course Description: A comprehensive examination of the possibility of the existence of life (microbial and advanced) outside of the Earth (star and planet formation rates, habitability zones, origin of life, evolution, and formation of intelligence), the probability of discovery of extraterrestrial life (methods of planet detection, chemical signatures of microbial life, and contact with advanced life), and the scientific and cultural implications of such a discovery. Special Fees.
K. Course Prerequisites: BIOL A108 and [PHYS A123 or PHYS A211]
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: Junior standing; completion of all GER Tier 1 courses is required.
O. Course Fees: Yes

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
1. Provide a basic description of the physical, chemical and geological properties necessary for the origin and sustainability of life on Earth.
2. Build on this conceptual framework to describe how other moon, planet and star systems have zones of habitability in which life can exist.
3. Discuss the physical features of other worlds within our Solar System and beyond which may allow life to develop.
4. Describe how life evolves in tandem with its changing environment. Provide detailed examples of how the physiological straits of organisms are uniquely linked to their habitat, and of how changes in that habitat may influence species diversity and abundance through impacts on physiological properties.
5. Discuss the techniques used to search for extraterrestrial planets on which life could exist. Explore future missions and technologies that will search for the chemical signatures of simple life forms on these worlds.
6. Discuss the role of intelligence in the evolution of life, and its implications for the likelihood of advanced extraterrestrial life forms capable of communicating with us.

7. Examine the techniques used to search for advanced life in the Universe, and explore the scientific and cultural implications of such a discovery.

8. Teach students how to evaluate and integrate information from a variety of different sources and perspectives.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Articulate in depth the processes of the origins and evolution of life in different ecosystems. Conceptually link the chemistry and physiology of living organisms with the physical and biological aspects of their environment.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Critically integrate information read from scientific articles provided in lecture and textbook assignments, and apply this information to evaluate the scientific accuracy of popular press (TV, newspaper, magazine, web) reports related to astrobiology.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>3. Effectively describe the likelihood of &quot;contact&quot; with an advanced civilization, and discuss the scientific and cultural impacts of such a discovery.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>4. Assess the long-term prospects for the habitability for life of the Earth. In particular, explore the nature of human impacts on ecosystems through in depth study of current 'hot topics' such as global warming.</td>
<td>Written assignments and examinations</td>
</tr>
</tbody>
</table>

IV. Course Level Justification

Students are required to learn and integrate information from a variety of scientific disciplines as it relates to astrobiology, to read, understand, and apply ideas conveyed by primary scientific literature, to synthesize astrophysical, chemical, geological and biological knowledge and social considerations; and to apply course materials to this topic.

GER Integrative Capstone Justification:
Justifications for designating BIOL A365 Astrobiology as a GER Integrative Capstone course include its emphases on:

1. Knowledge Integration / Interrelationships and synergy among GER disciplines:
Astrobiology’s relationship to the other natural and social sciences is an overall theme of the course. This course focuses on the interfaces between physical sciences (astronomy, chemistry, physics, geology), biological sciences (molecular biology, origins of life, evolutionary biology),
and the social sciences, particularly as they relate to the implications of the discovery of extraterrestrial life.

2. Effective communication skills: Course success demands effective communication through essay examinations, individual classroom presentations, brief reports (oral and written) on hot topics from the local media, and a final research paper.

3. Critical Thinking: Students will succeed in this class if they are able to integrate information across disciplines, and critically evaluate the reliability of data and positions presented in lecture, texts, scientific, and popular viewpoints. Students' ability to critically evaluate diverse materials will be determined based on writing assignments, class presentations, and exams.

4. Information literacy: Students are expected to achieve and demonstrate computer and Internet skills for acquiring information relevant to current topics in astrobiology. This will involve both research in the primary scientific literature (via library and internet resources) and the collection of information from more 'public' sources such as TV, Web, popular press magazines and newspapers, and advocacy organizations. Students must show that they can critically and appropriately evaluate scientific content in 'public' sources based on knowledge gleaned from 'scientific' sources.

5. Quantitative Perspectives: A critical understanding of astrobiology requires that students grasp quantitative concepts such as how a star's mass affects the size and longevity of a habitability zone, and how cell size affects metabolic and reproductive rates. In addition, students must be able to read and interpret scientific graphs (quantitative data, graphically displayed), and to generate graphs showing the relationship between different properties (such as the temperature and luminosity of a star). Exams will specifically test on these skills.

5. Evolving realities of the 21st Century: The growing knowledge that understanding the possibility and probability of life on another planet is to understand how life originated on ours. It creates a special perspective on the uniqueness of life on Earth, and its fragility. This is particularly relevant in the context that humans are having large and potentially irreversible impacts on the habitability of the Earth for many forms of life, which has been a recent focus of scientific and political discussions.

V. Topical Course Outline
   A. An Introduction to Life in the Universe
      1. The Possibilities of Life Beyond Earth
      2. The Scientific Context of the Search
      3. The New Science of Astrobiology
   B. The Habitability of the Earth
      1. Geology and Life
      2. Habitability
      3. Climate Regulation and Change
   C. The Nature of Life on Earth
      1. Defining Life
      2. Cells: The Basic Units of Life
      3. Metabolism
      4. DNA and Heritability
   D. Origin and Evolution of Life on Earth
      1. Searching for the Origin of Life
      2. The Evolution of Life
3. Impacts and Extinctions

E. Life in the Solar System
   1. The Inner Solar System
   2. The Outer Solar System
   3. Spacecraft and Exploration

F. Mars
   1. Fantasies of Martian Civilization
   2. Modern Portrait of Mars
   3. The Climate History of Mars
   4. Searching for Life on Mars

G. The Jovian Moons
   1. Life on the Galilean Moons
   2. Life on Saturn and Beyond

H. The Nature and Evolution of Habitability
   1. The Concept of a Habitable Zone
   2. Venus and Mars: Examples in Potential Habitability
   3. The Future of Life on Earth
   4. Global Warming

I. Habitability Outside the Solar System
   1. Extrasolar Planets
   2. Stellar Classification
   3. Rare Earth?

J. The Search for Extraterrestrial Intelligence
   1. The Drake Equation
   2. The Question of Intelligence
   3. Searching for Intelligence

K. Interstellar Travel
   1. The Challenge of Interstellar Travel
   2. Building a Spaceship for Interstellar Travel
   3. Fermi’s Paradox

VI. Suggested Texts


VII. Bibliography


Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College
AS CAS

1b. Division
AMSC Division of Math Science

1c. Department
Biological Sciences

2. Course Prefix
BIOL

3. Course Number
A403

4a. Previous Course Prefix & Number

4b. Credits/CEUs
6

5b. Contact Hours
(Lecture + Lab) (3+9)

6. Complete Course Title
Experiential Learning: Microscopical Tissue Techniques
EL: Microscopical Tissue Tech.

Abbreviated Title for Transcript (30 character)

7. Type of Course

☐ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action:
☐ Add or ☑ Change or ☐ Delete

If a change, mark appropriate boxes:

☐ Prefix ☑ Course Number
☐ Credits ☑ Contact Hours
☐ Title ☑ Repeat Status
☐ Grading Basis ☑ Cross-Listed/Stacked
☐ Course Description ☑ Course Prerequisites
☐ Test Score Prerequisites ☑ Co-requisites
☐ Automatic Restrictions ☑ Registration Restrictions
☐ Class ☑ Level ☑ General Education Requirement
☐ College ☑ Major ☐
☐ Other CCG (please specify)

9. Repeat Status No # of Repeats Max Credits

10. Grading Basis
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date
From: Fall/2015 To: Fall/9999

12. ☐ Cross Listed with ☐ Stacked with Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
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</table>

Initiator Name (typed): Khrys Duddleston  Initiator Signed Initials: __________ Date: __________

13b. Coordination Email
Date: 6 Jan 14

13c. Coordination with Library Liaison
Date: 6 Jan 14

14. General Education Requirement
Mark appropriate box:

☐ Oral Communication ☐ Written Communication ☐ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☐ Natural Sciences ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

Theory and practice of microscopical tissue techniques include laboratory training in the practical operation of microtomes and ancillary equipment. Sample preparation, staining, digital imaging and analysis of an array of tissue samples will be performed. Students must submit a prescribed series of final slides, images and illustrations. Group research project with oral report and poster may be also required. Students will be course certified in the operation of all laboratory equipment to process samples with minimal supervision.

16a. Course Prerequisite(s) (list prefix and number or test code and score)

[Biol A242 and BIOL A252] with minimum grade C

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)

☐ College ☐ Major ☐ Class ☐ Level

17. ☑ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action

The title, description and credits/contact hours are being changed to better reflect content and expectations of the course. This revision is part of an over all revision of our curriculum to bring our B.S. in Biological Sciences degree in alignment with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).
<table>
<thead>
<tr>
<th>Role</th>
<th>Approved</th>
<th>Disapproved</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Initiator (faculty only)</td>
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<tr>
<td>Khrys Duddleston</td>
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<tr>
<td>Initiator (TYPE NAME)</td>
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<tr>
<td>Department Chair</td>
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<tr>
<td>College/School Curriculum Committee Chair</td>
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<td>Dean/Director of School/College</td>
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<td>Undergraduate/Graduate Academic Board Chair</td>
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<tr>
<td>Provost or Designee</td>
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</tbody>
</table>
I. **Date of Initiation:** Spring 2014

II. **Curriculum Action Request**

   A. **College:** College of Arts and Sciences  
   B. **Course Prefix:** BIOL  
   C. **Course Number:** A403  
   D. **Number of Credits:** 6  
   E. **Contact Hours:** 3+9  
   F. **Course Title:** Experiential Learning: Microscopical Tissue Techniques  
   G. **Grading Basis:** A-F  
   H. **Implementation Date:** Fall 2015  
   I. **Cross-listed/Stacked:** N/A  
   J. **Course Description:** Theory and practice of microscopical tissue techniques include laboratory training in the practical operation of microtomes and ancillary equipment. Sample preparation, staining, digital imaging and analysis of an array of tissue samples will be performed. Students must submit a prescribed series of final slides, images and illustrations. Group research project with oral report and poster may be also required. Students will be course certified in the operation of all laboratory equipment to process samples with minimal supervision.

   K. **Course Prerequisites:** [BIOL A242 and BIOL A252] with minimum grade of C.

   L. **Course Co-requisites:** N/A  
   M. **Other Restrictions:** N/A  
   N. **Registration Restrictions:** N/A  
   O. **Course Fees:** Yes

III. **Instructional Goals and Student Learning Outcomes**

   A. **Instructional Goals.** The instructor will:
      1. Identify and describe safety issues and communicate safety concerns in the laboratory.
      2. Provide theoretical and practical principles of microscopical tissue technique.
      3. Demonstrate the use of light microscopes (including dark field, phase contrast, differential interference contrast, fluorescence) ancillary laboratory instruments used in the preparation of samples and specimens.
      4. Demonstrate the use of microtomes (including rotary, vibratome, cryotome).
      5. Demonstrate the preparation of tissue samples for processing, sectioning, staining, and measuring.
      6. Demonstrate the acquisition of digital images of student produced permanent slides for image analysis.
      7. Provide guidance for group research projects, oral reports and research posters, if assigned.
8. Assess a student’s proficiency to produce research grade tissue sections, images and illustrations.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify safety issues and demonstrate the appropriate precautions to avoid or minimize risks in the laboratory.</td>
<td>Reading assignment, examination, notebook</td>
</tr>
<tr>
<td>2. Describe the theoretical and practical principles of microscopical tissue technique.</td>
<td>Reading assignments, examination, literature searches, oral reports</td>
</tr>
<tr>
<td>3. Operate the light microscope (including dark field, phase contrast, differential interference contrast, fluorescence).</td>
<td>Reading assignments, demonstration, sample preparations, notebook</td>
</tr>
<tr>
<td>4. Operate the microtomes (including rotary, vibratome, cryotome).</td>
<td>Reading assignments, demonstration, sample preparations, notebook</td>
</tr>
<tr>
<td>5. Prepare specimens for processing, sectioning, staining and measuring.</td>
<td>Reading assignments, demonstration, sample preparations, notebook</td>
</tr>
<tr>
<td>6. Acquire and analyze digital images of their processed specimens in the microscope.</td>
<td>Image acquisition, demonstration, notebook</td>
</tr>
<tr>
<td>7. Communicate the results of group research projects through oral and poster presentations, if assigned.</td>
<td>Oral report, scientific poster (if assigned)</td>
</tr>
<tr>
<td>8. Produce research grade tissue sections, images and illustrations suitable for publication.</td>
<td>Final microscope slides, images and illustrations, notebook</td>
</tr>
</tbody>
</table>

IV. Course Level Justification
Designed for Biological and Natural Science majors as an elective undergraduate experiential learning course comparable to 400-level microscopical tissue technique courses offered at other universities. This course covers the theory and practice of microscopical tissue technique including sample preparation, instrumental methods, and digital-imaging essential to a student’s ability to succeed in and integrate course content with other 400-level courses in the biological sciences.

V. Topical Course Outline

Theory
A. Introduction
   a. Historical overview
   b. Safety in the laboratory
B. Fixation
C. Decalcification
D. Dehydration
E. Clearing and infiltrating tissues
   a. Paraffin
   b. Epoxy resins
F. Embedding and blocking
G. Microtomes and knives
   a. Historical development
b. Safety concerns
c. Usage and practice
d. Care of knives

H. Sectioning
   a. Paraffin
   b. Epoxy Resin
   c. Frozen
   d. Rotary
   e. Vibratome
   f. Cryotome

I. Cryo-processing of frozen specimens

J. Mounting sections on slides: techniques

K. Microscopy
   a. Light microscopy and Kohler illumination
   b. Dark field
   c. Phase contrast
   d. Differential interference contrast
   e. Fluorescence

L. Stains and staining actions

M. Slide mounting and staining procedures
   a. Hemotoxylin staining
   b. Azo-carmine staining

N. Specific staining procedures
   a. Connective tissues and muscle
   b. PAS and Feulgen reactions
   c. Cellular elements

O. Histochemistry
   a. Tissue Processing

P. Immunohistochemistry
   a. Principles
   b. Techniques

Q. Image processing and image analysis
   a. Image Processing
      1. Contrast, brightness and gamma
      2. Burning-in and dodging
      3. Removing noise
      4. Background removal
      5. Sharpening
      6. Look-up tables, thresholding and pseudocoloring
      7. Image averaging and computer enhancement
   b. Final display of digital images for publication and presentation

R. Interpretation of micrographs
   a. Viewing biological micrographs
   b. Interpretation of normal tissue structure
      1. Magnification and resolution
      2. Artifacts
         a) Fixation
         b) Dehydration
         c) Clearing and infiltration
         d) Embedding and trimming
         e) Microscope
S. Estimation of micrograph magnification

Application
A. Orientation. Laboratory Safety and UAA Chemical Hygiene Plan. Course expectations and grading criteria. Microtechnique demonstration: processing tissues including fixatives, buffers and solvents, the microtome, knives, ovens, microwave, trimming paraffin blocks, sectioning, wax ribbons, floating sections, mounting sections on glass slides, warming trays, staining, mounting cover glass, microscopy and imaging, Kohler illumination. Group research project (if assigned).

B. Practical microscopy: Kohler illumination, phase contrast, dark field, DIC, fluorescence. Introduction to preparing publication quality illustrations.

C. Digital imaging, Photoshop and Adobe Illustrator.

D. Preparing publication quality illustrations, scientific posters and research papers. The art and science of serial sections: do’s and don’ts. Begin research project (if assigned).


F. Finalize slides notebooks, micrographs and illustrations for submission. Poster and research paper due (if research option elected). Project presentation (if group research option elected)

VI. Suggested Texts


VII. Bibliography


Randall JB. *Principles of Biological Microtechnique; a Study of Fixation and Dyeing*. New York, NY: Garland Science; 2003


## Course Action Request

**University of Alaska Anchorage**  
Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS CAS</td>
<td>AMSC Division of Math Science</td>
<td>Biological Sciences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>A406</td>
<td>N/A</td>
<td>4</td>
<td>(2+4)</td>
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<table>
<thead>
<tr>
<th>6. Complete Course Title</th>
<th>Abbreviated Title for Transcript (30 character)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning: Biostatistics</td>
<td>EL: Biostatistics</td>
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<tr>
<th>7. Type of Course</th>
<th>8. Type of Action:</th>
<th>9. Repeat Status No</th>
<th># of Repeats</th>
<th>Max Credits</th>
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<tbody>
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If a change, mark appropriate boxes:
- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Automatic Restrictions
- Class
- Level
- College
- Other

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
<th>11. Implementation Date</th>
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<tbody>
<tr>
<td>A-F</td>
<td>From: Fall/2015</td>
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<td>P/NP</td>
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</table>

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<tr>
<th>12. Cross Listed with</th>
<th>Stacked with</th>
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13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

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Initiator Name (typed): Khrys Duddleston  
Initiator Signed Initials: _______  
Date: __________________

13b. Coordination Email: 6Jan14  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison: 6Jan14

14. General Education Requirement  
Mark appropriate box:
- Oral Communication
- Written Communication
- Quantitative Skills
- Humanities
- Fine Arts
- Social Sciences
- Natural Sciences
- Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

The design of biological experiments and the exploration and application of statistics to biological problems

16a. Course Prerequisite(s) (list prefix and number or test code and score)

[BIOL A271 and STAT A253] with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)

16d. Registration Restriction(s) (non-codable)

17. □ Mark if course has fees

18. □ Mark if course is a selected topic course

19. Justification for Action

This course meets the need for students in the Biological and Natural Sciences for a course in use of statistical methods in the biological sciences. The addition is part of an overall curriculum revision in which we seek to align our curriculum with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)

Initiator (faculty only)  
Khrys Duddleston  
Initiator (TYPE NAME)

Approved

Disapproved

Dean/Director of School/College  
Date

Approved

Disapproved

Undergraduate/Graduate Academic  
Date

Approved

Disapproved

Board Chair  
Date

Approved

Disapproved

Provost or Designee  
Date
I. Date of Initiation

Spring 2014

II. Curriculum Action Request

A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A406
D. Number of Credits: 4
E. Contact Hours: 2+4
F. Course Title: Experiential Learning: Biostatistics
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: The design of biological experiments and the exploration and application of statistics to biological problems

K. Course Prerequisites: [STAT A253 and BIOL A271] with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: Yes

III. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. The instructor will:
   1. Provide the students with the concepts underlying the design and implementation of experiments in biological sciences, with particular emphasis on investigations in physiology, ecology, and evolutionary biology.
   2. Provide a review of elementary statistical concepts as applied to biological data.
   3. Provide the students with the knowledge necessary to appropriately select and apply the principal univariate statistics to biological data.
   4. Guide the students in developing simple experiments in physiology or ecology, conducting these experiments, analyzing the data collected, and drawing inferences based on their results.
   5. Provide the students with guidance in learning to program in the statistical and modeling framework R

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Discriminate between alternative approaches to conducting biological experiments, and be able to compare and contrast these alternative experimental designs</td>
<td>Class discussions, experiential exercises, written assignments, examinations</td>
</tr>
<tr>
<td>2. Evaluate biological data and apply the appropriate statistical analyses for their interpretation</td>
<td>Written assignments and examinations</td>
</tr>
</tbody>
</table>
3. Describe the principal univariate statistics, and apply these analyses appropriately to biological data

<table>
<thead>
<tr>
<th>4. Use the R statistical platform for the analysis of biological data</th>
<th>Experiential exercises and examinations</th>
</tr>
</thead>
</table>

IV. **Course Level Justification**
This course requires background knowledge of statistics and a solid grounding in ecology, physiology, and/or evolutionary ecology.

V. **Topical Course Outline**
(Note: in each of the topics listed below, the instructor and students will conduct experiments or exercises that require appropriate design of the exercise and the collection and analysis of the data)

A. Review of statistical principles
   1. Measures of Central Tendency
   2. Measures of Dispersion
   3. Populations and sampling
   4. Distributions and Probability

B. Introduction to R programming
   1. Data entry and manipulation
   2. Data Management in R
   3. Producing simple graphics of your data
   4. Summary Statistics of data

C. Experimental Design for Biological Studies
   1. The Scientific Method Revisited - Strong Inference
   2. Sampling and Testing Hypotheses
   3. Some simple designs for experiments in Biological Sciences

D. Statistical Tests and Models
   1. Confidence intervals
   2. Testing Differences among two populations - the t-test
   3. Testing Differences among more than two populations, one-way ANOVA
   4. Other Analysis of Variance Models
   5. Simple Regression
   6. An Introduction to Linear Models
   7. An Introduction to Non-parametric Statistics

VI. **Suggested Texts**

VII. **Bibliography**


1. **School or College**
   AS CAS
2. **Course Prefix**
   BIOL
3. **Course Number**
   A408
4. **Previous Course Prefix & Number**
   N/A
5. **Credits/CEUs**
   6
6. **Complete Course Title**
   Experiential Learning: Scanning Electron Microscopy (SEM)
7. **Type of Course**
   [ ] Academic
   [ ] Preparatory/Development
   [ ] Non-credit
   [ ] CEU
   [ ] Professional Development
8. **Type of Action:**
   [X] Add
   [ ] Change
   [ ] Delete
9. **Repeat Status No**
   # of Repeats
   Max Credits
10. **Grading Basis**
    [X] A-F
    [ ] P/NP
    [ ] NG
11. **Implementation Date**
    Semester/year
    From: Fall/2015
    To: Fall/9999
12. **Cross Listed with**
    [ ] Stacked
    [ ] Cross-Listed Coordination Signature
13a. **Impacted Courses or Programs:** List any programs or college requirements that require this course.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
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</table>

Initiator Name (typed): Khrys Duddleston
Initiator Signed Initials: _________
Date: __________________

13b. **Coordination Email**
Date: 6Jan14
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. **Coordination with Library Liaison**
Date: 6Jan14

14. **General Education Requirement**
Mark appropriate box:
- [ ] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [ ] Integrative Capstone

15. **Course Description** (suggested length 20 to 50 words)
Theory and practice of scanning electron microscopy (SEM) are combined with laboratory training in the practical operation of the SEM and ancillary equipment. Sample preparation, digital imaging and analysis on a variety of samples will be performed. Group research project with oral report and poster required. Students will be course certified in the operation of all laboratory equipment. Weekly SEM tutorials leading to an SEM “driver’s test” are required before students can operate the microscope with minimal supervision.

16a. **Course Prerequisite(s)** (list prefix and number or test code and score)
[Biol A242 and BIOL A252] with minimum grade of C.

16b. **Co-requisite(s)** (concurrent enrollment required)

16c. **Automatic Restriction(s)**
- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

16d. **Registration Restriction(s)** (non-codable)

17. [X] Mark if course has fees

18. [ ] Mark if course is a selected topic course

19. **Justification for Action**
This course provides students with specialized skills in preparation for graduate school or careers in science. This change is part of our overall curriculum revision, which seeks to align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).
<table>
<thead>
<tr>
<th>Role</th>
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<tr>
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<tr>
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<tr>
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</table>
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A408
D. Number of Credits: 6
E. Contact Hours: 3+9
F. Course Title: Experiential Learning: Scanning Electron Microscopy (SEM)
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: No

II. Course Description:
Theory and practice of scanning electron microscopy (SEM) are combined with laboratory training in the practical operation of the SEM and ancillary equipment. Sample preparation, digital imaging and analysis on a variety of samples will be performed. Group research project with oral report and poster required. Students will be course certified in the operation of all laboratory equipment. Weekly SEM tutorials leading to an SEM “driver’s test” are required before students can operate the microscope with minimal supervision.

A. Course Prerequisites: [BIOL A242 and BIOL A252] with minimum grade of C.
B. Course Co-requisites: N/A
C. Other Restrictions: N/A
D. Registration Restrictions: Departmental Approval
E. Course Fees: Yes

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Identify and describe safety issues and communicate safety concerns in the scanning electron microscopy laboratory.
   2. Provide theoretical and practical principles of scanning electron microscopy.
   3. Demonstrate the use of ancillary laboratory instruments used in the preparation of samples and specimens.
   4. Demonstrate the use of the scanning electron microscope through scheduled recitation sections.
   5. Demonstrate the preparation of samples for imaging.
   6. Acquire digital images for image analysis.
   7. Provide guidance for group research projects, oral reports and research posters.
   8. Assess a student’s proficiency to independently operate a scanning electron microscope (S-510).
B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon completion of this course, the student will be able to:</td>
<td></td>
</tr>
<tr>
<td>1. Identify safety issues and demonstrate the appropriate precautions to avoid or minimize risks in the scanning electron microscopy laboratory.</td>
<td>Reading assignment, examination</td>
</tr>
<tr>
<td>2. Describe the theoretical and practical principles of scanning electron microscopy.</td>
<td>Reading assignments, examination, literature searches, oral reports</td>
</tr>
<tr>
<td>3. Operate all ancillary laboratory instruments safely to prepare specimens for imaging.</td>
<td>Reading assignments, demonstration, sample preparations, notebook</td>
</tr>
<tr>
<td>4. Operate the SEM proficiently and safely in all modes of operation.</td>
<td>Reading assignments, demonstration, sample preparations, notebook</td>
</tr>
<tr>
<td>5. Prepare specimens for imaging in the scanning electron microscope.</td>
<td>Reading assignments, demonstration, sample preparations, notebook</td>
</tr>
<tr>
<td>6. Acquire and analyze digital images of specimens in the scanning electron microscope.</td>
<td>Image acquisition, demonstration, notebook</td>
</tr>
<tr>
<td>7. Communicate the results of group research projects through oral and poster presentations.</td>
<td>Oral report, scientific poster</td>
</tr>
<tr>
<td>8. Operate the scanning electron microscope (S-510).</td>
<td>Real-time: SEM “driver’s test.” Student must demonstrate proficiency by first optimizing the scanning electron microscope before taking a set of predetermined high resolution images</td>
</tr>
</tbody>
</table>

IV. Course Level Justification
Designed for Biological and Natural Science majors as an elective undergraduate experiential learning course. This course is comparable to 400-level scanning electron microscopy courses offered at other universities. This course covers the theory and practice essential to a student’s ability to succeed in and integrate course content with other 400-level courses in the biological sciences.

V. Topical Course Outline

Theory:
A. Introduction: past, present and future of electron microscopy
   a. Safety in the electron microscopy laboratory
B. Specimen preparation for scanning electron microscopy
   1. Surface cleaning
   2. Buffers and fixatives
   3. Specimen drying techniques
   4. Critical point drying (CPD)
   5. Specimen fracturing techniques
   6. Specimen mounting
   7. Specimen coating for conductivity
   8. Specimen storage
C. Visible Light, Electrons and Lenses
1. Electromagnetic radiation and diffraction
   a. Influence of diffraction on resolution
   b. Electrons, waves and resolution
   c. General design of lenses
   d. Design of electromagnetic lenses
2. Defects in lenses
3. Preparing the scanning electron microscope of use

D. The scanning electron microscope
   1. Electron optical and beam control
      a. Electron gun
      b. Electromagnetic lenses
   2. Specimen manipulation
   3. Electron detector, signal processing and recording systems
      a. Signal versus noise
      b. Secondary electron detector
      c. Signal processing
      d. Image processing
   4. Contrast and three-dimensionality
   5. Stereoscopic imaging
   6. Major operational modes
      a. Vacuum systems
      b. Emergency shutdown procedures
   7. Alignment of the scanning electron microscope

E. Electron beam-specimen interaction and SEM signals
   1. Signal generation
   2. Excitation volumes
   3. Elastic and inelastic collisions
   4. Backscattered electron signals
   5. Characteristic X-rays
   6. Auger electrons
   7. Cathodoluminescence
   8. Transmitted electrons
   9. Specimen current

F. Analytical electron microscopy
   1. X-ray microanalysis
      a. Continuum (Bremsstrahlung) X-ray
      b. Characteristic X-rays
   2. Information obtainable using X-ray analysis
   3. Specimen preparation for X-ray analysis
      a. Bulk samples
      b. Single cells
      c. Sectioned materials
   4. Electron energy loss spectroscopy
   5. Electron diffraction

G. Image processing and image analysis
   1. Image Processing
      a. Contrast, brightness and gamma
      b. Burning-in and dodging
      c. Removing noise
      d. Background removal
      e. Sharpening
f. Fast Fourier transforms
g. Look-up tables, thresholding and pseudocoloring
h. Image averaging and computer enhancement

2. Final display of digital images for publication and presentation

3. Electronic image processing
   a. Particle counts
   b. Area
   c. Mean particle diameter
   d. Grid overlays
   e. Length
   f. Angle determination
   g. Center of mass

H. Interpretation of micrographs
   1. Viewing biological electron micrographs
   2. Interpretation of normal tissue structure
      a. Magnification and resolution
      b. Fixation artifacts
      c. Dehydration and CPD artifacts
      d. Microscope artifacts
   3. Estimation of micrograph magnification

Practice:
A. Orientation. Laboratory Safety and UAA Chemical Hygiene Plan. Emergency shutdown procedures. SEM Demonstration. Digital imaging. Prepare pollen and/or insect samples, store in dessicator; Library database search for 1st journal article employing SEM. Research project overview.

B. SEM Operation; Sample processing; Sputter-coat and image pollen samples; Discuss 1st journal article; Library database search for 2nd journal article employing SEM. Discuss research projects. Preparing posters.

C. SEM Operation; Sample processing; Sputter-coat and image insect samples; Fixation of plant leaves; Discuss 2nd journal article; Library database search for 3rd journal article employing SEM. Discuss research projects. Preparing scientific papers.

D. SEM Operation; Sample processing; Dual magnification function; Crafting Scientific Posters; Discuss research topics; Discuss 3rd journal article. Discuss research projects.

E. SEM Operation; Sample processing; Critical point drying; Sputter-coat leaves; Writing a Scientific Paper including figure legends. Research project pre-proposals due.

F. SEM Operation: Begin “SEM Driver’s License tests” and Research Projects

G. SEM Operation: Finalize Research Projects; Complete Posters

H. SEM Operation: Finalize Research Projects; Posters Presentations

VI. Suggested Texts


**VII. Bibliography**


Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College  
AS CAS

1b. Division  
AMSC Division of Math Science

1c. Department  
Biological Sciences

2. Course Prefix  
BIOL

3. Course Number  
A412

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
3

5b. Contact Hours  
(Lecture + Lab)  
(3+0)

6. Complete Course Title  
Behavioral Endocrinology

Abbreviated Title for Transcript (30 character)  
Behavioral Endocrinology

7. Type of Course  
☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action:  
☒ Add ☐ Change ☐ Delete

If a change, mark appropriate boxes:

☐ Prefix  ☒ Course Number  ☐ Contact Hours  ☐ Repeat Status

☐ Credits  ☐ Course Description  ☐ Cross-Listed/Stacked

☐ Title  ☐ Grading Basis  ☐ Course Prerequisites

☐ Grade Point Average  ☐ Test Score Prerequisites  ☐ Co-requisites

☐ Credits  ☐ Other (please specify)  ☐ Repeat Status

☐ Title  ☐ Contact Hours

9. Repeat Status No  ☐ # of Repeats  ☐ Max Credits

10. Grading Basis  
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date  
semester/year

From: Fall/2015  
To: Fall/9999

12. ☐ Cross Listed with  
Stacked with

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
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</thead>
<tbody>
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</table>

Initiator Name (typed): Khrys Duddleston  
Initiator Signed Initials: _________  
Date: __________

13b. Coordination Email  
Date: 6Jan14

submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 6Jan14

14. General Education Requirement  
Mark appropriate box:  
☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities

☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

Introduces the concepts of chemical messengers and the principles of hormonal integration of physiology and behavior associated with reproduction, stress, biological rhythms and learning and memory

16a. Course Prerequisite(s) (list prefix and number or test code and score)

BIOL A310 with minimum grade of C.

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)

☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☐ Mark if course has fees  
18. ☐ Mark if course is a selected topic course

19. Justification for Action

This course contributes to the development of a discipline specific area in physiology. Part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)

Initiator (faculty only)

Khrys Duddleston  
Initiator (TYPE NAME)

Initiator Signed Initials: _________  
Date: __________

Approved ☐  Disapproved ☐

Dean/Director of School/College  
Approved ☐  Disapproved ☐  Date __________

Undergraduate/Graduate Academic  
Approved ☐  Disapproved ☐  Date __________

Board Chair  
Approved ☐  Disapproved ☐  Date __________

Provost or Designee  
Approved ☐  Disapproved ☐  Date __________
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A412
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Behavioral Endocrinology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Introduces the concepts of chemical messengers and the principles of hormonal integration of physiology and behavior associated with reproduction, stress, biological rhythms and learning and memory
K. Course Prerequisites: BIOL A310 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide a historical basis and present day application of the science of Behavioral Endocrinology.
   2. Demonstrate the mechanisms and functions of signal transduction in the integration of endocrinology, physiology and behavior of vertebrates using diverse behavioral modules.
   3. Discuss possible pharmacological interventions to alleviate physiological and behavioral abnormalities.
   4. Guide students on their exploration of recent research in the arena of behavioral endocrinology.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe the historical breakthroughs in scientific understanding that allowed for a mechanistic understanding of the interrelationships among physiology, endocrinology and behavior.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Describe the systems of chemical mediation and communication and the general features of the vertebrate endocrine system.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>3. Detail the endocrine and neuroendocrine mechanisms of specific behaviors.</td>
<td>Written assignments and examinations</td>
</tr>
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</tr>
<tr>
<td>4. Extract and synthesize recent peer-reviewed literature relevant to behavioral endocrinology.</td>
<td>Written assignments and in class discussions</td>
</tr>
<tr>
<td>5. Communicate the results of recent peer-reviewed literature relevant to behavioral endocrinology.</td>
<td>Written assignments, classroom discussions, oral presentations</td>
</tr>
</tbody>
</table>

### IV. Course Level Justification

This course brings together the concepts of behavior, endocrinology and physiology and thus requires integration of core biological concepts introduced in the lower division curriculum.

### V. Topical Course Outline

A. Introduction to Behavioral Endocrinology
   1. Measuring Behavior
   2. General Concepts of Signal Transduction
   3. A Historical Perspective

B. Approaches to Behavioral Endocrinology
   1. Traditional Methods
   2. Theory and Practice of Immunoassay
   3. Emergent and Molecular Methods

C. Sexual Differentiation of the Brain and Behavior
   1. Sexual Differentiation in Males
   2. Sexual Differentiation in Females

D. Neuroendocrinology of Sexual Behavior
   1. Sexual Behavior in the Male
   2. Sexual Behavior in the Female
   3. Sexual Behavior in Humans

E. Neuroendocrinology of the Stress Response
   1. Homeostasis vs. Allostasis
   2. Acute vs. Chronic Stress
   3. Stress as a Pathology

F. Hormones and Biological Rhythms
   1. Endogenous Rhythms of Physiology and Behavior
   2. The Molecular Clockworks
   3. Endocrine and Behavioral Manifestation of a Disrupted Circadian Clock
   4. Circannual and Other Clocks

G. Hormonal Influences on Sensorimotor Function
   1. Sensation
   2. Activity and Motor Abilities

H. Hormones and Cognition
   1. Performance vs. Learning and Memory
   2. Methods of Assessment
   3. Neural Basis of Learning and Memory
   4. Sex Differences in Human Brain and Cognition

I. Hormonal Regulation of Ingestive Behaviors
   1. Fluid Regulation
   2. Body Weight Regulation

J. Environmental Endocrinology and Ecotoxicology
VI. **Suggested Texts**


VII. **Bibliography**

Bentivoglio, M. and Zucconi, G.G. Sleeping with the clock: pacemaker neurons enter the scene. *Archives Italiennes de Biologie*, 2011; 149: 131-144.


Current readings extracted from the following journals:

- *Endocrinology*
- *General and Comparative Endocrinology*
- *Journal of Biological Rhythms*
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

<table>
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<th>1b. Division</th>
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<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<td>(3+0)</td>
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6. Complete Course Title
Neurophysiology

Abbreviated Title for Transcript (30 character)

7. Type of Course
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:
☒ Add  ☐ Change  ☐ Delete

If a change, mark appropriate boxes:

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<th>□ Credits</th>
<th>□ Contact Hours</th>
<th>□ Title</th>
<th>□ Repeat Status</th>
<th>□ Grading Basis</th>
<th>□ Cross-Listed/Stacked</th>
<th>□ Course Description</th>
<th>□ Co-requisites</th>
<th>□ Test Score Prerequisites</th>
<th>□ Co-requisites</th>
<th>□ Automatic Restrictions</th>
<th>□ Registration Restrictions</th>
<th>□ Class</th>
<th>□ Level</th>
<th>□ College</th>
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9. Repeat Status No  # of Repeats  Max Credits

| 10. Grading Basis | ☒ A-F  | ☐ P/NP  | ☐ NG |

11. Implementation Date
From: Fall/2015  To: Fall/9999

12. ☐ Cross Listed with  ☐ Stacked with  ☐ Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

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Initiator Name (typed): Khrys Duddleston  Initiator Signed Initials: _________  Date:________________

13b. Coordination Email Date: 6Jan14

submitted to Faculty Listserv: (uas-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 6Jan14

14. General Education Requirement

Mark appropriate box:

<table>
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<tr>
<th>□ Oral Communication</th>
<th>□ Written Communication</th>
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<td>□ Integrative Capstone</td>
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15. Course Description (suggested length 20 to 50 words)

The relationship between molecules, cells, systems, and behavior will be explored. Focus will be on membrane and electrical properties of neurons, synaptic physiology, human neuropathologies, and sensory and motor system function with additional comparative neuroanatomy and neuroscience outreach components.

16a. Course Prerequisite(s) (list prefix and number or test code and score)

BIOL A310 with minimum grade of C.

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)

☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Requirement(s) (non-codable)

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action

This course contributes to the development of a comprehensive discipline specific area in physiology. Part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)
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</table>
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A413
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Neurophysiology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: The relationship between molecules, cells, systems, and behavior will be explored. Focus will be on membrane and electrical properties of neurons, synaptic physiology, human neuropathologies, and sensory and motor system function with additional comparative neuroanatomy and neuroscience outreach components.
K. Course Prerequisites: BIOL A310 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Establish the fundamental biochemical and cellular processes that underlie neuron and glia function and communication between neurons.
   2. Discuss the processes regulating sensation, motor control, and complex brain functions in humans and other animals.
   3. Provide examples of pathological conditions that affect the nervous system.
   4. Discuss the role of science advocacy and outreach in the community and provide opportunities to conduct outreach in the community.
   5. Provide model and human cadaver brains for students to examine.
   6. Reinforce the application of the scientific method by examining basic scientific and clinically applied examples of core neurophysiological principles.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Solve quantitative problems in neurophysiology.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Propose experiments to examine causes for neuropathologies.</td>
<td>Written proposals</td>
</tr>
<tr>
<td>3. Facilitate discussions on neurophysiological</td>
<td>Oral assignments, in class discussions</td>
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<tr>
<td>4. Evaluate and reflect on the role of science advocacy and outreach in the community</td>
<td>Written assignments, in class discussions</td>
</tr>
<tr>
<td>5. Demonstrate and analyze the anatomical and functional roles for each human brain region</td>
<td>Examinations, classroom discussions</td>
</tr>
<tr>
<td>6. Discover new approaches and experimental procedures for studying the nervous system</td>
<td>Written assignment, classroom discussions</td>
</tr>
</tbody>
</table>

### IV. Course Level Justification

This course expands upon advanced neurophysiological and neuroanatomical principles that are introduced in BIOL A242 and BIOL A310.

### V. Topical Course Outline

A. Cellular & Molecular  
1. Neurons & Glia  
2. Resting membrane potential  
3. Action potential  
4. Synaptic transmission  
5. Neurotransmitter systems  
6. Development  
7. Structure and Brain Anatomy  

B. Systems  
1. Chemical Senses  
2. Vision  
3. Audition  
4. Somatic Sensory System  
5. Movement  

C. Behavioral & Cognitive (Selected topics)  
1. Hypothalamus  
2. Reward & Motivation  
3. Emotion  
4. Attention & Sleep  
5. Language  
6. Synaptic plasticity  
7. Learning & Memory  
8. Mental Illness / Pathologies  

D. Neuroscience advocacy  
1. Role of service learning  
2. Activity planning for service learning  
3. Reflection and survey on service learning

### VI. Suggested Texts


VII. Bibliography


1a. School or College
AS CAS

1b. Division
AMSC Division of Math Science

1c. Department
Biological Sciences

2. Course Prefix
BIOL

3. Course Number
A414

4. Previous Course Prefix & Number
N/A

5a. Credits/CEUs
3

5b. Contact Hours
(Lecture + Lab)
(3+0)

6. Complete Course Title
Chronobiology
Abbreviated Title for Transcript (30 character)
Chronobiology

7. Type of Course
☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action:
☒ Add ☐ Change ☐ Delete

9. Repeat Status No
☐ # of Repeats ☐ Max Credits

10. Grading Basis
☐ A-F ☒ P/NP ☐ NG

11. Implementation Date
From: Fall/2015 To: Fall/9999

12. ☐ Cross Listed with ☐ Stacked with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

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Initiator Name (typed): Khrys Duddleston
Initiator Signed Initials: _________
Date:________________

13b. Coordination Email
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 6Jan14

14. General Education Requirement
Mark appropriate box:
☐ Oral Communication ☐ Written Communication ☐ Quantitative Skills
☐ Humanities ☐ Social Sciences ☐ Natural Sciences ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
Examination of the presence and physiological basis of biological rhythms and how changes in the different lighting of the seasons, sleep/wake patterns and non-photic cues can impact the biological clock.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
(BIOL A310 or [BIOL A111 and BIOL A112]) with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
This course contributes to the development of a comprehensive discipline specific area in physiology. Part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)
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University of Alaska Anchorage  
College of Arts & Sciences  
Course Content Guide

I. Date of Initiation:  
Spring 2014

II. Curriculum Action Request  
A. College: College of Arts and Sciences  
B. Course Prefix: BIOL  
C. Course Number: A414  
D. Number of Credits: 3  
E. Contact Hours: 3+0  
F. Course Title: Chronobiology  
G. Grading Basis: A-F  
H. Implementation Date: Fall 2015  
I. Cross-listed/Stacked: N/A  
J. Course Description: Examination of the presence and physiological basis of biological rhythms and how changes in the different lighting of the seasons, sleep/wake patterns and non-photic cues can impact the biological clock.

K. Course Prerequisites: {BIOL A310 or [BIOL A111 and BIOL A112]} with minimum grade of C.

L. Course Co-requisites: N/A  
M. Other Restrictions: N/A  
N. Registration Restrictions: N/A  
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes  
A. Instructional Goals. The instructor will:  
1. Build on basic physiological concepts with relevance to biological rhythms.  
2. Discuss how the internal biological clock can impacts health, disease and the obesity epidemic that industrialized countries are currently facing.  
3. Explain how physiological and cognitive processes are altered with the changing light of the seasons and other cues.  
4. Provide students with information on relevant procedures to measure variables related to biological rhythms.

B. Student Learning Outcomes and Assessment Measures

<table>
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<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
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</thead>
<tbody>
<tr>
<td>1. Interpret chronobiological data.</td>
<td>Examinations and assigned readings</td>
</tr>
<tr>
<td>2. Review and report chronobiological data to peers</td>
<td>Presentations</td>
</tr>
<tr>
<td>3. Demonstrate an understanding of complex biochemical and physiological theories and concepts</td>
<td>Examinations, presentations and assigned readings</td>
</tr>
<tr>
<td>4. Determine appropriate physiological measurements and procedures for a given problem</td>
<td>Examinations, presentations and assigned readings</td>
</tr>
</tbody>
</table>
IV. Course Level Justification
This course adds to previously learned knowledge of physiology and is consistent with 400-level physiology courses offered at other institutions.

V. Topical Course Outline
A. Introduction to rhythms, environment and animals
B. Endogenous rhythms and entrainment—light as a zeitgeber
C. Quest for the circadian clock
D. The circadian organization in mammals/two oscillator model
E. Non-photic zeitgebers
F. Impact of rhythms on sleep
G. The two process model: Integration of sleep and circadian rhythms
H. Photoperiodism
I. Circannual rhythms
J. Rhythms in the arctic
K. Chronotypes/Seasonality in humans
L. Learning and memory
M. Shift work
N. Circadian relationships and disease
O. Endocrine function and metabolism

VI. Suggested Texts


VII. Bibliography
1a. School or College
   AS CAS

1b. Division
   AMSC Division of Math Science

1c. Department
   Biological Sciences

2. Course Prefix
   BIOL

3. Course Number
   A416

4. Previous Course Prefix & Number
   N/A

5a. Credits/CEUs
   3

5b. Contact Hours
   (Lecture + Lab)
   (3+0)

6. Complete Course Title
   Exercise Physiology

   Abbreviated Title for Transcript (30 character)
   Exercise Physiology

7. Type of Course
   - [ ] Academic
   - [ ] Preparatory/Development
   - [ ] Non-credit
   - [ ] CEU
   - [ ] Professional Development

8. Type of Action:
   [ ] Add
   [ ] Change
   [ ] Delete

   If a change, mark appropriate boxes:
   - [ ] Prefix
   - [ ] Credits
   - [ ] Title
   - [ ] Grading Basis
   - [ ] Course Description
   - [ ] Test Score Prerequisites
   - [ ] Automatic Restrictions
   - [ ] Other
   - [ ] Course Number
   - [ ] Contact Hours
   - [ ] Repeat Status
   - [ ] Cross-Listed/Stacked
   - [ ] Course Prerequisites
   - [ ] Co-requisites
   - [ ] Registration Restrictions
   - [ ] General Education Requirement

9. Repeat Status No
   # of Repeats
   Max Credits

10. Grading Basis
   - [ ] A-F
   - [ ] P/NP
   - [ ] NG

11. Implementation Date
   - From:
     Fall/2015
   - To:
     Fall/9999

12. Cross Listed with
   [ ]
   Stacked with
   [ ]
   Cross-Listed Coordination Signature

13a. Impacted Courses or Programs:
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13b. Coordination Email
   Date: 6Jan14
   submitted to Faculty Listserv:  (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
   Date: 6Jan14

14. General Education Requirement
   Mark appropriate box:

   - [ ] Oral Communication
   - [ ] Written Communication
   - [ ] Quantitative Skills
   - [ ] Humanities
   - [ ] Fine Arts
   - [ ] Social Sciences
   - [ ] Natural Sciences
   - [ ] Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
   An examination of the effects of acute and chronic exercise on physiological and biochemical processes in the body as well as the role of exercise in health and disease, soreness and fatigue.

16a. Course Prerequisite(s)
   (list prefix and number or test code and score)
   (BIOL A310 or [BIOL A111 and BIOL A112]) with minimum grade of C.

16b. Co-requisite(s)
   (concurrent enrollment required)

16c. Automatic Restriction(s)

16d. Registration Restriction(s)
   (non-codable)

17. Mark if course has fees

18. Mark if course is a selected topic course

19. Justification for Action
   This course contributes to the development of a comprehensive discipline specific area in physiology. As part of our overall curriculum revision, which seeks to align our degree with the core concepts and competencies in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science), this course will become part of our rotation of upper division electives in physiology. This course has been taught as a BIOL A490 Selected Topics course.
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University of Alaska Anchorage
College of Arts and Sciences
Course Content Guide

I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A416
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Exercise Physiology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: An examination of the effects of acute and chronic exercise on physiological and biochemical processes in the body as well as the role of exercise in health and disease, soreness and fatigue.
K. Course Prerequisites: {BIOL A310 or [BIOL A111 and BIOL A112]} with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Build on basic physiological concepts with relevance to exercise.
   2. Discuss the how exercise physiology impacts health, disease and the obesity epidemic that industrialized countries are currently facing.
   3. Explain how biochemical processes are altered with exercise.
   4. Provide students with information and experiences on relevant procedures to measure exercise physiological variables.

B. Student Learning Outcomes and Assessment Measures

<table>
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<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
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<tr>
<td>1. Collect, analyze and interpret exercise physiological data.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Calculate, evaluate and solve conceptual and mathematical problems related to exercise physiology.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>3. Demonstrate an understanding of complex biochemical and physiological theories and concepts</td>
<td>Written assignments and examinations</td>
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<td>4. Determine appropriate physiological measurements and procedures for a given</td>
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</table>
IV. **Course Level Justification**
This course adds to previously learned knowledge of physiology and is consistent with 400-level physiology courses offered at other institutions.

V. **Topical Course Outline**
A. Thermodynamics and Energetics
   1. Calorimetry
   2. Energy Transduction in Cells and ATP
B. Metabolism
   1. Carbohydrate Metabolism
   2. Krebs Cycle and the Electron Transport Chain
   3. Lactate Metabolism
   4. Lipid and Ketone Metabolism
   5. Protein and Amino Acid Metabolism and Gluconeogenesis
   6. Hormonal Control of Metabolism
C. Ventilation
D. Heart and Systemic Circulation
E. Muscular System
F. Neural Regulation
G. Training Adaptations to Exercise
H. Muscle Soreness, Fatigue and Overtraining
I. Special Topics—Performance Enhancing Drugs
J. Special Topics—High Altitude Physiology
K. Exercise Immunology
L. Exercise and Disease
M. Obesity, Weight Control and Exercise Lecture

VI. **Suggested Texts**


VII. **Bibliography**

### 1. School or College
AS CAS

### 2. Course Prefix
BIOL

### 3. Course Number
A418

### 4. Previous Course Prefix & Number
N/A

### 5a. Credits/CEUs
3

### 5b. Contact Hours
(Lecture + Lab)
(3+0)

### 6. Complete Course Title
Fish Physiology

### 7. Type of Course
- [x] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

### 8. Type of Action:
- [x] Add
- [ ] Change
- [ ] Delete

#### If a change, mark appropriate boxes:
- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [ ] Course Description
- [ ] Test Score Prerequisites
- [ ] Automatic Restrictions
- [ ] Other
- [ ] Course Number
- [ ] Contact Hours
- [ ] Repeat Status
- [ ] Cross-Listed/Stacked
- [ ] Course Prerequisites
- [ ] Co-requisites
- [ ] Registration Restrictions
- [ ] General Education Requirement

### 9. Repeat Status No
- [ ] # of Repeats
- [ ] Max Credits

### 10. Grading Basis
- [x] A-F
- [ ] P/NP
- [ ] NG

### 11. Implementation Date
- Semester/Year:
  - From: Fall/2015
  - To: Fall/9999

### 12. Cross Listed with
- [ ] Stacked with

### 13a. Impacted Courses or Programs:
List any programs or college requirements that require this course.

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Initiator Signed Initials: __________
Date: __________________

### 13b. Coordination Email
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

### 13c. Coordination with Library Liaison
Date: 6Jan14

### 14. General Education Requirement
- [ ] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [ ] Integrative Capstone

### 15. Course Description (suggested length 20 to 50 words)
An overview of fish physiology with emphasis on understanding the ways in which fish are uniquely adapted to their physical environment.

### 16a. Course Prerequisite(s)
(list prefix and number or test code and score)
- BIOL A310 with minimum grade of C.

### 16b. Co-requisite(s)
(concurrent enrollment required)

### 16c. Automatic Restriction(s)
- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

### 16d. Registration Restriction(s)
(non-codable)

### 17. Mark if course has fees
- [ ]

### 18. Mark if course is a selected topic course
- [ ]

### 19. Justification for Action
This course contributes to the development of a comprehensive discipline specific area in physiology. As part of our overall curriculum revision, which seeks to align our degree with the core concepts and competencies in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science), this course will become part of our rotation of upper division electives in physiology. This course has been taught as a BIOL A490 Selected Topics course.
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<thead>
<tr>
<th>Position</th>
<th>Approval Status</th>
<th>Date</th>
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<tr>
<td>Khrys Duddleston</td>
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<tr>
<td>Initiator (TYPE NAME)</td>
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<td>Dean/Director of School/College</td>
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<td>Department Chair</td>
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<td>College/School Curriculum Committee Chair</td>
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<tr>
<td>Provost or Designee</td>
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I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts & Sciences
B. Course Prefix: BIOL
C. Course Number: A418
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Fish Physiology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: An overview of fish physiology with emphasis on understanding the ways in which fish are uniquely adapted to their physical environment.

K. Course Prerequisites: BIOL A310 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Detail the physiological processes that allow fishes to function, maintain homeostasis and survive in their environment and in response to environmental change and stressors.
   2. Guide students in their ability to synthesize and apply their knowledge of the physiological processes of fishes.
   3. Convey how the specialized structure and function of the physiological systems of fishes have evolved and how they enable different fish species to respond to and deal with unique environmental changes/stressors.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Summarize and articulate the key physiological processes of fish.</td>
<td>Written assignments, examinations and oral presentations</td>
</tr>
<tr>
<td>2. Critique how the physiological systems of fish allow them to maintain homeostasis in their environment and in response to environmental change.</td>
<td>Written assignments, examinations and oral presentations.</td>
</tr>
<tr>
<td>3. Compare and contrast the similarities and differences of the physiological systems of fishes that reside in different environments and predict how a fish may respond to</td>
<td>Written assignments, examinations and oral assignments.</td>
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</table>
IV. Course Level Justification
This course is similar to 400-level offerings in physiology at other universities. It requires prior understanding and expertise of a number of concepts of animal and cellular physiology.

V. Topical Course Outline
A. Locomotion
B. Feeding and nutrition
C. Respiration
D. Cardiovascular system
E. Ion-transport/osmoregulation/acid-base balance
F. Temperature
G. Endocrinology
H. Stress
I. Reproduction
J. Neurophysiology

VI. Suggested Texts

VII. Bibliography


Course Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course

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<th>5b. Contact Hours (Lecture + Lab)</th>
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6. Complete Course Title  
Ichthyology  
Abbreviated Title for Transcript (30 character)  

7. Type of Course  
学术

8. Type of Action:  
☐ Add or ☑ Change or ☐ Delete  

If a change, mark appropriate boxes:  
☐ Prefix  
☒ Credits  
☐ Title  
☐ Grading Basis  
☐ Course Description  
☐ Test Score Prerequisites  
☒ Automatic Restrictions  
☐ Class  
☐ Level  
☐ College  
☒ Major  
☐ Other CCG (please specify)

9. Repeat Status  
No  
# of Repeats  
Max Credits  

10. Grading Basis  
☒ A-F  
☐ P/NP  
☐ NG

11. Implementation Date  
From: Fall/2015  
To: Fall/9999

12. ☐ Cross Listed with  
☐ Stacked with  
Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.  
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Initiator Name (typed): Khrys Duddleston  
Initiator Signed Initials: ___________  
Date: ___________

13b. Coordination Email  
Date: 6Jan14  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 6Jan14

14. General Education Requirement  
Mark appropriate box:  
☐ Oral Communication  
☐ Written Communication  
☐ Quantitative Skills  
☐ Humanities  
☐ Fine Arts  
☐ Social Sciences  
☐ Natural Sciences  
☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)  
Evolution, taxonomy, anatomy, physiology, and ecology of fishes, with emphasis on Alaska’s taxa.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
(BIOL A252 and BIOL A320) with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)  
☐ College  
☐ Major  
☐ Class  
☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☐ Mark if course has fees  
18. ☐ Mark if course is a selected topic course

19. Justification for Action  
We are removing the laboratory portion of the course. Part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)

Initiator (faculty only)  
Khrys Duddleston  
Initiator (TYPE NAME)

☐ Approved  
☐ Disapproved  
Dean/Director of School/College  
Date

☐ Approved  
☐ Disapproved  
Undergraduate/Graduate Academic  
Board Chair  
Date

☐ Approved  
☐ Disapproved  
Provost or Designee  
Date
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A423
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Ichthyology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Evolution, taxonomy, anatomy, physiology, and ecology of fishes, with emphasis on Alaska’s taxa.
K. Course Prerequisites: [BIOL A252 and BIOL A320] with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Describe the physiological adaptations of fishes in the contexts of locomotion, respiration, buoyancy, thermal regulation, feeding, growth, sensory perception, and communication
   2. Introduce important exterior and interior anatomical features and understand how these define major fish groups
   3. Cover the evolutionary relationships among major fish groups as well as the relationship between fishes and other vertebrates
   4. Provide the framework for a working knowledge of fish taxonomy, focusing on major orders, economically and culturally important families, and common Alaskan freshwater, marine, and anadromous species
   5. Describe patterns of fish diversity and community structure at the regional (Alaska) scale, global scale, and within key habitats
   6. Cover basic concepts in fish ecology, including discussion of threats to fish biodiversity and the consequences of biodiversity loss.

B. Student Learning Outcomes and Assessment Measures

<table>
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<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>1. Describe the integrative association between the biology, morphology, classification, and evolution of fishes</td>
<td>Quizzes, group application exercises, writing assignments, and/or examinations</td>
</tr>
</tbody>
</table>
2. **Apply and interpret scientific terminology for fish anatomy and morphology to taxonomic descriptions and identification schemes including the use of dichotomous keys**
   - Quizzes, group application exercises, writing assignments, and/or examinations

3. **Contrast the morphological, physiological, and behavioral adaptations that allow survival aquatic environments, adapt fishes to their characteristic habitats, and enable competition and partitioning of resources among and within species**
   - Quizzes, group application exercises, writing assignments, and/or examinations

4. **Describe the functional and taxonomic diversity of fishes that occur in various habitats around Alaska and around the world.**
   - Quizzes, group application exercises, writing assignments, and/or examinations

5. **Characterize important threats to fish biodiversity both regionally and globally and discuss the ecological and sociological ramifications of diminished biodiversity**
   - Quizzes, group application exercises, writing assignments, and/or examinations

### IV. Course Level Justification
This course builds on concepts presented in 200- and 300-level courses and is comparable to 400-level ichthyology courses offered at other universities. Students are required to learn and integrate information from a variety of scientific disciplines; to read, understand, and apply ideas conveyed by primary scientific literature; to synthesize biological knowledge and social considerations; and to apply course materials to current problems.

### V. Topical Course Outline

- **A. Introduction, history, and the abiotic environment**
- **B. Anatomy, form, and movement**
  - 1. Respiration
  - 2. Buoyancy and thermal regulation
  - 3. Feeding, nutrition, digestion, excretion
  - 4. Growth
  - 5. Reproduction and life history
  - 6. Sensory perception
  - 7. Behavior and communication
- **C. Physiology and behavior**
- **D. Biodiversity and taxonomy**
  - 1. Systematics, genetics, and speciation
  - 2. Evolution
  - 3. Survey of fish diversity
    - i) Cartilaginous fishes
    - ii) Relict bony fishes
    - iii) Bony fishes
- **E. Zoogeography and communities**
  - 1. Zoogeography of freshwater fishes
  - 2. Zoogeography of marine fishes
  - 3. Communities of select habitats
- **F. Conservation**
VI. Suggested Texts

Selected articles from the primary literature

VII. Bibliography
### Course Action Request

**University of Alaska Anchorage**

**Proposal to Initiate, Add, Change, or Delete a Course**

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<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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**Complete Course Title**

Mammalogy

**Abbreviated Title for Transcript (30 character)**

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<td>☐ Preparatory/Development</td>
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<tr>
<td>☐ CEU</td>
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<td>☐ Professional Development</td>
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| 7. Type of Action: | ☐ Add | ☑ Change | ☐ Delete |

If a change, mark appropriate boxes:  
- ☐ Prefix  
- ☐ Credits  
- ☐ Title  
- ☐ Grading Basis  
- ☐ Course Description  
- ☐ Test Score Prerequisites  
- ☐ Automatic Restrictions  
- ☐ Other (please specify)  
- ☐ Course Number  
- ☐ Contact Hours  
- ☐ Repeat Status  
- ☐ Cross-Listed/Stacked  
- ☐ Course Prerequisites  
- ☐ Co-requisites  
- ☐ Registration Restrictions  
- ☐ General Education Requirement  

| 8. Type of Action: | ☐ Add | ☑ Change | ☐ Delete |

If a change, mark appropriate boxes:  
- ☐ Prefix  
- ☐ Credits  
- ☐ Title  
- ☐ Grading Basis  
- ☐ Course Description  
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- ☐ Registration Restrictions  
- ☐ General Education Requirement  

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| 10. Grading Basis | A-F | ☑ P/NP | ☐ NG |

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<td>To: Fall/9999</td>
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</table>

| 12. ☐ Cross Listed with |

| 13a. Impacted Courses or Programs: List any programs or college requirements that require this course. |

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Initiator Name (typed): Khrys Duddleston  
Initiator Signed Initials: ________  
Date: __________

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| 13c. Coordination with Library Liaison | Date: 6Jan14 |

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| 15. Course Description (suggested length 20 to 50 words) |

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| 17. ☐ Mark if course has fees |

| 18. ☐ Mark if course is a selected topic course |

| 19. Justification for Action |

As part of an overall revision of the B.S. in Biological Sciences degree, topics presented in this course are being folded into a new Vertebrate Biology course which covers both mammalogy and ornithology.

Initiator (faculty only)  
Khrys Duddleston  
Initiator (TYPE NAME)  

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Course Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course

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6. Complete Course Title  
Ornithology

Abbreviated Title for Transcript (30 character)

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- Class  
- Level  
- College  
- Major  
- Other (please specify)  
- Course Number  
- Contact Hours  
- Repeat Status  
- Cross-Listed/Stacked  
- Course Prerequisites  
- Co-requisites  
- Registration Restrictions  
- General Education Requirement

10. Grading Basis  
☑ A-F  
☐ P/NP  
☐ NG

11. Implementation Date  
From: Fall/2015  
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Cross-Listed Coordination Signature

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13c. Coordination with Library Liaison  
Date: 6Jan14

14. General Education Requirement  
Mark appropriate box:  
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16c. Automatic Restriction(s)

16d. Registration Restriction(s) (non-codable)

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
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Initiator (faculty only)  
Khrys Duddleston  
Initiator (TYPE NAME)

Initiator (faculty only)  
Date

Dean/Director of School/College  
Date

Undergraduate/Graduate Academic  
Date

Board Chair  
Date

Provost or Designee  
Date
## Course Action Request

### Proposal to Initiate, Add, Change, or Delete a Course

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<td>N/A</td>
<td>3</td>
<td>(Lecture + Lab) (3+0)</td>
</tr>
</tbody>
</table>

6. **Complete Course Title**

Marine Invertebrate Biology

Abbreviated Title for Transcript (30 character)

7. **Type of Course**

- **Academic**
- **Preparatory/Development**
- **Non-credit**
- **CEU**
- **Professional Development**

8. **Type of Action:**

- **Add**
- **Change**
- **Delete**

9. **Repeat Status No**

<table>
<thead>
<tr>
<th># of Repeats</th>
<th>Max Credits</th>
</tr>
</thead>
</table>

10. **Grading Basis**

- **A-F**
- **P/NP**
- **NG**

11. **Implementation Date**

From: Fall/2015 To: Fall/1999

12. **Cross Listed with**

- **Stacked with**

Cross-Listed Coordination Signature

13a. **Impacted Courses or Programs:**

List any programs or college requirements that require this course.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Initiator Name (typed): Khrys Duddleston

Initiator Signed Initials: ____________________________

Date: ____________________________

13b. **Coordination Email**

submitted to Faculty List: (uaa-faculty@lists.uaa.alaska.edu)

Date: 6Jan14

13c. **Coordination with Library Liaison**

Date: 6Jan14

14. **General Education Requirement**

Mark appropriate box:

- **Oral Communication**
- **Written Communication**
- **Quantitative Skills**
- **Humanities**
- **Fine Arts**
- **Social Sciences**
- **Natural Sciences**
- **Integrative Capstone**

15. **Course Description**

A study of the functional morphology, life history, systematics, evolution, and other selected aspects of the biology of marine invertebrates.

16a. **Course Prerequisite(s)**

(list prefix and number or test code and score)

BIOL A242 and BIOL A252 with minimum grade of C.

16b. **Co-requisite(s)**

(concurrent enrollment required)

16c. **Automatic Restriction(s)**

- **College**
- **Major**
- **Class**
- **Level**

16d. **Registration Restriction(s)**

(non-codable)

17. **Mark if course has fees**

18. **Mark if course is a selected topic course**

19. **Justification for Action**

We are removing the laboratory portion of the course and changing the name to better reflect content and align with our new course naming plan. Part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).

Initiator (faculty only)

Khrys Duddleston

Initiator (TYPE NAME)

Approved

Disapproved

Date

Dean/Director of School/College

Date

Undergraduate/Graduate Academic

Date

Board Chair

Approved

Disapproved

Provost or Designee

Date

Date
University of Alaska Anchorage  
College of Arts and Sciences  
Course Content Guide

I. Initiation Date:  
Spring 2014

II. Course Information  
A. College:  
College of Arts and Sciences  
B. Course prefix:  
BIOL  
C. Course Subject/Number:  
A427  
D. Number of credits:  
3.0  
E. Contact Hours:  
3+0  
F. Course Title:  
Marine Invertebrate Biology  
G. Grading Basis:  
A-F  
H. Implementation Date:  
Fall 2015  
I. Cross-listed/Stacked:  
N/A  
J. Course Description:  
A study of the functional morphology, life history, systematics, evolution, and other selected aspects of the biology of marine invertebrates  
K. Course Prerequisites:  
[BIOL A242 and BIOL A252] with minimum grade of C.  
L. Course Co-requisites:  
N/A  
M. Other restrictions:  
N/A  
N. Registration Restrictions:  
N/A  
O. Lab Fees:  
No

III. Instructional Goals and Student Learning Outcomes  
A. Instructional Goals. The instructor will:  
1. Elucidate current understanding and evolutionary relationships among the major marine invertebrate taxa studied.  
2. Characterize links between the structure and function of marine invertebrates.  
3. Illuminate key adaptations and trends in the evolutionary history of marine invertebrates.  
4. Describe and illustrate the major habitats where specific invertebrate taxa flourish.  
5. Elucidate the ecological roles and importance of marine invertebrates in their habitats.

B. Student Learning Outcomes and Assessment Measures:  

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe the current understanding and evolutionary relationships among major invertebrate taxa.</td>
<td>Reading assignments, examinations</td>
</tr>
<tr>
<td>2. Illustrate links between the structure and function of marine invertebrates.</td>
<td>Reading assignments, examinations, literature searches, oral reports</td>
</tr>
<tr>
<td>3. Compare and analyze key adaptations and trends in the evolutionary history of marine invertebrates.</td>
<td>Reading assignments, written assignments</td>
</tr>
<tr>
<td>4. Describe the major habitats where specific invertebrate taxa flourish.</td>
<td>Reading assignments, written assignments, examinations</td>
</tr>
<tr>
<td>5. Evaluate the ecological roles and importance</td>
<td>Reading assignments, written assignments</td>
</tr>
</tbody>
</table>
IV. Course Level Justification
Designed for Biological and Natural Science majors as an elective undergraduate course comparable to 400-level marine invertebrate biology courses offered at other universities. This course covers the principle concepts of invertebrate zoology essential to a student’s ability to succeed in and integrate course content with other 400-level courses in the biological sciences.

V. Topical Course Outline
A. Introduction to marine invertebrates
B. Simple animals
   1. Protozoa
   2. Porifera
   3. Placozoa
C. Organisms with 2 tissue layers
   1. Cnidaria
   2. Ctenophora
D. Organisms with 3 tissue layers
   1. Platyzolminthes
   2. Nematoda
   3. Nemertea
   4. Mollusca
   5. Annelida
   6. Crustacea
   7. Small phyla
   8. Deuterostomes
   9. Echinodermata
  10. Chordata
E. Phylogeny and Systematics
   1. Current hypotheses
   2. Clear relationships
   3. Unknown relationships
F. Ecological relationships
   1. Body structure and function relative to environment

VI. Suggested Texts


VII. Bibliography


Review articles from the following journals:
Science, American Association for the Advancement of Science
Nature, Nature Publishing Group
Deep Sea Research, Elsevier
Marine Ecology Progress Series, Inter-Research
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College
   AS CAS
1b. Division
   AMSC Division of Math Science
1c. Department
   Biological Sciences

2. Course Prefix
   BIOL
3. Course Number
   A430
4. Previous Course Prefix & Number
   N/A
5a. Credits/CEUs
   3
5b. Contact Hours
   (Lecture + Lab) (3+0)

6. Complete Course Title
   Marine Mammals and Seabirds
   Marine Mammals & Seabirds
   Abbreviated Title for Transcript (30 character)

7. Type of Course
   ☑ Academic
   ☐ Preparatory/Development
   ☐ Non-credit
   ☐ CEU
   ☐ Professional Development

8. Type of Action:
   ☑ Add
   ☐ Change
   ☐ Delete

If a change, mark appropriate boxes:
   ☐ Prefix
   ☑ Credits
   ☐ Title
   ☐ Grading Basis
   ☐ Course Description
   ☐ Test Score Prerequisites
   ☐ Automatic Restrictions
   ☐ Other CCG (please specify)

9. Repeat Status No
   # of Repeats
   Max Credits
   ☑ A-F
   ☐ P/NP
   ☐ NG
   ☐ A-F
   ☐ P/NP
   ☐ NG

10. Grading Basis
    ☑ A-F
    ☐ P/NP
    ☐ NG

11. Implementation Date
    Semester/year
    From: Fall/2015
    To: Fall/9999

12. Cross Listed with
    ☐ Stacked with
    Cross-Listed Coordination Signature

13a. Impacted Courses or Programs:
List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
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<th>Impacted Program/Course</th>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Initiator Name (typed): Khrys Duddleston
Initiator Signed Initials: ________ Date: __________

13b. Coordination Email
    Date: 6Jan14
    Submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
    Date: 6Jan14

14. General Education Requirement
    Mark appropriate box:
    ☐ Oral Communication
    ☐ Written Communication
    ☐ Quantitative Skills
    ☐ Humanities
    ☐ Fine Arts
    ☐ Social Sciences
    ☐ Natural Sciences
    ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
   The biology and ecology of marine mammals and seabirds, with an emphasis on understanding their evolution, physiology, and behavior.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
     [BIOL A271 and BIOL A288] with minimum grade of C.
16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)
     ☐ College
     ☐ Major
     ☐ Class
     ☐ Level

17. ☐ Mark if course has fees
18. ☐ Mark if course is a selected topic course

19. Justification for Action
    Removing stacked course, removing laboratory from course, revising name and content. Part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).

Initiator (faculty only)
Khrys Duddleston
Initiator (TYPE NAME)

Approved
Disapproved

Dean/Director of School/College
Date

Undergraduate/Graduate Academic Board Chair
Date

Provost or Designee
Date

Approved
Disapproved

Department Chair
Date

College/School Curriculum Committee Chair
Date
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A430
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Marine Mammals and Seabirds
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: The biology and ecology of marine mammals and seabirds, with an emphasis on understanding their evolution, physiology, and behavior.
K. Course Prerequisites: [BIOL A271 and BIOL A288] with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Teach students about marine mammals and seabirds: where they originated from, their evolutionary history, and the anatomical, physiological, reproductive, and behavioral changes that resulted from their re-entry into the marine habitat.
   2. Highlight the suite of morphological and physiological changes that have taken place that allow marine mammals and seabirds to exploit underwater and at-surface food resources, and explain how foraging behavior has shaped social evolution.
   3. Emphasize how reproductive strategies are closely tied to evolutionary history, foraging ecology, and social organization for marine mammals and seabirds.
   4. Convey the critical role that marine mammals and seabirds play in marine ecosystems, and make students aware of how human activities are impacting marine mammal and seabird populations throughout the globe.
   5. Provide detailed examples of how the anatomical and physiological traits of marine mammals and seabirds are uniquely linked to their habitat, and of how changes in that habitat may influence species diversity and abundance.
   6. Relate all of the above to current issues in Alaskan marine ecosystems and resources - with a focus on balancing the many values represented in our environment.
   7. Teach students how to evaluate and integrate information from a variety of different sources and perspectives.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon completion of</td>
<td></td>
</tr>
</tbody>
</table>

135
this course, the student will be able to:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read and understand current research papers published in the area of marine mammal and seabird biology.</td>
<td>In class discussions and demonstrations, written assignments</td>
</tr>
<tr>
<td>Integrate information from scientific articles with that provided in lecture and textbook assignments, and use this information to evaluate conservation issues</td>
<td>Exams, written assignments, in class reports</td>
</tr>
<tr>
<td>Compare adaptations to marine existence among species and assess how habitat influences ecology and behavior</td>
<td>Midterm and final exams</td>
</tr>
<tr>
<td>Synthesize and integrate information from lecture and literature and convey an understanding of the way in which marine mammals and seabirds have adapted to their environment.</td>
<td>Writing assignments, exams, presentations and final paper</td>
</tr>
</tbody>
</table>

IV. Course Level Justification
This course builds on concepts presented in 200 level courses. Students are required to learn and integrate information from a variety of scientific sources to gain an in-depth understanding of marine mammals and seabirds, and their roles within the marine ecosystems in which they are found.

V. Topical Course Outline
A. The marine habitat and speciation
   1. Systematics
   2. Evolution and distribution of Pinnipeds
   3. Evolution and distribution of Cetaceans
   4. Evolution and distribution of Sirenians, Polar Bears and Otters
   5. Evolution and distribution of Seabirds
B. Adaptations to aquatic existence
   1. Morphological
   2. Thermoregulatory
   3. Osmoregulation and water balance
   4. Sensory physiology
C. Adaptations for diving
   1. Increased oxygen storage
   2. Cardiovascular control
   3. Hydrodynamic adaptations
   4. Cost of transport
   5. Reduced metabolic rate
D. Diving and foraging behavior
   1. Methods for studying diving and foraging behavior
   2. General patterns of diving behavior
   3. Foraging behavior and ecology
   4. Trophic roles and foraging strategies
   5. Optimality models
E. Reproductive energetics
   1. Costs of reproduction
   2. Evolution of mating systems
3. Offspring provisioning strategies
4. Reproductive strategies
5. Impact on foraging ecology and distribution

F. Social systems & population dynamics
   1. Social systems
   2. Link to reproductive systems
   3. Implications for population dynamics

G. Management & conservation
   1. Requirements for appropriate management decisions
   2. Protective legislation
   3. Local management, subsistence issues
   4. Fisheries interactions
   5. Contaminants and pollution

VI. **Suggested Texts**


VII. **Bibliography**


In addition to textbook assignments, an extensive reference list of current literature from scientific journals is utilized for this course.
# Proposal to Initiate, Add, Change, or Delete a Course

### Course Action Request
University of Alaska Anchorage

**Complete Course Title**
Plant Diversity and Evolution

**Abbreviated Title for Transcript (30 characters)**
Plant Div. and Evol.

**Type of Course**
- [x] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

**Repeat Status No**

**Max Credits**

**Implementation Date**
From: Fall/2015
To: Fall/9999

**Course Description**
Focuses on understanding, organizing and describing plant diversity in relation to evolutionary principles; integrating data to address hypotheses; and identification and classification of the Alaskan flora.

**Course Prerequisite(s)**
- BIOL A271 or BIOL A288 with minimum grade of C

**Registration Restriction(s)**
- (non-codable)

**Justification for Action**
This course is an updated version of the formerly 300 level systematic botany course that better reflects the modernized content and expectation level of the course and content. Removing stacked course, removing laboratory from course, revising name and content. Part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).
<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
<th>Dean/Director of School/College</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khrys Duddleston</td>
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</tr>
<tr>
<td>Initiator (TYPE NAME)</td>
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<td></td>
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<td>Approved</td>
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<tr>
<td>Department Chair</td>
<td>Date</td>
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<tr>
<td>College/School Curriculum Committee Chair</td>
<td>Date</td>
<td>Provost or Designee</td>
<td>Date</td>
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<tr>
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</tr>
</tbody>
</table>
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A431
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Plant Diversity and Evolution
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Focuses on understanding, organizing and describing plant diversity in relation to evolutionary principles; integrating data to address hypotheses; and identification and classification of the Alaskan flora.
K. Course Prerequisites: [BIOL A271 or BIOL A288] with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide a basis for understanding the principles shaping plant diversity.
   2. Discuss patterns of plant diversity and evolution.
   3. Present methodologies for deriving evolutionary histories and classification.
   4. Explain systems of plant classification.
   5. Explain how taxonomic keys are used.
   6. Introduce students to the major vascular plants families and genera of Alaska.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Explain the principles shaping plant diversity.</td>
<td>Examinations and/or written assignments</td>
</tr>
<tr>
<td>2. Summarize the patterns of plant diversity and evolution.</td>
<td>Examinations and/or written assignments</td>
</tr>
<tr>
<td>3. Describe the primary methodologies for deriving evolutionary histories and classification.</td>
<td>Examinations and/or written assignments</td>
</tr>
<tr>
<td>4. Explain and discriminate among systems of plant classification.</td>
<td>Examinations and/or written and oral assignments</td>
</tr>
<tr>
<td>5. Generate hypotheses, integrate and analyze</td>
<td>Written assignments</td>
</tr>
</tbody>
</table>
IV. Course Level Justification
This course builds on the fundamental elements of botany, evolution, and ecology to generate increased mastery of biological themes scientific inquiry and communication.

V. Topical Course Outline
A. Introduction and Basic Principles
B. History of Systematics
C. Sources of Variation
   1. Morphological Variation – Vegetative
   2. Morphological Variation - Reproductive
D. Evolutionary Processes
   1. Natural Selection and Genetic Drift
   2. Plant Genomes and Genetic Variation
E. Genetic and Morphological Variation within Species
   1. Biometrical Methods
   2. Plant Genomes and Genetic Variation
F. Speciation
   1. Species Delineation
   2. Process of Speciation
   3. Genetic Transitions
   4. Species Concepts
G. Plant Collection, Curation, and Species Description
H. Plant Diversity I – Basal Lineages
   1. Introduction to dichotomous keys
   2. Chlorophytes to Land Plants
   3. Bryophytes
   4. Pteridophytes
   5. Gymnosperms
   6. Angiosperms
I. Hybridization
J. Process of Introgression
K. Plant Diversity II – Basal Angiosperms
   1. Ranunculales and Allies
   2. Caryophyllid and Basal Rosid Clades
   3. Eurosids
L. Polyploidy
M. Chromosome Evolution and Speciation
N. Molecular Approaches
O. Cladistic and Phenetic Analysis
P. Mating System and Pollination
Q. Plant Diversity III – Derived Angiosperms
   1. Euasterids I & II
   2. Petaloid Monocots
   3. Graminoids
R. Evolutionary Patterns
   1. Diversification and Radiation
   2. Biogeography and Diversity in Alaska
VI. **Suggested Texts**


VII. **Bibliography**


Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College
   AS CAS

1b. Division
   AMSC Division of Math Science

1c. Department
   Biological Sciences

2. Course Prefix
   BIOL

3. Course Number
   A441

4. Previous Course Prefix & Number
   N/A

5a. Credits/CEUs
   3

5b. Contact Hours
   (Lecture + Lab)
   (3+0)

6. Complete Course Title
   Animal Behavior

   Abbreviated Title for Transcript (30 character)

7. Type of Course
   ☑ Academic
   ☐ Preparatory/Development
   ☐ Non-credit
   ☐ CEU
   ☐ Professional Development

8. Type of Action:
   ☐ Add
   ☑ Change
   ☐ Delete

   If a change, mark appropriate boxes:
   ☐ Prefix
   ☑ Course Number
   ☐ Credits
   ☐ Title
   ☐ Repeat Status
   ☐ Grading Basis
   ☐ Cross-Listed/Stacked
   ☐ Course Description
   ☐ Course Prerequisites
   ☐ Co-requisites
   ☐ Test Score Prerequisites
   ☐ Registration Restrictions
   ☐ General Education Requirement
   ☐ Class
   ☐ Level
   ☐ College
   ☐ Major
   ☐ Other CCG (please specify)

9. Repeat Status
   ☑ No
   # of Repeats
   Max Credits

10. Grading Basis
    ☑ A-F
    ☐ P/NP
    ☐ NG

11. Implementation Date
    semester/year
    From: Fall/2015
    To: Fall/9999

12. ☐ Cross Listed with
    ☐ Stacked with
    Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
    Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.aaa.alaska.edu/governance.

    | Impacted Program/Course | Date of Coordination | Chair/Coordinator Contacted |
    |-------------------------|----------------------|-----------------------------|
    | 1.                      |                      |                             |
    | 2.                      |                      |                             |
    | 3.                      |                      |                             |

    Initiator Name (typed): Khrys Duddleston
    Initiator Signed Initials: __________ Date: __________

    13b. Coordination Email
         Date: 6Jan14
         submitted to Faculty Listserv: (uaa-faculty@lists.aaa.alaska.edu)

    13c. Coordination with Library Liaison
         Date: 6Jan14

    14. General Education Requirement
        Mark appropriate box:
        ☐ Oral Communication
        ☐ Written Communication
        ☐ Quantitative Skills
        ☐ Humanities
        ☐ Fine Arts
        ☐ Social Sciences
        ☐ Natural Sciences
        ☐ Integrative Capstone

    15. Course Description (suggested length 20 to 50 words)
        Ecological, evolutionary, physiological, and genetic basis of animal behavior.

    16a. Course Prerequisite(s) (list prefix and number or test code and score)
         BIOL A288 with minimum grade of C

    16b. Co-requisite(s) (concurrent enrollment required)

    16c. Automatic Restriction(s)
         ☐ College
         ☐ Major
         ☐ Class
         ☐ Level

    16d. Registration Restriction(s) (non-codable)

    17. ☐ Mark if course has fees
    18. ☐ Mark if course is a selected topic course

    19. Justification for Action
        We are removing the laboratory portion of the course. Part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)

    Initiator (facultly only)
    Khrys Duddleston
    Initiator (TYPE NAME)

    ☐ Approved
    ☐ Disapproved

    Dean/Director of School/College
    Date

    Undergraduate/Graduate Academic
    Board Chair
    Date

    Provost or Designee
    Date

    Approved
    Disapproved
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A441
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Animal Behavior
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: The ecological, evolutionary, physiological, and genetic basis of animal behavior.
K. Course Prerequisites: BIOL A288 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Convey how animal behaviors are adaptations to solving problems imposed by the animal's environment. Students will study a full range of behavioral fields from sexual selection and parental care to hormonal influences on behavior and migration. In every area students will gain insights into interactions between behavior and the environment.
   2. Teach students to analyze behavioral problems (and other ecological problems) on four distinct levels of analysis (Tinbergen’s four why’s): “Survival Value” (selective advantage), “Evolution” (phylogenetic history), “Causation” (proximate control), and “Ontogeny” (genetic x environment interaction in the development of behavior). Students learn to think about any given problem logically at four separate levels, thereby developing their complex thinking skills and teaching them a powerful scientific technique for understanding behavior.
   3. Give students the opportunity to apply behavioral techniques to the solution of conservation problems.
   4. Teach students the conceptual basis of evolutionary theory that underlies the field of behavioral ecology. Students will gain a more comprehensive command of modern evolutionary theory.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Explain the evolutionary significance of a full suite of behaviors, with a clear understanding of the relationship between behaviors and</td>
<td>Examinations, discussion, assignments.</td>
</tr>
</tbody>
</table>
environmental constraints.

2. Analyze a selected behavior with four distinct levels of analysis: survival value, evolution, causation, and ontogeny. The student will understand how all four levels occur simultaneously, and how all four levels are needed for a complete understanding of behavior.

3. Discuss the application of behavioral techniques to the conservation of wild animals.

4. Synthesize behavioral and environmental information into evolutionary theory to explain animal-environment interactions.

5. Read, assess, and critique current research papers published in the area of behavioral ecology both in class and in writing.

IV. Course Level Justification
Comparable to 400-level animal behavior or behavioral ecology courses offered at other universities. This course covers the principle concepts essential to the student’s ability to succeed in graduate programs and career pathways relevant to the discipline of animal behavior.

V. Topical Course Outline
A. Evolution of behavior
B. Sexual conflict and sexual selection
C. Reproduction and mating systems
D. Parental care
E. Hypothesis testing in behavioral ecology
F. Behavioral applications to the conservation of wild animals
G. Applied behavior
H. Competition and aggression
I. Concord fallacy
J. Predator-prey relations and mimicry
K. Group living
L. Altruistic behavior and cooperation
M. Communication
N. Cultural evolution
O. Genetics of behavior
P. Phylogenetics and behavior
Q. Migration
R. Sensory processes
S. Hormones and behavior
T. Behavioral ecology of humans

VI. Suggested Texts
VII. Bibliography


**Course Action Request**

**University of Alaska Anchorage**

**Proposal to Initiate, Add, Change, or Delete a Course**

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>AS CAS</th>
<th>1b. Division</th>
<th>AMSC Division of Math Science</th>
<th>1c. Department</th>
<th>Biological Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Course Prefix</td>
<td>BIOL</td>
<td>3. Course Number</td>
<td>A442</td>
<td>4. Previous Course Prefix &amp; Number</td>
<td>N/A</td>
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</table>

**6. Complete Course Title**

Experiential Learning: Animal Behavior
EL: Animal Behavior

**Abbreviated Title for Transcript (30 character)**

**7. Type of Course**

☑ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

**8. Type of Action:** ☒ Add  ☐ Change  ☐ Delete

**9. Repeat Status No**

☑  # of Repeats

☐ Max Credits

**10. Grading Basis**

☑ A-F  ☐ P/NP  ☐ NG

**11. Implementation Date**

semester/year

From: Fall/2015  To: Fall/9999

**12. Cross Listed with**

☐ Stacked with

Cross-Listed Coordination Signature

**13a. Impacted Courses or Programs:** List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.ualaska.edu/governance.

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**Initiator Name (typed): Khrys Duddleston**  Initiator Signed Initials: _________  Date: __________

**13b. Coordination Email**

Date: 6Jan14

submitted to Faculty Listserv: (uaa-faculty@lists.ualaska.edu)

**13c. Coordination with Library Liaison**

Date: 6Jan14

**14. General Education Requirement**

Mark appropriate box:

☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities

☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

**15. Course Description (suggested length 20 to 50 words)**

Theory and practice in research methods and analysis in animal behavior. Students conduct research in areas such as foraging behavior, communication, predator avoidance, sensory systems and social behaviors

**16a. Course Prerequisite(s) (list prefix and number or test code and score)**

BIOL A273 with minimum grade of C

**16b. Co-requisite(s) (concurrent enrollment required)**

BIOL A441

**16c. Automatic Restriction(s)**

☐ College  ☐ Major  ☐ Class  ☐ Level

**16d. Registration Restriction(s) (non-codable)**

**17. Mark if course has fees**

☐ Yes  ☐ No

**18. Mark if course is a selected topic course**

☐ Yes  ☐ No

**19. Justification for Action**

This course replaces the laboratory component of BIOL A441, which is being removed. This change is part of our overall curriculum revision, which seeks to align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).

**Initiator (faculty only)**

Khrys Duddleston

Initiator (TYPE NAME)

☑ Approved  ☐ Disapproved

Date

☐ Approved  ☐ Disapproved

Dean/Director of School/College  Date

☐ Approved  ☐ Disapproved

Undergraduate/Graduate Academic  Date

Board Chair

☐ Approved  ☐ Disapproved

Provost or Designee  Date

☑ Approved  ☐ Disapproved

College/School Curriculum Committee Chair  Date

☑ Approved  ☐ Disapproved

Department Chair  Date

☑ Approved  ☐ Disapproved

5346
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A442
D. Number of Credits: 3
E. Contact Hours: 1+4
F. Course Title: Experiential Learning: Animal Behavior
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Theory and practice in research methods and analysis in animal behavior. Students conduct research in areas such as foraging behavior, communication, predator avoidance, sensory systems and social behaviors.
K. Course Prerequisites: BIOL A273 with minimum grade of C
L. Course Co-requisites: BIOL A441
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: Yes

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide an introduction to the scientific exploration of animal behavior including the history, theory, and methods.
   2. Offer the opportunity to watch animals in the wild with a scientist’s eyes and mind by thinking about their behavior in the context of natural selection and evolution.
   3. Give students hands on experiences collecting data using appropriate behavioral sampling techniques and interpreting data using appropriate statistical methods.
   4. Explain the components of effective communication, and provide assignments that allow the students to practice these skills.

B. Student Learning Outcomes and Assessment Measures

<table>
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<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Apply the scientific process to formulate a question of interest in behavior to be tested in the field and/or laboratory.</td>
<td>Written assignments or oral presentations</td>
</tr>
<tr>
<td>2. Design and conduct an independent investigation to test hypotheses relating to animal behavior.</td>
<td>Written assignments and/or media assignments</td>
</tr>
<tr>
<td>3. Use relevant evidence gathered through</td>
<td>Written assignments</td>
</tr>
</tbody>
</table>
accepted scholarly methods and properly acknowledge sources of information

| 4. Use statistical analyses appropriate to the independent investigation. | Written assignments |
| 5. Effectively communicate one’s findings both verbally and in writing. | Written assignments and oral presentations |
| 6. Demonstrate critical thinking in the evaluation of scientific findings. | Written assignments, oral presentations, and classroom discussions |

IV. Course Level Justification
Designed for Biology and Natural Sciences majors as an elective undergraduate course comparable to 400-level animal behavior or behavioral ecology courses offered at other universities. This course covers the principle concepts essential to the student’s ability to succeed in graduate programs and career pathways relevant to the discipline of animal behavior.

V. Topical Course Outline
A. Introduction to methods of behavioral observation
   1. Scan sampling
   2. Focal animal sampling
   3. Ad lib sampling
   4. All occurrences sampling
B. Experimental design
C. Literature review
D. Pilot data collection
E. Project proposal
F. Data collection
G. Data analysis and statistics
H. Writing the scientific paper
I. Presenting the Results

VI. Suggested Texts

VII. Bibliography


# Course Action Request

## University of Alaska Anchorage

**Proposal to Initiate, Add, Change, or Delete a Course**

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<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
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<td>Microbial Biotechnology</td>
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<th>7. Type of Course</th>
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<tr>
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<td>To: Fall/9999</td>
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<td>Stacked</td>
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<tr>
<th>13a. Impacted Courses or Programs:</th>
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<tbody>
<tr>
<td>List any programs or college requirements that require this course.</td>
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</tbody>
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**Course Description**

Application of microbiology for improvement of human kind, including genetic engineering of microorganisms to produced products of importance to human health, microbe-based foods and beverages, microbe-based bio-control, biofuels and bioremediation.

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<th>14. General Education Requirement</th>
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<td>Oral Communication</td>
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<td>Written Communication</td>
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<tr>
<td>Quantitative Skills</td>
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<td>Humanities</td>
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<td>Fine Arts</td>
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<tr>
<td>Social Sciences</td>
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<tr>
<td>Natural Sciences</td>
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<tr>
<td>Integrative Capstone</td>
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<tr>
<th>15. Course Prerequisite(s) (list prefix and number or test code and score)</th>
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<td>BIOL A340 with minimum grade of C</td>
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<tr>
<th>16a. Co-requisite(s) (concurrent enrollment required)</th>
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<thead>
<tr>
<th>16b. Registration Restriction(s) (non-codable)</th>
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<thead>
<tr>
<th>17. Mark if course has fees</th>
</tr>
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<tr>
<th>18. Mark if course is a selected topic course</th>
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<table>
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<tr>
<th>19. Justification for Action</th>
</tr>
</thead>
</table>

This course is part of an overall revision of the Biological Sciences curriculum. The course description is being updated and the name is being change to better reflect the content of the course. Stacking with BIOL A651 is being removed (BIOL A651 is being deleted).

---

**Initiator Name (typed):** Khrys Duddleston  
**Initiator Signed Initials:** __________  
**Date:** __________

**Initiator Email:** submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

**Date:** 6Jan14

---

**Initiator:** Khrys Duddleston  
**Initiator (TYPE NAME):**

<table>
<thead>
<tr>
<th>Approved</th>
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**Dean/Director of School/College:**  
**Date:** __________

**Undergraduate/Graduate Academic:**  
**Date:** __________

**Board Chair:**  
**Date:** __________

**Provost or Designee:**  
**Date:** __________

---

**Course Action Request**  
**University of Alaska Anchorage**  
**Proposal to Initiate, Add, Change, or Delete a Course**
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A451
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Microbial Biotechnology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Application of microbiology for improvement of human kind, including genetic engineering of microorganisms to produce products of importance to human health, microbe-based foods and beverages, microbe-based bio-control, biofuels and bioremediation
K. Course Prerequisites: BIOL A340 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Present the principle concepts behind the applied use of microorganisms in a variety of fields
   2. Provide examples of the design, growth, and processing of microorganisms for human benefit
   3. Describe the production of microbial-based foods and beverages on a large scale
   4. Describe the use of microorganisms in agriculture and in reclamation of contaminated sites.
   5. Discuss the latest research findings relevant to the use of microorganism for improvement of human

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
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</thead>
<tbody>
<tr>
<td>1) Demonstrate understanding of the use of traditional and molecular techniques to manipulate the genetic make-up of microorganisms</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2) Propose the construction of a genetically modified microorganism for release into the</td>
<td>Project, paper, oral presentation and in class discussions</td>
</tr>
</tbody>
</table>

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environment and defend that proposal on scientific, ethical and economic means

3) Evaluate the factors affecting the use of microorganisms in agriculture and bioremediation
   Written assignments, in class discussions, examinations

4) Demonstrate understanding of the production of microbially-based foods and beverages
   Written assignments, examinations

5) Evaluate the primary literature in applied microbiology and microbial biotechnology
   Written assignments, examinations

IV. Course Level Justification
This course builds upon knowledge of microbiology, cell biology and genetics. It is equivalent to other 400-level courses in applied microbiology and microbial biotechnology at other universities.

V. Topical Course Outline
A. Molecular Microbial Biotechnology
   1. Methods of strain development
      a. pre-recombinant DNA technology
      b. post-recombinant DNA technology
   2. Cloning
      a. bacteria
      b. yeast
   3. Expression of foreign DNA
   4. Growth of modified microbes
   5. Downstream processing
B. Microbes as Living Factories
   1. Biocatalysis of useful products
   2. Large-scale production of proteins
   3. Organic synthesis
   4. Synthesis of optically pure drugs
   5. Antibiotics
   6. Polysaccharides and polyesters
   7. Food additives
C. Microbial Enzymes
   1. Production and application
D. Microbial-based foods and beverages
   1. Fermented foods
      a. Yogurt
      b. Cheese
      c. Sauerkraut
      d. Kimchi
      e. Chocolate
   2. Fermented beverages
      a. Beer
      b. Wine
      c. Distilled liquors
E. Plant-Microbe Interactions
   1. Protection of plants from frost
   2. Improvement of crop yields,
   3. *A. tumefaciens* in the production of transgenic plants

F. Microbes and Energy
   1. Biomass to fuels
      a. Ethanol
      b. Methane
   2. Bacterial batteries

G. Environmental Applications
   1. Biodegradation and bioremediation
   2. Sewage and wastewater treatment

VI. Suggested Texts

VII. Bibliography
Primary literature from journals such as: Applied and Environmental Microbiology, Applied Microbiology and Biotechnology, Journal of Applied Microbiology


Course Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course

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6. Complete Course Title  
Experiential Learning: Microbial Ecology  
EL: Microbial Ecology  
Abbreviated Title for Transcript (30 character)  

7. Type of Course  
☑ Academic  
☐ Preparatory/Development  
☐ Non-credit  
☐ CEU  
☐ Professional Development

8. Type of Action:  
☒ Add  
☐ Change  
☐ Delete

If a change, mark appropriate boxes:  
☐ Prefix  
☐ Credits  
☐ Title  
☐ Grading Basis  
☐ Course Description  
☐ Test Score Prerequisites  
☐ Automatic Restrictions  
☐ Other  
☐ Course Number  
☐ Contact Hours  
☐ Repeat Status  
☐ Cross-Listed/Stacked  
☐ Course Prerequisites  
☐ Co-requisites  
☐ Registration Restrictions  
☐ General Education Requirement

9. Repeat Status No  
# of Repeats  
Max Credits

10. Grading Basis  
☒ A-F  
☐ P/NP  
☐ NG

11. Implementation Date  
From: Fall/2015  
To: Fall/9999

12. ☒ Cross Listed  
☐ with  
☐ Stacked  
with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs:  
List any programs or college requirements that require this course.  
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

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Initiator Signed Initials: ___  
Date: __________

13b. Coordination Email  
Date: 6Jan14  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 6Jan14

14. General Education Requirement  
Mark appropriate box:  
☐ Oral Communication  
☐ Written Communication  
☐ Quantitative Skills  
☐ Humanities  
☐ Fine Arts  
☐ Social Sciences  
☐ Natural Sciences  
☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)  
Theory and application of laboratory techniques in microbial ecology, diversity and evolution with an emphasis on experimental design, scientific writing and oral presentation skills.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
BIOL A342 with minimum grade of C and [BIOL A450 or concurrent enrollment]

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)  
☐ College  
☐ Major  
☐ Class  
☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☒ Mark if course has fees

18. ☒ Mark if course is a selected topic course

19. Justification for Action  
The course prepares students for graduate school or careers in the environmental and/or microbial sciences. It is a companion laboratory-based course to BIOL A450 (Microbial Ecology). This change is part of our overall curriculum revision, which seeks to align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)
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</table>
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A453
D. Number of Credits: 4
E. Contact Hours: 2+4
F. Course Title: Experiential Learning: Microbial Ecology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A

Course Description: Theory and application of laboratory techniques in microbial ecology, diversity and evolution with an emphasis on experimental design, scientific writing and oral presentation skills.

J. Course Prerequisites: BIOL A342 with minimum grade of C and [BIOL A450 or concurrent enrollment]
K. Course Co-requisites: N/A
L. Other Restrictions: N/A
M. Registration Restrictions: N/A
N. Course Fees: Yes

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Guide students in selecting, comparing and interpreting scientific literature, synthesizing information and maintenance of a professional/field lab notebook.
   2. Train and guide students in microbial ecology and microbial evolution laboratory techniques.
   3. Support student-development of group projects to characterize microbial diversity and diversity changes in experimentally altered environments using culture and/or sequence based methods by facilitating discussion of research topics and providing guidance in experimental design, and data collection and analysis.
   4. Provide review and critical analysis of student proposals and guide students in student-to-student peer review.

A. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>1. Perform and interpret laboratory techniques in microbial ecology.</td>
<td>Written assignments and examinations, projects</td>
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<tr>
<td>2. Develop an experimental research plan, including research aims, experimental design</td>
<td>Project work, group discussion and/or written assignments.</td>
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</tbody>
</table>
### 3. Demonstrate competency in quantitative analysis and interpretation of scientific data in microbial ecology.

Written assignments, examinations and/or projects.

### 4. Communicate the results of scientific inquiry to an audience of scientific peers.

Oral Presentation, primary research paper, and/or written presentation materials.

---

**IV. Course Level Justification**

This experiential learning course is designed for Biological and Natural Science majors as a selective undergraduate course comparable to 400-level Microbial Ecology/Environmental Microbiology laboratory courses offered at other universities.

**V. Topical Course Outline**

A. Research Project Proposals

   1. Questions and Methods in Microbial Ecology
      a. Developing a project in Microbial Ecology and/or Microbial Evolution.
      b. Comparing different experimental systems in microbial ecology.

   2. Experimental Design
      a. Develop research aims.
      b. Develop hypothesis and experimental design.
      c. Generate and elaborate experimental protocols.

B. Experimentation – Microbial Ecology and Evolution

   1. Practical Skills
      a. Biological and Chemical Safety
      b. Examples of methods in community organism diversity
         1. Fluorescence in-situ hybridization
         2. Flow Cytometry
         3. 16S/23S/5S Pyrosequencing
      c. Examples of methods in genetic diversity
         1. Amplicon sequencing and community metabolic diversity
         2. Metabolic analysis
      d. Examples of methods in microcosms
         1. Microbial interactions
         2. Microbiology of the biomes
         3. Microbial evolution

   2. Data analysis
      a. Qualitative data analysis
      b. Quantitative data analysis
      c. Critical analysis and troubleshooting

C. Research communication

   1. In-lab journal article discussion/annotation
   2. In-lab biotechnology project discussion/presentation
   3. Primary research paper
      a. Peer Review
   4. Oral presentation to a scientific audience – In-class presentation

**VI. Suggested Texts**

A selection of journal articles relevant to course content chosen from primary literature (Science, Nature, Journal of Bacteriology, Microbial Ecology, Cell, EMBO, PNAS, etc.).

VII. **Bibliography**

Journal Articles from primary literature (Science, Nature, Journal of Bacteriology, Microbial Ecology, Cell, EMBO, PNAS, etc.) related to student investigative projects.

Web-based resources for project development and data analysis, including (but not limited to) DNA sequence analysis (EZ-Taxon, NCBI BLAST toolkit, NCBI genomic data information), Microbial ID analysis tools (API online resources), image analysis platforms (Image J) and genomics.

Reference books related to student research topics and the identification and description of diverse microbial organisms, including but not limited to:

Bergey’s Manual of Systematic Bacteriology. Volumes 1 through 5:


# Template for Course Action Request

### 1. School or College

**AS CAS**

### 2. Course Prefix

**BIOL**

### 3. Course Number

**A454**

### 4. Previous Course Prefix & Number

**N/A**

### 5. Credits/CEUs

**4**

### 6. Contact Hours

(2+4)

### 7. Type of Course

- [ ] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

### 8. Type of Action

- [x] Add
- [ ] Change
- [ ] Delete

### 9. Repeat Status

- [ ] No
- [ ] # of Repeats
- [ ] Max Credits

### 10. Grading Basis

- [x] A-F
- [ ] P/NP
- [ ] NG

### 11. Implementation Date

From: Fall/2015
To: Fall/9999

### 12. Cross Listed with

- [ ] Stacked with

### 13a. Impacted Courses or Programs

List any programs or college requirements that require this course. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

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**Initiator Name (typed):** Khrys Duddleston  
**Initiator Signed Initials:__________**  
**Date:________________**

### 13b. Coordination Email

submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

### 13c. Coordination with Library Liaison

Date: 6Jan14

### 14. General Education Requirement

Mark appropriate box:

- [ ] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [ ] Integrative Capstone

### 15. Course Description

**Theory and application of laboratory techniques in microbial biotechnology, genetic engineering of microorganisms, and applied microbiology with an emphasis on experimental design, data collection and analysis and scientific writing and oral presentation skills.**

### 16a. Course Prerequisite(s)

**BIOL A342 with minimum grade of C and [BIOL A451 or concurrent enrollment or Instructor Permission]**

### 16b. Co-requisite(s)

**Concurrent enrollment required**

### 16c. Automatic Restriction(s)

- [ ] College  
- [ ] Major  
- [ ] Class  
- [ ] Level

### 16d. Registration Restriction(s)

**Non-codable**

### 17. Mark if course has fees

- [ ]

### 18. Mark if course is a selected topic course

- [ ]

### 19. Justification for Action

The course prepares students for graduate school or careers in molecular biology, biotechnology and the microbial sciences. It is a companion laboratory-based course to BIOL A451 (Microbial Biotechnology). This change is part of our overall curriculum revision, which seeks to align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).
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I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A454
D. Number of Credits: 4
E. Contact Hours: 2+4
F. Course Title: Experiential Learning: Applied Microbiology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Theory and application of laboratory techniques in microbial biotechnology, genetic engineering of microorganisms, and applied microbiology with an emphasis on experimental design, data collection and analysis and scientific writing and oral presentation skills.
K. Course Prerequisites: BIOL A342 with minimum grade of C and [BIOL A451 or concurrent enrollment or Instructor Permission]
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: Yes

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Guide student in selecting, comparing and interpreting scientific literature, synthesizing information and the maintenance of a professional lab notebook.
   2. Train and guide students in techniques used in microbial biotechnology and applied microbiology.
   3. Support the development of student-led group projects in microbial biotechnology and genetic engineering of microorganisms by facilitating discussion of research topics and providing guidance in experimental design, and data collection and analysis.
   4. Provide review and critical analysis of student proposals and guide students in student-to-student peer review.

B. Student Learning Outcomes and Assessment Measures

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<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
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<td>1. Develop an experimental research plan, including research aims, experimental design</td>
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<td><strong>2.</strong> Demonstrate competency in molecular methods commonly used in biotechnology including (but not limited to) plasmid manipulation, recombinant DNA production, bacterial amplification and protein isolation and characterization.</td>
<td>Written assignments and/or projects.</td>
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<tr>
<td><strong>3.</strong> Communicate the results of scientific inquiry to an audience of scientific peers.</td>
<td>Oral presentation, primary research paper, and/or written presentation materials.</td>
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<td><strong>4.</strong> Demonstrate competency in applied microbiology techniques, including (but not limited to) bioremediation, surfactant production, protein production in bacterial systems, generation of foods and beverages by microbial action.</td>
<td>Written assignments, laboratory exercises and group discussion.</td>
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### IV. Course Level Justification
This experiential learning course is designed for Biological and Natural Sciences majors as a selective undergraduate course comparable to 400-level biotechnology/applied microbiology laboratory courses offered at other universities.

### V. Topical Course Outline

#### A. Research Project Proposals
1. Biotechnology questions methods
   a. Developing a project in recombinant DNA and bacterial expression.
   b. Comparing different model systems for production of recombinant proteins.
2. Experimental Design
   a. Develop research aims.
   b. Develop hypothesis and experimental design.
   c. Generate and elaborate experimental protocols.

#### B. Experimentation – Biotechnology and recombinant DNA
1. Examples of practical skills in applied microbiology
   a. Biological and Chemical Safety
   b. *In-vitro* Recombinant DNA techniques
   c. Generation of unique plasmids for the project aims.
   d. Model organism production of chosen protein
   e. Biological assays and molecular techniques
   f. Protein purification strategies and isolation methods.
2. Data analysis
   a. Qualitative data analysis
   b. Quantitative data analysis
   c. Critical analysis and troubleshooting

#### C. Experimentation – Applied Microbiology
1. Examples of practical skills in applied microbiology
   a. Biological assays and molecular techniques
   b. Methods in Microbial Disinfection
   c. Bioremediation
   d. Biosurfactant Production
   e. Production of fermented foods and beverages using microorganisms
f. Methods in wastewater treatment

2. Data analysis
   a. Qualitative data analysis
   b. Quantitative data analysis

D. Research communication
   1. In-lab journal article discussion/annotation
   2. In-lab biotechnology project discussion/presentation
   3. Primary research paper
      a. Peer Review
   4. Oral presentation to a scientific audience

VI. Suggested Texts


A selection of journal articles relevant to course content chosen from primary literature (Science, Nature, Journal of Bacteriology, Biotechnology, Cell, EMBO, PNAS, etc.).

VII. Bibliography
Journal Articles from primary literature (Science, Nature, Journal of Bacteriology, Microbial Ecology, Cell, EMBO, PNAS, etc.) relates to student investigative projects.

Web-based resources for project development and data analysis, including (but not limited to) DNA sequence analysis (NCBI BLAST toolkit, NCBI genomic data information) and image analysis platforms (Image J).

Reference books related to student research topics and the identification and description of diverse microbial organisms, including but not limited to:


Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College
AS CAS

1b. Division
AMSC Division of Math Science

1c. Department
Biological Sciences

2. Course Prefix
BIOL

3. Course Number
A455

4. Previous Course Prefix & Number
N/A

5a. Credits/CEUs
4

5b. Contact Hours
(Lecture + Lab)
(2+4)

6. Complete Course Title
Experiential Learning: Bioinformatics
EL: Bioinformatics
Abbreviated Title for Transcript (30 character)

7. Type of Course
☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action:
☒ Add ☐ Change ☐ Delete

If a change, mark appropriate boxes:

- ☐ Prefix
- ☐ Credits
- ☐ Title
- ☐ Grade Basis
- ☐ Course Description
- ☐ Test Score Prerequisites
- ☐ Co-requisites
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☐ Registration Restrictions
- ☐ General Education Requirement
- ☐ Class
- ☐ College
- ☐ Level
- ☐ Major
- ☐ Other (please specify)

9. Repeat Status No ☐ # of Repeats ☐ Max Credits

10. Grading Basis
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date
From: Fall/2015 To: Fall/9999

12. ☐ Cross Listed with
☐ Stacked with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

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Initiator Name (typed): Khrys Duddleston
Initiator Signed Initials:__________
Date:________________

13b. Coordination Email
Date: 6 Jan 14
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 6 Jan 14

14. General Education Requirement
Mark appropriate box:
☐ Oral Communication ☐ Written Communication ☐ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☐ Natural Sciences ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

Computational theory and methods for analyses of biological phenomena. Applied laboratory for learning algorithms and databases used in sequence alignment, sequence searching, metagenomics, phylogenetics, analysis of next-generation sequencing data, protein structures, and molecular pathways. Genomics approaches for understanding complex biological systems in model organisms and human disease will be presented.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
(BIOL A252 and [MATH A200 or MATH A272] and [STAT A253 or STAT A307]) with minimum grade of C and one computer science course [CS A109, CS A110, CS A111, CSCE A201, or CSCE A202]

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
This course prepares students for graduate school or careers in molecular biology and microbiology. This change is part of our overall curriculum revision, which seeks to align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)
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University of Alaska Anchorage  
College of Health  
Course Content Guide

I. Date of Initiation  
Spring 2014

II. Curriculum Action Request  
A. College: College of Arts and Sciences  
B. Course Prefix: BIOL  
C. Course Number: A455  
D. Number of Credits: 4  
E. Contact Hours: 2+4  
F. Course Title: Experiential Learning: Bioinformatics  
G. Grading Basis: A-F  
H. Implementation Date: Fall 2015  
I. Cross-listed/Stacked: N/A  
J. Course Description: Computational theory and methods for analyses of biological phenomena. Applied laboratory for learning algorithms and databases used in sequence alignment, sequence searching, metagenomics, phylogenetics, analysis of next-generation sequencing data, protein structures, and molecular pathways. Genomics approaches for understanding complex biological systems in model organisms and human disease will be presented.  
K. Course Prerequisites: {BIOL A252, and [MATH A200 or MATH A272] and [STAT A253 or STAT A307]} with minimum grade of C and one computer science course [CS A109, CS A110, CS A111, CSCE A201, or CSCE A202]  
L. Course Co-requisites: N/A  
M. Other Restrictions: N/A  
N. Registration Restrictions: N/A  
O. Course Fees: Yes

III. Instructional Goals and Student Learning Outcomes  
A. Instructional Goals. The instructor will:  
   1. Present a synthesis of basic principles of mathematics, computer science, statistics and genetics used to develop algorithms for analyzing biological sequence data, including sequence alignment, sequence searching, metagenomics, phylogenetics, and next-generation sequencing data analysis.  
   2. Discuss how to implement and critically deconstruct computational methods to understand genomics data, molecular pathways, protein structures, and complex biological systems, with reference to model organisms and human disease.  
   3. Introduce databases and software for bioinformatics analyses, and explain how to implement sequence analyses programs using computer programming tools.  
   4. Facilitate student learning of current, prescient topics in bioinformatics by guided discussion of select scientific literature and recent biotechnological advancements that impact understanding of immune responses.  
B. Student Learning Outcomes and Assessment Measures
<table>
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<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>1. Integrate basic principles of mathematics, computer science, statistics and genetics to develop and apply algorithms for analyzing biological sequence data.</td>
<td>Written assignments, examinations, computational laboratory exercises, and bioinformatics laboratory reports.</td>
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<tr>
<td>2. Implement, interpret, and critically discuss computational methods to understand genomics data, metagenomics, protein structures, molecular pathways, and complex biological systems.</td>
<td>Written assignments, examinations, computational laboratory exercises, and bioinformatics laboratory reports.</td>
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<tr>
<td>3. Use software for bioinformatics analyses, and implement sequence analyses programs using computer programming tools.</td>
<td>Computational laboratory exercises, and bioinformatics laboratory reports.</td>
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<tr>
<td>4. Develop scientific communication skills by participating in class discussion and presenting bioinformatics laboratory reports.</td>
<td>Computational laboratory exercises, and bioinformatics laboratory reports.</td>
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**IV. Course Level Justification**

Experiential Learning: Bioinformatics is an advanced laboratory course synthesizing computational, mathematical, and statistical methods for analyzing and interpreting biological data, such as genetic sequences. As such, it requires in-depth preparation in genetics and quantitative sciences, including mathematics, statistics, and computer science, to understand, interpret, and implement algorithms for bioinformatics analyses; to access databases and learn bioinformatics software tools for biological data analysis; and to describe the implications of analyses for complex biological systems.

**V. Topical Course Outline**

A. Introduction to bioinformatics
   1. What is bioinformatics?
   2. Molecular basis of sequencing
      a. Nucleic acids
      b. Proteins
      c. Next-generation sequencing
   3. The genome revolution
      a. Genomics
      b. Functional genomics
      c. Metagenomics
   4. Computational resources for biologists
      a. Databases
      b. Algorithms
      c. Coding languages
      d. Introductory computational laboratory exercises

B. Theoretical bases of bioinformatics
   1. Search and sort algorithms for nucleic acid sequence analysis
      a. Pairwise alignment
      b. Multiple sequence alignment
   2. Protein sequence analysis algorithms
3. Phylogenetics algorithms

4. Probabilistic sequence analysis algorithms
   a. Bayesian
   b. Hidden Markov models
   c. Maximizing likelihood
   d. Sampling algorithms

C. Applications of bioinformatics algorithms for sequence analysis
   1. Multiple sequence alignment
      a. BLAST variations
      b. Sequence alignment code
      c. Computational laboratory exercises
   2. Building phylogenetic trees for understanding evolution
   3. Next-generation sequencing
      a. Technological platforms
      b. Sequence data formats
      c. Gene and genome assembly
      d. Metagenomics of populations
      e. Computational laboratory exercises

4. Gene families
   a. Mapping gene duplication events
   b. Gene annotation
   c. Computational laboratory exercises

5. Whole genome sequence analysis
   a. Genome alignment algorithms
   b. Polymorphisms and ESTs
   c. Genome organization
   d. Inferring evolution from phylogeny
   e. Computational laboratory exercises

D. Applications of bioinformatics algorithms in molecular systems biology
   1. Protein structure
      a. Protein Database
      b. De novo protein structure prediction algorithms
      c. Computational laboratory exercises
   2. Functional genomics technologies used in systems biology
   3. Functional genomics networks and data analysis
      a. Transcriptional networks
      b. Protein interaction networks
      c. Metabolomics networks
      d. Systems biology data types
      e. Clustering and principal component algorithms
      f. Computational exercises in genomics data analyses

E. From model organisms to human disease
   1. Systems biology analysis of molecular pathways
      a. Genomics data sets
      b. Bioinformatics algorithms
      c. Computational exercises in systems biology
   2. Systems biology of model organisms
   3. Integrated genomics of human disease

VI. Suggested Texts
VII. Bibliography


Course Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College  
AS CAS  
1b. Division  
AMSC Division of Math Science  
1c. Department  
Biological Sciences

2. Course Prefix  
Biol  
3. Course Number  
A463  
4. Previous Course Prefix & Number  
N/A  
5a. Credits/CEUs  
3  
5b. Contact Hours  
(Lecture + Lab)  
(3+0)

6. Complete Course Title  
Molecular Biology of Cancer  
Abbreviated Title for Transcript (30 character)  
Molecular Biology of Cancer

7. Type of Course  
☐ Academic  
☐ Preparatory/Development  
☐ Non-credit  
☐ CEU  
☐ Professional Development

8. Type of Action:  
☐ Add or  
☐ Change or  
☐ Delete

If a change, mark appropriate boxes:

- Prefix  
- Credits  
- Title  
- Grading Basis  
- Course Description  
- Test Score Prerequisites  
- Automatic Restrictions  
- Class  
- Level  
- Other

9. Repeat Status No  
☐ of Repeats  
Max Credits

10. Grading Basis  
☐ A-F  
☐ P/NP  
☐ NG

11. Implementation Date  
semester/year  
From: Fall/2015  
To: Fall/9999

12.  
☐ Cross Listed with  
☐ Stacked with  
Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.  
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
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<tr>
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</table>

13b. Coordinator Email Date: 6Jan14  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 6Jan14

14. General Education Requirement  
Mark appropriate box:

☐ Oral Communication  
☐ Written Communication  
☐ Quantitative Skills  
☐ Humanities  
☐ Fine Arts  
☐ Social Sciences  
☐ Natural Sciences  
☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)  
A study of the molecular biology of cancer, with emphasis on the mechanisms by which a normal cell becomes a malignant cell, including the roles of chemicals, viruses, and other environmental insults in carcinogenesis. The orientation of the course will be toward a study of the fundamentals of cancer molecular biology and the current literature, through a combination of team-based learning (TBL), research, discussions, term papers, and seminars.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
Biol A252 with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)

☐ College  
☐ Major  
☐ Class  
☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
As part of our overall curriculum revision, which seeks to align our degree with the core concepts and competencies in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science), this course will become part of our rotation of upper division electives in molecular biology. This course has been offered at the graduate level (Biol A663) and required graduate standing. Many students with a Natural Sciences or Biological Sciences major and an interest in the health care professions have expressed interest in this course as an elective for their B.S. or B.A. degree.
<table>
<thead>
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<th>Date</th>
<th>Dean/Director of School/College</th>
<th>Date</th>
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</table>
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A463
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Molecular Biology of Cancer
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: A study of the molecular biology of cancer, with emphasis on the mechanisms by which a normal cell becomes a malignant cell, including the roles of chemicals, viruses, and other environmental insults in carcinogenesis. The orientation of the course will be toward a study of the fundamentals of cancer molecular biology and the current literature, through a combination of team-based learning (TBL), research, discussions, term papers, and seminars.
K. Course Prerequisites: BIOL A252 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Explain and provide a framework for understanding the fundamental changes in cell physiology that must occur for a cell to become cancerous.
   2. Provide examples by which environmental insults promote carcinogenesis and discuss cancer prevention.
   3. Discuss the latest research findings relevant to carcinogenesis and cancer treatment.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Illustrate the classes of molecular defects that must occur in the progression of carcinogenesis, as well as specific examples of these molecular defects, and to understand how the relevant molecular pathways interact.</td>
<td>TBL exercises, written assignments, in class discussions</td>
</tr>
<tr>
<td>2. Demonstrate the mechanisms by which genetic and environmental factors promote or</td>
<td>Written assignments, presentations, in class discussions</td>
</tr>
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</tbody>
</table>
inhibit carcinogenesis.

| 3. Analyze data presented in the primary literature on cancer molecular biology. | Presentations, in class discussions, written term paper |

IV. Course Level Justification
This course teaches the complex topic of the molecular bases of cancer and is similar in expectation and scope to 400-level courses in molecular biology offered at other universities.

V. Topical Course Outline
A. Biology of Cancer
B. Hallmarks of Cancer
C. Enabling Characteristics of Cancer
D. Growth Signaling and Oncogenes
E. Anti-Growth Signaling and Tumor Suppressors
F. Apoptosis
G. Tissue Invasion/Metastasis
H. Epigenetics and Cancer
I. Genome Stability and Cancer
   1. Genetics and Cancer Syndromes
   2. Carcinogens
J. Viruses and Cancer
K. Cancer and the Immune System

VI. Suggested Texts


Primary literature from journals such as Oncogene, Science, Cell, Nature, and similar titles.

VII. Bibliography

# Course Action Request

## University of Alaska Anchorage

Proposal to Initiate, Add, Change, or Delete a Course

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<tr>
<th>1a. School or College</th>
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<th>2. Course Prefix</th>
<th>3. Course Number</th>
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<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<tr>
<td>BIOL</td>
<td>A464</td>
<td>N/A</td>
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<td>(3+0)</td>
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6. Complete Course Title

Metals in Biology

Abbreviated Title for Transcript (30 character)

7. Type of Course

- [x] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

8. Type of Action:

- [x] Add
- [ ] Change
- [ ] Delete

9. Repeat Status No

- # of Repeats
- Max Credits

10. Grading Basis

- [x] A-F
- [ ] P/NP
- [ ] NG

11. Implementation Date

From: Fall/2015 To: Fall/9999

12. Cross Listed with

- [ ] Stacked with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

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Initiator Name (typed): Khrys Duddleston

Initiator Signed Initials: __________

Date: __________

13b. Coordination Email

Date: 6Jan14

submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison

Date: 6Jan14

14. General Education Requirement

Mark appropriate box:

- [ ] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [ ] Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

Investigation of the fundamental roles and actions of metals in biological systems. Major topics will include transition metals, catalysis of reactions, cellular and organismal homeostasis, evolutionary and ecological relevance, deficiency and toxicity. We will incorporate basic concepts of bioinorganic chemistry and structural biology.

16a. Course Prerequisite(s) (list prefix and number or test code and score)

[CHEM A106 and BIOL A242] with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)

- [ ] College
- [ ] Major
- [ ] Class
- [x] Level

16d. Registration Restriction(s) (non-codable)

Junior Standing

17. [ ] Mark if course has fees

18. [ ] Mark if course is a selected topic course

19. Justification for Action

This course contributes to the development of a comprehensive discipline specific area in cell, genetics and molecular biology. Part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)
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University of Alaska Anchorage  
College of Arts and Sciences  
Course Content Guide

I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A464
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Metals in Biology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Investigation of the fundamental roles and actions of metals in biological systems. Major topics will include transition metals, catalysis of reactions, cellular and organismal homeostasis, evolutionary and ecological relevance, deficiency and toxicity. We will incorporate basic concepts of bioinorganic chemistry and structural biology.
K. Course Prerequisites: [CHEM A106 and BIOL A242] with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: Junior Standing
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide contemporary course content based in primary literature and key relevant reviews.
   2. Build a conceptual framework for the fundamental roles of metals in biological systems.
   3. Explain the concepts of essentiality vs. toxicity of metals in biological systems and strategies for how organisms have evolved to balance these opposing qualities.
   4. Discuss current research in the field and relevant outstanding questions.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Summarize how metals are essential in biological systems and strategies for avoiding toxicity.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Illustrate potential metal toxicity mechanisms and current state-of-the-field knowledge in</td>
<td>Written assignments and examinations</td>
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<tr>
<td>selected areas.</td>
<td>[3. Deduce key metal-coordinating motifs in biological molecules.]</td>
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<tr>
<td>4. Evaluate experimental data in primary literature and develop meaningful questions for future study.</td>
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</table>

**IV. Course Level Justification**

This course synthesizes critical roles of metal in maintenance of homeostasis in biological systems. The conceptual framework requires a working knowledge of basic cellular and molecular biology as well as integration of basic chemistry.

**V. Topical Course Outline**

A. Essential transition metals and theories of evolutionary history
B. Reading primary literature and basic experimental methods
C. Critical transition metals
   1. Iron
   2. Copper
   3. Zinc
D. Metal toxicity mechanisms
   1. Routes of exposure
   2. Movement in the environment
   3. Molecular responses
E. Metal analysis in biological materials
   1. ICP-MS
   2. X-Ray Fluorescence
   3. Chemical sensors
F. Human metabolic disorders
   1. Menkes Disease and Wilson’s Disease
   2. Acrodermatitis enteropathica
   3. Hemochromatosis
   4. Friedreich’s ataxia
G. Neurotoxicity and neurodegeneration
   1. Alzheimer’s Disease
   2. Parkinson’s and Manganism
   3. Mercury toxicity
H. Plants and metals
   1. Transport and homeostasis
   2. Herbivory defense
   3. Applications: Phytoremediation
I. Metals and nutrition
   1. Animal husbandry
   2. Human nutrition and metals
   3. Wildlife: exposure and deficiency

**VI. Suggested Texts**

Selected articles from the following journals:

Metallomics: integrated biometal science. Royal Society of Chemistry.


Biochemical and biophysical research communications. Elsevier Publishing.

VII. **Bibliography**


### Course Action Request

**University of Alaska Anchorage**

Proposal to Initiate, Add, Change, or Delete a Course

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<th>6. Complete Course Title</th>
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<td>Immunology</td>
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Abbreviated Title for Transcript (30 character): Immunology

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<th>13a. Impacted Courses or Programs: List any programs or college requirements that require this course.</th>
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<td>Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at <a href="http://www.uaa.alaska.edu/governance">www.uaa.alaska.edu/governance</a>.</td>
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**Initiator Name (typed):** Khrys Duddleston

Initiator Signed Initials: ______________________ Date: ____________

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<th>14. General Education Requirement</th>
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<table>
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<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
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<tbody>
<tr>
<td>Fundamental concepts of immunology, including cells and tissues of the immune system, innate immunity, lymphocyte development, antigenicity, cytokine signaling, antibody responses, immunotherapies and vaccines. Comparative immunological evolution of non-human species will be discussed. Immunological aspects of human disease, with particular emphasis on host-pathogen interactions, autoimmune diseases, immunodeficiencies, and cancer.</td>
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<th>16b. Co-requisite(s) (concurrent enrollment required)</th>
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<td>[BIOL A242 and BIOL A252] with minimum grade of C</td>
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<th>17. Mark if course has fees</th>
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<th>19. Justification for Action</th>
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<tbody>
<tr>
<td>We are removing laboratory from course, revising name and content.</td>
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**Initiator (faculty only):**

**Initiator (TYPE NAME):**

Khrys Duddleston

Initiator Signed Initials: ______________________ Date: ____________

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<td>Date</td>
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181
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A471
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Immunology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: CHEM A471
J. Course Description: Fundamental concepts of immunology, including cells and tissues of the immune system, innate immunity, lymphocyte development, antigenicity, cytokine signaling, antibody responses, immunotherapies and vaccines. Comparative immunological evolution of non-human species will be discussed. Immunological aspects of human disease, with particular emphasis on host-pathogen interactions, autoimmune diseases, immunodeficiencies, and cancer.
K. Course Prerequisites: [BIOL A242 and BIOL A252] with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Present a synthesis of concepts in immunology, focused on cells and tissues of the immune system, innate immunity, innate immune effectors and antigen-presenting cells, lymphocyte development, the molecular bases of antigenicity and vaccines, and cytotoxic T-cell and antibody responses.
   2. Discuss how experimental methods using non-human species (mice, primates, rabbits, birds, and model organisms) have contributed important concepts to immunology.
   3. Conceptualize host-pathogen immune interactions, with case studies drawn from the literature, to include tuberculosis, HIV/AIDS, malaria, tumor viruses, and influenza, and the roles of the immune system in autoimmune diseases, immunodeficiencies, and cancer.
   4. Facilitate student learning of current, prescient topics in virology by guided discussion of select scientific literature and recent biotechnological advancements that impact understanding of immune responses.
B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Apply basic principles of genetics, cell biology, molecular biology, and physiology to describe the development of both innate and adaptive immune responses with a particular emphasis on the human immune system.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Analyze and critically discuss advanced experimental methods, comparative animal models to understand immune system evolution, host-pathogen interactions, and vaccines.</td>
<td>Written assignments and examinations</td>
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IV. Course Level Justification

Immunology is an interdisciplinary science, requiring in-depth preparation in genetics and cell biology, to understand novel immunological concepts presented and experimental animal models for immunological research. Immunology requires prerequisites in cell biology and genetics.

V. Topical Course Outline

A. Introduction to immunology
   1. Self vs. non-self
   2. Cells and tissues of immune system
   3. Experimental methods in immunology
   4. Comparative immunology in animal models

B. Integrated biological concepts at work in the immune system
   1. Immune subcellular structure and function
   2. Immune cell DNA replication and cell cycle
   3. Immunological gene expression
   4. Immunological signal transduction
   5. Immune cell development
   6. Immune cell physiology
   7. Immune cell protein structure and function
   8. Evolution of immune system

C. Innate immune system
   1. Pattern recognition receptors (PRR)
   2. Innate signal transduction
   3. Innate immune responses in the cell
4. Innate immune effector cell responses
5. Intrinsic immune responses
6. Complement and defensins
7. Evolution of innate immune system
   a. Mammals
   b. Model organisms

D. Innate immune effector cells
   1. Macrophages
   2. Neutrophils
   3. Natural killer T cells
   4. Specialized innate effector cells
   5. Innate immune killing mechanisms in infection
      a. Bacteria
      b. Viruses
      c. Eukaryotic parasites
      d. Superantigens in autoimmunity

E. Innate immune cells in antigen presentation
   1. Molecular pathways of antigen presentation
      a. MHC I
      b. MHC II
      c. Cross-presentation
   2. Antigen repertoire
   3. Innate responses in somatic cells
   4. Specialized antigen-presenting cells
   5. Molecular structure and function of antigen presentation proteins

F. Adaptive immune responses
   1. Hematopoetic cell development
   2. Myeloid lineages
   3. Lymphoid lineages
   4. Generation of lymphoid cell responses
      a. Differential TH responses
      b. Cytotoxic T cells
      c. Helper T cells
      d. B cells
      e. Plasma cells
   5. Immune memory
   6. Vaccination
   7. Antibody responses
      a. Immunoglobulin isotype structures
      b. Thymic selection theory
      c. Generation of genomic antibody diversity
      d. Somatic hypermutation

G. Emerging paradigms in immunology from experimental model organisms
   1. Comparative immunological evolution
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   3. Mouse models of adaptive immunity

H. Pathogen evasion of immune responses
   1. Primer on host-pathogen interactions
   2. Evasion of innate immunity
   3. Evasion of adaptive immunity
   4. HIV/AIDS
5. DNA tumor viruses
6. Tuberculosis
7. Malaria

I. Immunology and human disease
1. Autoimmune diseases
2. Immunodeficiencies
3. Aging and immune responses
4. Immune aspect of malignancies (cancer)
5. Immunological diseases of unknown etiology
6. Antigen selection for vaccine design
7. Immunotherapies

VI. Suggested Texts

Excerpts from primary literature and review articles from scientific journals, for example:
Immunity
FASEB Journal
Current Opinion in Immunology
Nature Reviews Immunology
Immunological Reviews

VII. Bibliography


**Course Action Request**

**University of Alaska Anchorage**

Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<th>5b. Contact Hours (Lecture + Lab)</th>
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6. Complete Course Title: Immunology

Abbreviated Title for Transcript (30 character): Immunology

7. Type of Course: [ ] Academic [ ] Preparatory/Development [ ] Non-credit [ ] CEU [ ] Professional Development

8. Type of Action: [ ] Add or [ ] Change or [ ] Delete

If a change, mark appropriate boxes:
- Prefix
- Credits
- Grade Basis
- Title
- Contact Hours
- Repeat Status
- Cross-Listed/Stacked
- Course Description
- Course Prerequisites
- Test Score Prerequisites
- Co-requisites
- Registration Restrictions
- General Education Requirement
- Other CCG (please specify)

9. Repeat Status No: # of Repeats: [ ] Max Credits

10. Grading Basis: [ ] A-F [ ] P/NP [ ] NG

11. Implementation Date: Semester/Year:
   - From: Fall/2015
   - To: Fall/9999

12. [ ] Cross Listed with BIOL A471

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

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<th>Date of Coordination</th>
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Initiator Name (typed): Khrys Duddleston/Colin McGill

Initiator Signed Initials: ______ Date:____

13b. Coordination Email: Date: 6Jan14

13c. Coordination with Library Liaison: Date: 6Jan14

14. General Education Requirement

Mark appropriate box:
- Oral Communication
- Written Communication
- Quantitative Skills
- Humanities
- Fine Arts
- Social Sciences
- Natural Sciences
- Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

Fundamental concepts of immunology, including cells and tissues of the immune system, innate immunity, lymphocyte development, antigenicity, cytokine signaling, antibody responses, immunotherapies and vaccines. Comparative immunological evolution of non-human species will be discussed. Immunological aspects of human disease, with particular emphasis on host-pathogen interactions, autoimmune diseases, immunodeficiencies, and cancer.

16a. Course Prerequisite(s) (list prefix and number or test code and score)

[Biol A242 and BIOL A252] with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)

N/A

16c. Automatic Restriction(s)

[ ] College [ ] Major [ ] Class [ ] Level

16d. Registration Restriction(s) (non-codable)

N/A

17. [ ] Mark if course has fees

18. [ ] Mark if course is a selected topic course

19. Justification for Action

We are removing laboratory from course, revising name and content.

__________________________     __________
Initiator (faculty only)         Date

Khrys Duddleston/Colin McGill

Initiator (TYPE NAME)

[ ] Approved [ ] Disapproved

Dean/Director of School/College Date

[ ] Approved [ ] Disapproved

Undergraduate/Graduate Academic Date

[ ] Approved [ ] Disapproved

Board Chair Date

[ ] Approved [ ] Disapproved

Provost or Designee Date

187
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: CHEM
C. Course Number: A471
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Immunology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: BIOL A471
J. Course Description: Fundamental concepts of immunology, including cells and tissues of the immune system, innate immunity, lymphocyte development, antigenicity, cytokine signaling, antibody responses, immunotherapies and vaccines. Comparative immunological evolution of non-human species will be discussed. Immunological aspects of human disease, with particular emphasis on host-pathogen interactions, autoimmune diseases, immunodeficiencies, and cancer.
K. Course Prerequisites: [BIOL A242 and BIOL A252] with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Present a synthesis of concepts in immunology, focused on cells and tissues of the immune system, innate immunity, innate immune effectors and antigen-presenting cells, lymphocyte development, the molecular bases of antigenicity and vaccines, and cytotoxic T-cell and antibody responses.
   2. Discuss how experimental methods using non-human species (mice, primates, rabbits, birds, and model organisms) have contributed important concepts to immunology.
   3. Conceptualize host-pathogen immune interactions, with case studies drawn from the literature, to include tuberculosis, HIV/AIDS, malaria, tumor viruses, and influenza, and the roles of the immune system in autoimmune diseases, immunodeficiencies, and cancer.
   4. Facilitate student learning of current, prescient topics in virology by guided discussion of select scientific literature and recent biotechnological advancements that impact understanding of immune responses.
B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
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<tbody>
<tr>
<td>1. Apply basic principles of genetics, cell biology, molecular biology, and physiology to describe the development of both innate and adaptive immune responses with a particular emphasis on the human immune system.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Analyze and critically discuss advanced experimental methods, comparative animal models to understand immune system evolution, host-pathogen interactions, and vaccines.</td>
<td>Written assignments and examinations</td>
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<td>3. Synthesize and evaluate the role of the immune system in chronic diseases, including autoimmune diseases, immunodeficiencies, and cancer.</td>
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5. Immunological diseases of unknown etiology
6. Antigen selection for vaccine design
7. Immunotherapies

VI. Suggested Texts
Abbas, A.K., A.H. Lichtman, S. Pillai. Cellular and Molecular Immunology, 7th ed.

Excerpts from primary literature and review articles from scientific journals, for example:
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FASEB Journal
Current Opinion in Immunology
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VII. Bibliography


**Course Action Request**  
**University of Alaska Anchorage**  
Proposal to Initiate, Add, Change, or Delete a Course

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<tr>
<td>BIOL</td>
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<td>A309</td>
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<th>Initiated Name (typed):</th>
<th>Initiator Signed Initials:</th>
<th>Date:</th>
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<tbody>
<tr>
<td>Biogeography</td>
<td>Khrys Duddleston</td>
<td>_________________________</td>
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| 7. Type of Course | | | |
|-------------------|学术|预备/发展|非学分|CEU|专业发展|

| 8. Type of Action: | | | |
|-------------------|添加|更改|删除|

**If a change, mark appropriate boxes:**

- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [ ] Course Description
- [ ] Test Score Prerequisites
- [ ] Automatic Restrictions
- [ ] Other CCG (please specify)

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| 10. Grading Basis | A-F | P/NP | NG |

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<td>Fall/2015</td>
<td>Fall/9999</td>
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<tr>
<td>1. Environment and Society, BA</td>
<td>6Jan14</td>
<td>Dorn VanDommelen, <a href="mailto:dvandommelen@uaa.alaska.edu">dvandommelen@uaa.alaska.edu</a></td>
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<tr>
<td>2. Environment and Society, BS</td>
<td>6Jan14</td>
<td>Dorn VanDommelen, <a href="mailto:dvandommelen@uaa.alaska.edu">dvandommelen@uaa.alaska.edu</a></td>
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<td>Quantitative Skills</td>
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<td>Humanities</td>
<td>Integrative Capstone</td>
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<th>15. Course Description (suggested length 20 to 50 words)</th>
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<td>Ecological basis and historical patterns of the distribution of organisms and ecosystems on a worldwide basis. Current theories regarding the origin of these distributions are examined.</td>
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<th>19. Justification for Action</th>
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<td>The course number is being changed to be consistent with the level at which the course has been taught, and so that graduate students can take the course for credit. Also, this is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).</td>
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<th>Date</th>
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I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A472
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Biogeography
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Ecological basis and historical patterns of the distribution of organisms and ecosystems on a worldwide basis. Current theories regarding the origin of these distributions are examined
K. Course Prerequisites: BIOL A288 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Elucidate processes leading to the global distribution of biomes, ecosystems and the effects of ecological scaling from the global to the micro-topography level.
   2. Provide the tools for assessing biogeographic patterns and environmental degradation in the context of geomorphological, geological and ecological processes.
   3. Guide students to analyze biogeographic patterns and habitat degradation through the formulation and testing of hypotheses.
   4. Reinforce the application of the scientific method for independent research projects designed to understand biogeographic principles, including the collection and interpretation of data, modification of study designs, and writing of an original scientific paper.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
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<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>1. Describe the fundamental concepts of biogeographic patterns ranging from global to micro-geographic scales based on climate, plate tectonics, oceanic and atmospheric circulation, and other major processes.</td>
<td>Examinations, independent research project and research paper.</td>
</tr>
<tr>
<td>2. Demonstrate and apply knowledge of biogeography to describe integrative</td>
<td>Examinations, independent research project and research paper.</td>
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associations between the distribution and evolution of various taxa and their environmental adaptations.

| 3. Interpret and assess environmental degradation through biogeographic distribution patterns and human land use including the application of island biogeographic theory to the design of nature reserves. | Examinations. |
| 4. Formulate and test hypotheses; collect, statistically analyze and interpret data from a research project that culminates in a standard scientific manuscript. | Independent research project and research paper. |

### IV. Course Level Justification
Designed for Biology and Natural Sciences majors as an elective undergraduate course comparable to 400-level biogeography courses offered at other universities.

### V. Topical Course Outline

A. Endemism, dispersal and variance  
B. Species distributions  
C. Community distributions  
D. Speciation and diversification  
E. History of life  
   1. Diversification of life  
   2. Mass extinction events  
   3. Patterns from the Pleistocene  
F. Provincialism and disjunction  
G. Phylogenetic analyses  
H. Island biogeography and the design of nature reserves  
   1. Case studies  
   2. GIS applications  
I. Latitudinal gradients in biodiversity  
J. Interchange and barriers  
K. Disturbance ecology  
L. Human biogeography  
M. Biomes  
   1. Terrestrial systems  
      a. Deserts  
      b. Tropical rainforests  
      c. Temperate forests  
      d. Treelines and boundaries  
      e. Arctic tundra  
   2. Marine systems  
      a. Oceanography, productivity and climate change  
      b. Coral reefs  
      c. Mangrove forests  
   3. Freshwater systems  
      a. Wetland conservation and mitigation  
      b. The river continuum concept
VI. **Suggested Texts**  

VII. **Bibliography**  
The classic papers found in *Foundations of Biogeography: Classic Papers with Commentaries*, edited by Lomolino, Sax & Brown (2004), formed the basis of the field of biogeography.

The “Journal of Biogeography”, published by Blackwell Publishing, along with the sister journals "Global Ecology and Biogeography" and "Diversity and Distributions" contain many thousands of articles that extend those classic ideas using modern techniques and technologies.

The book *Macroecology*, by Brown, J.H. (1995, University of Chicago Press), provides an excellent integration of biogeography with other biological specialties, such as phylogenetics.


**Course Action Request**  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
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If a change, mark appropriate boxes:
- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Other Restrictions
- Contact Hours
- Repeat Status
- Cross-Listed/Stacked
- Course Prerequisites
- Co-requisites
- Registration Restrictions
- Class
- Level
- College
- Major

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13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

**Impacted Program/Course** | **Date of Coordination** | **Chair/Coordinator Contacted** |
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<td>6Jan14</td>
<td>Dorn VanDommelen, <a href="mailto:dvandommelen@uaa.alaska.edu">dvandommelen@uaa.alaska.edu</a></td>
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13b. Coordination Email: Date: 6Jan14

submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison: Date: 6Jan14

14. General Education Requirement

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15. Course Description (suggested length 20 to 50 words)

Review of the human drivers of global environmental change (human population growth and consumption of resources), the consequences of environmental degradation, and application of tools to address environmental change.

16a. Course Prerequisite(s) (list prefix and number or test code and score)

[Biol A271 or Envi A211] with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)

16c. Other Restriction(s)

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<th>Class</th>
<th>Level</th>
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16d. Registration Restriction(s) (non-codable)

Completion of all GER Tier 1 courses is required

17. Mark if course has fees

18. Mark if course is a selected topic course

19. Justification for Action

The course number is being changed to be consistent with the level at which the course has been taught, and so that graduate students can take the course for credit. Also, this is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).

<table>
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<tr>
<td>Khrys Duddleston</td>
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I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A473
D. Number of Credits: 3.0
E. Contact Hours: 3+0
F. Course Title: Conservation Biology
G. Grading Basis: A-F
H. Implementation Date: Spring 2014
I. Cross-listed/Stacked: N/A
J. Course Description: Review of the human drivers of global environmental change (human population growth and consumption of resources), the consequences of environmental degradation, and application of tools to address environmental change.
K. Course Prerequisites: [BIOL A271 or ENVI A211] with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: Completion of all GER Tier 1 courses is required
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Guide students in understanding the roles of habitat preservation, population integrity, and application of conservation policy to maintain natural ecosystems and biota.
   2. Teach students to analyze conservation problems in a multidisciplinary manner with considerations of economics, law, policy and biological principles.
   3. Teach students to assess environmental degradation using standardized protocols and modern instruments, and analyze resulting data.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Explain the drivers and consequences of environmental problems</td>
<td>Case studies, analysis of hypotheticals, examinations</td>
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<tr>
<td>2. Report and interpret major environmental problems</td>
<td>Examinations</td>
</tr>
<tr>
<td>3. Explain how problems interact in synergism</td>
<td>Examinations</td>
</tr>
<tr>
<td>4. Explain and apply tools for solving</td>
<td>Project Report</td>
</tr>
</tbody>
</table>
IV. Course Level Justification

Students are required to learn and integrate information from a variety of scientific disciplines; to read, to understand, and to apply ideas conveyed by primary scientific literature; to synthesize chemical, geological, ecological and biological knowledge and social considerations; and to apply course materials to this topic.

GER Integrative Capstone Justification:
Justifications for designating BIOL A473 Conservation Biology as a GER Integrative Capstone course include:

1. Knowledge Integration/Interrelationships and Synergy Among GER Disciplines: The overall theme of the course is understanding the relationship of biological conservation principles to other natural and social sciences. The course will focus on the interfaces among natural sciences (geochemistry, geology, geography, mathematics), biological sciences (biology, ecology, conservation, molecular biology, etc.), and the social sciences (particularly human biology, sociology, anthropology).

2. Effective Communication Skills: Course success demands effective communication through essay examinations, individual classroom presentations, brief reports (oral and written) on current controversies surrounding conservation biology, and a final research product.

3. Critical Thinking: Students will not be able to succeed in the course unless they are able to integrate information across disciplines, and critically evaluate the reliability of data and positions presented in lecture, texts, scientific, and popular viewpoints. Student ability to critically evaluate diverse material will be determined based on writing assignments, class presentations, and examinations.

4. Information Literacy: Students are expected to achieve and demonstrate computer and internet skills for acquiring information relevant to current topics in evolutionary biology. This will involve research in the primary scientific literature, and the collection of information from unpublished sources such as popular press and public statements. Students will be required to show that they can critically winnow facts and scientific content from diverse non-scientific sources.

5. Quantitative Perspectives: A critical understanding of basic conservation biology is grounded in many quantitative disciplines, including statistical analysis, applied maths (algebra, calculus, probability and combinatorics, etc.), general and advanced ecology, and quantitative biology. In addition, students must be able to read and interpret scientific data in graphical and tabular form, and to generate appropriate graphical displays of their own results. Exams will specifically test on these skills.

5. Evolving Realities of the 21st Century: The growing understanding that conservation biology is a dynamic and ever present component of modern life, particularly in the context of climate change and anthropogenic change, touches many aspects of science, policy, and social attitudes. This course will help students understand the implication of the processes of conservation biology in a changing environment, and provide them with effective means to communicate its importance and relevance for individuals and society.
V. Topical Course Outline

A. Impacts and Drivers
   1. What is Conservation Biology?
   2. Status of Biodiversity
   3. Predicting Biodiversity
   4. Conservation Hotspots
   5. Extinctions and Its Consequences
   6. Rarity and Small Populations
   7. Habitat Change
   8. Environmental Change
   9. Climate Change
   10. Invasive Species

B. Problems and Approaches
   1. Metapopulations and Populations
   2. Conserving Metapopulations
   3. Habitat Fragmentation
   4. Landscape Analysis and Corridors
   5. Edges, Areas, and Reserves
   6. Habitat Mitigation and Environmental Reconstruction
   7. Conservation Management
   8. Risk Analysis and Decisions
   9. Complex Decision Making

C. Issues and Controversies
   1. Biodiversity and Human Health
   2. Sustainable Development
   3. Endangered Species Act
   4. Ecological Services and Ecosystem Functions
   5. Reserves and Ecological Justice
   6. Environmental Security

VI. Suggested Texts


VII. Bibliography


1a. School or College   
   AS CAS
1b. Division   
   AMSC Division of Math Science
1c. Department   
   Biological Sciences

2. Course Prefix   
   BIOL
3. Course Number   
   A474
4. Previous Course Prefix & Number   
   N/A
5a. Credits/CEUs   
   3
5b. Contact Hours   
   (Lecture + Lab)   
   (3+0)

6. Complete Course Title   
   Ecotoxicology
   Abbreviated Title for Transcript (30 character)   
   Ecotoxicology

7. Type of Course   
   ☒ Academic   
   ☐ Preparatory/Development   
   ☐ Non-credit   
   ☐ CEU   
   ☐ Professional Development

8. Type of Action:   
   ☒ Add   
   ☐ Change   
   ☐ Delete
   If a change, mark appropriate boxes:
   ☐ Prefix   
   ☐ Credits   
   ☐ Title   
   ☐ Grading Basis   
   ☐ Course Description   
   ☐ Test Score Prerequisites   
   ☐ Automatic Restrictions   
   ☐ Repeat Status   
   ☐ Cross-Listed/Stacked   
   ☐ Co-requisites   
   ☐ Registration Restrictions   
   ☐ General Education Requirement

9. Repeat Status No   
   # of Repeats   
   Max Credits

10. Grading Basis   
   ☒ A-F   
   ☐ P/NP   
   ☐ NG

11. Implementation Date   
   semester/year
   From: Fall/2015   
   To: Fall/9999

12. ☐ Cross Listed with   
    ☐ Stacked with
    Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
    Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

   Impact Program/Course   
   Date of Coordination   
   Chair/Coordinator Contacted
   1.
   2.
   3.

   Initiator Name (typed): Khrys Duddleston   
   Initiator Signed Initials:   
   Date:

13b. Coordination Email   
   Date: 6Jan14
   submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison   
   Date: 6Jan14

14. General Education Requirement
   Mark appropriate box:
   ☐ Oral Communication   
   ☐ Written Communication   
   ☐ Quantitative Skills   
   ☐ Humanities   
   ☐ Fine Arts   
   ☐ Social Sciences   
   ☐ Natural Sciences   
   ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
    Examination of the chemical and ecological nature of pollution processes and the major classes and environmental fate of pollutants.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
    BIOL A270 with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)
    ☐ College   
    ☐ Major   
    ☐ Class   
    ☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
    Course is being created in response to student interest and to prepare students for graduate school or careers in the environmental sciences. Part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science)

Initiator (faculty only)   
Khrys Duddleston
Initiator (TYPE NAME)

Initiator (faculty only)   
Khrys Duddleston
Initiator (TYPE NAME)

Approved   
Disapproved

Dean/Director of School/College   
Date

Approved   
Disapproved

Undergraduate/Graduate Academic   
Board Chair   
Date

Approved   
Disapproved

Provost or Designee   
Date
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A474
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Ecotoxicology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Examination of the chemical and ecological nature of pollution processes and the major classes and environmental fate of pollutants.
K. Course Prerequisites: BIOL A271 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Teach students about the major classes of pollutants, including their chemical structure, toxicological effects, and fate in the environment.
   2. Teach students about the routes by which pollutants enter ecosystems, including surface waters, land, and the atmosphere.
   3. Teach students about the global transport of pollutants and their fractionation into different environmental compartments.
   4. Teach students about the fate of pollutants in individual organisms and tissues and mechanisms of toxicity.
   5. Teach students about the effects of pollutants on populations and communities.
   6. Teach students about the evolution of resistance to contaminants in populations and community responses to contaminant exposure.
   7. Teach students about the use of biomarkers in ecotoxicology and various monitoring techniques.
   8. Teach students about remediation techniques and technologies.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>1. Explain the chemistry, toxicological effects and environmental fate of the major classes of contaminants.</td>
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<tr>
<td>2. Explain the global transport, fractionation, and routing of contaminants on both global</td>
<td>Examinations.</td>
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<td>3.</td>
<td>Explain the fate of pollutants in individual organisms and their various compartment, as well as the biological mechanisms of toxicity.</td>
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<td>4.</td>
<td>Extrapolate individual toxicity to understand effects of contaminants on populations and communities.</td>
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<td>5.</td>
<td>Synthesize knowledge of toxicity mechanisms to understand both evolved responses in populations and emergent effects on community ecology.</td>
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<td>6.</td>
<td>Explain on a mechanistic level the use of biomarkers and other monitoring techniques in studies of contaminants.</td>
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<td>7.</td>
<td>Explain the latest science underlying remediation techniques and technologies.</td>
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<td>Examinations.</td>
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<td>8.</td>
<td>Synthesize knowledge across multiple course content areas in written format.</td>
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<td></td>
<td>Independent course paper.</td>
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</table>

**IV. Course Level Justification**

Designed for Biology and Natural Sciences majors as an elective undergraduate course comparable to 400-level ecotoxicology course offered at other universities. This course covers the principle concepts essential to the student’s ability to succeed in graduate programs and career pathways relevant to the discipline of ecotoxicology.

**V. Topical Course Outline**

**A. Pollutants and their fate in ecosystems**

1. Major classes of pollutants
   a. Inorganic ions
   b. Organic pollutants
   c. Organometallic compounds
   d. Radioactive isotopes
   e. Gaseous pollutants

2. Routes by which pollutants enter ecosystems
   a. Entry into surface waters
   b. Contamination of land
   c. Discharge into the atmosphere

3. Long range movements and global transport of pollutants
   a. Factors determining movement and distribution of pollutants
   b. Transport in water
   c. Transport in air

4. The fate of metals and radioactive isotopes in contaminated ecosystems

5. The fate of organic pollutants in individuals and ecosystems
   a. Fate within individuals
   b. Fate in terrestrial ecosystems
   c. Fate in aquatic ecosystems

**B. Effects of pollutants on individual organisms**

1. Toxicity testing
2. Biochemical effects of pollutants
3. Physiological effects of pollutants
4. Interactive effects of pollutants
5. Biomarkers
6. In situ biological monitoring

C. Effects of pollutants on populations and communities
   1. Population dynamics
   2. Evolution of resistance to pollution
   3. Changes in communities and ecosystems

D. Remediation techniques and technologies

VI. Suggested Texts
   


VII. Bibliography
   


# Course Action Request

## University of Alaska Anchorage

Proposal to Initiate, Add, Change, or Delete a Course

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**6. Complete Course Title**

Wildlife Population Dynamics and Management  
Wildlife Pop. Dyn. Mgmt  
Abbreviated Title for Transcript (30 character)

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<th>10. Grading Basis</th>
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<td>Social Sciences</td>
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<td>Natural Sciences</td>
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<tr>
<td>Integrative Capstone</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>History and ecological principles underlying fish and wildlife management, including key theories of population ecology, methods for estimating population size, survival, and recruitment, and discussions of how theory is applied in contemporary population management in the face of uncertainty and habitat changes</td>
</tr>
</tbody>
</table>

| 16a. Course Prerequisite(s) (list prefix and number or test code and score) |
| [BIOL A271 and [MATH A107 or MATH A109 or MATH A200] with minimum grade of C. |

| 16b. Co-requisite(s) (concurrent enrollment required) |
| { } |

<table>
<thead>
<tr>
<th>16c. Automatic Restriction(s)</th>
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<tbody>
<tr>
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<td>Class</td>
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<td>Level</td>
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| 16d. Registration Restriction(s) (non-codable) |
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<table>
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<tr>
<th>17. Mark if course has fees</th>
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<table>
<thead>
<tr>
<th>18. Mark if course is a selected topic course</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>19. Justification for Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating new, permanent course, for content that has previously been covered in special topics course and meets needs of students interested in careers or graduate school in wildlife biology. This is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).</td>
</tr>
<tr>
<td>Initiator (faculty only)</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>Khrys Duddleston</td>
</tr>
<tr>
<td>Initiator (TYPE NAME)</td>
</tr>
<tr>
<td>☐ Approved</td>
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<table>
<thead>
<tr>
<th>Department Chair</th>
<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
<th>Undergraduate/Graduate Academic Board Chair</th>
<th>Date</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>College/School Curriculum Committee Chair</th>
<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
<th>Provost or Designee</th>
<th>Date</th>
</tr>
</thead>
</table>
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A476
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Wildlife Population Dynamics and Management
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: History and ecological principles underlying fish and wildlife management, including key theories of population ecology, methods for estimating population size, survival, and recruitment, and discussions of how theory is applied in contemporary population management in the face of uncertainty and habitat changes.
K. Course Prerequisites: {BIOL A271 and [MATH A107 or MATH A109 or MATH A200]} with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide a basic description of the goals of, and need for wildlife management
   2. Introduce the philosophy and history of the North American model of wildlife management, including comparison with the European model and government funding mechanisms.
   3. Introduce and develop core concepts in population biology and ecology, including population demographic models
   4. Emphasize the extent and historical/geographic patterns of human impacts on the wildlife populations, and on how humans have designed and implemented management programs.
   5. Provide detailed examples of how the vital rates of populations are influenced by both intrinsic and extrinsic factors, and of how changes in that habitat may
influence species diversity and abundance through impacts on population growth rates and interactions among species.

6. Relate all of the above to current issues in wildlife management and case studies that demonstrate management successes and failures - with a focus on Alaskan issues where possible. The need for balancing different perspectives and needs will be covered - including economic value (eg fisheries, hunting), cultural value (subsistence use), conservation value (wildlife in wildlands, resilience within ecosystems), and future values, and expose students to discussions on these topics from local experts.

7. Teach students how to evaluate and integrate information from a variety of different sources and perspectives.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify and assess the linkages between wildlife population ecology, management approaches, and conservation strategies.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Integrate information from scientific articles with that provided in lecture and textbook assignments, and use this information to evaluate the scientific accuracy of popular press (TV, newspaper, magazine, web) reports on wildlife management issues</td>
<td>Exams, written assignments, in class reports</td>
</tr>
<tr>
<td>3. Communicate their understanding of vertebrate population ecology, and the impacts that humans are having on the system directly and indirectly to peers</td>
<td>In-class presentation, exams, and writing assignment</td>
</tr>
<tr>
<td>4. Analyze, assess, and evaluate the impact that humans are having on the vertebrate populations through in depth study of current 'hot topics' such as global warming, habitat loss, disease, etc.</td>
<td>Presentations, exams, and written assignments</td>
</tr>
<tr>
<td>5. Analyze the range of options available for addressing specific wildlife management scenarios and identify the consequences (intended and unintended) of each on both wildlife and human populations.</td>
<td>Exams, written assignments, in class reports</td>
</tr>
</tbody>
</table>

IV. Course Level Justification

This course builds on concepts presented in 200 level courses. Students are required to learn and integrate information from a variety of scientific disciplines as it relates to wildlife management, to read, understand, and apply ideas conveyed by primary scientific literature, to synthesize biological knowledge and social considerations; and to apply course materials to current problems.
V. **Topical Course Outline**

A. Introduction to Wildlife Population Biology and the need for conservation & management
   1. History and philosophy of Wildlife Management
   2. Population ecology methods and approaches

B. Defining a population for management
   1. Species concepts
   2. Distinct Population Segments
   3. The role of genetics

C. Estimating population vital rates
   1. Essential parameters
   2. Methodological approaches
   3. Variation among and within populations
   4. Individual variation in ‘quality’

D. Models of population growth
   1. Geometric, exponential, logistic and others
   2. Stage-structured population models
   3. Density dependent models

E. The impact of predation & disease on populations

F. Management of populations
   1. Harvest rates and quotas
   2. Population viability models
   3. Conservation of small and endangered species

G. Case studies demonstrating wildlife management successes and failures

VI. **Suggested Texts**


VII. **Bibliography**


1a. School or College  
AS CAS

1b. Division  
AMSC Division of Math Science

1c. Department  
Biological Sciences

2. Course Prefix  
BIOL

3. Course Number  
A480

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
3.0

5b. Contact Hours  
(Lecture + Lab)  
(3+0)

6. Complete Course Title  
Ecological and Conservation Genetics

7. Type of Course  
☐ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  ☑ Add  ☐ Change  ☐ Delete

9. Repeat Status No  ☐ # of Repeats  ☐ Max Credits

10. Grading Basis  
☐ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  
From: Fall/2015  To: Fall/9999

12. ☐ Cross Listed with  ☐ Stacked with  Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
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<td>1.</td>
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<td>3.</td>
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Initiator Name (typed): Khrys Duddleston  
Initiator Signed Initials:  
Date:

13b. Coordination Email  
submitted to Faculty Listserv: (uae-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 6Jan14

14. General Education Requirement  
Mark appropriate box:

<table>
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<tr>
<th>Oral Communication</th>
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<th>Quantitative Skills</th>
<th>Humanities</th>
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<td>Integrative Capstone</td>
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15. Course Description (suggested length 20 to 50 words)

An in-depth examination of the primary forces and processes involved in shaping genetic variation in natural populations (mutation, drift, selection, migration, recombination, mating patterns, population size, and population subdivision), methods of measuring genetic variation in nature, and experimental tests of important ideas in population genetics and microevolution theory.

16a. Course Prerequisite(s) (list prefix and number or test code and score)

| BIOL A252 or BIOL A288 with minimum grade of C |

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)

| College  | Major  | Class  | Level  |

16d. Registration Restriction(s) (non-codable)

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action

The course is needed to provide majors in Biological Sciences and Natural Sciences with an upper division course in applied genetics. This is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).
<table>
<thead>
<tr>
<th>Initiative (faculty only)</th>
<th>Date</th>
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<tbody>
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University of Alaska Anchorage  
College of Arts and Sciences  
Course Content Guide

I. Date of Initiation: Spring 2014

II. Curriculum Action Request
   A. College: College of Arts and Sciences
   B. Course Prefix: BIOL
   C. Course Number: A480
   D. Number of Credits: 3
   E. Contact Hours: 3+0
   F. Course Title: Ecological and Conservation Genetics
   G. Grading Basis: A-F
   H. Implementation Date: Fall 2015
   I. Cross-listed/Stacked: N/A
   J. Course Description: An in-depth examination of the primary forces and
   processes involved in shaping genetic variation in
   natural populations (mutation, drift, selection, 
migration, recombination, mating patterns, 
population size, and population subdivision),
   methods of measuring genetic variation in nature, 
and experimental tests of important ideas in 
population genetics and microevolution theory.
   K. Course Prerequisites: [BIOL A252 or BIOL A288] with minimum grade 
of C
   L. Course Co-requisites: N/A
   M. Other Restrictions: N/A
   N. Registration Restrictions: N/A
   O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
   A. Instructional Goals. The instructor will:
      1. Provide the basis for advanced analysis of evolutionary theory and concepts
      2. Build on a theoretical framework to describe how evolutionary process results in 
         evolutionary pattern
      3. Link current research on how microevolutionary processes relate to observed responses 
         to environmental and climate change
      4. Enable students to undertake analyses and conceptualization of quantitative evolutionary 
         mechanisms
      5. Provide detailed examples of modern evolutionary analysis and theory as mechanisms of 
         biotic change and diversification
      6. Provide expert assistance in use and interpretation of current analytical software 
         developed for quantitative evolutionary analysis
   B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gain in-depth understanding of evolutionary process, microevolution mechanisms, and macroevolutionary</td>
<td>Exams and conceptual paper</td>
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</table>
IV. Course Level Justification
This course is similar to 400-level courses in conservation genetics offered at other universities. Students are required to learn and integrate information at an upper-division level from a variety of scientific disciplines as it relates to applied genetics, advanced evolutionary and ecological analysis, and microevolutionary processes; to read, understand, and apply ideas conveyed by primary scientific literature; and to synthesize current biological knowledge, ecological and evolutionary theory.

V. Topical Course Outline
A. Genetic and statistical background
B. Genetic and phenotypic variation
C. Organization of genetic variation
D. Population substructure
E. Sources of variation
F. Darwinian Selection
G. Complex Selection, Sexual Selection
H. Random genetic drift
I. Coalescence
J. Molecular population genetics
K. Mutation and Recombination
L. Stochastic Combinatorics
M. Neutral theory
N. Non-Darwinian dynamics

V. Suggested Texts


VII. Bibliography


### Course Action Request

**University of Alaska Anchorage**  
**Proposal to Initiate, Add, Change, or Delete a Course**

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<td>AMSC Division of Math Science</td>
<td>Biological Sciences</td>
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<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours</th>
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<th>8. Type of Action</th>
<th>9. Repeat Status No</th>
<th>10. Grading Basis</th>
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<th>12. Cross Listed with</th>
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<td>To: Fall/9999</td>
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| 13a. Impacted Courses or Programs: List any programs or college requirements that require this course. |

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>1. Environment and Society, BA</td>
<td>6Jan14</td>
<td>Dorn VanDommelen, <a href="mailto:dvandommelen@uaa.alaska.edu">dvandommelen@uaa.alaska.edu</a></td>
</tr>
<tr>
<td>2. Environment and Society, BS</td>
<td>6Jan14</td>
<td>Dorn VanDommelen, <a href="mailto:dvandommelen@uaa.alaska.edu">dvandommelen@uaa.alaska.edu</a></td>
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**Initiator Name (typed): Khrys Duddleston**  
**Initiator Signed Initials:** __________   
**Date:** __________

<table>
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<tr>
<th>14. General Education Requirement</th>
<th>15. Course Description (suggested length 20 to 50 words)</th>
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<td>An examination of marine biology, with a focus on understanding the pathways and transformation of energy and matter in coastal, pelagic, and benthic, waters, particularly those in Alaska. Students will gain an appreciation of the influence of the physical environment, climate change, and human activities on marine species diversity, food webs, and tropho-dynamics</td>
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<tr>
<td>□ Oral Communication</td>
<td>□ Written Communication</td>
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<td>□ Fine Arts</td>
<td>□ Social Sciences</td>
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<th>16a. Course Prerequisite(s) (list prefix and number or text code and score)</th>
<th>16b. Co-requisite(s) (concurrent enrollment required)</th>
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<td>[BIOL A271 or ENVI A211] with minimum grade of C</td>
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<th>16d. Registration Restriction(s) (non-codable)</th>
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<td>□ Major</td>
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<td>□ Level</td>
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</table>

| 17. □ Mark if course has fees | 18. □ Mark if course is a selected topic course |

<table>
<thead>
<tr>
<th>19. Justification for Action</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Renumbering course to comply with revision to BIOL undergraduate curricula; prerequisites revised to reflect changes to ENVI curricula (ENVI 202 no longer exists)</td>
<td></td>
</tr>
</tbody>
</table>

**Initiator (faculty only)**  
**Initiator (TYPE NAME):** Khrys Duddleston

**Initiator (faculty only):**  
**Date:** __________

**Approved:** Yes  
**Disapproved:** No

**Dean/Director of School/College:**  
**Date:** __________

**Approved:** Yes  
**Disapproved:** No

**Undergraduate/Graduate Academic Board Chair:**  
**Date:** __________

**Approved:** Yes  
**Disapproved:** No

**Provost or Designee:**  
**Date:** __________

**Approved:** Yes  
**Disapproved:** No

**College/School Curriculum Committee Chair:**  
**Date:** __________

**Approved:** Yes  
**Disapproved:** No

216
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A481
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Marine Biology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: An examination of marine biology, with a focus on understanding the pathways and transformation of energy and matter in coastal, pelagic, and benthic waters, particularly those in Alaska. Students will gain an appreciation of the influence of the physical environment, climate change, and human activities on marine species diversity, food webs, and trophodynamics.
K. Course Prerequisites: [BIOL A271 or ENVI A211] with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: Completion of all GER Tier 1 courses is required.
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
1. Provide a basic description of the physical, chemical, and geological properties of the ocean, and the different ocean habitats
2. Build on this conceptual framework to describe how physical and biological ocean systems are impacted by changing climate and human activities
3. Link physical features of the ocean habitat (pre- and post-human impact) to ocean trophic dynamics and food webs.
4. Emphasize the extent and historical/geographic patterns of human impacts on the marine environment, and describe how these impacts are mediated by and through biological and physical processes.
5. Provide detailed examples of how the physiological traits of organisms are unique to their habitat, and of how changes in that habitat may influence species diversity and abundance through impacts on physiological properties.
6. Relate all of the above to current issues in Alaskan marine ecosystems and resources - with a focus on balancing the many values represented in our environment. Such values include economic value (fisheries, oil exploitation, mining), cultural value (subsistence use, coastal villages and their impact), conservation value (nursery ground habitats, marine protected areas), and future values (arctic exploration with...
shrinking ice etc), and expose students to discussions on these topics from local experts.
7. Teach students how to evaluate and integrate information from a variety of different sources and perspectives.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify and assess the linkages between the chemistry and physiology of living organisms and the physical and biological aspects of the marine environment.</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Integrate information from scientific articles with that provided in lecture and textbook assignments, and use this information to evaluate the scientific accuracy of popular press (TV, newspaper, magazine, web) reports on marine issues.</td>
<td>Exams, written assignments, in class reports</td>
</tr>
<tr>
<td>3. Communicate their understanding of the marine ecosystem, and the impacts that humans are having on the system directly and indirectly to peers.</td>
<td>In-class presentation, exams, and writing assignment</td>
</tr>
<tr>
<td>4. Analyze, assess, and evaluate the impact that humans are having on the marine system through in depth study of current 'hot topics' such as global warming, fisheries collapse etc.</td>
<td>Presentations, exams, and written assignments</td>
</tr>
</tbody>
</table>

IV. Course Level Justification

This course builds on concepts presented in 200 level courses. Students are required to learn and integrate information from a variety of scientific disciplines as it relates to marine ecosystems, to read, understand, and apply ideas conveyed by primary scientific literature, to synthesize biological knowledge and social considerations; and to apply course materials to current problems.

V. Topical Course Outline

A. Basic Principles of Physical Oceanography
   1. Properties of water, salt, temperature, light
   2. Coriolis effect and tides
   3. Wind-driven and thermohaline circulation
B. Major Ocean Currents and Domains
   1. Global circulation patterns
   2. Alaskan circulation patterns
   3. Thermoclines, fronts, gyres, eddies
C. Ocean Climates & Impact of Global Warming
   1. Seasonal patterns of heat flux
   2. Impact of ice on currents
   3. Feedback loops
D. Ecology of the Open Ocean
   1. Sources of organic and inorganic nutrients
   2. Phytoplankton diversity & adaptations
   3. Factors influencing primary productivity

E. Pelagic food webs
   1. Zooplankton and methods for exploiting phytoplankton
   2. Necton and foraging adaptations

F. Trophic dynamics and foods webs
   1. Fisheries and their ecological and social impacts
   2. Major fisheries species & locations

G. Methods of resource exploitation
   1. Impact of overfishing on ecosystem
   2. Management methods and legislation
   3. Impact of different management regimes on fishers

H. Ecology of the coastal zones
   1. Physical challenges and adaptations
   2. Nutrients and tropho-dynamics in various marine environments

I. Coastal polar ecosystems

J. Impacts of coastal development and use
   1. On physical habitat
   2. On biological habitats
   3. On health of the ecosystem
   4. Potential solutions / remediation

VI. Suggested Texts


VII. Bibliography


### 1a. School or College
**AS CAS**

### 1b. Division
**AMSC Division of Math Science**

### 1c. Department
**Biological Sciences**

### 2. Course Prefix
**BIOL**

### 3. Course Number
**A482**

### 4. Previous Course Prefix & Number
**N/A**

### 5a. Credits/CEUs
**3**

### 5b. Contact Hours
*(Lecture + Lab)*
**3**

### 6. Complete Course Title
**Spatial Ecology**

### 7. Type of Course
- **Academic**
- **Preparatory/Development**
- **Non-credit**
- **CEU**
- **Professional Development**

### 8. Type of Action: **Add**

### 9. Repeat Status No

### 10. Grading Basis
- **A-F**
- **P/NP**
- **NG**

### 11. Implementation Date
- **From:** Fall/2015
- **To:** Fall/9999

### 13. Impacted Courses or Programs
- List any programs or college requirements that require this course.
- Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

### 14. General Education Requirement
- Mark appropriate box:
  - Oral Communication
  - Written Communication
  - Quantitative Skills
  - Humanities
  - Fine Arts
  - Social Sciences
  - Natural Sciences
  - Integrative Capstone

### 15. Course Description (suggested length 20 to 50 words)
An examination of spatial ecology including: 1) the physical and ecological nature of landscapes, 2) the use of GIS tools to map and understand patterns in physical and biological properties and 3) the use of case studies that apply GIS tools to ecological and abiotic processes such as migration of ungulates and birds; local-regional-continental and global patterns of precipitation chemistry and associations of societal practices and spatial patterns in the water and carbon cycles.

### 16a. Course Prerequisite(s) (list prefix and number or test code and score)
- **BIOL A271** with minimum grade of C.

### 16b. Co-requisite(s) (concurrent enrollment required)

### 16c. Automatic Restriction(s)
- **College**
- **Major**
- **Class**
- **Level**

### 16d. Registration Restriction(s) (non-codable)

### 17. Mark if course has fees

### 18. Mark if course is a selected topic course

### 19. Justification for Action
New course which meets the needs of students interested in graduate work or careers in ecology. This is part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).
<table>
<thead>
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University of Alaska Anchorage  
College of Arts and Sciences  
Course Content Guide

I. Date of Initiation:  
Spring 2014

II. Curriculum Action Request  
A. College: College of Arts and Sciences  
B. Course Prefix: BIOL  
C. Course Number: A482  
D. Number of Credits: 3  
E. Contact Hours: 3+0  
F. Course Title: Spatial Ecology  
G. Grading Basis: A-F  
H. Implementation Date: Fall 2015  
I. Cross-listed/Stacked: N/A  
J. Course Description: An examination of spatial ecology including: 1) the physical and ecological nature of landscapes, 2) the use of GIS tools to map and understand patterns in physical and biological properties and 3) the use of case studies that apply GIS tools to ecological and abiotic processes such as migration of ungulates and birds; local-regional-continental and global patterns of precipitation chemistry and associations of societal practices and spatial patterns in the water and carbon cycles.

K. Course Prerequisites: BIOL A271 with minimum grade of C.  
L. Course Co-requisites: N/A  
M. Other Restrictions: N/A  
N. Registration Restrictions: N/A  
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes  
A. Instructional Goals. The instructor will:  
1. Provide a description of the abiotic and biotic environments from the micro to the global scale.  
2. Discuss the role of key abiotic processes that vary spatially and temporally that have major effects on organisms, ecosystems and landscapes.  
3. Provide advanced information on food web ecology, atmospheric processes, land use patterns and migration ecology.  
4. Introduce the vocabulary of Geographic Information Systems.  
5. Introduce GIS concepts through discussion of spatial patterns in abiotic traits, animal distributions and migration dynamics.  
6. Conduct class exercises in ArcGIS.  
7. Encourage class discussion of spatial issues that are of relevance to Alaska, the Arctic and the global community.  
8. Help students understand GIS applications to research and resource management.  

B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of</th>
<th>Assessment Measures</th>
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</thead>
</table>

223
this course, the student will be able to:

1. Describe traits of the abiotic and biotic environment that have important spatial and temporal patterns.  
   Written assignments and examinations

2. Describe key migration and food web traits in northern systems and key spatial patterns.  
   Written assignments and examinations

3. Explain and use the key facets of GIS tools and their application to spatial ecology  
   Written assignments, examinations and classroom exercises

4. Explain some of the causes of spatial and temporal patterns of animal distributions, atmospheric chemistry, the water and the carbon cycles.  
   Written assignments and examinations

5. Describe how important societal processes-land use change- is being manifested spatially in Arctic and Temperate systems.  
   Written assignments and examinations, classroom discussions

6. Interpret the causes of spatial and temporal patterns in abiotic and biotic traits.  
   Written assignments and examinations, classroom discussions

IV. Course Level Justification

The class builds upon a foundation of basic biological, ecological and environmental knowledge. It assumes some proficiency with the vocabulary of biology and environmental sciences. It is similar to other senior level courses in ecology at other universities.

V. Topical Course Outline

A. Overview of Landscape Ecology
   1. Facets of Abiotic Traits-micro to global scales
      a. Precipitation
      b. Temperature
   2. Properties of Key Biotic traits
      a. Animal Abundances
      b. Species Distributions
   3. Watershed and Ecosystem Processes
      a. Biogeochemical Cycles
      b. Linkages between system components
   4. Food web Ecology
      a. Land
      b. Aquatic
      c. Marine
   5. Migration Ecology
      a. Birds
      b. Fish
      c. Mammals

B. Spatial and temporal patterns in Landscapes
   1. Spatial and temporal variation in Abiotic traits
      a. Precipitation
      b. Atmospheric Chemistry
      c. Temperature
   2. Spatial and temporal variation in biotic traits
      a. Birds
      b. Fish
c. Mammals  
d. Insects  
e. Human activities

C. Geographic Information Systems  
1. ArcGIS Introduction  
2. Data Collection  
3. Data Management  
4. Types of GIS files  
   a. Shapefiles/geodata bases  
5. Retrieval of data-bases  
6. Development of Data layers  
7. Modeling techniques for GIS data

D. Application exercises in GIS and Spatial Ecology  
1. Compare existing techniques for modeling species distribution, habitat use, and niche selection  
2. Apply advanced spatial analysis techniques to real-world migration ecology, conservation biology, precipitation and biogeochemistry, food web ecology, and case examples based on Alaska, Arctic, Boreal and Global ecology.

VI. Suggested Texts  

Gorr, W and K. Kurland. GIS Tutorial 1: Basic Workbook. 2010

VII. Bibliography  
Journals that feature Spatial Ecology:

Ecological Monographs. Ecological Society of America. Ithaca, NY  
Functional Ecology. Journals of the British Ecological Society  
Oecologia. International Association for Ecology. Berlin  
Landscape Ecology, Springer Verlag, NY
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College  
AS CAS

1b. Division  
AMSC Division of Math Science

1c. Department  
Biological Sciences

2. Course Prefix  
BIOL

3. Course Number  
A483

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
2

5b. Contact Hours  
(Lecture + Lab) 
(2+0)

6. Complete Course Title  
Exploration Ecology

Abbreviated Title for Transcript (30 character)  
Exploration Ecology

7. Type of Course  
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  
☒ Add  or  ☐ Change  or  ☐ Delete

If a change, mark appropriate boxes:

☐ Prefix  │  ☐ Course Number
☐ Credits  │  ☐ Contact Hours
☐ Title  │  ☐ Repeat Status
☐ Grading Basis  │  ☐ Cross-Listed/Stacked
☐ Course Description  │  ☐ Course Prerequisites
☐ Test Score Prerequisites  │  ☐ Co-requisites
☐ Automatic Restrictions  │  ☐ Registration Restrictions
☐ Class  │  ☐ Level
☐ College  │  ☐ Major
☐ Other  │  (please specify)

9. Repeat Status No  # of Repeats  Max Credits

10. Grading Basis  
☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  
semester/year  
From:  Fall/2015  To:  Fall/9999

12. ☐ Cross Listed  with
     ☐ Stacked  with
     Cross-Listed Coordination Signature

13a. Impacted Courses or Programs:  List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
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</table>

Initiator Name (typed):  Khrys Duddleston  Initiator Signed Initials:  _________  Date:  __________

13b. Coordination Email  Date:  6Jan14
submitted to Faculty Listserv:  (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  Date:  6Jan14

14. General Education Requirement  
Mark appropriate box:  
☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities
☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description  (suggested length 20 to 50 words)

An exploration of the principles and techniques used for study and collection of baseline ecological data in remote landscapes. Course activities will focus on survey and analytical resources, and design of simple ecological projects as well as those with complex and multidisciplinary components

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
BIOL A271 with minimum grade of C.

16b. Co-requisite(s) (concurrent enrollment required)  
BIOL A484

16c. Automatic Restriction(s)  
☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Restriction(s) (non-codable)  
Instructor Approval

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
The course is needed to provide majors in Biological Sciences and Natural Sciences with an upper division course in advanced ecological techniques. The addition is part of an overall curriculum revision in the Biological Sciences in which we aim to align our curriculum with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).
<table>
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<tr>
<th>Position</th>
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<td>Provost or Designee</td>
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</table>
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A483
D. Number of Credits: 2
E. Contact Hours: 2+0
F. Course Title: Exploration Ecology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: An exploration of the principles and techniques used for study and collection of baseline ecological data in remote landscapes. Course activities will focus on survey and analytical resources, and design of simple ecological projects as well as those with complex and multidisciplinary components.
K. Course Prerequisites: BIOL A271 with minimum grade of C
L. Course Co-requisites: BIOL A484
M. Other Restrictions: N/A
N. Registration Restrictions: Instructor Approval
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Provide a basic understanding of ecological survey and analysis
   2. Enable students to apply theory to field-based settings.
   3. Assist students in acquiring skills needed for acquisition and analysis of data, interpretation of results, and preparation of reports and publication.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrate understanding of critical aspects of ecological theory relating to acquisition of baseline data and information.</td>
<td>Exams and written assignments</td>
</tr>
<tr>
<td>2. Read, understand, and integrate information from scientific articles with that provided in lecture and textbook assignments, and to use this information to evaluate the scientific accuracy of reports from the popular press or public science.</td>
<td>Exams, written assignments, in-class presentations.</td>
</tr>
<tr>
<td>3. Communicate to others the results of original research they have conducted</td>
<td>Written reports, in-class presentations.</td>
</tr>
</tbody>
</table>
IV. **Course Level Justification** This course is proposed to build field course offerings in the department and greater course depth in advanced ecology and environmental biology.

V. **Topical Course Outline**
   A. Introduction
      1. Field Safety
      2. Planning a Research Program
   B. Research Design
      1. Principles of Sampling
      2. Data Acquisition
      3. General Census Methods
      4. Data Mining
      5. General Survey Methods
      6. Data Reduction
      7. Introduction to Analysis
   C. Introduction to Analysis
      1. Using R For Analysis
      2. Free-ware Software Programs
      3. Data Screening
   D. Statistical Analysis
      1. Univariate Statistics
      2. Multivariate Statistics
      3. Group Analysis
   E. Testing and Discrimination
      1. Multivariate Gradient Analysis
      2. Ordination
   F. Photogrammetry and Image Analysis
   G. Time Series Analysis
   H. Reporting and Results Selection

VI. **Suggested Texts**


VII. **Bibliography**


# Course Action Request

## University of Alaska Anchorage

Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
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<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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## Complete Course Title

**Experiential Learning: Exploration Ecology Field Study**  
**EL:** Exploration Ecology Field  
Abbreviated Title for Transcript (30 character)

## Type of Course

<table>
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<tr>
<th>Academic</th>
<th>Preparatory/Development</th>
<th>Non-credit</th>
<th>CEU</th>
<th>Professional Development</th>
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## Type of Action:

- **Add** or  
- **Change** or  
- **Delete**

### If a change, mark appropriate boxes:

- Prefix  
- Credits  
- Title  
- Grading Basis  
- Course Description  
- Test Score Prerequisites  
- Automatic Restrictions  
- Class  
- Level  
- College  
- Major  
- Other

### 9. Repeat Status

- **No**  
- **# of Repeats**  
- **Max Credits**

### 10. Grading Basis

- A-F  
- P/NP  
- NG

### 11. Implementation Date

- From: Fall/2015  
- To: Fall/9999

### 12. Cross Listed with

- **Stacked with**  
- Cross-Listed Coordination Signature

### 13a. Impacted Courses or Programs:

List any programs or college requirements that require this course.  
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.aaa.alaska.edu/governance](http://www.aaa.alaska.edu/governance).

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**Initiator Name (typed): Khrys Duddleston**  
**Initiator Signed Initials:** __________  
**Date:** __________

### 13b. Coordination Email

- Date: 6Jan14  
- submitted to Faculty Listserv: [uaa-faculty@lists.aaa.alaska.edu](mailto:uaa-faculty@lists.aaa.alaska.edu)

### 13c. Coordination with Library Liaison

- Date: 6Jan14

### 14. General Education Requirement

Mark appropriate box:  
- Oral Communication  
- Written Communication  
- Quantitative Skills  
- Humanities  
- Fine Arts  
- Social Sciences  
- Natural Sciences  
- Integrative Capstone

### 15. Course Description

- **Suggested length 20 to 50 words**  
- Field exploration of the principles and techniques used for study and collection of baseline ecological data in remote landscapes. Course activities will focus on field survey and methodology, and design of simple ecological projects as well as those with complex and multidisciplinary components

### 16a. Course Prerequisite(s)

(list prefix and number or test code and score)

### 16b. Co-requisite(s)

(concurrent enrollment required)

- BIOL A483

### 16c. Automatic Restriction(s)

- College  
- Major  
- Class  
- Level

### 16d. Registration Restriction(s)

(non-codable)

- Instructor Approval

### 17. Mark if course has fees

### 18. Mark if course is a selected topic course

### 19. Justification for Action

The course is needed to provide majors in Biological Sciences and Natural Sciences with an upper division course in advanced ecological techniques. The addition is part of an overall curriculum revision in the Biological Sciences in which we aim to align our curriculum with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).
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<tr>
<th>College/School Curriculum Committee Chair</th>
<th>Date</th>
<th>Provost or Designee</th>
<th>Date</th>
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232
University of Alaska Anchorage  
College of Arts and Sciences  
Course Content Guide

I. **Date of Initiation:** Spring 2014

II. **Curriculum Action Request**
A. **College:** College of Arts and Sciences  
B. **Course Prefix:** BIOL  
C. **Course Number:** A484  
D. **Number of Credits:** 4  
E. **Contact Hours:** 0+8  
F. **Course Title:** Experiential Learning: Exploration Ecology Field Study  
G. **Grading Basis:** A-F  
H. **Implementation Date:** Fall 2015  
I. **Cross-listed/Stacked:** N/A  
J. **Course Description:** Field exploration of the principles and techniques used for study and collection of baseline ecological data in remote landscapes. Course activities will focus on field survey and methodology, and design of simple ecological projects as well as those with complex and multidisciplinary components  
K. **Course Prerequisites:** N/A  
L. **Course Co-requisites:** BIOL A483  
M. **Other Restrictions:** N/A  
N. **Registration Restrictions:** Instructor Approval  
O. **Course Fees:** Yes

III. **Instructional Goals and Student Learning Outcomes**
A. **Instructional Goals.** The instructor will:  
1. Provide a basic understanding of ecological survey and analysis  
2. Enable students to apply theory to field-based settings.  
3. Assist students in acquiring skills needed for acquisition and analysis of data, interpretation of results, and preparation of reports and publication.

B. **Student Learning Outcomes and Assessment Measures**

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Design and conduct field based ecological research</td>
<td>Written assignments and data logs.</td>
</tr>
<tr>
<td>2. Utilize field-collected data in scientific analysis</td>
<td>Written assignments and reports</td>
</tr>
<tr>
<td>3. Initiate, understand, and follow appropriate safety, collection, landuse, and other regulations</td>
<td>Permits, forms, and reports</td>
</tr>
</tbody>
</table>
IV. **Course Level Justification**
This course builds field course offerings in the department and greater course depth in advanced ecology and environmental biology.

V. **Topical Course Outline**
Lab 1:  Lab and Field Safety
Lab 2:  Techniques of Sample Counts (Mark-Recapture, N-mixture Models)
Lab 3:  Techniques of Sample Counts 2
Lab 4:  Field Survey Techniques
Lab 5:  Distance Sampling, Indices, and Metrics
Lab 6:  Indirect Sampling by Proxy
Lab 7:  Indirect Sampling by Proxy 2
Lab 8:  Introduction to R Programming
Lab 9:  Multivariate Analysis, Groups
Lab 10:  Multivariate Analysis, Gradients
Lab 11:  Multivariate Analysis, Higher-order and Discrete
Lab 12:  Meta-Analysis.

VI. **Suggested Texts**

VII. **Bibliography**


**Course Action Request**  
**University of Alaska Anchorage**  
Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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</thead>
<tbody>
<tr>
<td>AS CAS</td>
<td>AMSC Division of Math Science</td>
<td>Biological Sciences</td>
</tr>
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</table>

<table>
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<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<tr>
<td>BIOL</td>
<td>A486</td>
<td>N/A</td>
<td>3</td>
<td>(3+0)</td>
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</table>

6. **Complete Course Title**  
Evolutionary Ecology  
Abbreviated Title for Transcript (30 character): Evolutionary Ecology

7. **Type of Course**  
- [X] Academic  
- [ ] Preparatory/Development  
- [ ] Non-credit  
- [ ] CEU  
- [ ] Professional Development

8. **Type of Action:**  
- [X] Add  
- [ ] Change  
- [ ] Delete

If a change, mark appropriate boxes:

- [ ] Prefix  
- [ ] Credits  
- [ ] Title  
- [ ] Grading Basis  
- [ ] Course Description  
- [ ] Test Score Prerequisites  
- [ ] Automatic Restrictions  
- [ ] Other

9. **Repeat Status No**  
- [ ] # of Repeats  
- [ ] Max Credits

10. **Grading Basis**  
- [X] A-F  
- [ ] P/NP  
- [ ] NG

11. **Implementation Date**  
- From: Fall/2015  
- To: Fall/9999

12. **Cross Listed with**  
- [ ] Stacked with

Cross-Listed Coordination Signature

13a. **Impacted Courses or Programs:**  
List any programs or college requirements that require this course.  
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.ualaska.alaska.edu/governance.

<table>
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Initiator Name (typed): _Khrys Duddleston_  
Initiator Signed Initials: _________  
Date:________________

13b. **Coordination Email**  
Submitted to Faculty Listserv: (uaa-faculty@lists.ualaska.edu)

13c. **Coordination with Library Liaison**  
Date: 6Jan14

14. **General Education Requirement**  
Mark appropriate box:

- [ ] Oral Communication  
- [ ] Written Communication  
- [ ] Quantitative Skills  
- [ ] Humanities  
- [ ] Fine Arts  
- [ ] Social Sciences  
- [ ] Natural Sciences  
- [ ] Integrative Capstone

15. **Course Description (suggested length 20 to 50 words)**  
Explores conceptual issues in the evolution of life histories and species interactions, as well as foundational and contemporary research in topics such as quantitative genetics, natural selection, and the evolution of sex. The course includes collection, interpretation, and integration of data into papers and presentations. Themes, including readings and case studies, will change with instructor.

16a. **Course Prerequisite(s) (list prefix and number or test code and score)**  
[BIOL A271 and BIOL A288] with minimum grade of C

16b. **Co-requisite(s) (concurrent enrollment required)**

16c. **Automatic Restriction(s)**  
- [ ] College  
- [ ] Major  
- [ ] Class  
- [ ] Level

16d. **Registration Restriction(s) (non-codable)**

17. **Mark if course has fees**  
- [ ]

18. **Mark if course is a selected topic course**  
- [ ]

19. **Justification for Action**  
The course is needed to provide majors in Biological Sciences and Natural Sciences with an upper division course in evolutionary ecology. Creating new, permanent course as part of our overall curriculum revision, which seeks to streamline completion of the B.S. in Biological Sciences degree and align our degree with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).
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I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A486
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Evolutionary Ecology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Explores conceptual issues in the evolution of life histories and species interactions, as well as foundational and contemporary research in topics such as quantitative genetics, natural selection, and the evolution of sex. The course includes collection, interpretation, and integration of data into papers and presentations.
K. Course Prerequisites: [BIOL A271 and BIOL A288] with minimum grade of C
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: None

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
1. Provide a basis for understanding the principles of the evolution.
2. Explain common themes in the evolution of life histories
3. Present foundational and contemporary studies for discussion.
4. Contrast a range of approaches in the study of evolutionary ecology.
5. Present important themes and primary literature in evolutionary ecology in the instructor’s area of expertise (e.g., vertebrate evolution, plant-animal interactions, etc.)

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>1. Contrast the ecological contexts that result in the evolution of various life history traits.</td>
<td>Examinations and/or written assignments</td>
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<tr>
<td>2. Synthesize the relationships of trait variation, heritability, and phenotypic selection to explain responses to evolution.</td>
<td>Examinations and/or written assignments</td>
</tr>
<tr>
<td>3. Evaluate foundational and contemporary research in evolutionary ecology.</td>
<td>Discussions and/or student presentations</td>
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</tbody>
</table>
IV. Course Level Justification
This course employs fundamental elements in evolution, genetics, and ecology in a synthetic approach to explore contemporary research questions in the field and is similar to other 400-level ecology courses offered at other universities.

V. Topical Course Outline
A. Introduction and Basic Principles
B. Fundamental Patterns in Evolution
   1. Macroevolutionary perspective: Speciation, Extinction, and Diversification Rates
C. Trait Variation and Natural Selection
   1. Phenotypic, Genotypic, Environmental Sources of Variation
   2. Changes in Trait Distribution Within Generations
D. Phenotypic Plasticity
   1. Genotype by Environmental Interactions
E. Fitness and Evolutionarily Stable Strategies
F. Quantitative Genetics and Heritability
   1. Additive and Non-Additive sources of Phenotypic Variation
   2. Measuring Trait Heritability
   3. Response to Selection
   4. Correlated Trait Evolution
G. Allocation and Trade-Offs
H. Evolution of Sex and Mating Systems
   1. Costs and Benefits of Gene Exchange
   2. Patterns of Outcrossing, Mixed Mating, and Self-fertilization
I. Sexual Selection
J. Evolutionary Patterns in Birth, Growth, and Death
   1. Offspring Number and Size
   2. Growth Rates
   3. Timing of Reproduction
   4. Senescence
K. Evolution of Species Interactions
   1. Coevolution
   2. Character Displacement
   3. Defense
   4. Mutualism
L. Patterns Specialization and Generalization

VI. Suggested Texts
VII. Bibliography


Additional reference books in thematic areas, for example:


1a. School or College  
AS CAS

1b. Division  
AMSC Division of Math Science

1c. Department  
Biological Sciences

2. Course Prefix  
BIOL

3. Course Number  
A487

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
3.0

5b. Contact Hours  
(Lecture + Lab)  
(3+0)

6. Complete Course Title  
Comparative Anatomy of Vertebrates  
Comp. Anatomy of Vertebrates  
Abbreviated Title for Transcript (30 character)

7. Type of Course  
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  
☐ Add  ☒ Change  ☐ Delete

If a change, mark appropriate boxes:

- ☑ Prefix
- ☑ Credits
- ☑ Title
- ☑ Grading Basis
- ☑ Course Description
- ☑ Test Score Prerequisites
- ☑ Automatic Restrictions
- ☑ Other CCG (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☐ Course Prerequisites
- ☐ Co-requisites
- ☐ Registration Restrictions
- ☐ General Education Requirement

9. Repeat Status No  
# of Repeats  
Max Credits

10. Grading Basis  
☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  
semester/year

From:  Fall/2015  
To:  Fall/9999

12. ☐ Cross Listed with  
Stacked with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.rra.alaska.edu/governance.

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Initiator Name (typed):  Khrys Duddleston  
Initiator Signed Initials:  _________  
Date:________________

13b. Coordination Email  
Date: 6Jan14  
submitted to Faculty Listserv: (uaa-faculty@lists.rra.alaska.edu)

13c. Coordination with Library Liaison  
Date: 6Jan14

14. General Education Requirement  
Mark appropriate box:

- ☑ Oral Communication  
- ☐ Written Communication  
- ☑ Quantitative Skills  
- ☐ Humanities  
- ☑ Fine Arts  
- ☐ Social Sciences  
- ☑ Natural Sciences  
- ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)  
A comparative exploration of vertebrate anatomy. The aim of the course is to investigate the links between the forms and functions of shared organ systems and to discuss their evolutionary, ecological and physiological implications.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
BIOL A288 with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)  
☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action

We are removing the laboratory portion of the course. The course has been modified as part of our overall curriculum revision in which we aim to streamline the B.S. in Biological Sciences degree and align our curriculum with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science).

Initiator (faculty only)  
Khrys Duddleston  
Initiator (TYPE NAME)  

☑ Approved  ☐ Disapproved  
Dean/Director of School/College  Date

☑ Approved  ☐ Disapproved  
Undergraduate/Graduate Academic  Date

☑ Approved  ☐ Disapproved  
Board Chair  Date

☑ Approved  ☐ Disapproved  
Provost or Designee  Date

Initiator Name (typed):  Khrys Duddleston  
Initiator Signed Initials:  _________  
Date:________________

☑ Approved  ☐ Disapproved  
Department Chair  Date

☑ Approved  ☐ Disapproved  
College/School Curriculum Committee Chair  Date

☑ Approved  ☐ Disapproved  
Provost or Designee  Date

241
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A487
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Comparative Anatomy of Vertebrates
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: A comparative exploration of vertebrate anatomy. The aim of the course is to investigate the links between the forms and functions of shared organ systems and to discuss their evolutionary, ecological and physiological implications.
K. Course Prerequisites: BIOL A288 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: N/A
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Present the principles of comparative vertebrate anatomy and integrate biological principles of chordate (particularly vertebrate) structure, function and ecology.
   2. Characterize how organ systems within the vertebrates are related phylogenetically and evolutionarily.
   3. Describe important anatomical features and phylogenetic relationships within the vertebrates, including the comprehension of phylogenetic relationships.

   B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe principles of comparative vertebrate anatomy mirrored by evolutionary associations between the structure, function and ecology of chordate phyla (particularly vertebrates).</td>
<td>Written assignments and examinations</td>
</tr>
<tr>
<td>2. Master and apply the necessary background knowledge and intellectual skills required to discuss and critically evaluate the fundamental features associated with vertebrate functional morphology and its evolution.</td>
<td>Written assignments and examinations</td>
</tr>
</tbody>
</table>
3. Identify vertebrate organ systems and their structure and functions

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<th>Written assignments and examinations</th>
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4. Master the vocabulary and nomenclature associated with the anatomy of the vertebrate organ systems

<table>
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<tr>
<th>Written assignments and examinations</th>
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</table>

IV. **Course Level Justification**
This course is designed for Biological and Natural Sciences majors as an elective undergraduate course comparable to 400-level comparative anatomy of vertebrates courses offered at other universities. This course covers the principle concepts and processes of comparative vertebrate anatomy in the context of evolution and is essential to the student’s ability to succeed and integrate content with other 400-level courses in biological sciences.

V. **Topical Course Outline**
   A. Evolution and Morphology
   B. Origins of the Chordates
   C. Vertebrate Diversity
      1. Aquatic vertebrates: Jawless fish, Cartilagenous fish, Bony fish
      2. Terrestrial vertebrates: Amphibians and Amniotes
   D. Biological Design
      1. Size and shape
      2. Biomechanics
   E. Life History and Vertebrate Development
   F. Integumentary system (the skin)
   G. Skeletal system
      1. Skull
      2. Axial skeleton
      3. Appendicular skeleton
   H. Muscular system
   I. Respiratory system
   J. Circulatory system
   K. Digestive system

VI. **Suggested Texts**

VII. **Bibliography**
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College
   AS CAS

1b. Division
   AMSC Division of Math Science

1c. Department
   Biological Sciences

2. Course Prefix
   BIOL

3. Course Number
   A488

4. Previous Course Prefix & Number
   N/A

5a. Credits/CEUs
   4

5b. Contact Hours
   (Lecture + Lab)
   (2+4)

6. Complete Course Title
   Experiential Learning: Developmental Biology
   EL: Developmental Biology
   Abbreviated Title for Transcript (30 character)

7. Type of Course
   ☑ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:
   ☑ Add  ☐ Change  ☐ Delete

   If a change, mark appropriate boxes:
   ☑ Prefix  ☐ Course Number
   ☑ Credits  ☐ Contact Hours
   ☑ Title  ☐ Repeat Status
   ☑ Grading Basis  ☐ Cross-Listed/Stacked
   ☑ Course Description
   ☐ Course Prerequisites
   ☐ Co-requisites
   ☐ Registration Restrictions
   ☐ General Education Requirement
   ☐ Other CCG (please specify)

9. Repeat Status No
   # of Repeats
   Max Credits

10. Grading Basis
    ☑ A-F  ☐ P/NP  ☐ NG

11. Implementation Date
    Semester/year
    From: Fall/2015 To: Fall/9999

12. ☐ Cross Listed with
    ☐ Stacked with
    Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

   Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

   Impact Program/Course  Date of Coordination  Chair/Coordinator Contacted
   1.
   2.
   3.

   Initiator Name (typed): Khrys Duddleston  Initiator Signed Initials: _________  Date: ______________

13b. Coordination Email
    Date: 6Jan14
    submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
    Date: 6Jan14

14. General Education Requirement
    Mark appropriate box:
    ☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities
    ☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
    An in depth study of the molecular and cellular principles which underlie the development of tissues and organ systems in animals, including classical embryology through utilization of numerous laboratory techniques within an authentic experiential learning environment.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
    BIOL A252 with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)
    ☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Restriction(s) (non-codable)

17. ☑ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
    The title, description and contact hours are being updated to reflect course design and content. As part of our overall curriculum revision, which seeks to align our degree with the core concepts and competencies in Vision and Change in Undergraduate Biology Education (National Science Foundation and American Association for the Advancement of Science), this course will become part of our rotation of upper division electives in molecular biology. It is being revised as an experiential learning course which combines conceptual theory and an authentic laboratory experience into a single course.
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<thead>
<tr>
<th>College/School Curriculum Committee Chair</th>
<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
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</table>

245
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A488
D. Number of Credits: 4
E. Contact Hours: 2+4
F. Course Title: Experiential Learning: Developmental Biology
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: An in depth study of the molecular and cellular principles which underlie the development of tissues and organ systems in animals, including classical embryology through utilization of numerous laboratory techniques within an authentic experiential learning environment.
K. Course Prerequisites: BIOL A252 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: None
O. Course Fees: Yes

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Explain and provide a framework for understanding the principles and key concepts of development, and describe the process.
   2. Provide hands-on examples by which genes in the fertilized egg control cell behavior in the embryo to determine its pattern, form and behavior.
   3. Discuss the latest research findings relevant to embryogenesis and how genes and epigenetics control cell behavior and development.
   4. Train students in classical histology and in the latest research techniques in developmental biology.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon completion of this course, the student will be able to:</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Illustrate the fundamental concepts of development in animals.</td>
<td>In class discussions, written assignments</td>
</tr>
<tr>
<td>2. Evaluate the mechanisms by which gene expression controls specific aspects of development in different model organisms.</td>
<td>Hands-on experiential learning including mating/fertilization, developmental staging, and RNA interference and analysis; written lab reports; in-class discussions</td>
</tr>
<tr>
<td>3. Analyze data presented in the primary literature on developmental biology.</td>
<td>Presentations, in class discussions</td>
</tr>
</tbody>
</table>
4. Formulate and test hypotheses regarding the role of specific genes or epigenetic effects on development.

Experimental design and implementation, data analysis, written assignment, in class discussion

IV. Course Level Justification
This course is designed for Biological and Natural Sciences majors as an elective undergraduate course comparable to 400-level developmental biology courses offered at other universities.

V. Topical Course Outline
A. Basic concepts of development
B. Model organisms
   1. *Xenopus, axolotls, Drosophila, sea urchin, chick, pig*
C. Developmental genes
D. Vertebrate body axes
E. Specification of vertebrate germ layers
F. Gastrulation
G. Somite formation and patterning
H. Organizer region and neural induction
I. Maternal and early embryonic genes
J. Segmentation and homeotic genes
K. Neural tube formation, neural crest migration and other cell movements
L. Epigenetics and gene expression in development
M. Inheritance of patterns of gene expression
N. Control of gene expression
O. Organogenesis and limb formation
P. Axonal guidance and synapse formation
Q. Sex determination
R. Germ cells and fertilization
S. Regeneration
T. Growth, metamorphosis, aging
U. Evolution and development

VI. Suggested Texts

VII. Bibliography

Primary literature from journals such as Development, Mechanisms of Development, Science, Cell, Nature, and similar titles.
1. **School or College**
   - AS CAS
2. **Division**
   - AMSC Division of Math Science
3. **Department**
   - Biological Sciences
4. **Course Prefix**
   - BIOL
5. **Course Number**
   - A489
6. **Credits/CEUs**
   - 3
7. **Contact Hours**
   - (Lecture + Lab) (3+0)
8. **Complete Course Title**
   - Population Genetics and Evolutionary Processes
   - Popn Genetics Evol Processes
9. **Type of Course**
   - Academic
10. **Type of Action**
    - Add
11. **Implementation Date**
    - From: Fall/2015
    - To: Fall/9999
12. **Course Prerequisite(s)**
    - [BIOL A252 or BIOL A288] with minimum grade of C
13. **Course Description**
    - A comprehensive examination of the primary forces and processes involved in shaping genetic variation in natural populations (mutation, drift, selection, migration, recombination, mating patterns, population size and population subdivision), methods of measuring genetic variation in nature, and experimental tests of important ideas in population genetics.
14. **Justification for Action**
    - One of the prerequisites (BIOL A288) has been renumbered through departmental curriculum revisions.
I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A489
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Title: Population Genetics and Evolutionary Processes
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: A comprehensive examination of the primary forces and processes involved in shaping genetic variation in natural populations (mutation, drift, selection, migration, recombination, mating patterns, population size and population subdivision), methods of measuring genetic variation in nature, and experimental tests of important ideas in population genetics
K. Course Prerequisites: BIOL A252 or BIOL A288 with minimum grade of C.
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: Senior Standing
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
1. Provide a basic description of evolutionary theory and concepts
2. Build on the conceptual framework to describe how evolutionary process results in evolutionary pattern
3. Link current research on microevolutionary processes relate to observed responses to environmental and climate change
4. Emphasize the underlying quantitative processes that structure the living world, and enable students to undertake analyses and conceptualization of processes on their own
5. Provide detailed examples of modern evolutionary analysis and theory as mechanisms of biotic change and diversification
6. Relate all of the above to current issues in local and national debate on endangered populations, relevance of evolution thought to modern life (evolutionary medicine, emerging disease and virulence, endangered species, etc.)
7. Assist students to learn how to evaluate and integrate information from a variety of sources and perspectives.

B. Student Learning Outcomes and Assessment Measures
Students will be able to:

<table>
<thead>
<tr>
<th>Assessment Method:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Read, understand, and integrate information from scientific articles with that provided in lecture and textbook assignments, and to use this information to evaluate the scientific accuracy of reports from the popular press or public science.</td>
<td>Exams, written assignments, in-class presentations.</td>
</tr>
<tr>
<td>2. Demonstrate an in-depth understanding of evolutionary process, microevolution mechanisms, and macroevolutionary patterns.</td>
<td>Exams and written assignments</td>
</tr>
<tr>
<td>3. Demonstrate an in-depth understanding of evolutionary process, microevolution mechanisms, and macroevolutionary patterns.</td>
<td>Written assignments, in-class presentations.</td>
</tr>
</tbody>
</table>

IV. Course Level Justification

Students are required to learn and integrate information from a variety of scientific disciplines as it relates to applied genetics, advanced evolutionary analysis, and microevolutionary processes; to read, understand, and apply ideas conveyed by primary scientific literature; to synthesize current biological knowledge and evolutionary theory; and to apply course materials to current problems

GER Integrative Capstone Justification:

Justifications for designating BIOL A489 Population Genetics and Evolutionary Theory as a GER Integrative Capstone course include:

1. Knowledge Integration/Interrelationships and synergy among GER disciplines: The overall theme of the course is understanding the relationship of evolutionary processes to other natural and social sciences. The course will focus on the interfaces among physical sciences (biochemistry, geological history, mathematics), biological sciences (biology, ecology, conservation, molecular biology, etc.), and the social sciences (particularly human biology, sociology, anthropology).

2. Effective Communication Skills: Course success demands effective communication through essay examinations, individual classroom presentations, brief reports (oral and written) on current controversies surrounding evolution and evolutionary processes, and a final research product.

3. Critical Thinking: Students will not be able to succeed in the course unless they are able to integrate information across disciplines, and critically evaluate the reliability of data and positions presented in lecture, texts, scientific, and popular viewpoints. Student ability to critically evaluate diverse material will be determined based on writing assignments, class presentations, and examinations.

4. Information Literacy: Students are expected to achieve and demonstrate computer and internet skills for acquiring information relevant to current topics in evolutionary biology. This will involve research in the primary scientific literature, and the collection of information from unpublished sources such as popular press and public statements. Students will be required to show that they can critically winnow facts and scientific content from diverse non-scientific sources.
5. Quantitative Perspectives: A critical understanding of evolutionary processes is grounded in many quantitative disciplines, including statistical analysis, applied maths (algebra, calculus, probability and combinatorics, etc.), general and advanced genetics, molecular biology. In addition, students must be able to read and interpret scientific data in graphical and tabular form, and to generate appropriate graphical displays of their own results. Microevolutionary analysis is only possible using sophisticated computer-based analytical techniques including: Bayesian analysis, Monte Carlo simulation, maximum likelihood analysis, and discrete graph analysis. Exams will specifically test on these skills.

6. Evolving realities of the 21st century: The growing understanding that evolution is a dynamic and everpresent component of modern life, particularly in the context of climate change and anthropogenic change, touches many aspects of science, policy, and social attitudes. This course will help students understand the implication of evolutionary process in a changing environment, and provide them with effective means to communicate its important and relevance for individuals and society.

V. Topical Course Outline
A. Population Structure
   1. Hardy Weinberg Equilibrium
   2. Systems of Mating
   3. Demographics
   4. Genetic Drift
   5. Neutrality and Molecular Evolution
   6. Coalescence
   7. Gene Flow & Subdivision
   8. Founders and Survivors
   9. mtDNA, Y-DNA: Separating History From Gene Flow

B. Genotype and Phenotype
   1. Quantitative Genetics: Means
   2. Quantitative Genetics: Variances
   3. The Unmeasured Genotype Approach
   4. The Measured Genotype Approach

C. Selection
   1. Measures of Fitness
   2. Constant Fitness Models
   3. Selection on Quantitative Traits and FFTNS
   4. Pleiotropy and Developmental Constraints
   5. The Shifting Balance Theory

D. Units and Targets of Selection
   1. The Unit of Selection
   2. Meiotic and Molecular Drive
   3. Sexual, Frequency and Density Dependent Selection I
   4. Asexual selection, lateral gene transfer

E. Ecological Genetics
   1. Environmental Heterogeneity
   2. Niche and Mimicry
   3. Coevolution and Host-parasite Systems
   4. Life History Evolution

F. Human Evolution and Sociobiology
   1. Hominid Evolution
   2. Altruism and Group Selection
3. Cultural Evolution

VI. Suggested Texts


VII. Bibliography


Course Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS CAS</td>
<td>AMSC Division of Math Science</td>
<td>Biological Sciences</td>
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<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>A495</td>
<td>N/A</td>
<td>1.0</td>
<td>(Lecture + Lab) (0+3)</td>
</tr>
</tbody>
</table>

6. Complete Course Title  
Instructional Practicum: Laboratory  
Instructional Practicum: Lab  
Abbreviated Title for Transcript (30 character)

7. Type of Course  
[ ] Academic  [ ] Preparatory/Development  [ ] Non-credit  [ ] CEU  [ ] Professional Development

8. Type of Action:  
[ ] Add  [ ] Change  [ ] Delete

If a change, mark appropriate boxes:

- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Automatic Restrictions
- Other CCG (please specify)

9. Repeat Status  
[ ] Yes  [ ] No  
# of Repeats: 1  
Max Credits: 2

10. Grading Basis  
[ ] A-F  [ ] P/NP  [ ] NG

11. Implementation Date  
From: Fall/2015  
To: Fall/9999

12. [ ] Cross Listed with  
[ ] Stacked with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.  
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
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<td>1.</td>
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<td>3.</td>
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</table>

Initiator Name (typed): Khrys Duddleston  
Initiator Signed Initials: _________  
Date: __________

13b. Coordination Email  
[ ] Date: 6Jan14  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
[ ] Date: 6Jan14

14. General Education Requirement  
Mark appropriate box:

- Oral Communication
- Written Communication
- Quantitative Skills
- Humanities
- Fine Arts
- Social Sciences
- Natural Sciences
- Integrative Capstone

15. Course Description (suggested length 20 to 50 words)  
Supervised instructional experience in a 2-hr, 3-hr or 4-hr biology laboratory or experiential learning course. Planning, presentation of material, achievement testing and correlation with lecture under the direct supervision of department faculty. Add Special Note about Repeat and mimic original description.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
N/A

16b. Co-requisite(s) (concurrent enrollment required)

16c. Automatic Restriction(s)  
[ ] College  [ ] Major  [ ] Class  [ ] Level

16d. Registration Restriction(s) (non-codable)  
Minimum 20 credits in BIOL

17. [ ] Mark if course has fees

18. [ ] Mark if course is a selected topic course

19. Justification for Action  
Update of CCG: modifying instructional goals and student expectations

Initiator (faculty only)  
Khrys Duddleston

Initiator (TYPE NAME)

[ ] Approved  
[ ] Disapproved

Dean/Director of School/College  
Date

[ ] Approved  
[ ] Disapproved

Undergraduate/Graduate Academic  
Date

Board Chair

[ ] Approved  
[ ] Disapproved

Provost or Designee  
Date

[ ] Approved  
[ ] Disapproved

Department Chair  
Date

College/School Curriculum Committee Chair  
Date
University of Alaska Anchorage  
College of Arts and Sciences  
Course Content Guide

I. Date of Initiation: Spring 2014

II. Curriculum Action Request
A. College: College of Arts and Sciences
B. Course Prefix: BIOL
C. Course Number: A495
D. Number of Credits: 1
E. Contact Hours: 0+3
F. Course Title: Instructional Practicum: Laboratory
G. Grading Basis: A-F
H. Implementation Date: Fall 2015
I. Cross-listed/Stacked: N/A
J. Course Description: Supervised instructional experience in a 2-hr, 3-hr or 4-hr biology laboratory or experiential learning course. Planning, presentation of material, achievement testing and correlation with lecture under the direct supervision of department faculty.
Special Note: May be repeated once for credit.
K. Course Prerequisites: N/A
L. Course Co-requisites: N/A
M. Other Restrictions: N/A
N. Registration Restrictions: Minimum 20 credits in BIOL
O. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals. The instructor will:
   1. Mentor students in learning how to teach effectively
   2. Model appropriate instructor/student relationship and instructor ethics in and out of the classroom
   3. Actively guide students in pedagogical methods and techniques to assist and answer student questions
   4. Provide supervisory coordination to maintain the coordinated delivery of practical and lecture materials and presentations

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Students will be able to:</th>
<th>Assessment Method:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Apply basic pedagogical skills by delivering instructional presentations in an experiential learning or laboratory setting.</td>
<td>Presentations, assisting instructor and students</td>
</tr>
<tr>
<td>2. Apply theoretical and practical teaching tools to organize, plan, present, demonstrate, assess and nurture student learning in an experiential learning or laboratory setting.</td>
<td>Presentations, assisting instructor and students</td>
</tr>
</tbody>
</table>
3. Effectively communicate skills in an experiential learning or laboratory setting.

Presentations, assisting instructor and students

IV. Course Level Justification
Designed for Biological and Natural Sciences majors and as elective undergraduate course comparable to 400-level teaching practica offered at other universities. Enables students to plan and present materials, conduct exams and quizzes, and correlate laboratory presentations with lecture material under direct supervision and mentoring of department faculty.

V. Topical Course Outline
A. Student will attend all weekly laboratory sessions for the course assigned
B. Student will attend all weekly planning meetings
C. Student will assist course enrollees with experiments and answer questions during class
D. Student will prepare and deliver 2 separate laboratory/experiential learning lead-ins
   1. Student will help prepare quizzes, exam questions and homework questions associated with the 2 laboratory lead-ins they prepare
   2. Student will help grade quizzes, exam questions and homework questions associated with the 2 laboratory lead-ins they prepare

VI. Suggested Texts
The text will vary depending on the assigned class for instructor practicum.

VII. Bibliography

8Jan14

To: CAS Course and Curriculum Committee
   Undergraduate Academic Board

From: Khrys Duddlestone, Chair
       Department of Biological Sciences Curriculum Committee

RE: Changes to the B.A. in Biological Sciences Degree

The Department of Biological Sciences proposes the following changes to the B.A. in Biological Sciences Degree

1. Changes to the core course requirements
2. Organize upper division electives into five areas
3. Updating upper division course offerings

These changes are intended to ensure that core course requirements prepare students for upper division electives as well as improve the depth and breadth of exposure to sub disciplines within the biological sciences. The purpose for making these changes is to improve the time to completion of the degree and align our curriculum with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education: A Call to Action (2013), a report of a national conference organized by the American Association for the Advancement of Science with support from the National Science Foundation.

Please contact me if you have any additional questions.
1. School or College: AS CAS
2. Complete Program Title/Prefix: Bachelor of Arts, Biological Sciences
3. Type of Program:
   - Choose one from the appropriate drop down menu: Undergraduate: Bachelor of Arts or Graduate: CHOOSE ONE
   - This program is a Gainful Employment Program: Yes or No
4. Type of Action:
   - PROGRAM: Add, Change, Delete
   - PREFIX: Add, Change, Inactivate
5. Implementation Date (semester/year):
   - From: Fall/2015 To: Fall/9999
6a. Coordination with Affected Units:
   - Department, School, or College: CAS
   - Initiator Name (typed): Khrys Duddleston
   - Initiator Signed Initials: 
   - Date: 
6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)
   - Date: 6Jan14
6c. Coordination with Library Liaison
   - Date: 6Jan14
7. Title and Program Description - Please attach the following:
   - Cover Memo
   - Catalog Copy in Word using the track changes function
8. Justification for Action
   - The purpose for making these changes is to improve the time to completion of the degree and align our curriculum with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education: A Call to Action (2013), a report of a national conference organized by the American Association for the Advancement of Science with support from the National Science Foundation.

Initiator (faculty only) Date
Khrys Duddleston
Initiator (TYPE NAME)

Approved Disapproved
Dean/Director of School/College Date

Approved Disapproved
Undergraduate/Graduate Academic Board Chair Date

Approved Disapproved
Provost or Designee Date

Approved Disapproved
Department Chair Date

Approved Disapproved
College/School Curriculum Committee Chair Date
## Program/Prefix Action Request

**University of Alaska Anchorage**

Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

<table>
<thead>
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<th>1a. School or College</th>
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<tr>
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<tr>
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<tbody>
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<td>Bachelor of Science, Biological Sciences</td>
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<th>3. Type of Program</th>
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<tr>
<td>Bachelor of Science</td>
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<th>4. Type of Action: PROGRAM</th>
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<td>Change</td>
<td>Change</td>
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<td>Delete</td>
<td>Inactivate</td>
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<tr>
<th>5. Implementation Date (semester/year)</th>
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<tr>
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<tr>
<th>6a. Coordination with Affected Units</th>
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<tbody>
<tr>
<td>Department, School, or College: CAS</td>
</tr>
<tr>
<td>Initiator Name (typed): Khrys Duddleston</td>
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<tr>
<td>Initiator Signed Initials: _________</td>
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<td>Date:________________</td>
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| 6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) | Date: 6Jan14 |
|------------------------------------------------------------------------------------------|

| 6c. Coordination with Library Liaison | Date: 6Jan14 |
|--------------------------------------|

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<th>Date</th>
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<tbody>
<tr>
<td>Khrys Duddleston</td>
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<tr>
<th>Undergraduate/Graduate Academic Board Chair</th>
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<tr>
<th>Provost or Designee</th>
<th>Date</th>
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**Initiator (TYPE NAME)**
BIOLOGICAL SCIENCES

ConocoPhillips Integrated Sciences Building (CPSB), Room 101P, (907) 786-4770
www.uaa.alaska.edu/biology

Biology is the science concerned with the study of living organisms. It encompasses a vast range of biological disciplines, from the study of microbes and molecular biology to the study of plants, animals and the environment. The undergraduate program in the Biological Sciences includes courses that provide students with a broad understanding of both traditional and modern biological sciences. These courses are suitable as preparation for professional degrees, teaching, or careers in government or industry. Both the Bachelor of Arts and the Bachelor of Science degrees are available for undergraduates. A Master of Science degree program in Biological Sciences as well as a joint UAA-UAF Doctor of Science degree program is available for students already holding a baccalaureate degree.

A program of study in the biological sciences requires completion of a basic science core curriculum in the chemical, physical and mathematical sciences as well as required and elective courses in the biological sciences. A degree in the biological sciences prepares students who wish to pursue careers in medicine, dentistry, veterinary medicine, ecology and the environmental sciences in the private or public sector, or who wish to attend graduate school. Students are strongly encouraged to consult with their academic advisors within the Department of Biological Sciences to determine which electives best suit their programmatic needs and career requirements.

The Bachelor of Arts and the Bachelor of Science degree programs require a total of 120-125 credits for graduation and can be completed in four years by students who have had adequate high school preparation in math and sciences. Refer to the beginning of this chapter for recommended high school courses.

Program Student Learning Outcomes

It is expected that graduates of the Biological Sciences program will:

1. Demonstrate an understanding of the core concepts in the biological sciences: evolution; structure and function relationships; information flow, exchange and storage; transformation of energy and matter
2. Apply the process of science and construct knowledge through observations, experimentation, quantitative reasoning and hypothesis testing
3. Read, analyze and synthesize primary literature, and communicate scientific concepts and data in written and oral form

Community Service Courses

The department offers a wide range of community service courses as a service to the people in the Anchorage area and extended campuses who wish to become more knowledgeable about the science of biology and how it relates to them. Unless noted otherwise in the course description, community service courses do not satisfy either core requirements or elective credit toward any degree programs in the biological sciences. All are offered as demand warrants.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL A074</td>
<td>Field Natural History</td>
</tr>
<tr>
<td>BIOL A075</td>
<td>Local Flora</td>
</tr>
<tr>
<td>BIOL A100</td>
<td>Human Biology</td>
</tr>
<tr>
<td>BIOL A124</td>
<td>Biota of Alaska: Selected Topics</td>
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<tr>
<td>BIOL A126</td>
<td>Birds in Field and Laboratory</td>
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</table>

Departmental Honors in Biology

Undergraduate Biological Science majors may be recognized for exceptional performance by earning departmental honors in Biology. In order to receive honors in biology, a student must meet each of the following requirements:

1. Meet the requirements for Graduation with Honors as listed in Chapter 7.
2. Meet the requirements for a BA/BS degree in Biological Sciences.
3. Earn a grade point average of 3.50 or above in the major requirements.
4. During the senior year of their academic program, the student must gain faculty approval for and complete, with a grade of B or better, a senior thesis research project, with enrollment in BIOL A499 Senior Thesis. Biological Science faculty members must approve the project proposal and final written report.

**Bachelor of Arts, Biological Sciences**

**Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7.

**Academic Progress**

To graduate with a BA in Biological Sciences, the student must complete all courses covered under Major Requirements for a BA in Biological Sciences with a grade of C or better. All prerequisites for Biology courses must be completed with a grade of C or better. Students who audit, or are unable to earn a grade of C or better in, a lower-division (100 or 200 level) course in the Department of Biological Sciences (BIOL) may repeat the course two additional times on a space available basis. Students who audit, or are unable to earn a grade of C or better in, an upper-division (300 or 400 level) course in the Department of Biological Sciences may repeat the course one additional time on a space available basis. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a linked lecture and laboratory component, both components must be repeated. Students enrolled in a laboratory or Experiential Learning course in the Department of Biological Sciences must attend the lab or course the first week of class or they may be administratively dropped.

**Graduation Requirements**

Students must complete the following graduation requirements:

**A. General University Requirements**

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

**B. General Education Requirements**

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

**C. College of Arts and Sciences Requirements**

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

**D. Major Requirements**

1. Complete these required core courses (34-35 credits):

   - BIOL A108 Principles and Methods in Biology 6
   - BIOL A242 Fundamentals of Cell Biology 3
   - BIOL A252 Principles of Genetics 3
   - BIOL A271 Principles of Ecology 3
   - BIOL A288 Principles of Evolution 3
   - BIOL A243 Experiential Learning: Genetics and Cell Biology 4
   - or
   - BIOL A273 Experiential Learning: Ecology and Evolution 4
   - BIOL A492 Undergraduate Seminar 1
   - CHEM A105 General Chemistry I 3
   - CHEM A105L General Chemistry I Laboratory 1
   - CHEM A106 General Chemistry II 3
   - CHEM A106L General Chemistry II Laboratory 1
   - STAT A252 Elementary Statistics (3) 3-4
or
STAT A253  Applied Statistics for the Sciences (4)

or
STAT A307  Probability and Statistics (4)

2. Complete 18-19 credits of upper division program electives from the following areas.
   a. A minimum of 3 credits must come from each of 4 of the 5 areas.*
   b. A minimum of 6 credits must be Experiential Learning from 2 areas**. 18-19

**Genetics, Cellular and Molecular Biology**

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<td>BIOL A461</td>
<td>Molecular Biology</td>
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<td>Virology</td>
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<td>BIOL A463</td>
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<td>Metals in Biology</td>
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<td>Experiential Learning: Microscopical Tissue Techniques</td>
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**Ecology and Evolution**

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<th>Course Name</th>
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<td>Conservation Biology</td>
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<td>BIOL A476</td>
<td>Wildlife Population Dynamics and Management</td>
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<td>Tundra and Taiga Ecosystems</td>
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<td>Biological Oceanography</td>
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<td>Physiological Plant Ecology</td>
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<td>BIOL A480</td>
<td>Ecological and Conservation Genetics</td>
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<td>Marine Biology</td>
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<td>BIOL A489</td>
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<td>Processes</td>
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<td>BIOL A484</td>
<td>Experiential Learning: Exploration Ecology Field Study</td>
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</table>
Diversity and Organismal Biology

BIOL A320 Vertebrate Biology (3)
BIOL A330 Plant Biology (3)
BIOL A340 Microbial Biology (3)
BIOL A423 Ichthyology (3)
BIOL A427 Marine Invertebrate Biology (3)
BIOL A430 Marine Mammals and Seabirds (3)
BIOL A431 Plant Diversity and Evolution (3)
BIOL A487 Comparative Anatomy of Vertebrates (3)

BIOL A321 Experiential Learning: Vertebrate Biology (2)
BIOL A332 Experiential Learning: Plant Biology (2)
BIOL A342 Experiential Learning: Microbial Biology (4)

Physiology

BIOL A310 Principles of Animal Physiology (3)
BIOL A316 Principles of Plant Physiology (3)
BIOL A412 Behavioral Endocrinology (3)
BIOL A413 Neurophysiology (3)
BIOL A414 Chronobiology (3)
BIOL A415 Comparative Animal Physiology (3)
BIOL A416 Exercise Physiology (3)
BIOL A418 Fish Physiology (3)
BIOL A479 Physiological Plant Ecology (3)
BIOL A487 Comparative Anatomy of Vertebrates (3)

Additional Upper Division Electives

BIOL A456 Nonlinear Dynamics and Chaos (3)
BIOL A490 Selected Lecture Topics in Biology (1-3)
BIOL A495 Instructional Practicum: Laboratory (1)
BIOL A497 Independent Study in Biology (1-12)
BIOL A498 Individual Research (1-6)
BIOL A499 Senior Thesis (3)
BIOL A490L Selected Laboratory Topics in Biology (1-3)
BIOL A406 Experiential Learning: Biostatistics (4)
BIOL A408 Experiential Learning: Scanning Electron Microscopy (SEM)

*Several courses are listed under more than one area. Each course can only count toward the credit requirement in one area.

**BIOL A498 credits may not be counted toward the Experiential Learning minimum requirement

**BIOL A490L credits may be counted toward the Experiential Learning minimum requirement

3. It is recommended that students complete 8 credits

from the following:

GEOL A111 Physical Geology (4)
GEOL A221 Historical Geology (4)
or
PHYS A123 Basic Physics I (3)
and
PHYS A123L Basic Physics I Laboratory (1)
PHYS A124 Basic Physics II (3)
PHYS A124L  Basic Physics II Laboratory (1)
or
PHYS A211  General Physics I (3)
and
PHYS A211L  General Physics I Laboratory (1)
PHYS A212  General Physics II (3)
and
PHYS A212L  General Physics II Laboratory (1)

4. A total of 124 credits is required for the degree, 42 credits of which must be upper division.

Bachelor of Science, Biological Sciences

The Bachelor of Science degree includes a single core program of coursework with electives selected from 4 sub-disciplines within the biological sciences. A wide selection of electives is available to all students, including courses offered under BIOL A490, which is a selected topics course. It is imperative that students consult their academic advisors within the Department of Biological Sciences to determine which electives are most appropriate to their career interests. Some of these elective courses are offered periodically, depending on demand. Refer to course descriptions to identify these courses.

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7.

Academic Progress

To graduate with a BS in Biological Sciences, the student must complete all courses covered under Major Requirements for a BS in Biological Sciences with a grade of C or better. All prerequisites for Biology courses must be completed with a grade of C or better. Students who audit, or are unable to earn a grade of C or better in, a lower-division (100 or 200 level) course in the Department of Biological Sciences (BIOL) may repeat the course two additional times on a space available basis. Students who audit, or are unable to earn a grade of C or better in, an upper-division (300 or 400 level) course in the Department of Biological Sciences may repeat the course one additional time on a space available basis. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a linked lecture and laboratory component, both components must be repeated. Students enrolled in a laboratory or Experiential Learning course in the Department of Biological Sciences must attend the lab or course the first week of class or they may be administratively dropped.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements

1. Some major requirements may also be used to satisfy the College of Arts and Sciences BS requirements.
2. Complete these required support courses (36 credits):
   - CHEM A105  General Chemistry I  3
   - CHEM A105L  General Chemistry I Laboratory  1
   - CHEM A106  General Chemistry II  3
CHEM A106L  General Chemistry II Laboratory  1
CHEM A321  Organic Chemistry I  3
CHEM A322  Organic Chemistry II  3
CHEM A323L  Organic Chemistry Laboratory  2
MATH A200  Calculus I  4
MATH A201  Calculus II  4
PHYS A123  Basic Physics I (3)  8
PHYS A123L  Basic Physics I Laboratory (1)
and
PHYS A124  Basic Physics II (3)
PHYS A124L  Basic Physics II Laboratory (1)
or
PHYS A211  General Physics I (3)
PHYS A211L  General Physics I Laboratory (1)
and
PHYS A212  General Physics II (3)
PHYS A212L  General Physics II Laboratory (1)
STAT A253  Applied Statistics for the Sciences (4)  4
or
STAT A307  Probability and Statistics (4)

3. Complete Biological Sciences core courses (22 credits):
   BIOL A108  Principles and Methods in Biology  6
   BIOL A242  Fundamentals of Cell Biology  3
   BIOL A252  Principles of Genetics  3
   BIOL A271  Principles of Ecology  3
   BIOL A288  Principles of Evolution  3
   BIOL A243  Experiential Learning: Genetics and Cell Biology  4
   or
   BIOL A273  Experiential Learning: Ecology and Evolution  4
   BIOL A492  Undergraduate Seminar  1

4. Complete at least 24 credits of upper division program electives from the following areas.
   a. A minimum of 3 credits must come from each of 4 of the five areas*.
   b. A minimum of 6 credits must be Experiential Learning from 2 areas**.  24

Genetics, Cellular and Molecular Biology
   BIOL A340  Microbial Biology (3)
   BIOL A451  Microbial Biotechnology (3)
   BIOL A452  Human Genome (3)
   BIOL A461  Molecular Biology (3)
   BIOL A462  Virology (3)
   BIOL A463  Molecular Biology of Cancer (3)
   BIOL A464  Metals in Biology (3)
   BIOL A471  Immunology (3)
   BIOL A342  Experiential Learning: Microbial Biology (4)
   BIOL A403  Experiential Learning: Microscopical Tissue Techniques (6)
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**Ecology and Evolution**

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<td>BIOL A489</td>
<td>Population Genetics and Evolutionary Processes</td>
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**Diversity and Organismal Biology**

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**Physiology**

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<td>Principles of Plant Physiology</td>
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<td>BIOL A412</td>
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<td>BIOL A413</td>
<td>Neurophysiology</td>
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<td>BIOL A414</td>
<td>Chronobiology</td>
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BIOL A415 Comparative Animal Physiology (3)
BIOL A416 Exercise Physiology (3)
BIOL A418 Fish Physiology (3)
BIOL A479 Physiological Plant Ecology (3)
BIOL A487 Comparative Anatomy of Vertebrates (3)

**Additional Upper Division Electives**

BIOL A456 Nonlinear Dynamics and Chaos (3)
BIOL A490 Selected Lecture Topics in Biology (1-3)
BIOL A495 Instructional Practicum: Laboratory (1)
BIOL A497 Independent Study in Biology (1-12)
BIOL A498 Individual Research (1-6)
BIOL A499 Senior Thesis (3)
BIOL A490L Selected Laboratory Topics in Biology (1-3)
CHEM A441 Principles of Biochemistry I (3)
CHEM A442 Principles of Biochemistry II (3)
CHEM A443 Biochemistry Laboratory (2)

BIOL A406 Experiential Learning: Biostatistics (4)
BIOL A408 Experiential Learning: Scanning Electron Microscopy (SEM)

*Several courses are listed under more than one area. Each course can only count toward the credit requirement in one area.

**BIOL A498 credits may not be counted toward the Experiential Learning minimum requirement

**BIOL A490L credits may be counted toward the Experiential Learning minimum requirement

5. A total of 122-125 credits is required for the degree, 42 credits of which must be upper division.

**Bachelor of Science, Natural Sciences**

The Department of Biological Sciences also oversees the Bachelor of Science in Natural Sciences. This curriculum emphasizes the interrelationships among the sciences. A program of study in the Natural Sciences requires that students select an option within the degree, and complete all courses required within the option, as well as sufficient science elective courses to meet minimum unit requirements for graduation. Students accepted into this flexible degree program select one of three options: the General Sciences Option is designed for students who are interested in understanding the interrelationships among various scientific fields, or in teaching science at the secondary level. The Pre-Health Professions Option is designed to meet the admission requirements of specific professional schools in medicine, dentistry, and veterinary medicine. The Environmental Sciences Option is designed to prepare students for graduate school or for employment in the private or public sector.

For a complete program description see the Natural Sciences section of this chapter.

**Minor, Biological Sciences**

Students majoring in another subject who wish to minor in Biological Sciences must complete the following requirements. A total of 28 credits is required for the minor, 12 of which must be upper division.

BIOL A108 Principles and Methods in Biology 6
BIOL A242 Fundamentals of Cell Biology 3
BIOL A252 Principles of Genetics 3
BIOL A288 Principles of Evolution 3
Upper division Biological Sciences electives 12

**FACULTY**

Eric Bortz, Assistant Professor, ebortz@uaa.alaska.edu
C. Loren Buck, Professor, clbuck@uaa.alaska.edu
BIOLOGICAL SCIENCES

ConocoPhillips Integrated Sciences Building (CPSB), Room 101P, (907) 786-4770
www.uaa.alaska.edu/biology

Biology is the science concerned with the study of living organisms. It encompasses a vast range of biological disciplines, from the study of microbes and molecular biology to the study of plants, animals and the environment. The undergraduate program in the Biological Sciences includes courses that provide students with a broad understanding of both traditional and modern biological sciences. These courses are suitable as preparation for professional degrees, teaching, or careers in government or industry. Both the Bachelor of Arts and the Bachelor of Science degrees are available for undergraduates. A Master of Science degree program in Biological Sciences as well as a joint UAA-UAF Doctor of Science degree program is available for students already holding a baccalaureate degree.

A program of study in the biological sciences requires completion of a basic science core curriculum in the chemical, physical and mathematical sciences as well as required and elective courses in the biological sciences. A degree in the biological sciences prepares students who wish to Two general divisions are recognized in the biology program: the cell-molecular and the organismal-ecology-evolution areas. The cell-molecular area focuses on pre-professional sciences for students wishing to pursue careers in medicine, dentistry, and veterinary medicine, ecology and the environmental sciences in the private or public sector, or who wish to attend graduate school. The organismal-ecology-evolution area is a more diversified curriculum emphasizing environmental, organismal, evolutionary, and general biological sciences preparatory for graduate school or for employment in the private or public sector.

Students are strongly encouraged to consult with their academic advisors within the Department of Biological Sciences to determine which electives best suit their programmatic needs and career requirements.

The Bachelor of Arts and the Bachelor of Science degree programs require a total of 124-125 credits for graduation and can be completed in four years by students who have had adequate high school preparation in math and sciences. Refer to the beginning of this chapter for recommended high school courses.

Program Student Learning Outcomes

It is expected that graduates of the Biological Sciences program will:

1. Demonstrate an understanding of and think through problems until solutions are derived and effectively communicate the solutions to supervisors.
2. Design and conduct projects that include fieldwork, laboratory analysis, and interpretation in the discipline. The core concepts in the biological sciences: evolution; structure and function relationships; information flow, exchange and storage; transformation of energy and matter.
3. Apply the process of science and construct knowledge through observations, experimentation, quantitative reasoning and hypothesis testing.
4. Read, analyze and synthesize primary literature, and communicate scientific concepts and data in written and oral form.

Community Service Courses

The department offers a wide range of community service courses as a service to the people in the Anchorage area and extended campuses who wish to become more knowledgeable about the science of biology and how it relates to them. Unless noted otherwise in the course description, community service courses do not satisfy either core requirements or elective credit toward any degree programs in the biological sciences. All are offered as demand warrants.

BIOL A074  Field Natural History
BIOL A075  Local Flora
BIOL A100  Human Biology
BIOL A124  Biota of Alaska: Selected Topics
BIOL A126  Birds in Field and Laboratory
Departmental Honors in Biology

Undergraduate Biological Science majors may be recognized for exceptional performance by earning departmental honors in Biology. In order to receive honors in biology, a student must meet each of the following requirements:

1. Meet the requirements for Graduation with Honors as listed in Chapter 7.
2. Meet the requirements for a BA/BS degree in Biological Sciences.
3. Earn a grade point average of 3.50 or above in the major requirements.
4. During the senior year of their academic program, the student must gain faculty approval for and complete, with a grade of B or better, a senior thesis research project, with enrollment in BIOL A499 Senior Thesis. Biological Science faculty members must approve the project proposal and final written report.

Bachelor of Arts, Biological Sciences

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7.

Academic Progress

To graduate with a BA in Biological Sciences, the student must complete all courses covered under Major Requirements for a BA in Biological Sciences with a grade of C or better. All prerequisites for Biology courses must be completed with a grade of C or better. Students who audit, or are unable to earn a grade of C or better in, a lower-division (100 or 200 level) course in the Department of Biological Sciences (BIOL) may repeat the course two additional times on a space available basis. Students who audit, or are unable to earn a grade of C or better in, an upper-division (300 or 400 level) course in the Department of Biological Sciences may repeat the course one additional time on a space available basis. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a linked lecture and laboratory component, both components must be repeated. Students enrolled in a laboratory or Experiential Learning course in the Department of Biological Sciences must attend the lab or course the first week of class or they may be administratively dropped.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements

1. Complete these required core courses (35 credits):

   - BIOL A115 Fundamentals of Biology I 4
   - BIOL A116 Fundamentals of Biology II 4
   - BIOL A242 Fundamentals of Cell Biology 4
   - BIOL A252 Principles of Genetics 4
   - BIOL A271 Principles of Ecology 4
   - BIOL A288 Principles of Evolution 3
   - BIOL A243 Experiential Learning: Genetics and Cell Biology 4
   - BIOL A288 Principles of Evolution 3

Or
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL A273</td>
<td>Experiential Learning: Ecology and Evolution</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A492</td>
<td>Undergraduate Seminar</td>
<td>1</td>
</tr>
<tr>
<td>CHEM A105</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM A105L</td>
<td>General Chemistry I Laboratory</td>
<td>1</td>
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<tr>
<td>CHEM A106</td>
<td>General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM A106L</td>
<td>General Chemistry II Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>STAT A252</td>
<td>Elementary Statistics (3)</td>
<td>3-4</td>
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<tr>
<td>or</td>
<td>STAT A253</td>
<td>Applied Statistics for the Sciences (4)</td>
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<tr>
<td>or</td>
<td>STAT A307</td>
<td>Probability and Statistics (4)</td>
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</table>

2. Complete 15-17 credits of upper division program electives from the following four areas.
   - A minimum of 3 credits must come from each of 4 of the 5 areas.*
   - A minimum of 6 credits must be Experiential Learning from 2 areas**. 18-19

### Genetics, Cellular and Molecular Biology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL A340</td>
<td>General Microbiology</td>
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<td>BIOL A451</td>
<td>Applied Microbiology</td>
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<tr>
<td>BIOL A452</td>
<td>Human Genome</td>
<td>3</td>
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<td>BIOL A453</td>
<td>Human Genome</td>
<td>3</td>
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<td>BIOL A461</td>
<td>Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A462</td>
<td>Virology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A463</td>
<td>Molecular Biology of Cancer</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A464</td>
<td>Metals in Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A464L</td>
<td>Molecular Biology Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A471</td>
<td>Immunochemistry, Immunology</td>
<td>4</td>
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<tr>
<td>BIOL A342</td>
<td>Experiential Learning: Microbial Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A403</td>
<td>Experimental Learning: Microscopical Tissue Techniques</td>
<td>6</td>
</tr>
<tr>
<td>BIOL A454</td>
<td>Experimental Learning: Microbial Biotechnology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A455</td>
<td>Experimental Learning: Bioinformatics</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A465</td>
<td>Experimental Learning: Molecular Biology</td>
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### Microtechnique

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<tbody>
<tr>
<td>BIOL A403</td>
<td>Microtechnique</td>
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<tr>
<td>BIOL A488</td>
<td>Experiential Learning: Developmental Biology</td>
<td>4</td>
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### Ecology and Evolution

<table>
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<tbody>
<tr>
<td>BIOL A365</td>
<td>Astrobiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A430</td>
<td>Marine Mammals and Seabirds</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A441</td>
<td>Animal Behavior</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A445</td>
<td>Plant-Herbivore Ecology</td>
<td>4</td>
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<tr>
<td>BIOL A450</td>
<td>Microbial Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A309/A472</td>
<td>Biogeography</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A372/A471</td>
<td>Conservation Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A474</td>
<td>Ecotoxicology</td>
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<td>BIOL A475</td>
<td>Fish Ecology</td>
<td>2</td>
</tr>
<tr>
<td>BIOL A476</td>
<td>Wildlife Population Dynamics and Management</td>
<td>3</td>
</tr>
</tbody>
</table>
BIOL A477  Tundra and Taiga Ecosystems (3)
BIOL A478  Biological Oceanography (3)
BIOL A479  Physiological Plant Ecology (3)
BIOL A483  Ecological and Conservation Genetics (3)
BIOL A484  Marine Biology (3)
BIOL A482  Spatial Ecology (3)
BIOL A483  Exploration Ecology (2)
BIOL A486  Evolutionary Ecology (3)
BIOL A430  Marine Mammal Biology (4)
BIOL A441  Animal Behavior (4)
BIOL A445  Plant-herbivore Ecology (4)
BIOL A450  Microbial Ecology (3)
BIOL A477  Tundra and Taiga Ecosystems (2)
BIOL A478  Biological Oceanography (4)
BIOL A479  Physiological Plant Ecology (2)
BIOL A489  Population Genetics and Evolutionary Processes (3)

BIOL A442  Experiential Learning: Animal Behavior (3)
BIOL A453  Experiential Learning: Microbial Ecology (4)
BIOL A484  Experiential Learning: Exploration Ecology Field Study (4)

Diversity and Organismal Biology
BIOL A320  Vertebrate Biology (3)
BIOL A330  Plant Biology (2)
BIOL A340  Microbial Biology (3)
BIOL A423  Ichthyology (3)
BIOL A427  Marine Invertebrate Biology (3)
BIOL A430  Marine Mammals and Seabirds (3)
BIOL A431  Systematic Botany (4) Plant Diversity and Evolution (3)
BIOL A433  Biology of Non-Vascular Plants (4)
BIOL A434  Biology of Vascular Plants (4)
BIOL A435  General Microbiology (5)
BIOL A437  Ichthyology (4)
BIOL A435  Mammalogy (3)
BIOL A476  Ornithology (4)
BIOL A477  Invertebrate Zoology (4)
BIOL A430  Marine Mammal Biology (4)

BIOL A321  Experiential Learning: Vertebrate Biology (2)
BIOL A332  Experiential Learning: Plant Biology (2)
BIOL A424  Experiential Learning: Microbial Biology (4)

Physiology
BIOL A310  Principles of Animal Physiology (4)
BIOL A316  Introduction to Plant Physiology (3)
BIOL A412  Behavioral Endocrinology (3)
BIOL A413  Neurophysiology (3)
BIOL A414  Chronobiology (3)
BIOL A415  Comparative Animal Physiology (3)
BIOL A416  Exercise Physiology (2)
BIOL A418  Fish Physiology (3)
BIOL A479  Physiological Plant Ecology (3)

BIOL A487  Comparative Anatomy of Vertebrates (3)

Additional Upper Division Electives

ASTR/
BIOL A365  Astrobiology (3)

BIOL/CHEM/
PHYS A456  Nonlinear Dynamics and Chaos (3)

BIOL A490  Selected Lecture Topics in Biology (1-3)
BIOL A493  Selected Laboratory Topics in Biology (1-3)
BIOL A495  Instructional Practicum: Laboratory (1)
BIOL A497  Independent Study in Biology (1-12)
BIOL A498  Individual Research (1-6)
BIOL A499  Senior Thesis (3)
BIOL A490L  Selected Laboratory Topics in Biology (1-3)

BIOL A406  Experiential Learning: Biostatistics (4)
BIOL A408  Experiential Learning: Scanning Electron Microscopy (SEM) (6)

*Several courses are listed under more than one area. Each course can only count toward the credit requirement in one area.

**BIOL A498 credits may not be counted toward the Experiential Learning minimum requirement

**BIOL A490L credits may be counted toward the Experiential Learning minimum requirement

3. The following may be taken for upper division elective credit in addition to the 15-17 credits required as stated in 2 above:

ASTR/
BIOL A365  Astrobiology (3)

BIOL/CHEM/
PHYS A456  Nonlinear Dynamics and Chaos (3)

BIOL A490  Selected Lecture Topics in Biology (1-3)
BIOL A493  Selected Laboratory Topics in Biology (1-3)
BIOL A495  Instructional Practicum: Laboratory (1)
BIOL A497  Independent Study in Biology (1-12)
BIOL A498  Individual Research (1-6)
BIOL A499  Senior Thesis (3)

4. It is recommended that students complete 8 credits from the following:

GEOL A111  Physical Geology (4)
GEOL A221  Historical Geology (4)
or
PHYS A123  Basic Physics I (3)
and
PHYS A123L  Basic Physics I Laboratory (1)
PHYS A124  Basic Physics II (3)
and

PHYS A124L  Basic Physics II Laboratory (1)

or

PHYS A211  General Physics I (3)

and

PHYS A211L  General Physics I Laboratory (1)

PHYS A212  General Physics II (3)

and

PHYS A212L  General Physics II Laboratory (1)

A total of 124 credits is required for the degree, 42 credits of which must be upper division.

**Bachelor of Science, Biological Sciences**

The Bachelor of Science degree includes a single core program of coursework with electives selected from 4 sub-disciplines within the biological sciences with two areas of study. Completing courses from the cellular and molecular biology area prepares students for professional careers in areas such as medicine, dentistry, and veterinary science. Completing courses from the organismal, ecology, and evolutionary area prepares students for careers in environmental, organismal, and evolutionary biology. A wide selection of electives is available to all students, including courses offered under BIOL A490, which is a selected topics course. It is imperative that students consult their academic advisors within the Department of Biological Sciences to determine which electives are most appropriate to their career interests. Some of these elective courses are offered periodically, depending on demand. Refer to course descriptions to identify these courses.

**Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7.

**Academic Progress**

To graduate with a BS in Biological Sciences, the student must complete all courses covered under Major Requirements for a BS in Biological Sciences with a grade of C or better. All prerequisites for Biology courses must be completed with a grade of C or better. Students who audit, or are unable to earn a grade of C or better in, a lower-division (100 or 200 level) course in the Department of Biological Sciences (BIOL) may repeat the course two additional times on a space available basis. Students who audit, or are unable to earn a grade of C or better in, an upper-division (300 or 400 level) course in the Department of Biological Sciences may repeat the course one additional time on a space available basis. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a linked lecture and laboratory component, both components must be repeated. Students enrolled in a laboratory or Experiential Learning course in the Department of Biological Sciences must attend the lab or course the first week of class or they may be administratively dropped.

**Graduation Requirements**

Students must complete the following graduation requirements:

**A. General University Requirements**

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

**B. General Education Requirements**

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

**C. College of Arts and Sciences Requirements**

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

**D. Major Requirements**

1. Some major requirements may also be used to satisfy the College of Arts and Sciences BS requirements.
2. Complete these required support courses (39 credits):
CHEM A105  General Chemistry I  3
CHEM A105L General Chemistry I Laboratory  1
CHEM A106  General Chemistry II  3
CHEM A106L General Chemistry II Laboratory  1
CHEM A321  Organic Chemistry I  3
CHEM A322  Organic Chemistry II  3
CHEM A322L Organic Chemistry Laboratory 2
MATH A200  Calculus I  4
MATH A201  Calculus II  4
PHYS A123  Basic Physics I (3) 8
PHYS A123L Basic Physics I Laboratory (1)
and
PHYS A124  Basic Physics II (3)
PHYS A124L Basic Physics II Laboratory (1)
or
PHYS A211  General Physics I (3)
PHYS A211L General Physics I Laboratory (1)
and
PHYS A212  General Physics II (3)
PHYS A212L General Physics II Laboratory (1)
STAT A253  Applied Statistics for the Sciences (4) 4
or
STAT A307  Probability and Statistics (4)
STAT A308  Intermediate Statistics for the Sciences*  3

3. Complete Biological Sciences core courses (32-33 credits):

BIOL A115  Fundamentals of Biology I with  4
BIOL A116  Fundamentals of Biology II  4
BIOL A108 Principles and Methods in Biology  6
BIOL A242  Fundamentals of Cell Biology 4
BIOL A252  Principles of Genetics 4
BIOL A271  Principles of Ecology 4
BIOL A308  Principles of Evolution 3

BIOL A243  Experiential Learning: Genetics and Cell Biology 4
or

BIOL A273  Experiential Learning: Ecology and Evolution 4

BIOL A210  Principles of Physiology (4) 3-4
or
BIOL A276  Introduction to Plant Physiology (3)
BIOL A340  General Microbiology 5
BIOL A492  Undergraduate Seminar 1

*It is recommended that STAT A308 be taken. Students may substitute STAT A308 with 3 upper division Biological Sciences credits.
4. Complete at least **11-1224** credits of upper division program.

   electives from the following areas.

   a. A minimum of 3 credits must come from each of 4 of the five 5 areas*.

   4. b. A minimum of 6 credits must be Experiential Learning from 2 areas**.

from the following list:

**Recommended electives in cellular and molecular biology:**

**Genetics, Cellular and Molecular Biology**

- BIOL A340 Microbial Biology (3)
- BIOL A451 Microbial Biotechnology (3)
- BIOL A452 Human Genome (3)
- BIOL A461 Molecular Biology (3)
- BIOL A462 Virology (3)
- BIOL A463 Molecular Biology of Cancer (3)
- BIOL A464 Metals in Biology (3)
- BIOL A471 Immunology (3)
- BIOL A342 Experiential Learning: Microbial Biology (4)
- BIOL A403 Experiential Learning: Microscopical Tissue Techniques (6)
- BIOL A454 Experiential Learning: Microbial Biotechnology (4)
- BIOL A455 Experiential Learning: Bioinformatics (4)
- BIOL A465 Experiential Learning: Molecular Biology (4)
- BIOL A488 Experiential Learning: Developmental Biology (4)

**Ecology and Evolution**

- BIOL A365 Astrobiology (3)
- BIOL A430 Marine Mammals and Seabirds (3)
- BIOL A441 Animal Behavior (3)
- BIOL A445 Plant-Herbivore Ecology (4)
- BIOL A450 Microbial Ecology (3)
- BIOL A472 Biogeography (3)
- BIOL A473 Conservation Biology (3)
- BIOL A474 Ecotoxicology (3)
- BIOL A475 Fish Ecology (3)
- BIOL A476 Wildlife Population Dynamics and Management (3)
- BIOL A477 Tundra and Taiga Ecosystems (3)
- BIOL A478 Biological Oceanography (3)
- BIOL A479 Physiological Plant Ecology (3)
- BIOL A480 Ecological and Conservation Genetics (3)
- BIOL A481 Marine Biology (3)
- BIOL A482 Spatial Ecology (3)
- BIOL A483 Exploration Ecology (3)
- BIOL A486 Evolutionary Ecology (3)
- BIOL A489 Population Genetics and Evolutionary Processes (3)

- BIOL A442 Experiential Learning: Animal Behavior (2)
- BIOL A453 Experiential Learning: Microbial Ecology (4)
- BIOL A484 Experiential Learning: Exploration Ecology Field Study (4)

**Diversity and Organismal Biology**
<table>
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<tr>
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<th>Credits</th>
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<td>BIOL A320</td>
<td>Vertebrate Biology (3)</td>
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<tr>
<td>BIOL A330</td>
<td>Plant Biology (3)</td>
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<tr>
<td>BIOL A340</td>
<td>Microbial Biology (3)</td>
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<tr>
<td>BIOL A423</td>
<td>Ichthyology (3)</td>
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</tr>
<tr>
<td>BIOL A427</td>
<td>Marine Invertebrate Biology (2)</td>
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</tr>
<tr>
<td>BIOL A430</td>
<td>Marine Mammals and Seabirds (2)</td>
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<tr>
<td>BIOL A431</td>
<td>Plant Diversity and Evolution (3)</td>
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<tr>
<td>BIOL A487</td>
<td>Comparative Anatomy of Vertebrates (3)</td>
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<td>BIOL A321</td>
<td>Experiential Learning: Vertebrate Biology (2)</td>
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<td>BIOL A332</td>
<td>Experiential Learning: Plant Biology (2)</td>
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<td>BIOL A422</td>
<td>Experiential Learning: Microbial Biology (4)</td>
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**Physiology**

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<td>BIOL A316</td>
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<td>BIOL A412</td>
<td>Behavioral Endocrinology (3)</td>
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<td>BIOL A413</td>
<td>Neurophysiology (3)</td>
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<td>Exercise Physiology (3)</td>
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<td>BIOL A418</td>
<td>Fish Physiology (3)</td>
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<td>BIOL A479</td>
<td>Physiological Plant Ecology (2)</td>
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**Additional Upper Division Electives**

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<td>Nonlinear Dynamics and Chaos (3)</td>
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<td>BIOL A490</td>
<td>Selected Lecture Topics in Biology (1-3)</td>
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<td>BIOL A495</td>
<td>Instructional Practicum: Laboratory (1)</td>
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<td>BIOL A497</td>
<td>Independent Study in Biology (1-12)</td>
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<td>BIOL A498</td>
<td>Individual Research (1-6)</td>
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<td>BIOL A499</td>
<td>Senior Thesis (3)</td>
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<td>BIOL A490L</td>
<td>Selected Laboratory Topics in Biology (1-3)</td>
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<td>CHEM A441</td>
<td>Principles of Biochemistry I (3)</td>
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<tr>
<td>BIOL A406</td>
<td>Experiential Learning: Biostatistics (4)</td>
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<td>BIOL A408</td>
<td>Experiential Learning: Scanning Electron Microscopy (SEM) (6)</td>
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*Several courses are listed under more than one area. Each course can only count toward the credit requirement in one area.

**BIOL A498 credits may not be counted toward the Experiential Learning minimum requirement**

**BIOL A490L credits may be counted toward the Experiential Learning minimum requirement**

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<td>Principles of Biochemistry II (3)</td>
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<td>CHEM A443</td>
<td>Biochemistry Laboratory (2)</td>
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**Cellular-Molecular**

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<tr>
<td>BIOL A452</td>
<td>Human Genomes (3)</td>
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</table>
BIOL A461 Molecular Biology (3)
BIOL A461L Molecular Biology Laboratory (3)
BIOL A462 Virology (3)
CHEM A471 Immunochemistry (4)
BIOL A488 Developmental Biology (4)

Zoology
BIOL A415 Comparative Animal Physiology (3)
BIOL A487 Comparative Anatomy of Vertebrates (4)

Techniques
BIOL A403 Microtechnique (4)
BIOL A495 Instructional Practicum: Laboratory (1)

b. Recommended elective courses in organismal, ecology and evolutionary biology:

Botany
BIOL A316 Introduction to Plant Physiology (3)
BIOL A331 Systematic Botany (4)
BIOL A333 Biology of Non-Vascular Plants (4)
BIOL A334 Biology of Vascular Plants (4)
BIOL A479 Physiological Plant Ecology (3)

Zoology
BIOL A415 Comparative Animal Physiology (3)
BIOL A423 Ichthyology (4)
BIOL A425 Mammalogy (3)
BIOL A426 Ornithology (4)
BIOL A427 Invertebrate Zoology (4)
BIOL A487 Comparative Anatomy of Vertebrates (4)

Ecology-Systems
BIOL A309 Biogeography (3)
BIOL A373 Conservation Biology (3)
BIOL A378 Marine Biology (3)
BIOL A430 Marine Mammal Biology (4)
BIOL A441 Animal Behavior (4)
BIOL A415 Plant-Herbivore Ecology (4)
BIOL A450 Microbial Ecology (3)
BIOL A477 Tundra and Taiga Ecosystems (3)
BIOL A478 Biological Oceanography (4)
5. A total of 122-125 credits is required for the degree, 42 credits of which must be upper division.

**Bachelor of Science, Natural Sciences**

The Department of Biological Sciences also oversees the Bachelor of Science in Natural Sciences. This curriculum emphasizes the interrelationships among the sciences. A program of study in the Natural Sciences requires that students select an option within the degree, and complete all courses required within the option, as well as sufficient science elective courses to meet minimum unit requirements for graduation. Students accepted into this flexible degree program select one of three options: the General Sciences Option is designed for students who are interested in understanding the interrelationships among various scientific fields, or in teaching science at the secondary level. The Pre-Health Professions Option is designed to meet the admission requirements of specific professional schools in medicine, dentistry, and veterinary medicine. The Environmental Sciences Option is designed to prepare students for graduate school or for employment in the private or public sector.

For a complete program description see the Natural Sciences section of this chapter.
Minor, Biological Sciences

Students majoring in another subject who wish to minor in Biological Sciences must complete the following requirements. A total of 28 credits is required for the minor, 12 of which must be upper division.

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<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tr>
<td>BIOL A115</td>
<td>Fundamentals of Biology I</td>
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<td>BIOL A116</td>
<td>Fundamentals of Biology II</td>
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<td>BIOL A108</td>
<td>Principles and Methods in Biology</td>
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<td>BIOL A242</td>
<td>Fundamentals of Cell Biology</td>
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<td>BIOL A252</td>
<td>Principles of Genetics</td>
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<tr>
<td>BIOL A288</td>
<td>Principles of Evolution</td>
<td>3</td>
</tr>
</tbody>
</table>

Upper division Biological Sciences electives 12

FACULTY

Lilian Alessa, Professor, lalessa@uaa.alaska.edu
Eric Bortz, Assistant Professor, ebortz@uaa.alaska.edu
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Ian van Tets, Associate Professor, igruntets@uaa.alaska.edu
Frank von Hippel, Professor, fvonhippel@uaa.alaska.edu
To: CAS Course and Curriculum Committee  
Undergraduate Academic Board

From: Khrys Duddleston, Chair  
Department of Biological Sciences Curriculum Committee

RE: Changes to the B.S. in Natural Sciences Degree

The Department of Biological Sciences proposes the following changes to the B.S. in Natural Sciences Degree:

1. Changes to the core course requirements
2. Updating upper division course offerings

These changes are being made to update the course requirements and course lists in light of changes the Dept. is making to the B.S. in Biological Sciences curriculum.

Please contact me if you have any additional questions.
1a. School or College  
AS CAS

1b. Department  
Biological Sciences

2. Complete Program Title/Prefix  
Bachelor of Science, Natural Sciences

3. Type of Program  
Choose one from the appropriate drop down menu:  
Undergraduate:  or  Graduate:  
Bachelor of Science  or  CHOOSE ONE

This program is a Gainful Employment Program:  
☐ Yes  or  ☑ No

4. Type of Action:  
PROGRAM  
☐ Add  ☑ Change  ☐ Delete

PREFIX  
☐ Add  ☐ Change  ☐ Inactivate

5. Implementation Date (semester/year)  
From: Fall/2015  To: Fall/9999

6a. Coordination with Affected Units  
Department, School, or College: CAS

Initiator Name (typed): Khrys Duddleston  
Initiator Signed Initials: _________

Date: __________________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)  
Date: 6Jan14

6c. Coordination with Library Liaison  
Date: 6Jan14

7. Title and Program Description - Please attach the following:  
☒ Cover Memo  ☑ Catalog Copy in Word using the track changes function

8. Justification for Action  
The purpose for making these changes is to improve the time to completion of the degree and align our curriculum with the core concepts and competencies outlined in Vision and Change in Undergraduate Biology Education: A Call to Action (2013), a report of a national conference organized by the American Association for the Advancement of Science with support from the National Science Foundation.

[Approval signatures and dates]

Initiator (faculty only)  
Khrys Duddleston  
Initiator (TYPE NAME)

☐ Approved  ☐ Disapproved  Dean/Director of School/College  Date

☐ Approved  ☐ Disapproved  Department Chair  Date

☐ Approved  ☐ Disapproved  Undergraduate/Graduate Academic Board Chair  Date

☐ Approved  ☐ Disapproved  Provost or Designee  Date
The undergraduate program in Natural Sciences is founded on a curriculum that emphasizes the interrelationships among the sciences. A program of study in the Natural Sciences requires that students select an option within the degree and complete all courses required within the option, as well as sufficient science elective courses to meet minimum unit requirements for graduation.

Students accepted into this flexible degree program select one of three options: the General Sciences Option is designed for students who are interested in understanding the interrelationships among various scientific fields, or in teaching science at the secondary level. The Pre-Health Professions Option is designed to meet the admission requirements of specific professional schools in medicine, dentistry, and veterinary medicine. The Environmental Sciences Option is designed to prepare students for graduate school or for employment in the private or public sector.

The Natural Sciences program is administered by the Department of Biological Sciences. Upon acceptance to the major the student will be assigned an academic advisor from the Department of Biological Sciences in accordance with the student’s declared option, and students are strongly encouraged to consult with their academic advisors to determine which electives best suit their career requirements.

**Bachelor of Science, Natural Sciences**

**Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7. Declare the major (see Major Requirements) and select one of three options: General Sciences, Pre-Health Professions or Environmental Sciences.

**Program Student Learning Outcomes**

It is expected that graduates of the Natural Sciences program will:

1. Demonstrate their knowledge of central conceptual models used in the major thematic areas of natural sciences.
2. Identify problems, devise solutions and communicate solutions effectively.

**Academic Progress**

To graduate with a BS in Natural Sciences, the student must complete all courses covered under Major Requirements for a BS in Natural Sciences with a grade of C or better. All prerequisites for courses used to meet the Natural Sciences degree requirements must be completed with a grade of C or better. Students who audit a course intended to meet the Natural Sciences degree requirements or who are unable to earn a grade of C or better in the course may repeat the course. Students who audit, or are unable to earn a grade of C or better in, a lower-division (100 or 200 level) course in the Department of Biological Sciences (BIOL) may repeat the course two additional times on a space available basis. Students who audit, or are unable to earn a grade of C or better in, an upper-division (300 or 400 level) course in the Department of Biological Sciences may repeat the course one additional time on a space available basis. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a lecture and laboratory component, both components must be repeated. Students enrolled in a laboratory or Experiential Learning course in the Department of Biological Sciences must attend the lab or course the first week of class or they may be administratively dropped.

**Graduation Requirements**

Students must complete the following graduation requirements:

**A. General University Requirements**

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.
B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees (GERs) listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences (CAS) Requirements listed at the beginning of the CAS section. It is recommended that MATH A200 or MATH A272, STAT A253 or STAT A307, and the computer programming requirements be completed in the first two years of study.

D. Major Requirements

1. To declare the Bachelor of Science in Natural Sciences as their major, students must meet with an advisor and then apply to be accepted into the major. To schedule your advising session, contact the Department of Biological Sciences. At the advising session students are required to:
   a. choose one of the three options and
   b. file a preliminary program of study with the Department of Biological Sciences.
2. It is strongly recommended that any changes to the preliminary program be reviewed by an advisor to ensure that the final program of study will meet all requirements for graduation.
3. Students must submit a final Program of Study-Natural Sciences Degree form signed by their advisor to both the Office of the Registrar and the Department of Biological Sciences during the semester prior to the semester in which they plan to graduate. All courses listed in the Program of Study-Natural Sciences Degree form must be approved by the formal advisor before submitting the form to the Office of the Registrar and the Department of Biological Sciences.
4. No more than 6 credits may come from courses designated as A495, A498 and A499 combined, with no more than 2 credits from A495.
5. No more than 4 credits may be A492, with no more than 2 from the same discipline.
6. Courses not listed as approved for the Natural Sciences degree may be considered by petition, which should be signed by an advisor.
7. A total of 120-124 credits is required for the degree, of which 42 credits must be upper division.

Note 1: It is suggested that the required science sequences for any option be completed in the first two years of study.

Note 2: Students are encouraged to pay careful attention to prerequisite requirements when designing their program of study.

Note 3: Some courses meet more than one of the requirements (GER, CAS, Major). Consult the beginning of this chapter for information about GERs and the beginning of the CAS section for information about CAS requirements.

Environmental Sciences Option (80 credits)

1. Complete the following required courses (28 credits):
   - BIOL A108 Principles and Methods in Biology 6
   - CHEM A105 General Chemistry I 3
   - CHEM A105L General Chemistry I Laboratory 1
   - CHEM A106 General Chemistry II 3
   - CHEM A106L General Chemistry II Laboratory 1
   - GEOL A111 Physical Geology 4
   - GEOL A221 Historical Geology 4
   - ENVI A211 Environmental Science: Systems and Processes 3
   - ENVI A212 Living on Earth: People and the Environment 3
2. Complete an additional 52 credits of degree electives from the approved course lists for the Environmental Sciences Option.
   a. A minimum of 32 credits must be upper division.
b. A minimum of 20 credits must come from the following Natural and Physical Sciences Course List for the Environmental Sciences Option:

- ASTR/BIOL A365 Astrobiology (3)
- BIOL A242 Fundamentals of Cell Biology (3)
- BIOL A243 Experiential Learning: Genetics and Cell Biology (4)
- BIOL A252 Principles of Genetics (3)
- BIOL A271 Principles of Ecology (3)
- BIOL A273 Experiential Learning: Ecology and Evolution (4)
- BIOL A288 Principles of Evolution (3)
- BIOL A310 Principles of Animal Physiology (3)
- BIOL A316 Principles of Plant Physiology (3)
- BIOL A340 Microbial Biology (3)
- BIOL A342 Experiential Learning: Microbial Biology (4)
- BIOL A403 Experiential Learning: Microscopical Tissue Techniques (6)
- BIOL A406 Experiential Learning: Biostatistics (4)
- BIOL A408 Experiential Learning: Scanning Electron Microscopy (SEM) (6)
- BIOL A415 Comparative Animal Physiology (3)
- BIOL A418 Fish Physiology (3)
- BIOL A423 Ichthyology (3)
- BIOL A427 Marine Invertebrate Biology (3)
- BIOL A430 Marine Mammals and Seabirds (3)
- BIOL A431 Plant Diversity and Evolution (3)
- BIOL A441 Animal Behavior (3)
- BIOL A442 Experiential Learning: Animal Behavior (3)
- BIOL A445 Plant-Herbivore Ecology (4)
- BIOL A450 Microbial Ecology (3)
- BIOL A451 Microbial Biotechnology (3)
- BIOL A453 Experiential Learning: Microbial Ecology (4)
- BIOL A454 Experiential Learning: Microbial Biotechnology (4)
- BIOL/CHEM/PHYS A456 Nonlinear Dynamics and Chaos (3)
- BIOL A472 Biogeography (3)
- BIOL A473 Conservation Biology (3)
- BIOL A474 Ecotoxicology (3)
- BIOL A475 Fish Ecology
- BIOL A476 Wildlife Population Dynamics and Management (3)
- BIOL A477 Tundra and Taiga Ecosystems (3)
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<td>Biological Oceanography</td>
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<td>BIOL A479</td>
<td>Physiological Plant Ecology</td>
<td>(3)</td>
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<tr>
<td>BIOL A480</td>
<td>Ecological and Conservation Genetics</td>
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<tr>
<td>BIOL A481</td>
<td>Marine Biology</td>
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<td>BIOL A482</td>
<td>Spatial Ecology</td>
<td>(3)</td>
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<td>BIOL A483</td>
<td>Exploration Ecology</td>
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<tr>
<td>BIOL A484</td>
<td>Experiential Learning: Exploration Ecology Field Study</td>
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<td>BIOL A486</td>
<td>Evolutionary Ecology</td>
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<td>BIOL A487</td>
<td>Comparative Anatomy of Vertebrates</td>
<td>(4)</td>
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<td>BIOL A489</td>
<td>Population Genetics and Evolutionary Processes</td>
<td>(3)</td>
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<td>BIOL A490</td>
<td>Selected Lecture Topics in Biology</td>
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<td>Selected Laboratory Topics in Biology</td>
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<td>BIOL A492</td>
<td>Undergraduate Seminar</td>
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<td>BIOL A495A</td>
<td>Internship in the Biological Sciences</td>
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<td>BIOL A498</td>
<td>Individual Research</td>
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<td>BIOL A499</td>
<td>Senior Thesis</td>
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<td>CHEM A253</td>
<td>Principles of Inorganic Chemistry</td>
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<td>CHEM A311</td>
<td>Physical Chemistry: A Biological Orientation</td>
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<td>CHEM A312</td>
<td>Quantitative Analysis</td>
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<td>CHEM A321</td>
<td>Organic Chemistry I</td>
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<td>CHEM A333L</td>
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<td>CHEM A434</td>
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<td>Igneous and Metamorphic Petrology</td>
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<td>GEOL A325</td>
<td>Geology of Ore Deposits</td>
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<td>Structural Geology</td>
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<td>Hydrogeology</td>
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<td>GEOL A360</td>
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GEOL A380 Anchorage Field Studies (3)
GEOL A381 Kenai Peninsula Field Studies (3)
GEOL A382 Geological Field Studies (3)
GEOL A450 Paleoclimatology and Global Change (3)
GEOL A452 Sedimentology and Stratigraphy (4)
GEOL A454 Glacial and Quaternary Geology (3)
GEOL A455 Permafrost (3)
GEOL A456 Geoarchaeology (3)
GEOL A460 Environmental Geochemistry (3)
GEOL A475 Environmental Geophysics (3)
GEOL A480 Geological Field Methods (3)
GEOL A481 Alaskan Field Investigations (3)
GEOL A482 Geological Field Investigations (3)
GEOL A490 Advanced Topics in Geology (1-4)
GEOL A492 Geology Seminar (1)
GEOL A495 Geology Internship (1-3)
GEOL A498 Student Research (1-3)
GEOL A499 Senior Thesis (3)
LSIS A201 Life on Earth (5)
LSIS A202 Concepts and Processes: Natural Sciences (5)

PHYS A123 Basic Physics I* (3)
PHYS A123L Basic Physics I Laboratory* (1)
PHYS A124 Basic Physics II* (3)
PHYS A124L Basic Physics II Laboratory* (1)
PHYS A211 General Physics I* (3)
PHYS A211L General Physics I Laboratory* (1)
PHYS A212 General Physics II* (3)
PHYS A212L General Physics II Laboratory* (1)
PHYS A303 Modern Physics (3)

*Students cannot get credit for both PHYS 123/L and PHYS 211/L or PHYS 124/L and PHYS 212/L.

c. A minimum of 15 credits must come from the following Math and Computational Skills Course List for the Environmental Sciences Option: 15

CS A109 Computer Programming
   (Languages Vary) (3)c
or
CS A110 Java Programming (3)
or
CS A111 Visual Basic .NET Programming (3)
or
CSCE A201 Computer Programming I (4)
CSCE A202 Object-Oriented Programming (3)
CSCE A302 Object-Oriented Design Patterns (3)
CSCE A311 Data Structures and Algorithms (3)
CSCE A351 Automata, Algorithms and Complexity (3)
CSCE A360 Database Systems (3)
CSCE A385 Computer Graphics (3)
CSCE A411 Artificial Intelligence (3)
CSCE A412 Evolutionary Computing (3)
GEO A157 Analytical and Digital Cartography (3)
GEO A167 Remote Sensing and Image Analysis (4)
GEO A248 Digital Terrain Cartography (3)
GEO A257 Elements of Photogrammetry (3)
GEO A359 Geodesy and Map Projections (3)
GEO A459 Geodetic Geomatics (3)
GEO A467 Analytical and Digital Photogrammetry (3)
GIS A268 Elements of Geographic Information Systems (GIS) (4)
GIS A295 Internship in Geographic Information Systems I (3)
GIS A366 Spatial Information Analysis and Modeling (3)
GIS A367 GIS and Remote Sensing (3)
GIS A370 GIS and Remote Sensing for Natural Resources (3)
GIS A433 Coastal Mapping (3)
GIS A458 Design and Management of Spatial Information (3)
GIS A468 Integration of Geomatics Technologies (3)
GIS A495 Internship in Geographic Information Systems II (3)
MATH A200 Calculus I (4)
or
MATH A201 Calculus II (4)
MATH A202 Calculus III (4)
MATH A215 Introduction to Mathematical Proofs (3)
MATH A231 Introduction to Discrete Mathematics (3)
MATH A302 Ordinary Differential Equations (3)
MATH A303 Introduction to Modern Algebra (3)
MATH A305 Introduction to Geometries (3)
MATH A306 Discrete Methods (3)
MATH A314 Linear Algebra (3)
MATH A321 Analysis of Several Variables (3)
MATH A324 Advanced Calculus (3)
MATH A371 Stochastic Processes (3)
MATH A407 Mathematical Statistics I (3)
MATH A408 Mathematical Statistics II (3)
MATH A410 Introduction to Complex Analysis (3)
MATH A422 Partial Differential Equations (3)
STAT A253 Applied Statistics for the Sciences (4)
or
STAT A307 Probability and Statistics (4)
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<td>Intermediate Statistics for the Sciences</td>
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<tr>
<td>STAT A402</td>
<td>Scientific Sampling</td>
<td>(3)</td>
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<tr>
<td>STAT A403</td>
<td>Regression Analysis</td>
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<tr>
<td>STAT A404</td>
<td>Analysis of Variance</td>
<td>(3)</td>
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<tr>
<td>STAT A405</td>
<td>Nonparametric Statistics</td>
<td>(3)</td>
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<tr>
<td>STAT A407</td>
<td>Time Series Analysis</td>
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<td>STAT A408</td>
<td>Multivariate Statistics</td>
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<tr>
<td>STAT A490</td>
<td>Selected Topics in Statistics</td>
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d. A minimum of 9 credits must come from the following Social Sciences Course List for the Environmental Sciences Option:

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<td>Introduction to Anthropology</td>
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<tr>
<td>ANTH A202</td>
<td>Cultural Anthropology</td>
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<td>ANTH A205</td>
<td>Biological Anthropology</td>
<td>(3)</td>
</tr>
<tr>
<td>ANTH A335</td>
<td>Native North Americans</td>
<td>(3)</td>
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<tr>
<td>ANTH A354</td>
<td>Culture and Ecology</td>
<td>(3)</td>
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<tr>
<td>ANTH A415</td>
<td>Applied Anthropology</td>
<td>(3)</td>
</tr>
<tr>
<td>ANTH A445</td>
<td>Evolution of Humans and Disease</td>
<td>(3)</td>
</tr>
<tr>
<td>CEL A292</td>
<td>Introduction to Civic Engagement</td>
<td>(3)</td>
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<td>CEL A390</td>
<td>Selected Topics in Civic Engagement</td>
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<td>Principles of Macroeconomics</td>
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<td>ECON A202</td>
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<td>ENV I A470</td>
<td>Environmental Planning and Problem Solving</td>
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<td>ENV I A490</td>
<td>Topics in Environment and Society</td>
<td>(3)</td>
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<tr>
<td>GEOG A101</td>
<td>Local Places/Global Regions: An Introduction to Geography</td>
<td>(3)</td>
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<td>LSSS A311</td>
<td>People, Places and Ecosystems</td>
<td>(3)</td>
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<td>SOC A101</td>
<td>Introduction to Sociology</td>
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<tr>
<td>SOC A404</td>
<td>Environmental Sociology</td>
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**Pre-Health Professions Option (80 credits)**

1. Complete the following required courses (22 credits):

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<tr>
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<th>Credits</th>
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<td>BIOL A108</td>
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<td>CHEM A105</td>
<td>General Chemistry I</td>
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<td>General Chemistry I Laboratory</td>
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<td>CHEM A106L</td>
<td>General Chemistry II Laboratory</td>
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<td>PHYS A123</td>
<td>Basic Physics I</td>
<td>(3)</td>
</tr>
<tr>
<td>PHYS A123L</td>
<td>Basic Physics I Laboratory</td>
<td>(1)</td>
</tr>
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</table>
2. Complete an additional 58 credits of degree electives from the approved course lists for the Pre-Health Professions Option.
   a. A minimum of 32 credits must be upper division.
   b. A minimum of 24 credits must come from the following Natural Sciences Course List for the Pre-Health Professions Option:

   - BIOL A111 Human Anatomy and Physiology I (4)
   - BIOL A112 Human Anatomy and Physiology II (4)
   - BIOL/CPLX A200 Introduction to Complexity (3)
   - BIOL A240 Introductory Microbiology for Health Sciences (4)
   - or
   - BIOL A340 Microbial Biology (3)
   - and
   - BIOL A342 Experiential Learning: Microbial Biology (4)
   - BIOL A242 Fundamentals of Cell Biology (3)
   - BIOL A252 Principles of Genetics (3)
   - BIOL A243 Experiential Learning: Genetics and Cell Biology (4)
   - BIOL A310 Principles of Animal Physiology (3)
   - BIOL A320 Vertebrate Biology (3)
   - BIOL A321 Experiential Learning: Vertebrate Biology (2)
   - BIOL A403 Experiential Learning: Microscopical Tissue Techniques (6)
   - BIOL A408 Experiential Learning: Scanning Electron Microscopy (SEM) (6)
   - BIOL A412 Behavioral Endocrinology (3)
   - BIOL A413 Neurophysiology (3)
   - BIOL A414 Chronobiology (3)
   - BIOL A415 Comparative Animal Physiology (3)
   - BIOL A416 Exercise Physiology (3)
   - BIOL A451 Microbial Biotechnology (3)
   - BIOL A452 Human Genome (3)
   - BIOL A454 Experiential Learning: Microbial Biotechnology (4)
   - BIOL A455 Experiential Learning: Bioinformatics (4)
   - BIOL/CHEM A471 Immunology (3)
   - BIOL A487 Comparative Anatomy of Vertebrates (4)
   - BIOL A488 Experiential Learning: Developmental Biology (4)
c. A minimum of (15) credits must come from the following Social Sciences Course List for the Pre-Health Professions Option: 15

- ANTH A101 Introduction to Anthropology (3)
- ANTH A205 Biological Anthropology (3)
- ANTH A324 Psychological Anthropology (3)
- ANTH A365 Modern Human Biological Diversity (3)
- ANTH A445 Evolution of Humans and Disease (3)
- ANTH A455 Medical Anthropology (3)
- ANTH A457 Food and Nutrition: An Anthropological Perspective (3)
- ANTH A485 Human Osteology (4)
- ANTH A486 Applied Human Osteology (3)
- ANTH A490 Selected Topics in Anthropology (1-3)
- ECON A201 Principles of Macroeconomics (3)
- ECON A202 Principles of Microeconomics (3)
- HS A210 Introduction to Environmental Health (3)
- HS A220 Core Concepts in the Health Sciences (3)
- HS A230 Introduction to Global Health (3)
- HS A326 Introduction to Epidemiology (3)
- HS A492 Senior Seminar: Contemporary Health Policy (3)
- PHIL A302 Biomedical Ethics (3)
- PSY A111 General Psychology (3)
- PSY A143 Death and Dying (3)
PSY A150  Lifespan Development (3)
PSY A260  Statistics for Psychology (3)
PSY A260L  Statistics for Psychology Lab (1)
PSY A261  Research Methods in Psychology (4)
PSY A345  Abnormal Psychology (3)
PSY A355  Learning and Cognition (4)
PSY A366  Perception (3)
PSY A368  Personality (3)
PSY A370  Behavioral Neuroscience (3)
PSY A412  Foundations of Modern Psychology (3)
PSY A420  Conducting Research in Psychology (3)
PSY A425  Clinical Psychology (3)
PSY A428  Evolutionary Psychology (3)
PSY A450  Adult Development and Aging (3)
PSY A455  Mental Health Services in Alaska (3)
PSY A485  Health Psychology (3)
PSY A498  Individual Research (3)

A minimum of 9 credits must come from the following Math and Computational Skills Course List for the Pre-Health Professions Option:

MATH A200  Calculus I (4)
MATH A272  Applied Calculus (3)
MATH A201  Calculus II (4)
MATH A202  Calculus III (4)
MATH A215  Introduction to Mathematical Proofs (3)
MATH A231  Introduction to Discrete Mathematics (3)
MATH A302  Ordinary Differential Equations (3)
MATH A303  Introduction to Modern Algebra (3)
MATH A305  Introduction to Geometries (3)
MATH A306  Discrete Methods (3)
MATH A314  Linear Algebra (3)
MATH A321  Analysis of Several Variables (3)
MATH A324  Advanced Calculus (3)
MATH A371  Stochastic Processes (3)
MATH A407  Mathematical Statistics I (3)
MATH A408  Mathematical Statistics II (3)
MATH A410  Introduction to Complex Analysis (3)
MATH A422  Partial Differential Equations (3)
MATH A490A  Selected Topics in Pure Mathematics (1-3)
MATH A490B  Selected Topics in Applied Mathematics (1-3)
MATH A498  Individual Research (1-3)
STAT A253  Applied Statistics for the Sciences (4)
STAT A307  Probability and Statistics (4)
STAT A308 Intermediate Statistics for the Sciences (3)
STAT A402 Scientific Sampling (3)
STAT A403 Regression Analysis (3)
STAT A404 Analysis of Variance (3)
STAT A405 Nonparametric Statistics (3)
STAT A407 Time Series Analysis (3)
STAT A408 Multivariate Statistics (3)
STAT A490 Selected Topics in Statistics (1-3)

General Sciences Option (80 credits)

1. Complete the following required courses (30 credits):
   BIOL A108 Principles and Methods in Biology 6
   CHEM A105 General Chemistry I 3
   CHEM A105L General Chemistry I Laboratory 1
   CHEM A106 General Chemistry II 3
   CHEM A106L General Chemistry II Laboratory 1
   GEOL A111 Physical Geology 4
   GEOL A221 Historical Geology 4
   PHYS A123 Basic Physics I (3) 8
   PHYS A123L Basic Physics I Laboratory (1) and
   PHYS A124 Basic Physics II (3)
   PHYS A124L Basic Physics II Laboratory (1) or
   PHYS A211 General Physics I (3)
   PHYS A211L General Physics I Laboratory (1) and
   PHYS A212 General Physics II (3)
   PHYS A212L General Physics II Laboratory (1)

2. Complete an additional 50 credits of degree electives. 50
   a. The credits may come from the following course lists:
      i. Environmental Sciences Option Course Lists (above)
      ii. Pre-Health Professions Course Lists (above)
      iii. General Sciences Additional Course List
          ASTR A103 Solar System Astronomy (3)
          ASTR A103L Solar System Astronomy Laboratory (1)
          ASTR A104 Stars, Galaxies and Cosmology (3)
          ASTR A104L Stars, Galaxies and Cosmology Laboratory (1)
          PHYS A311 Intermediate Classical Mechanics (3)
          PHYS/EE A314 Electromagnetics (3)
          PHYS A320 Simulation of Physical Systems (3)
          PHYS/EE A324 Electromagnetics II (3)
          PHYS A403 Quantum Mechanics (3)
At least two of the following disciplines must be represented at the upper division level: Astronomy, Biology, Chemistry, Geology, Mathematics, Physics, Statistics.

**FACULTY**

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The undergraduate program in Natural Sciences is founded on a curriculum that emphasizes the interrelationships among the sciences. A program of study in the Natural Sciences requires that students select an option within the degree and complete all courses required within the option, as well as sufficient science elective courses to meet minimum unit requirements for graduation.

Students accepted into this flexible degree program select one of three options: the General Sciences Option is designed for students who are interested in understanding the interrelationships among various scientific fields, or in teaching science at the secondary level. The Pre-Health Professions Option is designed to meet the admission requirements of specific professional schools in medicine, dentistry, and veterinary medicine. The Environmental Sciences Option is designed to prepare students for graduate school or for employment in the private or public sector.

The Natural Sciences program is administered by the Department of Biological Sciences. Upon acceptance to the major the student will be assigned an academic advisor from the Department of Biological Sciences in accordance with the student’s declared option, and students are strongly encouraged to consult with their academic advisors to determine which electives best suit their career requirements.

### Bachelor of Science, Natural Sciences

#### Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7. Declare the major (see Major Requirements) and select one of three options: General Sciences, Pre-Health Professions or Environmental Sciences.

#### Program Student Learning Outcomes

It is expected that graduates of the Natural Sciences program will:

1. Demonstrate their knowledge of central conceptual models used in the major thematic areas of natural sciences.
2. Identify problems, devise solutions and communicate solutions effectively.

#### Academic Progress

To graduate with a BS in Natural Sciences, the student must complete all courses covered under Major Requirements for a BS in Natural Sciences with a grade of C or better. All prerequisites for courses used to meet the Natural Sciences degree requirements must be completed with a grade of C or better. Students who audit a course intended to meet the Natural Sciences degree requirements or who are unable to earn a grade of C or better in the course may repeat the course. Students who audit, or are unable to earn a grade of C or better in, a lower-division (100 or 200 level) course in the Department of Biological Sciences (BIOL) may repeat the course two additional times on a space available basis. Students who audit, or are unable to earn a grade of C or better in, an upper-division (300 or 400 level) course in the Department of Biological Sciences may repeat the course one additional time on a space available basis. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a lecture and laboratory component, both components must be repeated. Students enrolled in a laboratory or Experiential Learning course in the Department of Biological Sciences must attend the lab or course the first week of class or they may be administratively dropped.

#### Graduation Requirements

Students must complete the following graduation requirements:

#### A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.
B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees (GERs) listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences (CAS) Requirements listed at the beginning of the CAS section. It is recommended that MATH A200 or MATH A272, STAT A253 or STAT A307, and the computer programming requirements be completed in the first two years of study.

D. Major Requirements

1. To declare the Bachelor of Science in Natural Sciences as their major, students must meet with an advisor and then apply to be accepted into the major. To schedule your advising session, contact the Department of Biological Sciences. At the advising session students are required to:
   a. choose one of the three options and
   b. file a preliminary program of study with the Department of Biological Sciences.

2. It is strongly recommended that any changes to the preliminary program be reviewed by an advisor to ensure that the final program of study will meet all requirements for graduation.

3. Students must submit a final Program of Study-Natural Sciences Degree form signed by their advisor to both the Office of the Registrar and the Department of Biological Sciences during the semester prior to the semester in which they plan to graduate. All courses listed in the Program of Study-Natural Sciences Degree form must be approved by the formal advisor before submitting the form to the Office of the Registrar and the Department of Biological Sciences.

4. No more than 6 credits may come from courses designated as A495, A498 and A499 combined, with no more than 2 credits from A495.

5. No more than 4 credits may be A492, with no more than 2 from the same discipline.

6. Courses not listed as approved for the Natural Sciences degree may be considered by petition, which should be signed by an advisor.

7. A total of 120-124 credits is required for the degree, of which 42 credits must be upper division.

Note 1: It is suggested that the required science sequences for any option be completed in the first two years of study.

Note 2: Students are encouraged to pay careful attention to prerequisite requirements when designing their program of study.

Note 3: Some courses meet more than one of the requirements (GER, CAS, Major). Consult the beginning of this chapter for information about GERs and the beginning of the CAS section for information about CAS requirements.

Environmental Sciences Option (80 credits)

1. Complete the following required courses (28-30 credits):
   - BCOL A115 Fundamentals of Biology I 4
   - BCOL A116 Fundamentals of Biology II 4
   - BIOL A108 Principles and Methods in Biology 6
   - CHEM A105 General Chemistry I 3
   - CHEM A105L General Chemistry I Laboratory 1
   - CHEM A106 General Chemistry II 3
   - CHEM A106L General Chemistry II Laboratory 1
   - GEOL A111 Physical Geology 4
   - GEOL A221 Historical Geology 4
   - ENVI A211 Environmental Science: Systems and Processes 3
   - ENVI A212 Living on Earth: People and the Environment 3

2. Complete an additional 50-52 credits of degree electives from the approved course lists for the Environmental Sciences Option.
   a. A minimum of 32 credits must be upper division.
A minimum of 20 credits must come from the following Natural and Physical Sciences Course List for the Environmental Sciences Option:

- ASTR/
- BIOL A365 Astrobiology (3)
- BIOL/
- GEOL A178 Fundamentals of Oceanography (3)
- BIOL/
- GEOL A179 Fundamentals of Oceanography Laboratory (1)
- BIOL/
- CPLX A200 Introduction to Complexity (3)
- BIOL A242 Fundamentals of Cell Biology (4)
- BIOL A252 Principles of Genetics (4)
- BIOL A271 Principles of Ecology (4)
- BIOL A288 Principles of Evolution (3)
- BIOL A308 Principles of Evolution (3)
- BIOL A310 Principles of Animal Physiology (4)
- BIOL A316 Introduction to Principles of Plant Physiology (3)
- BIOL A331 Systematic Botany (4)
- BIOL A332 Biology of Non-Vascular Plants (4)
- BIOL A333 Biology of Vascular Plants (4)
- BIOL A340 General Microbiology/Microbial Biology (3)
- BIOL A342 Experiential Learning: Microbial Biology (4)
- BIOL A403 Experiential Learning: Microscopical Tissue Techniques (6)
- BIOL A406 Experiential Learning: Biostatistics (4)
- BIOL A408 Experiential Learning: Scanning Electron Microscopy (SEM) (6)
- BIOL A415 Comparative Animal Physiology (5)
- BIOL A418 Fish Physiology (3)
- BIOL A423 Ichthyology (4)
- BIOL A427 Ornithology (4)
- BIOL A428 Marine Invertebrate Zoology (4)
- BIOL A430 Marine Mammals and Seabirds (3)
- BIOL A431 Plant Diversity and Evolution (3)
- BIOL A441 Animal Behavior (4)
- BIOL A442 Experiential Learning: Animal Behavior (3)
c. A minimum of 15 credits must come from the following Math and Computational Skills Course List for the Environmental Sciences Option: 15

CS A109 Computer Programming
(Languages Vary) (3c)
or
CS A110 Java Programming (3)
or
CS A111 Visual Basic .NET Programming (3)
or
CSCE A201 Computer Programming I (4)
CSCE A202 Object-Oriented Programming (3)
CSCE A302 Object-Oriented Design Patterns (3)
CSCE A311 Data Structures and Algorithms (3)
CSCE A351 Automata, Algorithms
    and Complexity (3)
CSCE A360 Database Systems (3)
CSCE A365 Computer Graphics (3)
CSCE A411 Artificial Intelligence (3)
CSCE A412 Evolutionary Computing (3)
GEO A157 Analytical and Digital Cartography (3)
GEO A167 Remote Sensing and Image Analysis (4)
GEO A248 Digital Terrain Cartography (3)
GEO A257 Elements of Photogrammetry (3)
GEO A359 Geodesy and Map Projections (3)
GEO A459 Geodetic Geomatics (3)
GEO A467 Analytical and Digital
    Photogrammetry (3)
GIS A268 Elements of Geographic Information
    Systems (GIS) (4)
GIS A295 Internship in Geographic Information
    Systems I (3)
GIS A366 Spatial Information Analysis
    and Modeling (3)
GIS A367 GIS and Remote Sensing (3)
GIS A370 GIS and Remote Sensing for
    Natural Resources (3)
GIS A433 Coastal Mapping (3)
GIS A458 Design and Management of Spatial
    Information (3)
GIS A468 Integration of Geomatics
    Technologies (3)
GIS A495 Internship in Geographic Information
    Systems II (3)
MATH A200 Calculus I (4)
or
MATH A272 Applied Calculus (3)
MATH A201 Calculus II (4)
MATH A202 Calculus III (4)
MATH A215 Introduction to Mathematical Proofs (3)
MATH A231 Introduction to Discrete Mathematics (3)
MATH A302 Ordinary Differential Equations (3)
MATH A303 Introduction to Modern Algebra (3)
MATH A305 Introduction to Geometries (3)
MATH A306 Discrete Methods (3)
MATH A314 Linear Algebra (3)
MATH A321 Analysis of Several Variables (3)
MATH A324 Advanced Calculus (3)
MATH A371 Stochastic Processes (3)
MATH A407 Mathematical Statistics I (3)
MATH A408 Mathematical Statistics II (3)
MATH A410 Introduction to Complex Analysis (3)
MATH A422 Partial Differential Equations (3)
STAT A253 Applied Statistics for the Sciences (4)
or
STAT A307 Probability and Statistics (4)
STAT A308 Intermediate Statistics for the Sciences (3)
STAT A402 Scientific Sampling (3)
STAT A403 Regression Analysis (3)
STAT A404 Analysis of Variance (3)
STAT A405 Nonparametric Statistics (3)
STAT A407 Time Series Analysis (3)
STAT A408 Multivariate Statistics (3)
STAT A490 Selected Topics in Statistics (1-3)
d. A minimum of 9 credits must come from the following Social Sciences Course List for the Environmental Sciences Option: 9
ANTH A101 Introduction to Anthropology (3)
ANTH A202 Cultural Anthropology (3)
ANTH A205 Biological Anthropology (3)
ANTH A335 Native North Americans (3)
ANTH A354 Culture and Ecology (3)
ANTH A415 Applied Anthropology (3)
ANTH A445 Evolution of Humans and Disease (3)
CEL A292 Introduction to Civic Engagement (3)
CEL A390 Selected Topics in Civic Engagement (1-3)
ECON A201 Principles of Macroeconomics (3)
ECON A202 Principles of Microeconomics (3)
ECON A210 Environmental Economics and Policy (3)
ECON A300 The Economy of Alaska (3)
ECON A321 Intermediate Microeconomics (3)
ECON A324 Intermediate Macroeconomics (3)
ECON A435 Natural Resource Economics (3)
ENVI
PHIL A303 Environmental Ethics (3)
ENVI A470 Environmental Planning and Problem Solving (4)
ENVI A490 Topics in Environment and Society (3)
GEOG A101 Local Places/Global Regions: An Introduction to Geography (3)
LSSS A311  People, Places and Ecosystems (3)
SOC A101  Introduction to Sociology (3)
SOC A404  Environmental Sociology (3)

Pre-Health Professions Option (80 credits)

1. Complete the following required courses (22 credits):
   - BIOL A115  Fundamentals of Biology I  4
   - BIOL A116  Fundamentals of Biology II  4
   - BIOL A108  Principles and Methods in Biology  6
   - CHEM A105  General Chemistry I  3
   - CHEM A105L  General Chemistry I Laboratory  1
   - CHEM A106  General Chemistry II  3
   - CHEM A106L  General Chemistry II Laboratory  1
   - PHYS A123  Basic Physics I  3
   - PHYS A123L  Basic Physics I Laboratory  1
   - PHYS A124  Basic Physics II  3
   - PHYS A124L  Basic Physics II Laboratory  1

2. Complete an additional 56-58 credits of degree electives from the approved course lists for the Pre-Health Professions Option.
   a. A minimum of 32 credits must be upper division.
   b. A minimum of 24 credits must come from the following Natural Sciences Course List for the Pre-Health Professions Option:
      - BIOL A111  Human Anatomy and Physiology I (4)
      - BIOL A112  Human Anatomy and Physiology II (4)
      - BIOL A200  Introduction to Complexity (3)
      - BIOL A240  Introductory Microbiology for Health Sciences (4)
      - or
      - BIOL A340  General Microbiology/General Microbiology (5)
      - and
      - BIOL A342  Experiential Learning: Microbial Biology (4)
      - BIOL A242  Fundamentals of Cell Biology (2)
      - BIOL A252  Principles of Genetics (3)
      - BIOL A243  Experiential Learning: Genetics and Cell Biology (4)
      - BIOL A242  Fundamentals of Cell Biology (4)
      - BIOL A252  Principles of Genetics (2)
      - BIOL A310  Principles of Animal Physiology (4)
      - BIOL A320  Vertebrate Biology (3)
      - BIOL A321  Experiential Learning: Vertebrate Biology (2)
      - BIOL A403  Experiential Learning: Microscopical Tissue Techniques/Microtechniques (6)
      - BIOL A408  Experiential Learning: Scanning Electron Microscopy (SEM) (6)
      - BIOL A412  Behavioral Endocrinology (3)
      - BIOL A413  Neurophysiology (3)
      - BIOL A414  Chronobiology (3)
      - BIOL A415  Comparative Animal Physiology (3)
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<th>Credits</th>
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<td>BIOL A416</td>
<td>Exercise Physiology</td>
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<tr>
<td>BIOL A425</td>
<td>Mammalogy</td>
<td>(3)</td>
</tr>
<tr>
<td>BIOL A451</td>
<td>Applied Microbiology, Microbial Biotechnology</td>
<td>(3)</td>
</tr>
<tr>
<td>BIOL A452</td>
<td>Human Genome</td>
<td>(3)</td>
</tr>
<tr>
<td>BIOL A454</td>
<td>Experiential Learning: Microbial Biotechnology</td>
<td>(4)</td>
</tr>
<tr>
<td>BIOL A455</td>
<td>Experiential Learning: Bioinformatics</td>
<td>(4)</td>
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<tr>
<td>BIOL/PHYS A456</td>
<td>Nonlinear Dynamics and Chaos</td>
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<tr>
<td>BIOL A461</td>
<td>Molecular Biology</td>
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<td>BIOL A461L</td>
<td>Molecular Biology Laboratory</td>
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<td>BIOL A462</td>
<td>Virology</td>
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<td>BIOL A463</td>
<td>Molecular Biology of Cancer</td>
<td>(3)</td>
</tr>
<tr>
<td>BIOL A464</td>
<td>Metals in Biology</td>
<td>(3)</td>
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<tr>
<td>BIOL A465</td>
<td>Experiential Learning: Molecular Biology</td>
<td>(4)</td>
</tr>
<tr>
<td>BIOL A471</td>
<td>Immunology (Chemistry)</td>
<td>(4)</td>
</tr>
<tr>
<td>BIOL A487</td>
<td>Comparative Anatomy of Vertebrates</td>
<td>(4)</td>
</tr>
<tr>
<td>BIOL A488</td>
<td>Experiential Learning: Developmental Biology</td>
<td>(4)</td>
</tr>
<tr>
<td>BIOL A489</td>
<td>Population Genetics and Evolutionary Processes</td>
<td>(3)</td>
</tr>
<tr>
<td>BIOL A490</td>
<td>Selected Lecture Topics in Biology</td>
<td>(1-3)</td>
</tr>
<tr>
<td>BIOL A490L</td>
<td>Selected Laboratory Topics in Biology</td>
<td>(1-3)</td>
</tr>
<tr>
<td>BIOL A492</td>
<td>Undergraduate Seminar</td>
<td>(1)</td>
</tr>
<tr>
<td>BIOL A495A</td>
<td>Internship in the Biological Sciences</td>
<td>(3)</td>
</tr>
<tr>
<td>BIOL A496</td>
<td>Individual Research</td>
<td>(1-6)</td>
</tr>
<tr>
<td>CHEM A311</td>
<td>Physical Chemistry: A Biological Orientation</td>
<td>(3)</td>
</tr>
<tr>
<td>CHEM A312</td>
<td>Quantitative Analysis</td>
<td>(5)</td>
</tr>
<tr>
<td>CHEM A321</td>
<td>Organic Chemistry I</td>
<td>(3)</td>
</tr>
<tr>
<td>CHEM A322</td>
<td>Organic Chemistry II</td>
<td>(3)</td>
</tr>
<tr>
<td>CHEM A322L</td>
<td>Organic Chemistry Laboratory</td>
<td>(2)</td>
</tr>
<tr>
<td>CHEM A434</td>
<td>Instrumental Methods</td>
<td>(5)</td>
</tr>
<tr>
<td>CHEM A441</td>
<td>Principles of Biochemistry I</td>
<td>(3)</td>
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<td>CHEM A442</td>
<td>Principles of Biochemistry II</td>
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</tr>
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<td>CHEM A443</td>
<td>Biochemistry Laboratory</td>
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<td>Chemical Ecotoxicology</td>
<td>(3)</td>
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<td>CHEM A492</td>
<td>Undergraduate Seminar</td>
<td>(1)</td>
</tr>
<tr>
<td>CHEM A498</td>
<td>Individual Research</td>
<td>(3)</td>
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c. A minimum of (15) credits must come from the following Social Sciences Course List for the Pre-Health Professions Option: 15

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ANTH A101</td>
<td>Introduction to Anthropology</td>
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<tr>
<td>ANTH A205</td>
<td>Biological Anthropology</td>
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<tr>
<td>ANTH A324</td>
<td>Psychological Anthropology</td>
</tr>
<tr>
<td>ANTH A365</td>
<td>Modern Human Biological Diversity</td>
</tr>
<tr>
<td>ANTH A445</td>
<td>Evolution of Humans and Disease</td>
</tr>
</tbody>
</table>
ANTH A455 Medical Anthropology (3)
ANTH A457 Food and Nutrition: An Anthropological Perspective (3)
ANTH A485 Human Osteology (4)
ANTH A486 Applied Human Osteology (3)
ANTH A490 Selected Topics in Anthropology (1-3)
ECON A201 Principles of Macroeconomics (3)
ECON A202 Principles of Microeconomics (3)
HS A210 Introduction to Environmental Health (3)
HS A220 Core Concepts in the Health Sciences (3)
HS A230 Introduction to Global Health (3)
HS A26 Introduction to Epidemiology (3)
HS A492 Senior Seminar: Contemporary Health Policy (3)
PHIL A302 Biomedical Ethics (3)
PSY A111 General Psychology (3)
PSY A143 Death and Dying (3)
PSY A150 Lifespan Development (3)
PSY A260 Statistics for Psychology (3)
PSY A260L Statistics for Psychology Lab (1)
PSY A261 Research Methods in Psychology (4)
PSY A345 Abnormal Psychology (3)
PSY A355 Learning and Cognition (4)
PSY A366 Perception (3)
PSY A368 Personality (3)
PSY A370 Behavioral Neuroscience (3)
PSY A412 Foundations of Modern Psychology (3)
PSY A420 Conducting Research in Psychology (3)
PSY A425 Clinical Psychology (3)
PSY A428 Evolutionary Psychology (3)
PSY A450 Adult Development and Aging (3)
PSY A455 Mental Health Services in Alaska (3)
PSY A485 Health Psychology (3)
PSY A498 Individual Research (3)

A minimum of 9 credits must come from the following Math and Computational Skills Course List for the Pre-Health Professions Option:

MATH A200 Calculus I (4)
MATH A201 Calculus II (4)
MATH A202 Calculus III (4)
MATH A215 Introduction to Mathematical Proofs (3)
MATH A231 Introduction to Discrete Mathematics (3)
MATH A302 Ordinary Differential Equations (3)
MATH A303 Introduction to Modern Algebra (3)
MATH A305 Introduction to Geometries (3)
MATH A306 Discrete Methods (3)
MATH A314 Linear Algebra (3)
MATH A321 Analysis of Several Variables (3)
MATH A324 Advanced Calculus (3)
MATH A371 Stochastic Processes (3)
MATH A407 Mathematical Statistics I (3)
MATH A408 Mathematical Statistics II (3)
MATH A410 Introduction to Complex Analysis (3)
MATH A422 Partial Differential Equations (3)
MATH A490A Selected Topics in Pure Mathematics (1-3)
MATH A490B Selected Topics in Applied Mathematics (1-3)
STAT A253 Applied Statistics for the Sciences (4)
or
STAT A307 Probability and Statistics (4)
STAT A308 Intermediate Statistics for the Sciences (3)
STAT A402 Scientific Sampling (3)
STAT A403 Regression Analysis (3)
STAT A404 Analysis of Variance (3)
STAT A405 Nonparametric Statistics (3)
STAT A407 Time Series Analysis (3)
STAT A408 Multivariate Statistics (3)
STAT A490 Selected Topics in Statistics (1-3)

General Sciences Option (80 credits)

1. Complete the following required courses (32-30 credits):
   BIOC A115 Fundamentals of Biology I 4
   BIOC A116 Fundamentals of Biology II 4
   CHEM A105 General Chemistry I 3
   CHEM A105L General Chemistry I Laboratory 1
   CHEM A106 General Chemistry II 3
   CHEM A106L General Chemistry II Laboratory 1
   GEOL A111 Physical Geology 4
   GEOL A221 Historical Geology 4
   PHYS A123 Basic Physics I (3) 8
   PHYS A123L Basic Physics I Laboratory (1)
   and
   PHYS A124 Basic Physics II (3)
   PHYS A124L Basic Physics II Laboratory (1)
or
   PHYS A211 General Physics I (3)
   PHYS A211L General Physics I Laboratory (1)
   and
   PHYS A212 General Physics II (3)
   PHYS A212L General Physics II Laboratory (1)

2. Complete an additional 48-50 credits of degree electives.
a. The credits may come from the following course lists:
   i. Environmental Sciences Option Course Lists (above)
   ii. Pre-Health Professions Course Lists (above)
   iii. General Sciences Additional Course List
   - ASTR A103 Solar System Astronomy (3)
   - ASTR A103L Solar System Astronomy Laboratory (1)
   - ASTR A104 Stars, Galaxies and Cosmology (3)
   - ASTR A104L Stars, Galaxies and Cosmology Laboratory (1)
   - PHYS A311 Intermediate Classical Mechanics (3)
   - PHYS/EE A314 Electromagnetics (3)
   - PHYS A320 Simulation of Physical Systems (3)
   - PHYS/EE A324 Electromagnetics II (3)
   - PHYS A403 Quantum Mechanics (3)
   - PHYS A413 Statistical and Thermal Mechanics (3)
   - PHYS A498 Individual Research (1-6)

b. At least two of the following disciplines must be represented at the upper division level: Astronomy, Biology, Chemistry, Geology, Mathematics, Physics, Statistics.

FACULTY

- Lilian Alessa, Professor, lalessa@uaa.alaska.edu
- Eric Bortz, Assistant Professor, ebortz@uaa.alaska.edu
- C. Loren Buck, Professor, clbuck@uaa.alaska.edu
- Jason Burkey, Assistant Professor, jburkey@uaa.alaska.edu
- Jennifer Moss Burns, Professor, jmburns@uaa.alaska.edu
- Matt Carlson, Associate Professor, mlcarlson@uaa.alaska.edu
- Douglas Causey, Professor, dcausey@uaa.alaska.edu
- Kristine Crossen, Associate Professor, kクロ@uaa.alaska.edu
- Korya Duddleston, Associate Professor, kduddleston@uaa.alaska.edu
- Sarah Gerken, Associate Professor, sgerken@uaa.alaska.edu
- Martha Hatch, Associate Professor, jcmh@uaa.alaska.edu
- Eric Holmberg, Professor, egholmberg@uaa.alaska.edu
- John Kennish, Professor, jmkennish@uaa.alaska.edu
- Andrew Kliskey, Professor, adkliskey@uaa.alaska.edu
- Jocelyn Krebs, Professor, jkrebs@uaa.alaska.edu
- Jerry Kudene, Professor, jkudene@uaa.alaska.edu
- Mike Ii, Assistant Professor, mi@uaa.alaska.edu
- Kristine Mann, Professor Emeritus, afkm@uaa.alaska.edu
- Jerry Masello, Professor, jm@masello@uaa.alaska.edu
- Colin McGill, Assistant Professor, cmc@uaa.alaska.edu
- Dean Milligan, Professor Emeritus, afm@uaa.alaska.edu
- Lee Ann Munk, Associate Professor, lamunk@uaa.alaska.edu
- Terry Neumann, Associate Professor, tneumann@uaa.alaska.edu
- James Pantaleone, Professor, jpantaleone@uaa.alaska.edu
- Ann Pasch, Emeritus Professor, afpasch@uaa.alaska.edu
- Kim Peterson, Professor, kpeterson@uaa.alaska.edu
**Course Action Request**

**University of Alaska Anchorage**

Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tr>
<td>School or College AS CAS</td>
<td>AFAR Division of Fine Arts</td>
<td>Theatre and Dance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<tr>
<td>DNCE</td>
<td>A170</td>
<td>N/A</td>
<td>3</td>
<td>(3+0)</td>
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**Type of Course:**

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<th>Academic</th>
<th>Preparatory/Development</th>
<th>Non-credit</th>
<th>CEU</th>
<th>Professional Development</th>
</tr>
</thead>
</table>

If a change, mark appropriate boxes:

- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Automatic Restrictions
- Other Course Content Guide (please specify)

**Repeat Status:**

- No
- # of Repeats
- Max Credits

**Grading Basis:**

- A-F
- P/NP
- NG

**Implementation Date:**

- From: Fall/2014
- To: 9999

**Cross Listed with**

- Stacked with

**Coordination Em ail Date:** 2/4/14

**Coordination with Library Liaison Date:** 2/4/14

**13a. Impacted Courses or Programs:**

List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

**General Education Requirement:**

- Oral Communication
- Written Communication
- Quantitative Skills
- Humanities
- Fine Arts
- Social Sciences
- Natural Sciences
- Integrative Capstone

**Course Description** (suggested length 20 to 50 words)

Develops an appreciation of dance for observer and participants through readings, lectures, videos, writing exercises, live performances and movement and discussion sessions. Explores dance in social and cultural contexts and as an aesthetic and kinesthetic experience. Dances across culture examined along with the development of dance as an art form in Europe and America. A lecture course with 4-7 dance studio movement sessions per semester.

**Course Prerequisite(s) (list prefix and number or test code and score)**

**Co-requisite(s) (concurrent enrollment required)**

**College**

**Major**

**Class**

**Level**

**Mark if course has fees**

**Mark if course is a selected topic course**

**Justification for Action**

This is a required update to the Course Content Guide for Dance Appreciation.

**Initiator Name (typed): Jill Flanders Crosby**

**Initiator Signed Initials:**

**Date:**

**Dean/Director of School/College**

**Date:**

**Department Chair**

**Date:**

**Provost or Designee**

**Date:**

**Undergraduate/Graduate Academic Board Chair**

**Date:**

**Provost or Designee**

**Date:**
I. **Date of Initiation:** Fall, 2014

II. **Course Information:**
A. College or School: CAS
B. Course Subject: Theatre & Dance
C. Course Number: A170
D. Number of Credits: 3.0 (3+0)
E. Course Title: Dance Appreciation
F. Grading Basis: A-F
G. Course Description: Develops an appreciation of dance for observer and participants through readings, lectures, videos, writing exercises, live performances and movement and discussion sessions. Explores dance in social and cultural contexts and as an aesthetic and kinesthetic experience. Dances across culture examined along with the development of dance as an art form in Europe and America. A lecture course with 4-7 dance studio movement sessions per semester.
H. Course Prerequisites: N/A
I. Co-Requisite: N/A
J. Restrictions: None
K. Fees: Yes

III. **Instructional Goals and Student Learning Outcomes:**
A. Instructional Goals. The Instructor will:
   1) Present the fundamentals of defining, viewing and critiquing dance.
   2) Present the roles and functions of dance in culture and society through select theoretical lenses.
   3) Present the range of concert and performance dance forms and styles in an historical progression.
   4) Discuss and define each area of the various performance dance forms and styles.
   5) Introduce the basics of preparing and presenting a research report inclusive of citation style guides and analysis of sources.

B. Student Learning Outcomes. The students will be able to:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Identify and apply the fundamentals of defining, viewing and critiquing dance.</td>
<td>1) Group discussions and oral and written presentations, tests, movement observation chart, dance review.</td>
</tr>
<tr>
<td>2) Identify and describe the roles and functions of dance.</td>
<td>2) Group discussions and oral and written presentations, homework, test essays using select</td>
</tr>
</tbody>
</table>
4) Identify and describe historical and cultural context, aesthetic qualities and choreographers (if applicable) specific to concert and performance dance forms and styles presented in class.

5) Select and apply evaluation of primary, secondary, scholarly and non-scholarly source material and a citation/bibliographic style.

analytical frames and theoretical lenses and instructor feedback.

3) Group discussions and oral and written presentations, quizzes, response paper, tests and instructor feedback.

4) Group discussions and oral and written presentations, tests and final research report.

5) Submission of two preliminary bibliographies and presentation and submission of final research report with correct citation style, bibliography and required number of scholarly and non-scholarly sources of instructor’s choice.

IV. Course Evaluation
Students will be evaluated based on quizzes, in-class assignments, homework, dance review, response paper, take home tests and final research report.

V. Course Level Justification
This course is an introductory GER survey course. It fulfills the BA Theatre Major with a Dance Concentration and the dance minor.

VI. Topical Course Outline
1. What is dance, can we define dance and why do people dance?
2. How do we see, talk and write about dance? What is a dance critique?
3. How do we research dance? Evaluate sources and understand how to cite and create a bibliography.
4. Dance and religion across culture and time.
5. Social dance across culture and time.
7. Evolution of court dance into ballet.
8. Romanticism.
9. Turn of the 20th century modernism in concert dance and Native American dance.
10. Mid-modernism: ballet, folk-performance, American and European contemporary dance, African-American dance and other contemporary forms across cultures as chosen by the instructor.
11. Post-modernism from America and Europe to post-colonial Africa, Asia and Asia-Pacific as chosen by the instructor.
12. Current popular Culture forms as chosen by the instructor.
VII. Suggested Texts


VIII. Bibliography


* Seminal textbook in the field
VIDEOGRAPHY:

The Alvin Ailey American Dance Theatre – ABC Video Enterprises

Balanchine: Jewels – The Balanchine Library

Balanchine: Tzigane, Andante from Divertimento No 15, The Four Temperments – The Balanchine Library

Bob Fosse: A Dancer Remembered – PBS Library

Butoh Dancing on the Edge of Darkness – Michael Blackwood Productions


Denishawn: The Birth of Modern Dance – New Jersey Center Dance Collective

Free to Dance – PBS Library

Giselle – Kultur Video

Honi Coles & Cholly Atkins: Over the Top to Bebop – Creative Arts Television Archive

Humphrey: The Shakers – Dance Horizon Video

Isadora Duncan – Dance Horizons Video

La Sylphide – PBS Library

Martha Graham, A Dancer Revealed – Kultur

Paris Dances Diagalev – Elektra Nonesuch Dance Collection

Road to the Stamping Ground – Home Visions Films

Sevillanos (Flamenco) – Connoisseur Meridian Films

Stormy Weather – Fox Video

Other selections as per instructor’s choice and or personal fieldwork tapes/DVDs as available.
Course Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College  
AS CAS

1b. Division  
AFAR Division of Fine Arts

1c. Department  
Theatre and Dance

2. Course Prefix  
THR

3. Course Number  
A141

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
3

5b. Contact Hours  
(Lecture + Lab)  
(2+2)

6. Complete Course Title  
Stagecraft I

Abbreviated Title for Transcript (30 character)

7. Type of Course  
☐ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  
☐ Add  ☐ Change  ☐ Delete

If a change, mark appropriate boxes:

☐ Prefix  ☐ Course Number  ☐ Contact Hours  ☐ Repeat Status  ☐ Grading Basis  ☐ Cross-Listed/Stacked  ☐ Test Score Prerequisites  ☐ Course Prerequisites  ☐ Automatic Restrictions  ☐ Registration Restrictions  ☐ Class  ☐ Level  ☐ College  ☐ Major  ☐ General Education Requirement  ☐ Other Course Content Guide (please specify)

9. Repeat Status No  # of Repeats  Max Credits

10. Grading Basis  
☐ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  
semester/year

From: Fall/2014  
To: /9999

12. ☐ Cross Listed with  
☐ Stacked with  
Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
<thead>
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<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>Theatre and Dance; 136-138</td>
<td>2/4/14</td>
<td>Tom Skore</td>
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<tr>
<td>2.</td>
<td></td>
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Initiator Name (typed): Colleen Metzger  
Initiator Signed Initials: _________  
Date: __________________

13b. Coordination Email  
Date: 2/4/14  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 2/4/14

14. General Education Requirement  
Mark appropriate box:  
☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities  
☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description  
(suggested length 20 to 50 words)

Workshop in principles and techniques of contemporary theatrical production including technical direction, drafting, scenery construction and rigging. Special Note: This course includes a Lab.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
THR A131 with a minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)  
N/A

16c. Automatic Restriction(s)  

☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Restriction(s) (non-codable)  
N/A

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
Updating prerequisites by adding the language "with a minimum grade of C" in order to align with all upper division performance and technical classes. Revising student learning outcomes.

Initiator (faculty only)  
Colleen Metzger  
Initiator (TYPE NAME)  

[Approval dates for various roles: Dean/Director of School/College, Undergraduate/Graduate Academic Board Chair, Provost or Designee]
I. **Date of Initiation:** Fall, 2014

II. **Course Information:**
A. College or School: CAS
B. Course Subject: Theatre
C. Course Number: A141
D. Number of Credits: 3.0 (2+2)
E. Course Title: Stagecraft I
F. Grading Basis: A-F
G. Course Description: Workshop in principles and techniques of contemporary theatrical production including technical direction, drafting, scenery construction and rigging. Special Note: This course includes a Lab.
H. Course Prerequisites: THR A131 with a minimum grade of C
I. Co-requisite: None
J. Restrictions: None
K. Fees: Yes

III. **Instructional Goals and Student Learning Outcomes:**
A. Instructional Goals. The Instructor will:
   1) Present the fundamentals of stagecraft and introduce appropriate vocabulary for theatre production and entertainment industry.
   2) Introduce drafting and discuss drafting technique.
   3) Demonstrate the proper techniques for safely working in the Scene Shop, and discuss basic skills in working with rigging equipment.
   4) Demonstrate proper scenic construction technique.
   5) Discuss shop drawings and how to correctly create them.

B. Student Learning Outcomes. The students will be able to:

| 1. Identify the fundamentals of stagecraft. | 1. Quizzes |
| 2. Identify and discuss proper hand-drafting technique. | 2. Class discussion, application on design projects and instructor feedback |
| 3. Demonstrate an understanding of how to work in the scenery construction shop. | 3. Instructor feedback during applied lab hours |
| 4. Demonstrate an understanding of shop drawings and how to complete them. | 4. Completed drafting projects |
| 5. Discuss the proper technique of rigging for the theatre. | 5. Classroom discussion |
| 6. Identify and discuss the process of | 6. Quizzes and |

Course Content Guide for: THR A141 Stagecraft I 1 of 3
IV. Course Evaluation

Students will be evaluated based on their performance in a series of exams and projects in each areas of the course material along with the completion of a special project in the area of stagecraft.

V. Course Level Justification

This course provides the necessary skills and background required before the students can take upper division design courses required for a BA in Theatre.

VI. Topical Course Outline

1. Basic principles of theatre safety and stagecraft
2. Introduction to drafting
3. Graphic standards and lettering
4. Tool use and geometric construction
5. Advanced geometric construction
6. Dimensions and notes
7. Introduction to drafting shop drawings
8. Shop tools and tool safety
9. Advanced shop tools and applications
10. Introduction to the fly system and fly system mechanics
11. Advanced rigging and rigging applications
12. Discuss traditional soft scenery, modern hard scenery, and three-dimensional non-traditional scenery
13. Tech tables and equipment set-up
14. Hands-on work on special projects in stagecraft

VII. Suggested Text

VIII. Bibliography


Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College
AS CAS

1b. Division
AFAR Division of Fine Arts

1c. Department
Theatre and Dance

2. Course Prefix
THR

3. Course Number
A243

4. Previous Course Prefix & Number
N/A

5a. Credits/CEUs
3

5b. Contact Hours (Lecture + Lab)
(3+0)

6. Complete Course Title
Scene Design

Abbreviated Title for Transcript (30 character)

7. Type of Course
☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action:
☐ Add ☒ Change ☐ Delete

If a change, mark appropriate boxes:

☐ Prefix ☐ Course Number
☐ Credits ☒ Contact Hours
☐ Title ☐ Repeat Status
☐ Grading Basis ☐ Cross-Listed/Stacked
☒ Course Description ☒ Course Prerequisites
☐ Test Score Prerequisites ☐ Co-requisites
☐ Automatic Restrictions ☐ Registration Restrictions
☐ Class ☒ Level ☐ College ☐ Major
☐ General Education Requirement
☐ Other Course Content Guide (please specify)

9. Repeat Status No
# of Repeats
Max Credits

10. Grading Basis
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date
semester/year
From: Fall /2014 To: /9999

12. Cross Listed with
☐ Stacked with

Cross-Listed Coordination Signature

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Initiator Name (typed): Colleen Metzger
Initiator Signed Initials: _________
Date:________________

13b. Coordination Email
Date: 2/4/14
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 2/4/14

14. General Education Requirement
Mark appropriate box:
☐ Oral Communication ☐ Written Communication ☐ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☐ Natural Sciences ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
Fundamental principles of design for the stage, including drafting, rendering, theory, analysis, and practice. Special Note: This course includes a Lab.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
 THR A131 & THR A132 with a minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)
N/A

16c. Automatic Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

16d. Registration Restriction(s) (non-codable)
N/A

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Updating prerequisites by adding the language "with a minimum grade of C" in order to align with all upper division performance and technical classes. Revising student learning outcomes.

Initiator (faculty only) Colleen Metzger
Initiator (TYPE NAME) _________
Date:________________

☐ Approved ☐ Disapproved
Dean/Director of School/College Date:________________

☐ Approved ☐ Disapproved
Undergraduate/Graduate Academic Board Chair Date:________________

☐ Approved ☐ Disapproved
Provost or Designee Date:________________

Initiator (faculty only) Colleen Metzger
Initiator (TYPE NAME) _________
Date:________________

☐ Approved ☐ Disapproved
Department Chair Date:________________

☐ Approved ☐ Disapproved
College/School Curriculum Committee Chair Date:________________
I. **Date of Initiation:** Fall, 2014

II. **Course Information:**
A. College or School: CAS
B. Course Subject: Theatre
C. Course Number: A243
D. Number of Credits: 3+0
E. Course Title: Scene Design
F. Grading Basis: A-F
G. Course Description: Fundamental principles of design for the stage, including drafting, rendering, theory, analysis, and practice. Special Note: This course includes a Lab.
H. Course Prerequisites: (THR A131 and THR A132) with a minimum grade of C
I. Co-requisite: None
J. Restrictions: None
K. Fees: Yes

III. **Instructional Goals and Student Learning Outcomes:**
A. Instructional Goals. The Instructor will:
   1. Define and discuss the theory of scenic design for a theatrical production.
   2. Discuss common challenges and practical solutions in scenic design.
   3. Present industry standards of proper design communication and presentation.
   4. Identify and describe how to reinterpret dramatic literature as an artistic expression intended for the stage.

B. Student learning Outcomes.

<table>
<thead>
<tr>
<th>The students will be able to:</th>
<th>Assessed by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define and discuss the theory of scenic design for a theatrical production.</td>
<td>1. Quizzes and instructor feedback</td>
</tr>
<tr>
<td>2. Identify and describe the challenges and offer solutions within the scenic design.</td>
<td>2. Renderings, models and conceptual designs</td>
</tr>
<tr>
<td>3. Identify industry standards of proper design communication.</td>
<td>3. Classroom discussion and application on final research design</td>
</tr>
<tr>
<td>4. Analyze a piece of dramatic</td>
<td>4. Research design</td>
</tr>
</tbody>
</table>
IV. Course Evaluation

Students will be evaluated based on successful and timely completion of tests and practical projects. Students will also be evaluated on a set design for a piece of dramatic literature.

V. Course Level Justification

Topics covered in this class are advanced and specialized beyond the subject matter covered in the basic introduction to design and technical theatre classes, THR A131 and THR A132.

VI. Topical Course Outline

1. Basic principles of design
2. Set design within the entertainment industry
3. History of contemporary set design
4. Survey of western architecture
5. Perspective rendering for a set design
6. Challenges for designing in different conventions
7. Basic script analysis
8. Reinterpreting a script visually
9. Researching a design
10. Basic model making
11. Color Theory
12. Drafting for a theatrical design
13. Developing a design concept

VII. Suggested Text


VIII. Bibliography


1a. School or College  
AS CAS

1b. Division  
AFAR Division of Fine Arts

1c. Department  
Theatre and Dance

2. Course Prefix  
THR

3. Course Number  
A257

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
3

5b. Contact Hours  
(Lecture + Lab)  
(3+0)

6. Complete Course Title  
Costume Design

Abbreviated Title for Transcript (30 character)

7. Type of Course  
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  
☐ Add or ☒ Change or ☐ Delete

If a change, mark appropriate boxes:
☐ Prefix  ☐ Course Number  ☒ Contact Hours  ☐ Repeat Status  ☐ Grading Basis
☐ Credits  ☐ Cross-Listed/Stacked  ☐ Course Prerequisites  ☐ Other Course Content Guide (please specify)
☐ Title  ☐ Registration Restrictions  ☐ General Education Requirement
☐ Grading Basis  ☐ Co-requisites  ☐ Oral Communication  ☐ Fine Arts
☐ Course Description  ☐ Test Score Prerequisites  ☐ Written Communication  ☐ Social Sciences
☐ Repeat Status  ☐ Course Prerequisites  ☐ Quantitative Skills  ☐ Humanities
☐ Title  ☐ Registration Restrictions  ☐ General Education Requirement  ☐ Integrative Capstone

9. Repeat Status No  ☐ # of Repeats  ☐ Max Credits

10. Grading Basis  
☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  
semester/year
From:  Fall /2014  To:  /9999

12. ☐ Cross Listed with  ☐ Stacked with  
Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
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<tbody>
<tr>
<td>Department of Theatre and Dance; 136-138</td>
<td>4 February 2014</td>
<td>Tom Skore</td>
</tr>
</tbody>
</table>

Initiator Name (typed): Colleen Metzger  Initiator Signed Initials: _________  Date: __________

13b. Coordination Email  Date: 4 February 2014  submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  Date: 4 February 2014

14. General Education Requirement  
Mark appropriate box:
☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities
☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
Basic principles of costume design with emphasis on research and rendering techniques. Overall study of costume and fashion history and its relation to theatre productions and designs.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
THR A132 with minimum grade C

16b. Co-requisite(s) (concurrent enrollment required)  
N/A

16c. Automatic Restriction(s)  
☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Restriction(s) (non-codable)  
N/A

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Altering title to accurately represent what is taught in the course. And adjusting the contact hours to suit the new class structure, updating prerequisites by adding the language “with a minimum grade of C” in order to align with all upper division performance and technical classes.

Initiator (faculty only)  Date
Colleen Metzger  __________

Initiator (TYPE NAME)
☐ Approved  ❌ Disapproved  Dean/Director of School/College  Date
☐ Approved  ☐ Disapproved  Undergraduate/Graduate Academic Board Chair  Date
☑ Approved  ☐ Disapproved  Provost or Designee  Date

Disapproved
Department Chair  __________

Disapproved
College/School Curriculum Committee Chair  __________
Course Content Guide
University of Alaska Anchorage
THR A257
Costume Design

I. Date of Initiation: Fall, 2014

II. Course Information:
A. College or School: CAS
B. Course Subject: Theatre and Dance
C. Course Number: A257
D. Number of Credits: 3.0 (3+0)
E. Course Title: Costume Design
F. Grading Basis: A-F
G. Course Description: Basic principles of costume design with emphasis on research and rendering techniques. Overall study of costume and fashion history and its relation to theatre productions and designs.
H. Course Prerequisites: THR A132 with minimum grade of C
I. Co-Requisite: N/A
J. Restrictions: None
K. Fees: Yes

III. Instructional Goals and Student Outcomes:
A. Instructional Goals. The Instructor will:
   1) Present the fundamentals of costume design.
   2) Discuss and define each area of the design process.
   3) Define and describe how to analyze a character in a play and make choices about the appropriate costume, including color, line, and style.
   4) Present an overview of clothing history with an emphasis on research materials in the areas of fashion and art of each period.
   5) Present basic figure drawing and costume rendering techniques.

B. Student Learning Outcomes. The students will be able to:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Identify the fundamentals of costume design.</td>
<td>1) Quizzes</td>
</tr>
<tr>
<td>2) Identify and describe each area of the design process and explain the importance of each.</td>
<td>2) Class Discussion</td>
</tr>
<tr>
<td></td>
<td>Application on Design Projects</td>
</tr>
<tr>
<td></td>
<td>Instructor Feedback</td>
</tr>
<tr>
<td>3) Analyze each character of a play and design costumes based on that analysis.</td>
<td>3) Class Discussion</td>
</tr>
<tr>
<td></td>
<td>Application on Design Projects</td>
</tr>
<tr>
<td></td>
<td>Instructor Feedback</td>
</tr>
<tr>
<td>4) Relate knowledge of period styles to artists and plays of each specific period.</td>
<td>4) Costume History Presentation Application on Historical Design Project</td>
</tr>
<tr>
<td>5) Demonstrate basic figure drawing and rendering techniques.</td>
<td>5) Graded Sketchbook Instructor Feedback</td>
</tr>
</tbody>
</table>

### IV. Course Evaluation

Students will be evaluated based on finished renderings inspired by various creative stimuli and two full sets of costume design renderings based on assigned plays, complete with swatches, costume plots, action charts, and character analyses.

### V. Course Level Justification

This 200-level design course builds on the skills gained in THR 132.

### VI. Topical Course Outline

1. Basic principles of costume design
2. Meaning of the costume
3. Interpreting the script and the characters
4. Developing a concept
5. Collaboration with the other design artists
6. Developing line
7. Basic elements of design
8. Character Analysis
9. Color
10. Period styles
11. Sketching the human figure
12. Use of light and shadow to create dimension
13. Rendering techniques

### VII. Suggested Text


### VIII. Bibliography


## Meisner Acting Technique

### Abbreviated Title for Transcript (30 character)

#### Course Description

Improvisational technique created by Sanford Meisner to help actors feel, rather than think, their way through a scene by responding to inner impulses. Improvisational work will carry over into scene study by the end of the semester.

### Course Prerequisite(s)

- THR A121 with a minimum grade of C

### Course Co-requisite(s)

- N/A

### Automatic Restrictions

- N/A

### Registration Restrictions

- General Education Requirement

### General Education Requirement

- Mark appropriate box:
  - Oral Communication
  - Written Communication
  - Quantitative Skills
  - Humanities
  - Fine Arts
  - Social Sciences
  - Natural Sciences
  - Integrative Capstone

### Course Prerequisite(s) (list prefix and number or test code and score)

- THR A121 with a minimum grade of C

### Co-requisite(s) (concurrent enrollment required)

- N/A

### Registration Restriction(s) (non-codable)

- N/A

### Mark if course is a selected topic course

- N/A

### Mark if course has fees

- N/A

### Justification for Action

Updating prerequisites by adding the language "with a minimum grade of C" in order to align with all upper division performance and technical classes. Revising student learning outcomes.
I. **Date of Initiation:** Fall, 2014

II. **Course Information:**
   A. College or School: CAS
   B. Course Subject: Theatre
   C. Course Number: THR A321
   D. Number of Credits: 3.0 (2+3)
   E. Course Title: Meisner Acting Technique
   F. Grading Basis: A-F
   G. Course Description: Improvisational techniques created by Sanford Meisner to help actors feel, rather than think, their way through a scene by responding to inner impulses. Improvisational work will carry over into scene study toward the end of the semester.
   H. Course Prerequisites: THR A121 with a minimum grade of C
   I. Restrictions: None
   J. Fees: None

III. **Instructional Goals and Student Learning Outcomes**
   A. Instructional goals. The instructor will:

   1) Discuss Stanislavski and his influence on the development of American actor training and what is commonly referred to as the Method.

   2) Employ a series of improvisational exercises designed to remove all intellectualization from the acting process so the actor is feeling their way through a scene, rather than thinking their way through a scene (gut versus head).

   3) Reinforce the important distinctions to be made between the character’s thought process and the actor’s thought process and their relevance to the performance.

   4) Challenge students to take emotional risks, expand their imaginative possibilities, and tap into their emotional resources on their deepest level.

   B. Student learning outcomes.
Students will be able to:

<table>
<thead>
<tr>
<th>Assessment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Speak about various approaches stemming from Stanislavski’s original system.</td>
</tr>
<tr>
<td>2) Demonstrate their knowledge of the Meisner approach through direct application in improvised scenes.</td>
</tr>
<tr>
<td>3) Develop independent activities and background character information which is totally imaginative but contains an element of truth as an emotional lifeline, and which is in the extreme, and fully justified.</td>
</tr>
<tr>
<td>4) Apply improvisation work to actual scene work.</td>
</tr>
</tbody>
</table>

IV. Course Evaluation

Once students learn the basic repetition exercise they will be matched with partners, asked to develop either a fully justified independent activity or a reason for coming to the door and knocking. Students will be evaluated each time they do an improvisation with a response sheet listing the specifics of what worked, what didn’t, and why. Students will be graded on their level of preparation, imagination, and execution.

V. Course Level Justification

This course uses advanced improvisational methods and requires a solid grasp of the basic concepts for acting, movement, and voice.

VI. Topical Course Outline: Each of these topics corresponds to a specific set of exercises that build one upon another:

1. Acting is really doing: living truthfully on stage
2. Taking the intellect out of the process
3. How being “right” is irrelevant
4. The basic repetition
5. The truth from your point of view
6. Independent activities
7. The knock at the door
8. Justifications: being specific
9. Emotional preparations: how to get your emotional engine running
10. Upping the stakes: extremes
11. Improvisations and scenes

VII. Suggested Text

VIII. Bibliography


* Seminal text in the field
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College  
AS CAS

1b. Division  
AFAR Division of Fine Arts

1c. Department  
Theatre and Dance

2. Course Prefix  
THR

3. Course Number  
A325

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
3

5b. Contact Hours (Lecture + Lab)  
(3+0)

6. Complete Course Title  
Theatre Speech and Dialects

Abbreviated Title for Transcript (30 character)

7. Type of Course  
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  
☐ Add  or  ☒ Change  or  ☐ Delete

If a change, mark appropriate boxes:

- Prefix  
- Credits  
- Grade Basis  
- Course Number  
- Contact Hours  
- Title  
- Repeat Status  
- Course Description  
- Cross-Listed/Stacked  
- Test Score Prerequisites  
- Course Prerequisites  
- Automatic Restrictions  
- Registration Restrictions  
- Class  
- Level  
- College  
- Major  
- General Education Requirement  
- Other CCG Update (please specify)

9. Repeat Status No  
# of Repeats  
Max Credits

10. Grading Basis  
☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  
semester/year

From:  Fall/2014  
To:  7/9999

12. ☐ Cross Listed with  
Stacked with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
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<tr>
<th>Impacted Program/Course</th>
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<tbody>
<tr>
<td>1. Department of Theatre and Dance; 136-138</td>
<td>4 February 2014</td>
<td>Tom Skore</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Initiator Name (typed): Tom Skore  
Initiator Signed Initials:  
Date:  

13b. Coordination Email  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date:  4 February 2014

14. General Education Requirement  
Mark appropriate box:

- Oral Communication  
- Written Communication  
- Quantitative Skills  
- Fine Arts  
- Social Sciences  
- Humanities  
- Natural Sciences  
- Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

Continuation of THR A222 starting with the production and energizing of vowels and consonants. In addition to the International Phonetic Alphabet, students will develop a systematic approach for the acquisition of a foreign dialect based on tempo/rhythm, facial posture, pitch range, resonance focus, lilt pattern, topography, history, and national character.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
THR A222 with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)  
N/A

16c. Automatic Restrictions(s)  
College  Major  Class  Level

16d. Registration Restriction(s) (non-codable)  
N/A

17. Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action

Updating prerequisites by adding the language "with a minimum grade of C" in order to align with all upper division performance and technical classes. Revising student learning outcomes.

Initiator (faculty only)  
Date

Initiator (TYPE NAME)

☑ Approved  
☐ Disapproved  
Date

Dean/Director of School/College  
Date

Undergraduate/Graduate Academic  
Board Chair  
Date

Provost or Designee  
Date

Tom Skore  
Initiator

☑ Approved  
☐ Disapproved  
Date

Department Chair  
Date

☑ Approved  
☐ Disapproved  
Date

College/School Curriculum Committee Chair  
Date

☑ Approved  
☐ Disapproved  
Date
Course Content Guide  
University of Alaska Anchorage  
THR A325  
Theatre Speech and Dialects

I. Date of Initiation: Fall, 2014

II. Course Information:
A. College or School: CAS
B. Course Subject: Theatre
C. Course Number: THR A325
D. Number of Credits: 3.0 (3+0)
E. Course Title: Theatre Speech and Dialects
F. Grading Basis: A-F
G. Course Description: Continuation of THR 222 starting with the production and energizing of vowels and consonants. In addition to the International Phonetic Alphabet, students will develop a systematic approach for the acquisition of a foreign dialect based on tempo/rhythm, facial posture, pitch range, resonance focus, lilt pattern, topography, history and national character.
H. Course Prerequisites: THR A222 with a minimum grade of C
I. Restrictions: None
J. Fees: None

III. Instructional Goals and Student Outcomes
A. Instructional goals. The instructor will:

1) Identify the Lessac energies of speech (consonants, structural, tonal) and various aspects of language (rhythm, lilt, facial posture, resonant focus, pitch range, substitutions) and guide the student toward mastery of these elements as they apply to formal and informal speech, dialects, and poetic drama.

2) Provide the students with a process and the resources by which they can acquire dialects on their own.

3) Assist students toward basic fluency in five dialects: Southern, N.Y.C., Standard British (RP), Cockney, and Irish.

B. Student learning outcomes.

<table>
<thead>
<tr>
<th>Students will be able to:</th>
<th>Assessment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Demonstrate mastery of Lessac’s energies of speech through relaxed forward facial posture, full two finger spacing on formal vowels, awareness of the y-buzz, use of the full consonant orchestra, and command of the neutral vowels and diphthongs.</td>
<td>Actual performance; written tests and quizzes</td>
</tr>
</tbody>
</table>
2) Demonstrate a basic knowledge of the IPA (International Phonetic Alphabet), as well as a small number of basic diacritics.

3) Demonstrate basic proficiency in American Southern, NYC, Standard British (RP), Cockney, and Irish.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2)</td>
<td>In class exercises; written tests and quizzes</td>
</tr>
<tr>
<td>3)</td>
<td>Graded audio recordings on CD’s or thumb drives; in class conversations or readings in assigned dialects</td>
</tr>
</tbody>
</table>

IV. Course Evaluation

Students will be evaluated based on exams and quizzes for both Lessac and the IPA. Students will also turn in CDs or cassettes of exercises and dialects that will be graded and critiqued.

V. Course Level Justification

This course builds on vocal training methods used in THR A222, Voice for the Actor, to prepare the student for advanced work with Shakespeare and other poetic drama as well as dialects, which require extreme sensitivity to all elements involved with the production of language, with the specific goal of manipulating those elements as needed.

VI. Topical Course Outline

1. Vowels: the music of language
2. Consonants: the consonant orchestra
3. Dialects: an overview
4. Southern
5. NYC
6. British RP
7. Cockney
8. Irish

VII. Suggested Text


VIII. Bibliography


* Seminal textbook in the field
Course Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course

<table>
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<th>1c. Department</th>
<th>Theatre and Dance</th>
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<tbody>
<tr>
<td>2. Course Prefix</td>
<td>THR</td>
<td>3. Course Number</td>
<td>A328</td>
<td>4. Previous Course Prefix &amp; Number</td>
<td>N/A</td>
</tr>
<tr>
<td>5a. Credits/CEUs</td>
<td>3</td>
<td>5b. Contact Hours</td>
<td>(Lecture + Lab)</td>
<td>(2+3)</td>
<td></td>
</tr>
</tbody>
</table>

6. Complete Course Title  
Acting Shakespeare

Abbreviated Title for Transcript (30 character)

7. Type of Course  
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  
☐ Add  or  ☒ Change  or  ☐ Delete

If a change, mark appropriate boxes:
☐ Prefix  ☐ Credits  ☐ Title  ☐ Repeat Status  ☐ Grading Basis  ☐ Cross-Listed/Stacked  ☐ Course Description  ☐ Course Prerequisites  ☐ Test Score Prerequisites  ☐ Co-requisites  ☐ Automatic Restrictions  ☐ Registration Restrictions  ☐ Class  ☐ Level  ☐ College  ☐ Major  ☐ General Education Requirement  ☐ Other CCG Update (please specify)

9. Repeat Status No  # of Repeats  Max Credits

10. Grading Basis  ☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  
From: Fall/2014  To: /9999

12. ☐ Cross Listed with  ☐ Stacked with  
Cross-Listed Coordination Signature

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Initiator Name (typed): Tom Skore  
Initiator Signed Initials: _________  
Date: __________________

13b. Coordination Email  
Date: 4 February 2014  
submitted to Faculty Listserv: (uae-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 4 February 2014

14. General Education Requirement  
Mark appropriate box:  
☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities  
☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
Intensive exploration of text-based analysis of Shakespearean characters. Emphasis will be placed on scene and character study in a studio setting.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
(THR A221 and THR A222) with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)  
N/A

16c. Automatic Restriction(s)  
☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Restriction(s) (non-codable)  
N/A

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
Updating prerequisites by adding the language "with a minimum grade of C" in order to align with all upper division performance and technical classes. Revising student learning outcomes.

Initiator (faculty only)  
☐ Approved  ☐ Disapproved  
Tom Skore  
Initiator (TYPE NAME)

Initiator (faculty only)  
☐ Approved  ☐ Disapproved  
Dean/Director of School/College  
Date

Initiator (faculty only)  
☐ Approved  ☐ Disapproved  
Undergraduate/Graduate Academic Board Chair  
Date

Initiator (faculty only)  
☐ Approved  ☐ Disapproved  
Provost or Designee  
Date

333
I. Date of Initiation:  Fall, 2014

II. Course Information:
A. College or School:  CAS
B. Course Subject:  Theatre
C. Course Number:  THR A328
D. Number of Credits:  3.0 (2+3)
E. Course Title:  Acting Shakespeare
F. Grading Basis:  A-F
G. Course Description: Intensive exploration of text-based analysis of Shakespearean characters. Emphasis will be placed on scene and character study in studio setting.
H. Course Prerequisites: (THR A221 and THR A222) with a minimum grade of C
I. Restrictions: None
J. Fees: None

III. Instructional Goals and Student Outcomes
A. Instructional goals: The instructor will:

1). Discuss the significant historical and social trends, which shaped Elizabethan sensibilities and formed the foundation for Elizabethan poetic drama.

2). Identify and illustrate rhetorical devices and figures of speech commonly found in poetic drama.

3). Discuss the basic rules of scansion and demonstrate how understanding the poetic structure helps shape character development.

4). Lead actors through a series of exercises designed to integrate text with voice, body, and emotions.

5). Provide background information on the particular plays used for class.

B. Student learning outcomes:

<table>
<thead>
<tr>
<th>Students will be able to:</th>
<th>Assessment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Identify and discuss the significant historical and social trends which shaped Elizabethan sensibilities.</td>
<td>Through written assignments, and graded</td>
</tr>
</tbody>
</table>
IV. Course Evaluation

Students will encounter a comprehensive final exam covering all lecture material, as well as the occasional quiz. The bulk of their grade, however, will be based on performance projects from particular plays of Shakespeare chosen specifically for that class. Projects will include a monologue and two scenes where students will have the opportunity to put theory into practice. Students will use outside class time for rehearsal of projects and keep a journal of their creative class activities to be shared if requested by the instructor.

V. Course Level Justification

Shakespeare’s poetry demands research, imagination, and technical skill. Therefore, THR A221, Movement for the Actor, and THR A222, Voice for the Actor, are all prerequisites for THR A328, Acting Shakespeare.

VI. Topical Course Outline

1. The sounds of speech: vowels, consonants, and silence
2. The vertical and horizontal of speech: balancing meaning and emotions
3. Elizabethan sensibilities: Who were they? Why did they think that way?
4. Reading Shakespeare’s plays: tips for approaching poetic drama
5. Scanning Shakespeare’s poetry: What does the poetry tell us?
7. Researching the plays: Where are my best sources?
8. Poetry into action: What they mean when they say “it’s all right there.”
VII. Suggested Text:

Each semester students will be asked to purchase different plays. Instructor will examine versions from different publishers to select the best possible acting editions, including one that contains a first folio edition.

VIII. Bibliography


Scheeder & Younts. *All the Words on Stage*. Hanover: Smith and Kraus, 2002.


1. **School or College**
   - AS CAS

2. **Division**
   - AFAR Division of Fine Arts

3. **Department**
   - Theatre and Dance

4. **Course Prefix**
   - THR

5. **Course Number**
   - A347

6. **Previous Course Prefix & Number**
   - N/A

7. **Credits/CEUs**
   - 3

8. **Contact Hours**
   - (Lecture + Lab) (3+0)

9. **Complete Course Title**
   - Lighting Design

10. **Type of Course**
    - Academic

11. **Type of Action**
    - Add

12. **Repeat Status**
    - No

13. **Grading Basis**
    - A-F

14. **Implementation Date**
    - From: Fall/2014 To: /9999

15. **Course Description**
    - Theory and practice of the design and execution of lighting and associated electrical effects for the stage. Focus on theatrical lighting with additional material on related fields.

16. **Course Prerequisite(s)**
    - (THR A131 & THR A132) with a minimum grade of C

17. **Course Prerequisite(s) (list prefix and number or test code and score)**
    - (THR A131 & THR A132) with a minimum grade of C

18. **Co-requisite(s)**
    - (concurrent enrollment required)

19. **Registration Restriction(s) (non-codable)**
    - (non-codable)

20. **Mark if course has fees**

21. **Mark if course is a selected topic course**

22. **Justification for Action**
    - Updating prerequisites to align with all upper division performance and technical classes. Revising student learning outcomes.

---

**Initiator (faculty only)**
- Colleen Metzger
- Date

**Dean/Director of School/College**
- Date

**Department Chair**
- Date

**Board Chair**
- Date

**Provost or Designee**
- Date
I. **Date of Initiation:** Fall, 2014

II. **Course Information:**
   A. College or School: CAS
   B. Course Subject: Theatre
   C. Course Number: A347
   D. Number of Credits: 3.0 (3+0)
   E. Course Title: Lighting Design
   F. Grading Basis: A-F
   G. Course Description:
      Theory and practice of the design and execution of lighting and
      associated electrical effects for the stage. Focus on theatrical
      lighting with additional material on related fields.
   H. Course Prerequisites: (THR A131 & THR A132) with a minimum grade of C
   I. Restrictions: None
   J. Fees: Yes

III. **Instructional Goals and Student Learning Outcomes:**
   A. Instructional Goals. The Instructor will:
      1) Present the fundamentals of lighting design.
      2) Discuss and define each area of the design process.
      3) Demonstrate the proper techniques in working with the required
         paperwork in realizing a lighting design.
      4) Discuss basic skills in working with lighting equipment and its control
         equipment.
      5) Demonstrate the importance of lighting and its emotional impact on the
         production.
      6) Discuss how to analyze a script or project for lighting design.

   B. Student Learning Outcomes.
      | The students will be able to:                                      | Assessed by:                  |
      |--------------------------------------------------|-----------------------------|
      | 1. Identify the fundamentals of lighting design.              | Quizzes and exams            |
      | 2. Analyze a play and design lighting based on that analysis. | In class presentation/discussion
      | 3. Demonstrate an understanding of how to work within the confines of a defined lighting inventory. | Final project                |
      | 4. Articulate a clear design idea and how it’s related to the play. | In class presentation/discussion
      | 5. Complete a lighting design for a play including drafting the proper documents for the design. | Final project                |
IV. Course Evaluation

Students will be evaluated based on their performance in a series of lighting projects designed to teach them the design process. Additionally they will be evaluated on a written exam, in class presentations, attendance, and the completion of a lighting design including all of the supporting documentation.

V. Course Level Justification

Designed as an upper division course which covers the technical and artistic aspects of lighting design for the stage. This class builds on the technical skills gained in THR A131, and the Theoretical and Design skills gained in THR A132.

VI. Topical Course Outline

1. Basic principles of electricity and stagecraft
2. Designing lights at UAA
3. Basic concepts of lighting instrumentation
4. An introduction to color theory as it relates to lighting design
5. Mapping out your lighting ideas
6. Discussing photometrics
7. Basic paperwork associated with lighting design
8. An introduction to the design process
9. Script analysis
10. Collecting lighting research
11. Lighting storyboards
12. Putting it all together
13. Working within a specified inventory
14. The lighting hang and focus
15. Realizing the design at the tech table
16. The lighting strike

VII. Suggested Text

VIII. Bibliography


**1a. School or College**  
AS CAS  

**1b. Division**  
AFAR Division of Fine Arts  

**1c. Department**  
Theatre and Dance  

**2. Course Prefix**  
THR  

**3. Course Number**  
A357  

**4. Previous Course Prefix & Number**  
N/A  

**5a. Credits/CEUs**  
3  

**5b. Contact Hours**  
(Lecture + Lab) (1+4)  

**6. Complete Course Title**  
Costume Construction  

**7. Type of Course**  
☑ Academic  
☐ Preparatory/Development  
☐ Non-credit  
☐ CEU  
☐ Professional Development  

**8. Type of Action:**  
☐ Add  
☐ Change  
☐ Delete  

If a change, mark appropriate boxes:  
☐ Prefix  
☐ Credits  
☑ Title  
☐ Grade Basis  
☐ Course Description  
☐ Test Score Prerequisites  
☐ Automatic Restrictions  
☑ Other Course Content Guide (please specify)  

**9. Repeat Status Yes**  
# of Repeats 1  
Max Credits 6  

**10. Grading Basis**  
☑ A-F  
☐ P/NP  
☐ NG  

**11. Implementation Date**  
semester/year  
From: Fall/2014  
To: /9999  

**12. Cross Listed with**  
Stacked with  
Cross-Listed Coordination Signature  

**13a. Impacted Courses or Programs:**  
List any programs or college requirements that require this course.  
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.  

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
<th>Initiator Name (typed):</th>
<th>Initiator Signed Initials:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Department of Theatre and Dance; 136-138</td>
<td>4 February 2014</td>
<td>Tom Skore</td>
<td>Colleen Metzger</td>
<td></td>
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</tbody>
</table>

**13b. Coordination Email**  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)  

**13c. Coordination with Library Liaison**  
Date: 4 February 2014  

**14. General Education Requirement**  
Mark appropriate box:  
☐ Oral Communication  
☐ Written Communication  
☐ Quantitative Skills  
☐ Humanities  
☐ Fine Arts  
☐ Social Sciences  
☐ Natural Sciences  
☐ Integrative Capstone  

**15. Course Description**  
(suggested length 20 to 50 words)  
Advanced work in costume construction, including developing essential sewing techniques, gaining basic knowledge of draping and pattern alteration, and completion of a finished theatrical garment. Special Note: This course includes a Lab.  

**16a. Course Prerequisite(s) (list prefix and number or test code and score)**  
THR A131 - with minimum grade C  

**16b. Co-requisite(s) (concurrent enrollment required)**  
N/A  

**16c. Automatic Restriction(s)**  
☐ College  
☐ Major  
☐ Class  
☐ Level  

**16d. Registration Restriction(s) (non-codable)**  
N/A  

**17. ☑ Mark if course has fees**  

**18. ☐ Mark if course is a selected topic course**  

**19. Justification for Action**  
New instructor teaching the course. Altering title to accurately represent what is taught in the course, adjusting prerequisites so students are prepared for material taught in the course, and updating the Course Content Guide.  

---  

**Initiator (faculty only)**  
Colleen Metzger  
Initiator (TYPE NAME)  

**Initiator (faculty only) Date**  
☑ Approved  
☐ Disapproved  

**Dean/Director of School/College Date**  
☑ Approved  
☐ Disapproved  

**Undergraduate/Graduate Academic Date**  
☑ Approved  
☐ Disapproved  

**Board Chair Date**  
☑ Approved  
☐ Disapproved  

**Provost or Designee Date**  
☑ Approved  
☐ Disapproved  

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341
I. **Date of Initiation:** Fall, 2014

II. **Course Information:**

A. College or School: CAS  
B. Course Subject: Theatre & Dance  
C. Course Number: A357  
D. Number of Credits: 3.0 (1+4)  
E. Course Title: Costume Construction  
F. Repeat Status: 1 Repeat, Total Credits = 6  
G. Grading Basis: A-F  
H. Course Description: Advanced work in costume construction, including developing essential sewing techniques, gaining basic knowledge of draping and pattern alteration, and completion of a finished theatrical garment. Special Note: This course includes a Lab.  
I. Course Prerequisites: THR A131, with minimum grade C  
J. Co-Requisite: None  
K. Restrictions: None  
L. Fees: Yes

III. **Instructional Goals and Student Outcomes:**

A. Instructional Goals. The Instructor will:

1) Discuss and define each area of costume shop operations.

2) Introduce essential hand sewing and machine sewing techniques.

3) Present the techniques for draping garments.

4) Demonstrate techniques for drafting flat patterns from scratch and repurposing existing flat patterns.

5) Demonstrate the proper techniques for measurement and fitting of actors.

6) Discuss good communication skills with the designers and learn to work in collaboration with designers, directors and actors.
B. Student Learning Outcomes. The students will be able to:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Identify and describe the costume shop areas and operations.</td>
<td>1) Quizzes</td>
</tr>
<tr>
<td>2) Master basic hand and machine sewing skills.</td>
<td>2) Creation of a skills binder</td>
</tr>
<tr>
<td>3) Demonstrate draping and flat pattern drafting techniques for costume construction.</td>
<td>Application on Final Project Garment</td>
</tr>
<tr>
<td>4) Measure actors and do costume fittings confidently.</td>
<td>3) Two draping assignments</td>
</tr>
<tr>
<td>5) Demonstrate good communication skills that enhance creative collaboration.</td>
<td>One drafting assignment</td>
</tr>
<tr>
<td></td>
<td>4) Classroom discussion</td>
</tr>
<tr>
<td></td>
<td>Application on final project garment</td>
</tr>
<tr>
<td></td>
<td>Instructor feedback</td>
</tr>
<tr>
<td></td>
<td>5) Classroom discussion</td>
</tr>
<tr>
<td></td>
<td>Application on final project garment</td>
</tr>
<tr>
<td></td>
<td>Instructor feedback</td>
</tr>
</tbody>
</table>

IV. Course Evaluation
Students will be evaluated based on hands-on sewing projects that help them practice the various skills learned in class, and furthermore act as a guide for all future sewing endeavors. These projects will cumulate in a finished, theatrical garment that was measured, draped, and fit entirely by the student.

V. Course Level Justification
This is an upper division course that builds on the basic sewing skills gained in Introduction to Production Techniques, THR A131. The repeat status would allow the student to take the course an additional time, and complete far more advanced projects to further their costume construction skill.

VI. Topical Course Outline
1. Costume Shop layout and operation
2. Hand Sewing
3. Machine Sewing
4. Taking Measurements
5. Draping
6. Flat Patterning
7. Fabric Identification
8. Fitting the actors with an emphasis on movement
9. Interpretation of the designs and transferring a sketch to fabric
10. Communicating with the costume designer, director and actors
11. Budgeting the designs
12. Finishing details and the overall look of the show
VII. Suggested Text


VIII. Bibliography


1a. School or College  
AS CAS

1b. Division  
AFAR Division of Fine Arts

1c. Department  
Theatre and Dance

2. Course Prefix  
THR

3. Course Number  
A450

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
1

5b. Contact Hours  
(Lecture + Lab) (1+2)

6. Complete Course Title  
Resume & Portfolio Workshop

Abbreviated Title for Transcript (30 character)

7. Type of Course  
☑ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  ☑ Add  ☐ Change  ☐ Delete

If a change, mark appropriate boxes:

- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Automatic Restrictions
- Other

9. Repeat Status No  # of Repeats  Max Credits

10. Grading Basis  ☑ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  
From: Fall/2014  To: 9999

12. ☐ Cross Listed with  ☐ Stacked with

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
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<tbody>
<tr>
<td>1. Department of Theatre Dance; 136-138</td>
<td>4 February 2014</td>
<td>Tom Skore</td>
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</table>

Initiator Name (typed): Colleen Metzger  
Initiator Signed Initials: ________  
Date: __________________

13b. Coordination Email  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

Date: 4 February 2014

13c. Coordination with Library Liaison  
Date: 4 February 2014

14. General Education Requirement  
Mark appropriate box:

- Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities  
- Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

This course offers career preparation for theatre professionals. Portfolio preparation will follow the United States Institute for Theatre Technology’s standards and standards employed by Actors’ Equity Association, LORT theatres and U/RTA and ACTF for Stage Managers. Standards and subjects include: organization, resume, interview/audition procedures, personal marketing and presentation, dress and decorum, job applications, and networking. Special Note: Recommended for the fall semester of the student's senior year.

16a. Course Prerequisite(s) (list prefix and number or test code and score)

16b. Co-requisite(s) (concurrent enrollment required)  
N/A

16c. Automatic Restriction(s)

- College  ☐ Major  ☐ Class  ☑ Level

16d. Registration Restriction(s) (non-codable)  
Fall semester of final year

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
Creates a new course to help prepare our students to enter the workforce or apply for graduate school. This course will also be a cornerstone of our departmental assessment.
<table>
<thead>
<tr>
<th>Initator (faculty only)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colleen Metzger</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initiative Name</th>
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</tr>
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<tr>
<td>Dean/Director of School/College</td>
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<tr>
<td>Department Chair</td>
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</tr>
<tr>
<td>College/School Curriculum Committee Chair</td>
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<tr>
<td>Provost or Designee</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
I. Date of Initiation: Fall, 2014

II. Course Information:
A. College or School: CAS
B. Course Subject: Theatre & Dance
C. Course Number: A450
D. Number of Credits: 1.0 (1+2)
E. Course Title: Resume & Portfolio Workshop
F. Grading Basis: A-F
G. Course Description: This course offers career preparation for theatre professionals. Portfolio preparation will follow the United States Institute for Theatre Technology’s standards and standards employed by Actors’ Equity Association, LORT theatres and U/RTA and ACTF for Stage Managers. Standards and subjects include: organization, resume, interview/audition procedures, personal marketing and presentation, dress and decorum, job applications, and networking. Special Note: Recommended for the fall semester of the student’s final year.
H. Course Prerequisites: N/A
I. Co-Requisite: N/A
J. Restrictions: Fall Semester of final year
K. Fees: No

III. Instructional Goals and Student Learning Outcomes:
A. Instructional Goals. The Instructor will:
   1) Present the details of creating a theatrical resume & portfolio.
   2) Delineate industry specific standards for creating a portfolio in the areas of design and technology, performance, and dance.
   3) Introduce skills to help prepare for and navigate a professional interview/portfolio presentation.
   4) Discuss methods of personal marketing and professional networking.

B. Student Learning Outcomes. The students will be able to:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrate an understanding of the discipline specific requirements for portfolio creation.</td>
<td>Final portfolio</td>
</tr>
<tr>
<td>2. Identify the qualities of a well-designed resume.</td>
<td>Resume and cover letter project</td>
</tr>
<tr>
<td>3. Demonstrate portfolio presentation techniques.</td>
<td>Mock interview/presentation</td>
</tr>
<tr>
<td>4. Demonstrate ability to locate and apply for employment in a selected area.</td>
<td>Resume and cover letter project</td>
</tr>
<tr>
<td>5. Illustrate knowledge of professional networking and marketing.</td>
<td>Marketing project</td>
</tr>
</tbody>
</table>

### IV. Course Evaluation
This course is largely independent work. Students will be expected to attend all of the group sections, and the one on one mentoring sessions with the instructor. The finished portfolio, resume and mock interview will be the main tools for evaluation.

### V. Course Level Justification
This course is a course required in the fall semester of their final year for the BA in Theatre. Students will use the mini portfolios they made for each of the technical practicum classes along with all of their achievements as a theatre major to complete this class.

### VI. Topical Course Outline
1. The theatrical resume
2. Creating your brand
3. The cover letter
4. The business of show business
5. Designing a portfolio that works for you
6. The design portfolio
7. The actors portfolio
8. The technicians portfolio
9. The dance portfolio
10. An introduction to the standards in: USITT, URTA, LORT, AEA, AFTRA, and ACTF
11. How to find job openings in the performing arts
12. How to prepare for the job interview
13. Marketing yourself
14. Professional networking
15. Your exit interview

### VII. Bibliography


Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College  AS CAS
1b. Division  AFAR Division of Fine Arts
1c. Department  Theatre and Dance

2. Course Prefix  THR
3. Course Number  A490
4. Previous Course Prefix & Number  N/A

5a. Credits/CEUs  3
5b. Contact Hours (Lecture + Lab)  (2+2)

6. Complete Course Title
Selected Topics in Performance

Abbreviated Title for Transcript (30 character)

7. Type of Course  ❑ Academic  ❑ Preparatory/Development  ❑ Non-credit  ❑ CEU  ❑ Professional Development

8. Type of Action:  ❑ Add  ❑ Change  ❑ Delete
If a change, mark appropriate boxes:
- Prefix
- Credits
- Title
- Contact Hours
- Repeat Status
- Grading Basis
- Cross-Listed/Stacked
- Course Description
- Co-requisites
- Test Score Prerequisites
- Registration Restrictions
- General Education Requirement
- Class
- Level
- College
- Major
- Other Update CCG (please specify)

9. Repeat Status Yes  # of Repeats  3  Max Credits  12

10. Grading Basis  ❑ A-F  ❑ P/NP  ❑ NG

11. Implementation Date  semester/year  From: Fall/2014  To: /9999

12. ❑ Cross Listed with  ❑ Stacked with

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

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<td>Tom Skore</td>
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<td>2.</td>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

Initiator Name (typed): Tom Skore  Initiator Signed Initials: _________  Date: __________

14. General Education Requirement
Mark appropriate box:
- Oral Communication
- Written Communication
- Quantitative Skills
- Humanities
- Fine Arts
- Social Sciences
- Natural Sciences
- Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
Current topics in theatrical performance addressing special demands of the theatre season or special faculty expertise. Special note: may be repeated with change of subtitle.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
THR A121 with minimum grade of C

16b. Co-requisite(s) (concurrent enrollment required)
N/A

16c. Automatic Restriction(s)

16d. Registration Restriction(s) (non-codable)
N/A

17. ❑ Mark if course has fees
18. ❑ Mark if course is a selected topic course

19. Justification for Action
Updating prerequisites by adding the language "with a minimum grade of C" in order to align with all upper division performance and technical classes. Revising student learning outcomes.

Initiator (faculty only)  Tom Skore
Initiator (TYPE NAME)  ____________________________  Date: __________

 phêf Tower:  Dean/Director of School/College  Date: __________
Unfex,  Graduate Academic  Date: __________
Board Chair  Date: __________
Provost or Designee  Date: __________

350
I. Date of Initiation: Fall, 2014

II. Course Information:
   A. College or School: CAS
   B. Course Subject: Theatre
   C. Course Number: THR A490
   D. Number of Credits: 3.0 (2+2)
   E. Course Title: Selected Topics in Performance.
   F. Grading Basis: A-F
   G. Course Description: Current topics in theatrical performance addressing special demands of the theatre season or special faculty expertise.
   H. Course Prerequisites: THR A121 with a minimum grade of C
   I. Restrictions: None
   J. Fees: None

III. Instructional Goals and Student Outcomes
   A. Instructional goals: The instructor will:

      1) Discuss what is unique about the chosen area of study and the way the material can be used to enhance an area of performance.

      2) Teach the specific steps/process involved in acquiring the new skill or technique.

      3) Make recommendations for the improvement of process and product.

   B. Student Learning Outcomes.

<table>
<thead>
<tr>
<th>Students will be able to:</th>
<th>Assessment method:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Discuss the history and philosophy behind the new technique as well as how to apply the technique to performance in specific terms.</td>
<td>Assessment method will vary with topic but will include written exams, and performance</td>
</tr>
<tr>
<td>2. List and execute all essential steps in that process.</td>
<td>Assessment method will vary with topic but will include written exams, and performance</td>
</tr>
<tr>
<td>3. Critically examine the strengths and weaknesses of performance projects in terms of the language and concepts learned in the class.</td>
<td>In class critiques</td>
</tr>
</tbody>
</table>
IV. Course Evaluation

Course evaluation will differ depending on the nature of the subject matter, though performance projects and critiques will always be essential to the process.

V. Course Level Justification

Topics will always be in special areas of interest and use advanced techniques.

VI. Topical Course Outline: Topics vary according to interests and expertise of the faculty teaching the course. Below is a sample outline of a possible course.

Stage emotive techniques (A class previously taught under this course number)

1. Alba Emoting: what is it?
2. What is an emotion?
3. How the brain developed
4. How the brain works, in particular, emotionally
5. The step out: eliminating emotional hangovers
6. The effector patterns:
   A. Tender love
   B. Joy
   C. Sadness
   D. Anger
   E. Fear
   F. Erotic love

VII. Suggested Text


VIII. Bibliography


# Program/Prefix Action Request

University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS CAS</td>
<td>Theatre and Dance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Complete Program Title/Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA Theatre and Dance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Type of Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose one from the appropriate drop down menu: Undergraduate: or Graduate: Bachelor of Arts or CHOOSE ONE</td>
</tr>
</tbody>
</table>

This program is a Gainful Employment Program:  
☐ Yes  or  ☒ No  

<table>
<thead>
<tr>
<th>4. Type of Action: PROGRAM</th>
<th>PREFIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Add</td>
<td>☐ Add</td>
</tr>
<tr>
<td>☒ Change</td>
<td>☐ Change</td>
</tr>
<tr>
<td>☐ Delete</td>
<td>☐ Inactivate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Implementation Date (semester/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>From: Fall/2014</td>
</tr>
<tr>
<td>To: /9999</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6a. Coordination with Affected Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department, School, or College: CAS Dept. of Theatre and Drama</td>
</tr>
</tbody>
</table>

Initiator Name (typed): Colleen Metzger  
Initiator Signed Initials: __________ |

Date: ___________________  

<table>
<thead>
<tr>
<th>6b. Coordination Email submitted to Faculty Listserv (<a href="mailto:uaa-faculty@lists.uaa.alaska.edu">uaa-faculty@lists.uaa.alaska.edu</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: 4 February 2014</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6c. Coordination with Library Liaison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: 4 February 2014</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Title and Program Description - Please attach the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ Cover Memo</td>
</tr>
<tr>
<td>☒ Catalog Copy in Word using the track changes function</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. Justification for Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changing “option” to “concentration.” Redefining the dance concentration and the performance concentration, and adding a technical concentration. Adding new courses to support our new technical concentration.</td>
</tr>
</tbody>
</table>

Initiator (faculty only)  
Colleen Metzger  
Initiator (TYPE NAME)  
Date: ___________________  

Dean/Director of School/College  
Date: ___________________  

Undergraduate/Graduate Academic Board Chair  
Date: ___________________  

Provost or Designee  
Date: ___________________
The Department of Theatre and Dance offers a well-rounded liberal arts approach in its curriculum. Theatre courses cover all the basic areas of theatrical endeavor, including acting, movement for the actor, directing, stagecraft, scene design, lighting, costuming, makeup, dramatic literature, theatre history, dramatic theory and criticism, and play writing. The Dance program offers courses in dance techniques, choreography, improvisation, dance history and dance research methods. Selected topics offered from time to time range from a diverse menu of performance and technical offerings such as: Alba Emoting Technique, Scene Painting, Practical Applications in Theatrical Control Systems, Sound Engineering, and Prop Design and Construction. Dance offers Hip Hop, Salsa Immersion, and Capoeira.

Theatre is the art of giving life in performance to dramatic literature. Production is at the very center of our award-winning Theatre and Dance program. Each season UAA Theatre and Dance produces four plays and two dance concerts on its “modified thrust” Mainstage, and in the Jerry Harper Studio Theatre, a fully-equipped, black-box space. Student-directed scenes, one-acts, and full-length plays are also presented yearly in the Harper. Department plays are cast at open auditions and on average more than 100 majors, non-majors and members of the community are involved in our productions each year. All Theatre and Dance majors are required to participate in Mainstage productions and/or related departmental activities.

Dance as performance and as theoretical discourse from a multidisciplinary and multicultural perspective is primary in the Dance program. As in theatre, production is also at the heart of the program, with the UAA Dance Ensemble as the core performing group. Each year, we feature two dance productions either on Mainstage and/or at the Harper Theatre and guest artist residencies are a staple of the program. All Dance minors, or Theatre majors choosing the dance option, are required to participate in Dance Ensemble performances and/or related departmental activities.

Honors in Theatre

Students majoring in Theatre are eligible to graduate with departmental honors if they satisfy all of the following requirements:

1. Meet the requirements for a BA degree in Theatre.
2. Maintain a grade point average of 3.50 or above in Theatre courses applicable to the major requirements.
3. Complete THR A498 Individual Research with a minimum grade of B prior to enrolling in THR A499 Senior Thesis.
4. Complete THR A499 Senior Thesis with a minimum grade of B. The thesis project must be approved in writing in advance by the department faculty and be completed in the senior year. The project must culminate in a public performance or presentation.
5. Students intending to graduate with departmental honors must notify the department in writing at least one year prior to filing their Application for Graduation with the Office of the Registrar.

Bachelor of Arts, Theatre

Program Student Learning Outcomes:

Students graduating with a Bachelor of Arts in Theatre with a Theatre or Dance option will be able to:

- Translate creative skills and techniques into performance and/or related technical production areas.
- Demonstrate integral collaborative communication skills fundamental to performance and/or related technical production areas.
- Demonstrate theories based on the historical and cultural foundations of theatre, dance and production.
- Analyze artistic works within an informed critical framework through a variety of contexts and formats such as artistic creation, performance, production and critical analysis.

Admission Requirements

Admission Requirements: All Majors

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7.

Mandatory Practicum Requirement

All Theatre Majors (Theatre or Dance option) are required to take at least one credit of Technical Practicum per semester for the first three years. Students will meet with the Department Practicum coordinator to sign up for the semester practicum assignment. Practicum opportunities are available (but not limited to) in the areas of: scene shop assistant, costume shop assistant, prop artist or artisan, light shop assistant, master electrician, master carpenter, assistant technical director, cutter/draper, costume crafts, and student publicist assistant.

Admission Requirements to Upper Division Courses

1. Completion of any combination of at least 9 credits from the Tier 1 General Education Requirements with a cumulative GPA of 2.25 or higher.
2. Completion of each of the following courses with a grade of C or better.
Performance Concentration (15 credits):
- THR A121 Introduction to Acting 3
- THR A131 Theatrical Production Techniques 3
- THR A132 Introduction to Design 3
- THR A221 Movement for the Actor 3
- THR A222 Voice for the Actor 3

Design and Technical Concentration (12 credits)
- THR A121 Introduction to Acting 3
- THR A131 Theatrical Production Techniques 3
- THR A132 Introduction to Design 3
- THR A141 Stagecraft I 3

Dance Concentration (17 credits):
- DNCE A170 Dance Appreciation 3
- DNCE A121 Fundamentals of Modern I 2
- DNCE A262 Theory and Improvisation 3
- THR A121 Introduction to Acting 3
- THR A131 Theatrical Production Techniques 3
- THR A132 Introduction to Design 3

Students in the Theatre and Dance Program who do not meet the above standards may not take upper division courses.

Conditional Admission to Upper Division Courses
A student classified as being conditionally admitted to upper division status may take upper division THR and DNCE courses for one semester only while fulfilling division deficiencies with departmental approval.

Graduation Requirements
Students must complete the following graduation requirements:

A. General University Requirements
   Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements
   Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements
   Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements, BA Theatre
   1. Complete the following required core courses (28 credits):
      - THR A121 Introduction to Acting 3
      - THR A131 Theatrical Production Techniques 3
      - THR A132 Introduction to Design 3
      - THR A295 Theatre Practicum: Technical (1-3) 6
      - THR A306 Stage Management 3
      - THR A411 History of the Theatre I 3
      - THR A412 History of the Theatre II 3
      - THR A490 Resume & Portfolio Workshop 1
   2. Complete one of the following design area courses:
      - THR A243 Scene Design (3)
      - THR A257 Costume Design and Construction I (3)
      - THR A347 Lighting Design (3)
3. Students working toward a degree in Theatre must choose from the following three concentrations:

**Performance Concentration (24 credits):**

a. Complete the following required courses (12 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR A222</td>
<td>Voice for the Actor</td>
<td>3</td>
</tr>
<tr>
<td>THR A221</td>
<td>Movement for the Actor</td>
<td>3</td>
</tr>
<tr>
<td>THR A431</td>
<td>Directing I</td>
<td>3</td>
</tr>
<tr>
<td>THR A311</td>
<td>Representative Plays I (3)</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>THR A312</td>
<td>Representative Plays II (3)</td>
<td></td>
</tr>
</tbody>
</table>

b. Complete four of the following performance or technical area courses: 12

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR A315</td>
<td>Playwriting Workshop (3)</td>
<td></td>
</tr>
<tr>
<td>THR A321</td>
<td>Meisner Acting Technique</td>
<td>3</td>
</tr>
<tr>
<td>THR A325</td>
<td>Theatre Speech and Dialects</td>
<td>3</td>
</tr>
<tr>
<td>THR A328</td>
<td>Acting Shakespeare</td>
<td></td>
</tr>
<tr>
<td>THR A329</td>
<td>Combat for the Stage</td>
<td>3</td>
</tr>
<tr>
<td>THR A337</td>
<td>Costume Design and Construction II (3)</td>
<td></td>
</tr>
<tr>
<td>THR A376</td>
<td>CAD for the Arts</td>
<td>3</td>
</tr>
<tr>
<td>THR A435</td>
<td>Directing II (3)</td>
<td></td>
</tr>
<tr>
<td>THR A490</td>
<td>Selected Topics in Performance (3)</td>
<td></td>
</tr>
<tr>
<td>THR A491</td>
<td>Selected Topics in Technical Theatre (3)</td>
<td></td>
</tr>
<tr>
<td>THR A495</td>
<td>Advanced Practicum: Technical (1-3)</td>
<td></td>
</tr>
</tbody>
</table>

**Design and Technical Concentration (27 credits):**

a. Complete the following required courses (15 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR A141</td>
<td>Stagecraft</td>
<td>3</td>
</tr>
<tr>
<td>THR A243</td>
<td>Scene Design</td>
<td>3</td>
</tr>
<tr>
<td>THR A257</td>
<td>Costume Design</td>
<td>3</td>
</tr>
<tr>
<td>THR A311</td>
<td>Representative Plays I (3)</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>THR A312</td>
<td>Representative Plays II (3)</td>
<td></td>
</tr>
<tr>
<td>THR A347</td>
<td>Lighting Design</td>
<td>3</td>
</tr>
</tbody>
</table>

b. Complete 4 of the following performance or technical area courses: 12

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR A315</td>
<td>Playwriting Workshop (3)</td>
<td></td>
</tr>
<tr>
<td>THR A321</td>
<td>Meisner Acting Technique</td>
<td>3</td>
</tr>
<tr>
<td>THR A325</td>
<td>Theatre Speech and Dialects</td>
<td>3</td>
</tr>
<tr>
<td>THR A328</td>
<td>Acting Shakespeare</td>
<td></td>
</tr>
<tr>
<td>THR A329</td>
<td>Combat for the Stage</td>
<td>3</td>
</tr>
<tr>
<td>THR A357</td>
<td>Costume Design and Construction II (3)</td>
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</tr>
<tr>
<td>THR A376</td>
<td>CAD for the Arts</td>
<td>3</td>
</tr>
<tr>
<td>THR A435</td>
<td>Directing II (3)</td>
<td></td>
</tr>
<tr>
<td>THR A490</td>
<td>Selected Topics in Performance (3)</td>
<td></td>
</tr>
<tr>
<td>THR A491</td>
<td>Selected Topics in Technical Theatre (3)</td>
<td></td>
</tr>
<tr>
<td>THR A495</td>
<td>Advanced Practicum: Technical (1-3)</td>
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</table>

**Dance Concentration (24 credits):**

a. Complete the following required courses (13 credits):
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DNCE A121</td>
<td>Fundamentals of Modern I</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A170</td>
<td>Dance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>DNCE A262</td>
<td>Theory and Improvisation</td>
<td>3</td>
</tr>
<tr>
<td>DNCE A361</td>
<td>Approaches to Dance Composition</td>
<td>3</td>
</tr>
<tr>
<td>DNCE A395</td>
<td>Advanced Practicum: Performance</td>
<td>2</td>
</tr>
</tbody>
</table>

b. Complete 11 credits from the following performance area courses of which 4 credits must be 200 or above: 11

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNCE A101</td>
<td>Fundamentals of Ballet I</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A121</td>
<td>Fundamentals of Modern I</td>
<td>2</td>
</tr>
<tr>
<td>THR A124</td>
<td>Dance for Musical Theatre I</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A131</td>
<td>Fundamentals of Music-Based Jazz I</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A145</td>
<td>Dances of the West African Diaspora I</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A147</td>
<td>Popular American Social Dance</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A151</td>
<td>Fundamentals of Tap I</td>
<td>1</td>
</tr>
<tr>
<td>DNCE A205</td>
<td>Fundamentals of Ballet II</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A223</td>
<td>Fundamentals of Modern II</td>
<td>2</td>
</tr>
<tr>
<td>THR A224</td>
<td>Dance for Musical Theatre II</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A234</td>
<td>Fundamentals of Music-Based Jazz II</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A245</td>
<td>Dances of the West African Diaspora II</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A253</td>
<td>Beginning Tap II</td>
<td>1</td>
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<tr>
<td>DNCE A290</td>
<td>Selected Topics in Dance</td>
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</tr>
<tr>
<td>DNCE A321</td>
<td>Intermediate Modern I</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A322</td>
<td>Intermediate Modern II</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A365</td>
<td>Dance Repertory and Performance I</td>
<td>3</td>
</tr>
<tr>
<td>DNCE A395</td>
<td>Advanced Practicum: Performance</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A465</td>
<td>Advanced Performance and Choreography Workshop</td>
<td>3</td>
</tr>
<tr>
<td>DNCE A475</td>
<td>Dance Repertory and Performance II</td>
<td>3</td>
</tr>
<tr>
<td>DNCE A490</td>
<td>Selected Topics in Dance (1-3)</td>
<td></td>
</tr>
<tr>
<td>THR A221</td>
<td>Movement for the Actor</td>
<td>3</td>
</tr>
</tbody>
</table>

4. A total of 120 credits is required for the degree of which 42 credits must be upper division.

**Minor, Theatre**

Students majoring in another subject who wish to minor in Theatre must complete the following requirements. A total of 18 credits is required for the minor in Theatre.

1. Complete the following required courses (9 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR A121</td>
<td>Introduction to Acting</td>
<td>3</td>
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<tr>
<td>THR A131</td>
<td>Theatrical Production Techniques</td>
<td>3</td>
</tr>
<tr>
<td>THR A411</td>
<td>History of the Theatre I</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>THR A412</td>
<td>History of the Theatre II</td>
<td>3</td>
</tr>
<tr>
<td>Theatre electives</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Choose 9 credits from any 200-level or above Theatre course offerings excluding Theatre Practicum Minor, Dance

Students majoring in another subject who wish to minor in Dance must complete the following requirements. A total of 21 credits is required for the minor. Theatre majors with a dance emphasis are not eligible for a dance minor.

1. Complete the following required courses (17 credits):
   - DNCE A170  Dance Appreciation  3
   - DNCE A262  Theory and Improvisation  3
   - DNCE A361  Approaches to Dance Composition  3
   - DNCE A370  Interdisciplinary Dance Studies: Issues and Methods  3
   - DNCE A 395  Advanced Practicum: Performance (1-3)  2
   - THR A131  Theatrical Production Techniques  3

2. And choose 4 more credits from the following courses:  4
   - DNCE A101  Fundamentals of Ballet I (2)
   - DNCE A121  Fundamentals of Modern I (2)
   - DNCE/ THR A124  Dance for Musical Theatre I (2)
   - DNCE A131  Fundamentals of Music-Based Jazz I (2)
   - DNCE A145  Dances of the West African Diaspora I (2)
   - DNCE A147  Popular American Social Dance (2)
   - DNCE A151  Fundamentals of Tap I (1)
   - DNCE A205  Fundamentals of Ballet II (2)
   - DNCE A223  Fundamentals of Modern II (2)
   - DNCE/ THR A224  Dance for Musical Theatre II (2)
   - DNCE A234  Fundamentals of Music-Based Jazz II (2)
   - DNCE A245  Dances of the West African Diaspora II (2)
   - DNCE A253  Beginning Tap II (1)
   - DNCE A321  Intermediate Modern I (2)
   - DNCE A322  Intermediate Modern II (2)
   - DNCE A365  Dance Repertory and Performance I (3)
   - DNCE A465  Advanced Performance and Choreography Workshop (3)
   - DNCE A475  Dance Repertory and Performance II (3)

FACULTY

Tom Skore, Professor/Chair, ttskore@uaa.alaska.edu
Colleen Metzger, Assistant Professor, cmetzger@uaa.alaska.edu
Daniel Anteau, Associate Professor, danteau@uaa.alaska.edu
Jill Flanders Crosby, Professor, jflanderscrosby@uaa.alaska.edu
David Edgecombe, Professor, dpedgecombe@uaa.alaska.edu
Brian Jeffer, Term Assistant Professor, bjeffer2@uaa.alaska.edu
Daniel G. Carlgren, Assistant, Professor dcarlgrn@uaa.alaska.edu
Fran Lautenberger, Professor Emeritus
Katherine Kramer, Term Assistant Professor, kkramer1001@uaa.alaska.edu
The Department of Theatre and Dance offers a well-rounded liberal arts approach in its curriculum. Theatre courses cover all the basic areas of theatrical endeavor, including acting, movement for the actor, directing, stagecraft, scene design, lighting, costuming, makeup, dramatic literature, theatre history, dramatic theory and criticism, and play writing. The Dance program offers courses in dance techniques, choreography, improvisation, dance history and dance research methods. Selected topics offered from time to time range from a diverse menu of performance and technical offerings such as: Alba Emoting Technique, Scene Painting, Practical Applications in Theatrical Control Systems, Sound Engineering, and Prop Design and Construction. Dance offers Hip Hop, Salsa Immersion, and Capoeira.

Theatre is the art of giving life in performance to dramatic literature. Production is at the very center of our award-winning Theatre and Dance program. Each season UAA Theatre and Dance produces four plays and two dance concerts on its “modified thrust” Mainstage, and in the Jerry Harper Studio Theatre, a fully-equipped, black-box space. Student-directed scenes, one-acts, and full-length plays are also presented yearly in the Harper. Department plays are cast at open auditions and on average more than 100 majors, non-majors and members of the community are involved in our productions each year. All Theatre and Dance majors are required to participate in Mainstage productions and/or related departmental activities.

Dance as performance and as theoretical discourse from a multidisciplinary and multicultural perspective is primary in the Dance program. As in theatre, production is also at the heart of the program, with the UAA Dance Ensemble as the core performing group. Each year, we feature two dance productions either on Mainstage and/or at the Harper Theatre and guest artist residencies are a staple of the program. All Dance minors, or Theatre majors choosing the dance option, are required to participate in Dance Ensemble performances and/or related departmental activities.

Honors in Theatre
Students majoring in Theatre are eligible to graduate with departmental honors if they satisfy all of the following requirements:
1. Meet the requirements for a BA degree in Theatre.
2. Maintain a grade point average of 3.50 or above in Theatre courses applicable to the major requirements.
3. Complete THR A498 Individual Research with a minimum grade of B prior to enrolling in THR A499 Senior Thesis.
4. Complete THR A499 Senior Thesis with a minimum grade of B. The thesis project must be approved in writing in advance by the department faculty and be completed in the senior year. The project must culminate in a public performance or presentation.
5. Students intending to graduate with departmental honors must notify the department in writing at least one year prior to filing their Application for Graduation with the Office of the Registrar.

Bachelor of Arts, Theatre
Program Student Learning Outcomes:
Students graduating with a Bachelor of Arts in Theatre with a Theatre or Dance option will be able to:
• Translate creative skills and techniques into performance and/or related technical production areas.
• Demonstrate integral collaborative communication skills fundamental to performance and/or related technical production areas.
• Demonstrate theories based on the historical and cultural foundations of theatre, dance and production.
• Analyze artistic works within an informed critical framework through a variety of contexts and formats such as artistic creation, performance, production and critical analysis.

Admission Requirements

Admission Requirements: All Majors
Complete the Admission to Baccalaureate Programs Requirements in Chapter 7.

Mandatory Practicum Requirement
All Theatre Majors (Theatre or Dance option) are required to take at least one credit of Technical Practicum per semester for the first three years. Students will meet with the Department Practicum coordinator to sign up for the semester practicum assignment. Practicum opportunities are available (but not limited to) in the areas of: scene shop assistant, costume shop assistant, prop artist or artisan, light shop assistant, master electrician, master carpenter, assistant technical director, cutter/draper, costume crafts, and student publicist assistant.

Admission Requirements to Upper Division Courses
1. Completion of any combination of at least 9 credits from the Tier 1 General Education Requirements with a cumulative GPA of 2.25 or higher.
2. Completion of each of the following courses with a grade of C or better.
### Theatre Option Performance Concentration (1521 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR A121</td>
<td>Introduction to Acting</td>
<td>3</td>
</tr>
<tr>
<td>THR A131</td>
<td>Theatrical Production Techniques</td>
<td>3</td>
</tr>
<tr>
<td>THR A132</td>
<td>Introduction to Design</td>
<td>3</td>
</tr>
<tr>
<td>THR A141</td>
<td>Stagecraft I</td>
<td>3</td>
</tr>
<tr>
<td>THR A221</td>
<td>Movement for the Actor</td>
<td>3</td>
</tr>
<tr>
<td>THR A222</td>
<td>Voice for the Actor</td>
<td>3</td>
</tr>
<tr>
<td>THR A243</td>
<td>Scene Design</td>
<td>3</td>
</tr>
<tr>
<td>THR A257</td>
<td>Costume Design and Construction I</td>
<td>3</td>
</tr>
</tbody>
</table>

### Design and Technical Concentration (12 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR A121</td>
<td>Introduction to Acting</td>
<td>3</td>
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<tr>
<td>THR A131</td>
<td>Theatrical Production Techniques</td>
<td>3</td>
</tr>
<tr>
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<td>Introduction to Design</td>
<td>3</td>
</tr>
<tr>
<td>THR A141</td>
<td>Stagecraft I</td>
<td>3</td>
</tr>
</tbody>
</table>

### Dance Concentration Option (1721 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNCE A170</td>
<td>Dance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>DNCE A121</td>
<td>Fundamentals of Modern I</td>
<td>2</td>
</tr>
<tr>
<td>DNCE A262</td>
<td>Theory and Improvisation</td>
<td>3</td>
</tr>
<tr>
<td>THR A121</td>
<td>Introduction to Acting</td>
<td>3</td>
</tr>
<tr>
<td>THR A131</td>
<td>Theatrical Production Techniques</td>
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</tr>
<tr>
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<td>Introduction to Design</td>
<td>3</td>
</tr>
<tr>
<td>THR A221</td>
<td>Movement for the Actor</td>
<td>3</td>
</tr>
<tr>
<td>THR A257</td>
<td>Costume Design and Construction I</td>
<td>3</td>
</tr>
</tbody>
</table>

Students in the Theatre and Dance Program who do not meet the above standards may not take upper division courses.

### Conditional Admission to Upper Division Courses

A student classified as being conditionally admitted to upper division status may take upper division THR and DNCE courses for one semester only while fulfilling division deficiencies with departmental approval.

### Graduation Requirements

Students must complete the following graduation requirements:

**A. General University Requirements**

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

**B. General Education Requirements**

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

**C. College of Arts and Sciences Requirements**

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

**D. Major Requirements, BA Theatre**

1. Complete the following required core courses (2823 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR A121</td>
<td>Introduction to Acting</td>
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<td>Movement for the Actor</td>
<td>3</td>
</tr>
<tr>
<td>THR A257</td>
<td>Costume Design and Construction I</td>
<td>3</td>
</tr>
<tr>
<td>THR A295</td>
<td>Theatre Practicum: Technical (1-3)</td>
<td>6</td>
</tr>
</tbody>
</table>
2. Complete one of the following design area courses:

THR A243 Scene Design (3)
THR A347 Lighting Design (3)
THR A257 Costume Design and Construction I (3)

3. Students working toward a degree in Theatre must choose from the following three concentration options:

**Theatre Option**

**Performance Concentration (24 credits):**

a. Complete the following required courses (12 credits):

THR A141 Stagecraft I (3)
THR A222 Voice for the Actor (3)
THR A221 Movement for the Actor (3)
THR A243 Scene Design (3)
THR A431 Directing I (3)
THR A311 Representative Plays I (3) or
THR A312 Representative Plays II (3)

b. Complete four of the following performance or technical area courses (12 credits):

THR A315 Playwriting Workshop (3)
THR A321 Meisner Acting Technique (3)
THR A325 Theatre Speech and Dialects (3)
THR A328 Acting Shakespeare (3)
THR A329 Combat for the Stage (3)
THR A357 Costume Design and Construction II (3)
THR A376 CAD for the Arts (3)
THR A435 Directing II (3)
THR A490 Selected Topics in Performance (3)
THR A491 Selected Topics in Technical Theatre (3)
THR A495 Advanced Practicum: Technical (1-3)

**Design and Technical Concentration (27 credits):**

a. Complete the following required courses (15 credits):

THR A141 Stagecraft (3)
THR A243 Scene Design (3)
THR A257 Costume Design (3)
THR A311 Representative Plays I (3) or
THR A312 Representative Plays II (3)
THR A347 Lighting Design (3)

b. Complete 4 of the following performance or technical area courses (12 credits):

THR A315 Playwriting Workshop (3)
THR A321 Meisner Acting Technique (3)
THR A325 Theatre Speech and Dialects (3)
THR A328 Acting Shakespeare (3)
THR A329 Combat for the Stage (3)
THR A357 Costume Design and Construction II (3)
THR A376 CAD for the Arts (3)
THR A435 Directing II (3)
THR A490 Selected Topics in Performance (3)
THR A491 Selected Topics in Technical Theatre (3)
THR A495 Advanced Practicum: Technical (1-3)
THR A315  Playwriting Workshop (3)
THR A321  Meisner Acting Technique (3)
THR A325  Theatre Speech and Dialects (3)
THR A328  Acting Shakespeare (3)
THR A329  Combat for the Stage (3)
THR A357  Costume Design and Construction II (3)
THR A376  CAD for the Arts (3)
THR A435  Directing II (3)
THR A490  Selected Topics in Performance (3)
THR A491  Selected Topics in Technical Theatre (3)
THR A495  Advanced Practicum: Technical (1-3)

Dance Option Concentration (214 credits):

a. Complete the following required courses (133 credits):
   2 credits of any 100- or 200-level dance (DNCE) performance course
   DNCE A121 Fundamentals of Modern I  2
   DNCE A170  Dance Appreciation  3
   DNCE A262  Theory and Improvisation  3
   DNCE A361  Approaches to Dance Composition  3
   DNCE A395  Advanced Practicum: Performance  2

b. Complete 118 credits from the following performance area courses of which 4 credits must be 200 or above:  118
   DNCE A101  Fundamentals of Ballet I (2)
   DNCE A121  Fundamentals of Modern I (2)
   DNCE A124  Dance for Musical Theatre I (2)
   DNCE A131  Fundamentals of Music-Based Jazz I (2)
   DNCE A145  Dances of the West African Diaspora I (2)
   DNCE A147  Popular American Social Dance (2)
   DNCE A151  Fundamentals of Tap I (1)
   DNCE A205  Fundamentals of Ballet II (2)
   DNCE A223  Fundamentals of Modern II (2)
   DNCE A224  Dance for Musical Theatre II (2)
   DNCE A234  Fundamentals of Music-Based Jazz II (2)
   DNCE A245  Dances of the West African Diaspora II (2)
   DNCE A253  Beginning Tap II (1)
   DNCE A290  Selected Topics in Dance
   DNCE A321  Intermediate Modern I (2)
   DNCE A322  Intermediate Modern II (2)
   DNCE A365  Dance Repertory and Performance I (3)
   DNCE A395  Advanced Practicum: Performance (1-3)
   DNCE A465  Advanced Performance and Choreography Workshop (3)
Minor, Theatre

Students majoring in another subject who wish to minor in Theatre must complete the following requirements. A total of 18 credits is required for the minor in Theatre.

1. Complete the following required courses (9 credits):
   - THR A121  Introduction to Acting  3
   - THR A131  Theatrical Production Techniques  3
   - THR A411  History of the Theatre I (3)  3
     or
   - THR A412  History of the Theatre II (3)  3
   - Theatre electives  3

2. Choose 9 credits from any 200-level or above Theatre course offerings excluding Theatre Practicum 9

Minor, Dance

Students majoring in another subject who wish to minor in Dance must complete the following requirements. A total of 21 credits is required for the minor. Theatre majors with a dance emphasis are not eligible for a dance minor.

1. Complete the following required courses (17 credits):
   - DNCE A170  Dance Appreciation  3
   - DNCE A262  Theory and Improvisation  3
   - DNCE A361  Approaches to Dance Composition  3
   - DNCE A370  Interdisciplinary Dance Studies: Issues and Methods  3
   - DNCE A 395 Advanced Practicum: Performance (1-3)  2
   - THR A131  Theatrical Production Techniques  3

2. And choose 4 more credits from the following courses:  4
   - DNCE A101  Fundamentals of Ballet I (2)
   - DNCE A121  Fundamentals of Modern I (2)
   - DNCE/THR A124 Dance for Musical Theatre I (2)
   - DNCE A131  Fundamentals of Music-Based Jazz I (2)
   - DNCE A145  Dances of the West African Diaspora I (2)
   - DNCE A147  Popular American Social Dance (2)
   - DNCE A151  Fundamentals of Tap I (1)
   - DNCE A205  Fundamentals of Ballet II (2)
   - DNCE A223  Fundamentals of Modern II (2)
   - DNCE/THR A224 Dance for Musical Theatre II (2)
   - DNCE A234  Fundamentals of Music-Based Jazz II (2)
   - DNCE A245  Dances of the West African Diaspora II (2)
   - DNCE A253  Beginning Tap II (1)
   - DNCE A321  Intermediate Modern I (2)
   - DNCE A322  Intermediate Modern II (2)
   - DNCE A365  Dance Repertory and Performance I (3)
   - DNCE A465  Advanced Performance and Choreography Workshop (3)
   - DNCE A475  Dance Repertory and Performance II (3)
FACULTY

Tom Skore, Professor/Chair, ttskore@uaa.alaska.edu
Colleen Metzger, Assistant Professor, cmetzger@uaa.alaska.edu
Daniel Anteau, Associate Professor, danteau@uaa.alaska.edu
Jill Flanders Crosby, Professor, jflanderscrosby@uaa.alaska.edu
David Edgecombe, Professor, dedgecombe@uaa.alaska.edu
Brian Jeffery, Term Assistant Professor, bjeffery2@uaa.alaska.edu
Daniel G. Carlgren, Assistant, Professor dcarlgren@uaa.alaska.edu
Fran Lautenberger, Professor Emeritus
Katherine Kramer, Term Assistant Professor, kkramer1003@uaa.alaska.edu
# Course Action Request

**University of Alaska Anchorage**

Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS CAS</td>
<td>AHUM Division of Humanities</td>
<td>LANG</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPN</td>
<td>A490</td>
<td>N/A</td>
<td>3.0</td>
<td>(3+0)</td>
</tr>
</tbody>
</table>

**6. Complete Course Title**

**Selected Topics: Studies in Japanese Literature and Culture**

ST: JPN Lit and Culture

**7. Type of Course**

- [x] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

**8. Type of Action:**

- [x] Add
- [ ] Change
- [ ] Delete

If a change, mark appropriate boxes:

- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [ ] Course Description
- [ ] Test Score Prerequisites
- [ ] Other Restrictions
  - [ ] Class
  - [ ] Level
  - [ ] College
  - [ ] Major
- [x] Other (please specify)

**9. Repeat Status**

- [x] Yes
- [ ] # of Repeats: 2
- [x] Max Credits: 9

**10. Grading Basis**

- [x] A-F
- [ ] P/NP
- [ ] NG

**11. Implementation Date**

- Semester/Year: Fall/2014 to 9999/9999

**12. Cross Listed with/Stacked with**

- [ ] Cross Listed with
- [ ] Stacked with

**13a. Impacted Courses or Programs:**

List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.ualaska.edu/governance](http://www.ualaska.edu/governance).

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s)</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA, International Studies</td>
<td>113-114</td>
<td>11/25/13</td>
<td>Prof. Dorn Van Dommelen</td>
</tr>
</tbody>
</table>

**13b. Coordination Email**

- Date: November 25, 2013
- Submitted to Faculty Listserv: [uaa-faculty@lists.ualaska.edu](mailto:uaa-faculty@lists.ualaska.edu)

**13c. Coordination with Library Liaison**

- Date: November 25, 2013

**14. General Education Requirement**

- [ ] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [ ] Integrative Capstone

**15. Course Description**

(Suggested length 20 to 50 words)

Focuses on intensive study of authors, literary movements, periods, and genres in historical and cultural contexts. Enhances Japanese language skills in reading, listening, writing, speaking, and cross-cultural literacy. Special Note: May be repeated twice for credit with change in subtitle. Course conducted in Japanese.

**16a. Course Prerequisite(s)**

JPN A302 with a minimum grade of "C"

**16b. Test Score(s)**

N/A

**16c. Co-requisite(s)**

(concurrent enrollment required)

N/A

**16d. Other Restriction(s)**

- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

**16e. Registration Restriction(s)**

(non-codable)

N/A

**17. Mark if course has fees**

- [ ]

**18. Mark if course is a selected topic course**

- [x]

**19. Justification for Action**

Japanese Program is expanding its upper-division course offerings to meet student demand.

**Initiator Name (typed): Hiroko Harada**

Initiator Signed Initials: [ ] Date: [ ]

**14. General Education Requirement**

Mark appropriate box:

- [ ] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [ ] Integrative Capstone

**15. Course Description**

(Suggested length 20 to 50 words)

Focuses on intensive study of authors, literary movements, periods, and genres in historical and cultural contexts. Enhances Japanese language skills in reading, listening, writing, speaking, and cross-cultural literacy. Special Note: May be repeated twice for credit with change in subtitle. Course conducted in Japanese.

**16a. Course Prerequisite(s)**

JPN A302 with a minimum grade of "C"

**16b. Test Score(s)**

N/A

**16c. Co-requisite(s)**

(concurrent enrollment required)

N/A

**16d. Other Restriction(s)**

- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

**16e. Registration Restriction(s)**

(non-codable)

N/A

**17. Mark if course has fees**

- [ ]

**18. Mark if course is a selected topic course**

- [x]

**19. Justification for Action**

Japanese Program is expanding its upper-division course offerings to meet student demand.
I. Initiation Date: February 25, 2014

II. Course Information:
   A. College: College of Arts and Sciences
   B. Course Title: Selected Topics: Studies in Japanese Literature and Culture
   C. Course Subject/Number: JPN A490
   D. Credit Hours: 3.0
   E. Contact Time: 3 + 0 hours per week
   F. Grading Information: A-F
   G. Course Description: Focuses on intensive study of authors, literary movements, periods, and genres in historical and cultural contexts. Enhances Japanese language skills in reading, listening, writing, speaking, and cross-cultural literacy. Special Note: May be repeated twice for credit with change in subtitle. Course conducted in Japanese.
   H. Status of Course Relative to Degree or Certificate Programs:
      Course may be used as an elective to satisfy the upper-division requirement of a Japanese major and minor.
   I. Course Attributes: Applies toward the upper-division requirement for Japanese majors and minors.
   J. Lab Fees: Yes
   K. Coordination: UAA Faculty List Serve
   L. Course Prerequisite: JPN A302 with a minimum grade of “C”

III. Instructional Goals and Student Learning Outcomes:

   A. **Instructional Goals:** The instructor will
      1. Conduct the class in Japanese, soliciting student collaboration via discussion of course material.
      2. Present literary, historical, and cultural background relevant to the author, period, literary movement or genre selected as the focus of the course.
3. Introduce appropriate disciplinary approaches and terminology for the interpretation of the material selected as the focus of the course.
4. Guide students in critically analyzing and interpreting the reading material selected as the focus of the course.

B. Student Learning Outcomes and Assessment Methods:

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Upon successful completion of the course, students will be able to…</th>
<th>Assessment Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate enhancement and refinement of oral skills in Japanese.</td>
<td>Class discussions</td>
</tr>
<tr>
<td></td>
<td>Class presentations</td>
</tr>
<tr>
<td>Demonstrate proper use of discipline-specific terminology when interpreting the material studied in the course.</td>
<td>Exams and quizzes</td>
</tr>
<tr>
<td></td>
<td>Class discussions</td>
</tr>
<tr>
<td></td>
<td>Essays</td>
</tr>
<tr>
<td></td>
<td>Research papers</td>
</tr>
<tr>
<td>Demonstrate effective analytical writing skills in Japanese through the interpretation of the material studied in the course.</td>
<td>Essays</td>
</tr>
<tr>
<td></td>
<td>Research papers</td>
</tr>
<tr>
<td></td>
<td>Exams and quizzes</td>
</tr>
<tr>
<td>Demonstrate appropriate understanding of literary, historical, and cultural background relevant to the author, period, literary movement or genre studied in the course.</td>
<td>Exams and quizzes</td>
</tr>
<tr>
<td></td>
<td>Class discussions</td>
</tr>
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<td></td>
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<td></td>
<td>Essays</td>
</tr>
<tr>
<td></td>
<td>Research papers</td>
</tr>
</tbody>
</table>

IV. Course Activities:
This course reflects a balance of learner-centered, small-group collaboration as well as instructor-delivered lesson format based on extensive reading assignments from authentic Japanese literary and/or cultural artifacts.

V. Course-level Justification:
Course requires prior introduction to the formal study of college Japanese language at the upper-division level to ensure the success of the student, and builds upon the knowledge of fundamental concepts refined in JPN A302.

VI. Sample Course Outline: The following outline focuses on Matsuo Basho’s *Oku no hosomichi* as one possible version of the course.

A. General overview of haiku
B. Introduction to Basho’s life and literary work
C. Importance of *Oku no hosomichi* in the Japanese culture, philosophy and literary tradition
D. Comparative analysis of Basho’s haiku with poetry of the world
E. Appreciation and discussion of *Oku no hosomichi*
VII. Suggested texts:


VIII. Bibliography:


*Classic Texts
# Course Action Request

## University of Alaska Anchorage

### Proposal to Initiate, Add, Change, or Delete a Course

## 1. School or College

AS CAS

## 2. Division

AHUM Division of Humanities

## 3. Department

Languages

## 4. Course Prefix

SPAN

## 5. Course Number

A320

## 6. Previous Course Prefix & Number

<table>
<thead>
<tr>
<th>Previous Prefix</th>
<th>Previous Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## 7. Credits/CEUs

3.0

## 8. Contact Hours

(Lecture + Lab)

3 + 0

## 9. Complete Course Title

Studies in Contemporary Hispanic Cultures

Contemporary Hispanic Cultures

Abbreviated Title for Transcript (30 character)

## 10. Type of Course

- [ ] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

## 11. Type of Action:

- [ ] Add
- [X] Change
- [ ] Delete

## 12. Repeat Status

Yes

# of Repeats: 1

Max Credits: 6

## 13. Grading Basis

- [X] A-F
- [ ] P/NP
- [ ] NG

## 14. Implementation Date

From: Fall/2014
To: 9999/9999

## 15. Cross Listed with

- [ ] Stacked with

## 16. Course Description

Examines contemporary Hispanic cultures through various media (printed, electronic, and audiovisual). Critical analysis through a variety of disciplinary methodologies (e.g. historical, cultural, artistic); terminology also explored and developed. Additionally enhances Spanish language skills in writing, reading, speaking, and listening.

Special note: Course taught in Spanish, and may be repeated once for credit with change of subtitle.

## 17. Course Prerequisite(s)

SPAN A302 with a minimum grade of "C"

## 18. Co-requisite(s)

- [ ] Concurrent enrollment required

## 19. Registration Restriction(s)

- [ ] Non-codable

## 20. Other Restriction(s)

- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

## 21. Fee

- [ ] Mark if course has fees

## 22. Justification for Action

Course is being changed from 4.0 to 3.0 credits given that students are now able to complete course E-Portfolio Projects independently and effectively outside of laboratory classroom with new software platforms. With this one-credit reduction, course will now better accommodate student demand and course scheduling timeslots at the upper-division level without compromising any course content material or Student Learning Outcomes.
<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
<th>Dean/Director of School/College</th>
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<tbody>
<tr>
<td>Rebeca Maseda, Ph.D.</td>
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<td>Initiator (TYPE NAME)</td>
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<tr>
<td>Department Chair</td>
<td>Date</td>
<td>Approved</td>
<td>Disapproved</td>
<td>Undergraduate/Graduate Academic</td>
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<td>Board Chair</td>
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</tr>
<tr>
<td>College/School Curriculum Committee Chair</td>
<td>Date</td>
<td>Approved</td>
<td>Disapproved</td>
<td>Provost or Designee</td>
<td>Date</td>
</tr>
</tbody>
</table>

☑️ Approved
☒ Disapproved
I. Initiation Date: January 13, 2014

II. Course Information:
   A. College: College of Arts and Sciences
   B. Course Title: Studies in Contemporary Hispanic Cultures
   C. Course Subject/Number: SPAN A320
   D. Credit Hours: 3.0
   E. Contact Time: 3 + 0 hours per week
   F. Grading Information: A-F
   G. Course Description: Examines contemporary Hispanic cultures through various media (printed, electronic, and audiovisual). Critical analysis through a variety of disciplinary methodologies (e.g. historical, cultural, artistic); terminology also explored and developed. Additionally enhances Spanish language skills in writing, reading, speaking, and listening.
      Special note: Course is conducted in Spanish, and may be repeated once for credit with change of subtitle.
   H. Status of Course Relative to Degree or Certificate Programs:
      Course may be used as an elective to satisfy the upper-division requirement of a Spanish major or minor.
   I. Course Attributes: Applies toward the upper-division requirement for Spanish majors and minors.
   J. Lab Fees: Yes
   K. Coordination: UAA Faculty List Serve
   L. Course Prerequisite: SPAN A302 with a minimum grade of “C”

III. Instructional Goals and Defined Student Learning Outcomes:

   **Instructional Goals:** The instructor will
   1. Conduct the class in Spanish, soliciting student collaboration via discussion of course material.
2. Present representative authentic media and relate them to the cultural contexts in which they were composed.
3. Enhance stylistic and rhetorical skills through engagement with a variety of works.
4. Guide students in critically analyzing and interpreting cultural artifacts using appropriate disciplinary approaches and terminology.

<table>
<thead>
<tr>
<th>Defined Student Learning Outcomes:</th>
<th>Assessment Methods:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate comprehension of class instruction.</td>
<td>Class participation and discussion</td>
</tr>
<tr>
<td>Identify representative contemporary works and relate them to the cultural context in which they were composed.</td>
<td>Quizzes, Exams, Oral Presentations, and Papers</td>
</tr>
<tr>
<td>Demonstrate analytical skills in Spanish through engagement with cultural artifacts.</td>
<td>Quizzes, Exams, Oral Presentations, and Papers</td>
</tr>
<tr>
<td>Apply appropriate disciplinary approaches and terminology in investigative analyses executed in the target language.</td>
<td>Final Project Portfolio and Oral Presentation</td>
</tr>
</tbody>
</table>

IV. Course Activities:
This course reflects a balance of learner-centered, small-group collaboration as well as instructor-delivered lesson format.

V. Course-level Justification:
Course requires prior formal study of college Spanish language at the upper-division level.

VI. Course Outline:
The following is a possible version of the course: “Diverse Voices: Peninsular Society and Culture.” This course addresses the sociocultural realities of Spain with a focus on linguistic and cultural diversity and delves into a variety of topics from cross-cultural perspectives.

1.0 Daily Life, Social Conventions, and Economy

1.1 Employment

1.2 Gastronomy and eating etiquettes

1.3 Pastimes, holidays and celebrations

1.4 Conversational and behavioral taboos
1.5 Life conditions
1.6 Housing conditions and social assistance
1.7 Education
1.8 Resources
1.9 Migration

2.0 Social relations
  2.1 Gender
  2.2 Family
  2.3 Generations
  2.4 Communities
  2.5 Work situations
  2.6 Administration and government institutions
  2.7 Political and religious groups

3.0 Values, beliefs, and attitudes
  3.1 Social class and class division
  3.2 Security, institutions, tradition and social change
  3.3 Historical figures and representative events
  3.4 Minorities
  3.5 National identity
  3.6 Foreign diplomacy
  3.7 Politics, arts, religion, and humor

4.0 Entertainment
  4.1 Music and dance
  4.2 Classical and contemporary cinema
4.3 Theater

4.4 Radio and television

4.5 Internet

4.6 Sports

VII. Suggested texts


VIII. Bibliography


Bravo Bosch, M.C. "Lava más blanco, o la publicidad en la clase de E/LE."


Tran. Ministerio de Educación, Cultura y Deporte. Madrid:


To: Undergraduate Academic Board

The Physics department recently put through a series of curriculum changes for many of our courses. After everything was approved and the changes were implemented in Banner, "automatic prerequisite checking" was turned on for all added/modified courses for Fall 2014. For one of the changed courses, PHYS 123L, this has caused unforeseen technical issues for students when trying to register. We are requesting a minor curriculum change which will solve these issues: specifically, to remove MATH A105 from the list of prerequisites for PHYS A123L. It is a redundant prerequisite, whose removal should not affect any other courses or programs.

The history and details:

The course PHYS A123L currently has a prerequisite of MATH A105 and PHYS A123 (with C or concurrent). The MATH part of the prerequisite has been there for many years, and historically dates back to the days before automatic prerequisite checking was performed in Banner. When prerequisite checking was first introduced at UAA, we elected to leave it "off" for this course, because MATH A105 ("Intermediate Algebra") is just one of several ways that a student can demonstrate sufficient knowledge of algebra to succeed in this physics course, and many incoming students have this algebra knowledge from a source other than MATH A105.

Unfortunately, when the recent curriculum was finalized, prerequisite checking was automatically turned on. As a result, our instructors and academic advisors have been flooded with requests for prerequisite overrides from frustrated students who could not get in because their algebra experience is from a "non-standard" place. We did not realize that this would happen at the time the curriculum was going through. If we had, we would have thought more carefully about the presence of MATH A105 in the prerequisites for this course.

Because PHYS A123L went through the curriculum process recently, we have been told that the automatic prerequisite checking cannot simply be turned back off again. Fortunately, the "fix" to the underlying problem is simple: remove MATH A105 from the list of prerequisites for PHYS A123L. It is a redundant prerequisite anyway, because the remaining prerequisite (PHYS A123, the lecture) is a course that also requires MATH A105. It is also a sensible thing to do for the long-term future of this lab course, as its requirements should always mirror the requirements of its accompanying lecture course. If a student can take PHYS A123, whatever its prerequisites are, that student should also be able to take PHYS A123L.

Because the MATH A105 that we propose to remove is also present in the prerequisites for PHYS A123, removing it as a prerequisite for PHYS A123L should have no effect on any other courses, departments, or programs.

Please consider accepting this minor curriculum change. Thank you!

Katherine Rawlins
Jim Pantaleone (chair)
Patricia Linton (CAS/academics)
The University of Alaska Anchorage Curriculum Handbook for Faculty

Revised June 2013
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<th>Description</th>
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<td>BOR</td>
<td>Board of Regents</td>
</tr>
<tr>
<td>CAR</td>
<td>Course Action Request</td>
</tr>
<tr>
<td>CCG</td>
<td>Course Content Guide</td>
</tr>
<tr>
<td>CEU</td>
<td>Continuing Education Unit</td>
</tr>
<tr>
<td>GAB</td>
<td>Graduate Academic Board</td>
</tr>
<tr>
<td>GER</td>
<td>General Education Requirement</td>
</tr>
<tr>
<td>GERC</td>
<td>General Education Review Committee</td>
</tr>
<tr>
<td>NWCCU</td>
<td>Northwest Commission on Colleges and Universities</td>
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<tr>
<td>OAA</td>
<td>Office of Academic Affairs</td>
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<tr>
<td>PAR</td>
<td>Program/Prefix Action Request</td>
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<td>Statewide Academic Council</td>
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<td>Undergraduate Academic Board</td>
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<td>USUAA</td>
<td>Union of Students at UAA</td>
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Section 1 - Introduction

1.1 Academic Boards of the Faculty Senate Principles of Operation

- Excellence in teaching, learning, and research is the indispensable core value of the University of Alaska Anchorage (UAA) mission, goals and activities. The Graduate Academic Board (GAB) and the Undergraduate Academic Board (UAB) of the Faculty Senate are the principal peer review committees charged to guide the University’s curricular processes.

- The university evaluates its achievements against appropriate regional, national, and international benchmarks. The academic boards devise evidence-based methods for the curriculum approval. The Curriculum Handbook is periodically revised to reflect policy and procedural changes.

- The academic boards are charged to identify areas for improvement, foster collaboration, and encourage an ethos of critical self-evaluation for all curriculum.

- The work of the academic boards is part of the normal and continuous cycle of curricular planning, monitoring, and improvement. It is emphasized that although the curricular products of the faculty reviewed and approved by the board are useful for purposes of external review, they are primarily intended to promote and maintain excellence in teaching, learning, and research.

These Guidelines in the Curriculum Handbook describe the University of Alaska Anchorage’s process for approving all academic coursework developments. These guidelines should be used in conjunction with departmental requirements as appropriate.

Basis for Academic Board Review

Academic board approval is required for the following:

1. New permanent courses that will appear on the student’s transcript with academic credit.

2. New departmental programs such as:

   A. Undergraduate programs
      i. Occupational Endorsement Certificates
      ii. Undergraduate Certificates
      iii. Associate Degrees
      iv. Baccalaureate Degrees
      v. Minors

   B. Post-baccalaureate Certificates

   C. Graduate programs
      i. Graduate Certificates
      ii. Graduate Degrees

The maximum number of credits that may be required by a degree or certificate program will be for each level (BOR Policy and Regulation 10.04.030):

- Occupational Endorsement Certificates 29 credits
- Certificate 60 credits
- Associate Degree 75 credits
- Bachelor's Degree 132 credits
- Minors no maximum
- Master's Degree 45 credits
- Graduate Certificate 29 credits
Post-Baccalaureate Certificate 60 credits
Doctoral Degree See program requirements

3. New policies or revisions to existing policies that affect the method of approval, content, or delivery of university courses or programs.

4. Substantial revision to the academic content of a course including
   A. Additions, modifications or deletions of major subject areas
   B. Any course that has not been offered at least once during the past 4 years (i.e., Course on a purge list that the discipline informs the Board it intends to deliver. See section 5.3 for additional information).

5. Changes having an impact on the study options available to prospective students, including changes to
   A. Selection/admission procedures and standards
   B. Prerequisites, co-requisites, and registration restrictions.

6. Changes responding to the professions, employers, or the wider community.

7. Changes made to maintain the currency and vitality of the curriculum. It is recommended that no individual course be allowed to age more than 10 years without review and update by the program faculty. However, it is understood that all programs will differ with respect to the frequency of need for update and/or revisions.
Section 2 - Curriculum Screening Criteria

2.1 Issues in Curriculum Review

2.1.1 Curriculum Review

A request for a curriculum change should be reviewed for format, content, and the impact it has on the entire curriculum and general direction of the school or college in relation to the university. Curriculum review bodies are asked to review any change carefully with respect to the program initiating the change and to other academic programs.

At any time a curriculum change is brought before a review body, the program or course will be reviewed in total as outlined in this handbook.

If a Course Action Request (CAR) for a credit-bearing course, program, or policy is submitted for processing and that CAR has been disapproved at any level prior to UAB/GAB review, then that particular curricular action is placed on the agenda of UAB/GAB for review and recommendation.

Pertinent academic considerations:
A. Course or program is designed with the appropriate content and student learning outcomes, with learning experiences that enable students to achieve the stated learning outcomes, and with evaluation methods that enable faculty to assess student achievement of those learning outcomes.
B. Justification for the change
C. Effect on resources within the program
D. Frequency of course offerings for new programs. Note: Deans/Directors may require this information for new courses.
E. Impact on other affected UAA programs and courses
F. Implementation Dates must be in line with catalog and scheduling deadlines.

2.1.2 Academic Considerations Addressed in Review

The faculty member initiating the curriculum action should be prepared to address the following and any other appropriate issues that members of the curriculum review committees may ask when the curriculum action is presented to the appropriate boards/committees at each level of review.

A. Academic considerations for a new course proposal:
   i. School/college offering this course is the appropriate academic unit
   ii. Appropriate prerequisites for content and level
   iii. Availability of prerequisites for this course
   iv. Frequency of scheduling of course
   v. Justification for stacking or cross listing
   vi. Duplication with any other existing courses is explained
   vii. Documented coordination with the impacted/affected departments
   viii. Identifiable accreditation or nationally accepted practice standards
   ix. Rationale for requiring this course in a program
   x. If a new prefix is requested, the prefix must be approved prior to developing the curriculum

B. Courses that will become program electives/selectives:
   i. Effect of this course on other electives/selectives
   ii. Enhancement of a program by this course
   iii. Increase in options for specialization within the major
   iv. Effect on scheduling of other program electives

C. Courses that will become General Education Requirements (GERs):
i. Addresses GER student learning outcomes from the GER Preamble
ii. Meets category definition from Board of Regents Regulation
   (www.alaska.edu/bor/policy-regulations/)
iii. Addresses and assesses GER student learning outcomes for the classification
     descriptions described in the catalog
     (www.uaa.alaska.edu/records/catalogs/catalogs.cfm) and this handbook
iv. Provides rationale for adding this course to the GER menu

**D. Resource implication considerations for new course proposals:**

i. Commitment from resource manager to support course offerings
ii. Effects on other offerings within a program or school
iii. Effect on offering other required courses
iv. Effect on electives and selectives
v. If the course was offered as a trial course, the number of times it was offered and the
   number of enrollments

**2.1.3 Review of Program Proposals**

A. Program description adequately expresses the program characteristics, requirements and
   student learning outcomes.
B. The proposing unit is clearly prepared to present the program based on available faculty
   numbers and expertise, support staff, fiscal resources, facilities and equipment.
C. Needs analysis for the new program is attached.
D. Coordination has occurred with appropriate departments, schools, and colleges and
   documentation is submitted to the Governance Office.
E. Possible duplication of an existing program is addressed.
F. All courses used in the creation or modification of a degree or certificate program have
   current Course Content Guides on file in the Office of the Registrar. These must contain all of
   the required elements described in Section 9 of this handbook. If courses are ill-defined or
   outdated they must be revised at the same time or before the program addition or modification
   is proposed.
G. When proposing multiple certificates in a given discipline their requirements must differ by at
   least 6 credits. Otherwise the program should be proposed as a single certificate with
   emphasis areas.

**2.1.4 Program Student Learning Outcomes**

A. Program Student Learning Outcomes are to be clearly stated as the knowledge or abilities that
   students are expected to demonstrate upon successful completion of the program.
B. Program Student Learning Outcomes and a plan for their assessment are to be developed in
   accordance with the guidance and requirements found in the Academic Assessment Handbook
   (http://www.uaa.alaska.edu/governance/academic_assessment_committee/handbook.cfm).
C. Program Student Learning Outcomes are to be published in the catalog for student use in
   evaluating and selecting their academic program.
D. Programs whose external accreditors require program objectives should state these clearly as
   the knowledge or abilities that students are expected to demonstrate after completion of the
   program.
E. A complete and valid Academic Assessment Plan must be emailed to the Academic
   Assessment Committee at ayaac@uaa.alaska.edu in accordance with the requirements of the
   Academic Assessment Handbook. **Note: Academic boards do not evaluate the Program
   Student Learning Outcomes or Academic Assessment Plan; however the Academic
   Assessment Plan must be complete, approved through the Dean, and submitted to
   ayaac@uaa.alaska.edu for review by the Academic Assessment Committee when a new
   program is submitted to the academic boards. Following AAC review of the Academic
   Assessment Plan, an informational item is sent to the Faculty Senate.**
F. If this action requires BOR review, see Regents’ Policy and Regulation
   (www.alaska.edu/bor/policy-regulations/).
G. If this action requires notifying the Commission on Colleges refer to their website at www.nwccu.org.
Section 3 - Curriculum Approval Process for Courses, Programs and Prefixes

Any new degree program, and/or new course required for a degree program, wherever initiated within UAA, requires approval by UAB/GAB. Programs include certificates and occupational endorsements; associate, baccalaureate, post-baccalaureate, and graduate degrees; Minors; and regional studies. Non-credit courses, CEU courses, and Workforce Credential programs are not reviewed or approved by UAB/GAB as indicated in the curriculum approval process below.

3.1 Curriculum Approval Process

1. Except as noted in sections 3.2 and 3.3, all courses, programs (with the exception of doctoral programs), and prefixes follow the approval process presented in this section. The approval process for doctoral programs is found in section 3.8.

2. Curriculum must be initiated by a faculty member, reviewed by the department’s curriculum committee/chain, the school/college curriculum committee, and finally the dean/director of the school/college.

3. The term “faculty initiator” will use the definition of faculty from the Faculty Senate Constitution (http://www.uaa.alaska.edu/governance/facultysenate/constitution.cfm) except in the special cases listed.

Special cases: There may be special circumstances where a program has no tenure-track or term faculty. In these cases, an adjunct faculty member who has been approved to teach a course or has special expertise in the content area of the program may initiate course and program curriculum changes under the sponsorship of a tenure-track or term faculty member as defined above. It is recommended that the initiating faculty member and the faculty sponsor sign the CAR/PAR.

New programs must be initiated by tenure-track or term faculty as defined in the Faculty Senate Constitution. An adjunct faculty member who has expertise in the area may be consulted by the faculty initiator(s).

4. All templates are available on the Governance website at www.uaa.alaska.edu/governance. Faculty initiators should ensure that documents are prepared using Microsoft Word. Course proposals must be submitted using the CAR, and program/prefix proposals must be submitted using the PAR.

5. Proposers of any curriculum action should refer initial questions to their discipline-specific curriculum committees. Further assistance may be sought from college curriculum committees, and in the last resort the Governance Office, to ensure the proposal is considered in a timely fashion.

6. Coordination should take place early in the curriculum process. Steps for coordination are found in sections 4, 5, 6, and 7 depending on the curriculum action under consideration.

7. The faculty initiator is responsible for the development of the required documents outlined in sections 4, 5, 6, and 7 and submission to the appropriate organizations. It is strongly recommended that the faculty initiator consult with Scheduling and Publications in the Registrar’s office when developing the CAR and PAR documents as outlined sections 10 and 11 of this handbook. Assistance with developing the CCG can be obtained from the school’s representatives on the academic boards, from the college curriculum committee, and section 9 of this handbook.

8. Curriculum proposals are reviewed by the college/school curriculum committee. The committee chair signs the CAR following the committee’s review.

9. A hard copy of the proposal is forwarded to the appropriate dean/director for review.

10. Following review, the dean/director signs the CAR and a hard copy of the curriculum proposal is forwarded to the Governance Office along with an electronic version in Microsoft Word format of the full proposal. Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.
• The Governance Office forwards noncredit, continuing education unit (CEU), -93s, -94s, and 500-level courses to the Office of the Registrar to be entered into the system.

• The Governance Office forwards Workforce Credential proposals to OAA for review and approval.

• Courses and programs to be published in the catalog, and prefix requests, are sent to UAB/GAB for review.

11. Any items needing UAB/GAB review must be received in the Governance Office by 9 a.m. Monday in order to be on the agenda for the Friday meeting of the same week. Initiating faculty member or faculty representative must present courses, programs and prefixes to UAB/GAB. Representatives should be prepared to answer all relevant questions as described in 2.1.2 or the proposal will be tabled. OAA will consult with initiating faculty during the review of Workforce Credentials.

12. After appropriate reviews are complete, the course, program or prefix appears in the next catalog or schedule for which the publication deadline was met, unless a later implementation date has been approved. See below for more information on implementation dates and deadlines for inclusion in the catalog. Note: meeting these deadlines does not guarantee all approvals can be obtained in time for inclusion in the next catalog.

New programs may have an implementation date of summer, fall, or spring. For new programs to be included in the catalog, first reading by the boards should be no later than the first meeting in January (See the UAA Curriculum and Catalog Production Calendar located on the Governance website (www.uaa.alaska.edu/governance) for current dates.

Existing programs with changes must have an implementation date of fall so that correct curriculum is in effect in current catalog. Changes to programs must be initiated with enough time to reach final approval prior to submission of catalog for printing (Recommend first reading no later than first meeting in March).

New courses may have an implementation date of summer, fall, or spring. Changes to existing courses may not be implemented for a term once registration has opened, implementation dates must be chosen for a future term. Note: course changes related to program changes must have an implementation date of fall. In order to have approval prior to fall registration opening, it is suggested that first reading take place no later than the first week in February.

13. After the final reading by UAB/GAB, the initiating faculty member is responsible for the preparation of the corrected final documents and submission to the Governance Office before UAA Faculty Senate takes action.

14. The Governance Office prepares the UAB/GAB reports for the UAA Faculty Senate. The Senate then reviews and acts on the proposed courses and prefixes.

15. OAA reports decisions regarding Workforce Credential proposals to the Faculty Senate through the Governance Office and to the BOR through SAC.

16. UAB/GAB chair signs CAR/PAR documents after approval by the Faculty Senate.

17. The Vice Provost for Undergraduate Academic Affairs reviews and acts on undergraduate courses and undergraduate and post-baccalaureate programs. The Vice Provost for Research and Graduate Studies reviews and acts on graduate courses and programs. The two Vice Provosts collaborate on the approval of prefixes.

18. New programs and programs with major changes (with the exception of Minors, Occupational Endorsements and Workforce Credentials) require approval through the BOR. After approval by the Faculty Senate, OAA works with the faculty initiator to prepare and submit the necessary documents (see section 7.3).

19. After approval by the Faculty Senate, the Vice Provost for Undergraduate Academic Affairs works with faculty initiators for Minors, Occupational Endorsements and Workforce Credentials to obtain approval as required from OAA and the Chancellor’s office and to prepared documents notifying NWCCU of the curriculum actions. Note: Workforce Credentials do not require Faculty Senate approval.
20. All new programs and programs with major changes require approval through the NWCCU. After approval by the BOR, OAA works with the faculty initiator to prepare and submit the necessary documents (see section 7.3). The appropriate Vice Provost approves new programs and programs with major changes only after approval is received from the NWCCU.

21. After final approvals are obtained from the Chancellor, Regents, and/or the NWCCU. After the appropriate Vice Provost approves the curriculum and returns the folders to the Governance Office. The Governance Office sends the approved courses, programs and prefixes to the Office of the Registrar.

22. New certificate programs may require an additional review and approval by the US Department of Education (US DoE) before admitted students are eligible for federal financial aid. This review is initiated by the UAA Director of Student Financial Aid after BOR approval of the program. US DoE approval usually occurs within 90 days of submission.

This approval process is depicted in Figures 3.1, 3.2, 3.3, and 3.4 for specific types of courses, programs, and prefixes.

### 3.2 Approval for Minor Changes to Undergraduate Credit Courses

#### 3.2.1 All Undergraduate Credit Courses Numbered 050 – 499

1. If a course title change is proposed by the prefix (initiating) department, and approved through the regular curriculum process, then the course title will be automatically changed wherever the course title appears in the catalog.

   The initiating department is required to coordinate with all impacted departments, using Box 13a of the CAR, and an additional spreadsheet, if necessary. e.g., ENGL 450 required in English for Speakers of Other Languages (ESOL) 7-12 Concentration (Graduate program in COE).

2. If prerequisites within the prefix department are changed in 050-499 courses, the initiating department must complete a CAR to be approved through the regular curriculum process. No Course Content Guide will be required so long as the course has been updated within the past 4 years.

   The initiating department is required to coordinate with all impacted departments. The impacted departments must be listed in Box 13a of the CAR, with an additional spreadsheet, if necessary.

3. If registration restrictions within the prefix department are changed in 050-499 courses, the initiating department must complete a Course Action Request (CAR) to be approved through the regular curriculum process. No Course Content Guide (CCG) will be required so long as the course has been updated within the past 4 years. The initiating department is required to coordinate with all impacted departments. The impacted departments must be listed in Box 13a of the CAR, with an additional spreadsheet, if necessary.

#### 3.2.2 Lower Division Undergraduate Credit Courses Numbered 050 – 299 Only

Minor changes that do not substantially affect the intent or content of lower division courses are handled by the school/college curriculum committee or community campus instructional council. These changes include the following that do not affect the quality of the curriculum:

1. Course number change at the same level
2. Grammatical change in course description
3. Co-requisite changes that only affect the prefix department
4. Fee change
5. Course description change that does not change course intent (e.g., USSR to Russia, Word 2003 to Word 2010)
6. Updating of the bibliography.
The school/college curriculum committee or community campus instructional council is responsible for ensuring that proper coordination has occurred. Upon final approval by the college dean or director, courses with the types of changes listed above are forwarded to the Governance Office for transmittal to the Office of the Registrar.

These course actions are placed on the UAB agenda as informational items. Any UAB member may request that an information item be changed to an action item. No action can be taken on an action item until after it has been placed on the next meeting’s agenda.

### 3.3 Approval of Minor Catalog Changes

The following catalog changes are considered minor changes and do not have to be reviewed by the UAB/GAB. These changes can be implemented by program faculty during the annual catalog copy review processes conducted by the Office of the Registrar.

**Minor Changes:**

1. Contact information, location, and web address
2. General Discipline information
   a. Degree or Certificate program
   b. Overview and career information
   c. Accreditation
   d. Research possibilities
3. Advising
4. Academic Progress Requirements

### 3.4 Approval for substantive changes to courses numbered 050 - 299, for all changes to courses numbered 300 - 499, and for additions or deletions of all academic credit courses.

Additions, deletions, or changes that have a substantive effect on the intent, content or student learning outcomes of any courses numbered 050 to 299 require approval through the established governance process and UAB action as shown at the beginning of this section.

Additions, deletions or changes to any 300- or 400-level course with a permanent number, wherever initiated within UAA, require approval through the established governance process and UAB action as shown at the beginning of this section.

The approval process for these courses is found in section 3.1 and is depicted in Figure 3.1.

### 3.5 Approval of 600-Level Courses

A new or revised 600-level course with a permanent number, wherever initiated within UAA, requires GAB action. School/college curriculum committee or community campus instructional council takes responsibility for the following changes that do not affect the intent and quality of the curriculum:

1. Title change
2. Course number change at the same level
3. Grammatical change in course description
4. Prerequisite change that involves only the prefix department
5. Fee change
6. Course description change that does not change course intent (e.g., USSR to Russia, Word 2003 to Word 2010)
7. Updating of the bibliography

Upon final approval by the college dean or director, courses with the types of changes listed in 1-7 are forwarded to the Governance Office for transmittal to the Office of the Registrar. These course actions are placed on the GAB agenda as informational items. Any GAB member may request that an information item be changed to an action item. No action can be taken on an action item until after it has been approved by the GAB.

The community campus director will work with the appropriate school/college dean to obtain review and approval for offering of a graduate course.

The approval process for 600 level courses is found in section 3.1 and is depicted in Figure 3.1.

3.6 Approval of 500-Level Courses

These courses are offered for professional development credit only. The UAB is responsible for UAA policy associated with 500-level courses.

The appropriate dean/director or designee has authority for initial approval and offering of 500-level courses. Each college offering 500-level courses must have policies and procedures in place that guarantee appropriate faculty review and course quality.

Approved courses are forwarded through the Governance Office to the Office of the Registrar to be entered into the system and are listed in the curriculum log posted on the Governance website (www.uaa.alaska.edu/governance).

The approval process for 500 level courses is found in section 3.1 and is depicted in Figure 3.2.

3.7 Approval of Non Credit Courses Numbered AC000-AC049 or A000-A049 and changes to these courses

These courses are not offered for academic credit. Courses numbered AC000-AC049 earn Continuing Education Units (CEU) and may be used for Workforce Credentials. These courses are approved as indicated in the approval process outlined in section 3.1.

The approval process for non-credit and CEU courses is found in section 3.1 and is depicted in Figure 3.2.

3.8 Approval of Doctoral Programs

The program approval process in section 3.1 is not applicable to doctoral programs.

*It is necessary for programs to consult with OAA before starting work on doctoral program proposals. The primary point of contact with OAA is the Vice Provost for Research and Graduate Studies.*

The doctoral approval process consists of two stages: A Justification Proposal and a Full Proposal.
Justification Proposal

The Justification Proposal is a relatively brief document that addresses how the proposed doctoral program meets specific criteria important to the process for deciding if the program is viable and needed. This proposal requires that the basic structure of the program be well designed to meet standards that will ensure that the program is likely to be successful. At this stage, the curriculum pieces (PAR, CAR, and CCG) are not to be included. Section 3.8.1 is the Justification Proposal Outline and includes all the criteria for the proposal. The Justification Proposal follows the normal curriculum approval process through the Provost and Chancellor with additional review by the Graduate Council and the Dean of Graduate Studies.

Full Proposal

The Full Proposal is an expansion on the Justification Proposal and includes the curriculum documents. The Full Proposal's main purpose is to demonstrate that the proposed program meets the standards of all applicable accreditation agencies. The program must identify all relevant accreditation standards and demonstrate how the program meets the standards. This document is essentially an accreditation self-study document. As a part of the Full Proposal package, the program will fill out a checklist where they will indicate that certain criteria important to the institution are addressed in the package. If a particular item on the checklist is not included in the accreditation analysis, then the program will be required to include an analysis of how the particular institutional requirement is met. Section 3.8.2 is the Full Proposal Outline and includes all the criteria for the proposal. The Full Proposal follows the normal curriculum approval process through the Provost and Chancellor with additional review by the Graduate Council and the Dean of Graduate Studies. Once approved at UAA the full proposal is forwarded to the UA Board of Regents and the NWCCU by the UAA Office of Academic Affairs.

3.8.1 Justification Proposal

The purpose of this document is to articulate to individuals and groups in the campus curriculum approval process the relevant details of the proposed program so that decisions can be made relative to the viability of the proposed program. The proposal must include the following sections and address the identified issues. Do not include curriculum (i.e., PAR, CARs, and CCGs) documents at this stage.

The justification proposal is be to reviewed and approved, with signatures, by the proposing department, the applicable college or school curriculum committee and Dean, the Graduate Council and Dean of the Graduate School, the Graduate Academic Board, the Faculty Senate, and the Provost.

Prior to approval by the Provost an external review (which may include a site visit if determined to be needed at the justification level) shall be conducted. This review is to focus on need, demand, program quality, and physical resources. The review panel is to consist of three highly qualified individuals from the profession and/or peer institutions in the specific field/discipline of the proposed program. The unit proposing the doctorate recommends potential members of the review panel; however the members of the review panel are selected and appointed by the Provost.

1. Brief Description of the Proposed Doctorate (Maximum of one page, 1.5 spaced and 12 point font)
   (Name, degree initials, proposed by (person, department, college), brief description of the target group of students, brief description of the key characteristics of the degree; mission statement; Key objectives as expressed as learner outcomes-no more than six; mode of offering; relationship to, and impact on, existing programs and courses)

2. Justification of the Proposal on the Basis of Need (Maximum of two pages; include as appendices statements from professional associations etc.)
   (Typical headings include: needs in the profession, needs in the state, needs in terms of training high level leaders, relevance for higher education employment, employment demands)

3. Justification of the Proposal on the Basis of Prospective Student Demand (Maximum of two pages; include as appendices the survey used)
4. **Identify Several Peer Programs (Maximum of one page)**
   (Are there any similar programs at UA, other Alaska universities; describe, and provide web links for, peer programs and name of their universities)

5. **Brief Description of the Entry Requirements (Maximum of one page)**
   (Clearly articulate admissions requirements, such as Degree level, previous professional experience, or other prerequisite requirements. Describe the process for selecting students. Note that each doctoral program is required to have an admissions committee of at least three members.)

6. **Faculty Qualifications (Maximum one page; summarize in a table with 6 columns as below)**
   (Personnel; highest degree; top 5 refereed publications in the last five years; no more than 5 key presentations in the last 5 years; external competitive research grants won in the last 5 years; significant industrial/professional experience in that field in the last 5 years)

7. **Student Services (Maximum of one page)**
   (Indicate advising, office space, scholarships, graduate assistantships, student assistantships, conference attendance)

8. **Facilities and Resources (Maximum of two pages; to be signed by the Dean)**
   (Need for staffing, additional faculty, technicians, additional lab space, additional plant, equipment, technology, consumables, library resources network infrastructure, etc.)

9. **Budget and Cost Analysis (Maximum of one page)**
   (Specific budget proposal; revenue streams; sustainability; up-front costs; ongoing costs; external funding; UA funding)

10. **Identify Relevant Accreditation Agencies and Their Criteria (Maximum of two pages)**
     (NWCCU, State, National, and other professional organizations; provide links to the accreditation's web sites & criteria; How does the program meet basic eligibility and what are the biggest challenges in meeting the criteria.)

11. **Program Catalog Copy**
    (Proposed catalog copy; new course titles, numbers, and descriptions)

**3.8.2 Full Proposal**

This document is used to show how the proposed program meets institutional and accrediting body criteria. The full curriculum (i.e., PAR, CARs, and CCGs) for the program is also to be included. This document is, in essence, an abbreviated self-study showing how the program meets applicable accreditation standards.

The full proposal is to be reviewed and approved, with signatures, by the proposing department, the applicable college or school curriculum committee and Dean, the Graduate Council and Dean of the Graduate School, the Graduate Academic Board, and the Faculty Senate.

Prior to approval by the Provost, the external review panel used in the justification proposal shall do a review of the full proposal and provide comments to the program and Provost.

The Office of Academic Affairs will work with the program to develop a final submittal to SAC, the UA Board of Regents, and the Northwest Commission on Colleges and Universities (NWCCU).

Required Outline:
1. **Introduction and Program Overview**  
   (Name, degree initials, proposed by (person, department, college), brief description of the key characteristics of the degree; mission statement; key objectives expressed as learner outcomes-no more than six)

2. **Program Accrediting Standards (if any)**  
   (Identify accrediting agency with hyperlinks to their standards; an item by item list of the standards and how the program plans to meet them)

3. **NWCCU Accrediting Standards**  
   (an item by item list of criteria and how the program plans to meet the criteria)

4. **Institutional Checklist**  
   (As a minimum, the Full Proposal must address the following items. It is probable that many of the items are addressed in prior sections of the full proposal, so the requirement of this section is to provide an index to the parts of the proposal that address the indicated concerns. In the event that a specific concern has not been addressed, please provide discussion about how the proposed program addresses the concern. See the Justification Proposal instructions for the type of information required.)
   - Justification on the Basis of Need:  
     Found in section ___________________
   - Justification on the Basis of Prospective Student Demand:  
     Found in section ___________________
   - Identify Several Peer Programs:  
     Found in section ___________________
   - Entry Requirements:  
     Found in section ___________________
   - Faculty Qualifications:  
     Found in section ___________________
   - Student Services:  
     Found in section ___________________
   - Facilities and Resources:  
     Found in section ___________________
   - Budget and Cost Analysis:  
     Found in section ___________________

5. **Curriculum Documents**  
   (PAR, Catalog Copy, CARs, and CCGs)

6. **Academic Assessment Plan**

7. **Board of Regents PAR and Executive Summary**
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Figure 3.1: Permanent Academic Course Approval Process

NOTE: Coordination with affected units and faculty listserv (uaa-faculty@lists.uaa.alaska.edu) must occur at least 10 working days before consideration by UAB or GAB. See section 5 for details.

Also see section 5 for required documents and instructions.

Faculty Initiated
Addition/Change/Deletion of Course

Department Curriculum Committee/Chair

College/School Curriculum Committee

College/School Dean/Director

Governance Office

Undergraduate Academic Board (UAB)

First Reading

General Education Review Committee (GERC)

GERs

Second Reading

Faculty Senate

Provost

Office of the Registrar

Curriculum Office
Updates Banner with course additions and changes. After update, courses can be added to semester schedules.
Figure 3.2: Non-Permanent (-93, -94) Credit Course, 500-Level Course, and Noncredit/CEU Approval Process

NOTE: Coordination with the faculty listserv (uaa-faculty@lists.uaa.alaska.edu) must occur at least 10 working days before submittal to the Governance Office. See section 5 for details.

Also see section 5 for required documents and instructions.
A major revision of an existing program or the development of a new program must be discussed with the Office of Academic Affairs at ayoaa@uaa.alaska.edu or 907-786-1054 before the curriculum proposal is presented to UAB/GAB. It is best to meet with OAA at the start of program development.

NOTE: Coordination with affected units and faculty listserv (uaa-faculty@lists.uaa.alaska.edu) must occur at least 10 working days before consideration by UAB or GAB. See section 7 for details.
Before the curriculum proposal is presented to the school/college committees and UAB/GAB, consult with the Office of the Registrar at aypublications@uaa.alaska.edu for a new prefix.

NOTE: Coordination with affected units and faculty listserv (uaa-faculty@lists.uaa.alaska.edu) must occur at least 10 working days before consideration by UAB or GAB. See section 4 for details.

Also see section 4 for required documents and instructions.
A suspension to an existing program must be discussed with the Office of Academic Affairs at ayoaa@uaa.alaska.edu or 907-786-1054.
A deletion to an existing program must be discussed with the Office of Academic Affairs at ayoaa@uaa.alaska.edu or 907-786-1054.

**Figure 3.5: Degree and Certificate Deletion Approval Process**

Deletion Initiated by Faculty and/or College/School Dean/Director

Program Suspension  
*(See suspension approval process for greater detail)*

- Accommodation for Existing Students
- Impact on Other Departments and Colleges
- Input from External Stakeholders

Consult With Office of Academic Affairs

Develop Proposal Based on Relevant Considerations

Department Curriculum Committee/Chair

College/School Curriculum Committee

College/School Dean/Director

Governance Office

Undergraduate Academic Board (UAB)

Faculty Senate

Graduate Academic Board (GAB)

OAA/Provost

Chancellor

Statewide Academic Council

UA President

Board of Regents*

Northwest Commission on Colleges and Universities

Office of the Registrar

*Requires 60-day advance notice to have items placed on the agenda
Section 4 - Prefixes

Responsibility for prefixes and their associated courses are assigned to academic departments. All proposals to add, change, inactivate or transfer a prefix must originate with the academic program currently assigned to the prefix.

4.1 Changes to or Replacement of a Prefix

*The school/college must discuss the change or replacement of prefix with the OAA before the proposal is presented to the UAB/GAB for review. OAA contact persons are the Vice Provost for Undergraduate Academic Affairs or the Assistant Vice Provost (ayoaa@uaa.alaska.edu, ph 907-786-1054).*

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. A cover memo summarizing the proposal.
   b. Signed Program/Prefix Action Request (PAR; www.uaa.alaska.edu/governance/coordinatio/index.cfm)

   *Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.*

   If the change of prefix affects a degree or certificate, a separate signed PAR must be submitted for each program change, together with revised catalog copy in Word using the track changes function. A Word copy of the current catalog is available on the Governance website (www.uaa.alaska.edu/governance).

2. Coordination should take place early in the curriculum process and consists of two steps:
   a. Coordination memo or email. Coordination is required when the change of prefix has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.

   A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet (www.uaa.alaska.edu/governance/coordinatio/index.cfm) is required listing the reference and the impact (program requirements, electives, selectives, course prerequisite, corequisites).

   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the addition or inactivation of the prefix. The coordination email must include contact information, as well as:

   - School and department (PAR boxes 1a and 1b),
   - Prefix (PAR box 2),
   - Type of Action (Add/Change/Delete) (PAR box 4),
   - justification for action (PAR box 8),
   - any other relevant information.

   The email must be sent at least 10 working days before being presented at UAB/GAB.

3. Approval of changes to or replacement of a prefix follows the curriculum approval process outlined in Section 3.
4.2 Addition of a Prefix

The school/college must discuss the addition of a prefix with the OAA before the proposal is presented to the UAB/GAB for review. OAA contact persons are the Vice Provost for Undergraduate Academic Affairs and the Assistant Vice Provost (ayoaa@uaa.alaska.edu, ph 907-786-1054).

A new prefix must be requested from the Office of the Registrar. Email address is aypublications@uaa.alaska.edu

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. A cover memo summarizing the proposal.
   b. Signed PAR (www.uaa.alaska.edu/governance/coordination/index.cfm).
      Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.
   c. If the addition of the prefix affects a degree or certificate, a separate signed PAR must be submitted for each program change, together with revised catalog copy in Word using the track changes function. A Word copy of the current catalog is available on the Governance website (www.uaa.alaska.edu/governance/).

2. Coordination should take place early in the curriculum process and consists of two steps:
   a. Coordination memo or email. Coordination is required when the new prefix has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.
   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the addition of the prefix. The email must include contact information, as well as:
      - School and department (PAR boxes 1a and 1b),
      - Prefix (PAR box 2),
      - Type of Action (Add/Change/Delete) (PAR box 4),
      - justification for action (PAR box 8),
      - any other relevant information.
      The email must be sent at least 10 working days before being presented at UAB/GAB.

3. Approval of addition of a prefix follows the curriculum approval process outlined in Section 3.

4.3 Inactivation of a Prefix

The school/college must discuss the inactivation of a prefix with the OAA before the proposal is presented to the UAB/GAB for review. OAA contact persons are the Vice Provost for Undergraduate Academic Affairs and the Assistant Vice Provost (ayoaa@uaa.alaska.edu, ph 907-786-1054).

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. A cover memo summarizing the proposal.
   b. Signed PAR (www.uaa.alaska.edu/governance/coordination/index.cfm).
Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

If the inactivation of the prefix affects a degree or certificate, a separate signed PAR must be submitted for each program change, together with revised catalog copy in Word using the track changes function. A Word copy of the current catalog is available on the Governance website (www.uaa.alaska.edu/governance/).

2. Coordination should take place early in the curriculum process and consists of two steps:

   a. Coordination memo or email. Coordination is required when the inactivated prefix has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.

   A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet is required listing the reference and the impact (program requirements, electives, selectives, course prerequisite, corequisites).

   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the addition or inactivation of the prefix. The email must include contact information, as well as:
      • School and department (PAR boxes 1a and 1b),
      • Prefix (PAR box 2),
      • Type of Action (Add/Change/Delete) (PAR box 4),
      • justification for action (PAR box 8),
      • any other relevant information.

   The email must be sent at least 10 working days before being presented at UAB/GAB.

3. Approval to inactivate a prefix follows the curriculum approval process outlined in Section 3.

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4.4 Transfer of a Prefix

A proposal to transfer responsibility for a prefix and its associated courses to an academic department other than the department currently assigned to the prefix requires approval from the Provost. The proposal consists of a memorandum of understanding between the departments stating the requested action and the reason for the action. The memorandum is to be signed by the department chairs of the two departments and the dean/director of each department. The memorandum of understanding is forwarded to OAA for consideration. Proposals approved by the Provost are forwarded to the Office of the Registrar to update relevant records.
Section 5 - Courses

5.1 Changes or Revisions to a Course

It is advisable to write the Course Content Guide (CCG) first. The information from the CCG can then be pasted into the CAR. Before developing the CCG, the following need to be considered in addition to the course content: type of course, level, number, whether it will be stacked or cross-listed, prerequisites and registration restrictions, instructor goals and student learning outcomes.

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. CAR signed by the faculty initiator, department chair, college curriculum committee chair, and the dean or director or designee. A faculty member may sign no more than two signature lines on the CAR. Exceptions to this rule may be permissible with supporting documentation.
      
      Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.
   
   b. Completed CCG.
   
   c. If the revised course changes the requirements of the program in which the course is housed, a signed PAR and catalog copy in Word using the track changes function must be provided. (See section 7)
   
   d. Signed Fee Request Form (one per course) for courses with new, deleted or revised fees. (www.uaa.alaska.edu/governance/coordination/index.cfm). The Fee Request Form is not required if there are no changes to existing fees.

2. Coordination should take place early in the curriculum process and consists of three steps:
   a. Coordination memo or email. Coordination is required when the revised course has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.
   
   b. A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet is required listing the reference, the impacted program/course/catalog copy, and the impact (program requirements, electives, selectives, course prerequisite, corequisites).
   
   c. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the revision. The coordination email must include contact information as well as:
      - School and department (CAR boxes 1a and 1c),
      - course prefix (CAR box 2),
      - course number (CAR box 3),
      - course title (CAR box 6),
      - Add/Change/Delete and if change, a summary list of changes (CAR box 8),
      - course description (CAR box 15),
      - justification for action (CAR box 19),
      - any other relevant information.
3. The faculty initiator is required to send the CAR and CCG to the library liaison for that department (http://consortiumlibrary.org/find/subject_liaison_librarians). It is suggested that this be done early in the curriculum process.

4. If the revised course is a GER, the appropriate guidelines must be followed (See Section 6). GER review templates are available at www.uaa.alaska.edu/governance/GER.

5. A course may not be scheduled nor registration for a course at UAA take place before the appropriate curriculum approval process has been completed and approved and the course has been entered into the system.

6. Changes or revisions to existing courses are approved through the curriculum approval process outlined in section 3.

5.2 Adding a New Course

It is advisable to write the CCG first. The information from the CCG can then be pasted into the CAR. Before developing the CCG, the following need to be considered in addition to the course content: type of course, level, number, whether it will be stacked or cross-listed, prerequisites and registration restrictions, instructional goals and student learning outcomes.

A course may not be scheduled nor registration for a course at UAA take place before the appropriate curriculum approval process has been completed and approved and the course has been entered into the system.

5.2.1 Permanent Credit Courses (050-499 and 600-699)

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. CAR signed by the faculty initiator, department chair, college curriculum committee chair, and the dean or director or designee.
      
      Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.
   
   b. Completed CCG.
   
   c. If the new course changes the requirements of the program in which the course is housed, a signed PAR and catalog copy in Word using the track changes function must be provided.
   
   d. Signed Resource Implication Form (one per discipline). Signed Fee Request Form (one per course) for courses with new or revised fees (www.uaa.alaska.edu/governance/coordination/index.cfm). The Fee Request Form is not required if the course does not have fees or an existing general program fee is to be applied.

2. Coordination should take place early in the curriculum process and will consist of three steps:
   a. Coordination memo or email. Coordination is required when the new course has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.

A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet is required listing the
reference, the impacted program/course/catalog copy, and the impact (program requirements, electives, selectives, course prerequisite, corequisites).

b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the new course. The coordination email must include contact information as well as:
   - School and department (CAR boxes 1a and 1c),
   - course prefix (CAR box 2),
   - course number (CAR box 3),
   - course title (CAR box 6),
   - Add/Change/Delete and if change, a summary list of changes (CAR box 8),
   - course description (CAR box 15),
   - justification for action (CAR box 19),
   - any other relevant information.

Do not attach the CAR/PAR or the CCG to the email. The coordination email must be sent at least 10 working days before being presented at UAB/GAB.

c. The faculty initiator is required to send the CAR and CCG to the Library Liaison for that department (http://consortiumlibrary.org/find/subject_liaison_librarians).

3. If the new course is proposed as a GER, the appropriate guidelines must be followed (See Section 6). GER review templates are available at www.uaa.alaska.edu/governance/GER).

4. The curriculum approval process to be followed is found in section 3.1 and is depicted in Figure 3.1

5.2.2 Non-Permanent (-93, -94) Credit Course, 500-Level Course, and Noncredit/CEU Course

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. CAR signed by the faculty initiator, department chair, college curriculum committee chair, and the dean or director or designee.

      Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

   b. Completed CCG.

   c. If the new course changes the requirements of the program in which the course is housed, a signed PAR and catalog copy in Word using the track changes function must be provided.

   d. Signed Resource Implication Form (one per discipline).

   e. Signed Fee Request Form (one per course) for courses with new or revised fees (www.uaa.alaska.edu/governance/coordination/index.cfm). The Fee Request Form is not required if the course does not have fees or an existing general program fee is to be applied.

2. Coordination should take place early in the curriculum process and consists of three steps:

   a. Coordination memo or email. Coordination is required when the new course has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.

      A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet is required listing the
reference, the impacted program/course/catalog copy, and the impact (program requirements, electives, selectives, course prerequisite, corequisites).

b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the new course. The email must include contact information, as well as:

- School and department (CAR boxes 1a and 1c),
- course prefix (CAR box 2),
- course number (CAR box 3),
- course title (CAR box 6),
- Add/Change/Delete and if change, a summary list of changes (CAR box 8),
- course description (CAR box 15),
- justification for action (CAR box 19),
- any other relevant information.

Do not attach the CAR/PAR or the CCG to the email. The coordination email must be sent at least 10 working days before being presented at UAB/GAB.

c. The faculty initiator is required to send the CAR and CCG to the Library Liaison for that department (http://consortiumlibrary.org/find/subject_liaison_librarians).

3. The curriculum approval process to be followed is found in section 3.1 and is depicted in Figure 3.2
5.3 Deleting a Course

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. CAR signed by the faculty initiator, the department chair, the college curriculum committee chair, and the dean or director or designee.
      
      Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.
   b. Signed PAR, if needed. If the course deletion affects a degree or certificate, a separate signed PAR must be submitted for each program, together with revised catalog copy in Word using the track changes function.

2. When filling out the CAR, only the following boxes need to be completed:
   - Course Prefix (Box 2)
   - Course Number (Box 3)
   - Complete Course Title (Box 6)
   - Type of Action (Box 8)
   - Implementation Date (Box 11)
   - Cross Listed or Stacked (Box 12)
   - Coordination Email Date (Box 13b.)
   - Justification for Action (Box 19)

3. Coordination should take place early in the curriculum process and consists of two steps:
   a. Coordination memo or email. Coordination is required when the deleted course has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.
      
      A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet (www.uaa.alaska.edu/governance/coordination/index.cfm) is required listing the reference, the impacted program/course/catalog copy, and the impact (program requirements, electives, selectives, course prerequisite, corequisites).
      
      Reference to a deleted course in impacted programs and courses will be struck from the catalog and from Banner.
   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the deletion. The email must include contact information, and must be sent at least 10 working days before being presented at UAB/GAB.

4. Purge List
   A purge list is compiled annually for courses not offered successfully in the previous four academic years. If a course has not been successfully offered in the previous four academic years, then that course will be purged from the catalog unless the department responsible for the course provides a clear justification for retaining the course in the catalog. This justification must be submitted to UAB/GAB for review.
      
      Reference to a purged course in impacted programs and courses will be struck from the catalog and from Banner.
5. **GER Course Purge List**
UAA policy states that a course may not remain on the GER list if it has not been offered successfully at least once during the past four semesters, excluding summer. The list of GER courses will be provided to UAB by the Office of the Registrar each spring. Review of the GER list will be done annually by UAB in the spring semester.
Section 6 - General Education Requirement (GER)

6.1 General Education and General Course Requirements

The Associate of Arts degree program and programs at the baccalaureate level must comply with the UAA General Education Requirements specified for that program in the catalog. Associate of Applied Science degree programs and undergraduate certificate programs of 30 credits or more must have identifiable general education components in the areas of communication, computation and human relations. These components must be at the collegiate level, must require a combined effort equivalent to at least 6 academic credits (for the program), and their student learning outcomes must be assessed.

The student learning outcomes of these general requirements may be met through specific courses or through activities embedded in the major requirements. If embedded, programs will be asked to identify the number and types of exercises used to fulfill these requirements and to describe their assessment methods.

When an action involves a change in GER, the UAB will refer the action, preferably with recommendations, to the General Education Review Committee (GERC).

When an action involves a change in the GER, the faculty initiator must communicate with all affected faculty in school/colleges, community campuses (including Prince William Sound Community College), deans, and their assistants.

All GER courses must have instructional goals and assessable student learning outcomes that are consistent with the current UAA catalog GER category descriptors and the appropriate GER Student Learning Outcomes. See the Governance webpage at www.uaa.alaska.edu/governance/GER.

All GER courses are subject to ongoing review and approval through the normal Governance process on a cycle, proposed by the departments and approved by the colleges, which must not exceed 10 years.

The GERC is a standing committee of the UAB reporting to the UAB.

The GERC review process is as follows:

1. Department/school/college prepare proposal and coordinate
2. UAB agenda (first reading)
3. GER Committee of UAB
4. UAB agenda (second reading)
5. Faculty Senate (approved actions of UAB only)
6. Administration (approved actions of the UAA Faculty Senate only)

6.2 Revision of or Request for GER Course

It is advisable to write the CCG first. The information from the CCG can then be pasted into the CAR. Before developing the CCG, the following need to be considered in addition to the course content: type of course, level, number, whether it will be stacked or cross-listed, prerequisites and registration restrictions, instructor goals and student learning outcomes.

1. Additional Considerations:
   - Inter MAU coordination to facilitate transfer between campuses.
     - Courtesy coordination is recommended to determine potential transfer conflicts.
Check other campus’ catalogs to see if they have a course with the same prefix and number.

If this is the case and the course is not a GER, consider using a new, unused (at all MAUs) course number if making this course a GER at UAA. The registrar’s office can provide assistance with course number suggestions.

If a new number is inappropriate, please bring transfer concerns to the attention of the GERC.

The appropriate GER template must be applied (www.uaa.alaska.edu/governance/)

Addresses appropriate GER student learning outcome(s) from the GER Preamble
(www.uaa.alaska.edu/records/catalogs/catalogs.cfm)

1. Communicate effectively in a variety of contexts and formats;
2. Reason mathematically and analyze quantitative and qualitative data competently to reach sound conclusions;
3. Relate knowledge to the historical context in which it developed and the human problems it addresses;
4. Interpret different systems of aesthetic representation and understand their historical and cultural contexts;
5. Investigate the complexity of human institutions and behavior to better understand interpersonal, group and cultural dynamics;
6. Identify ways in which science has advanced the understanding of important natural processes;
7. Locate and use relevant information to make appropriate personal and professional decisions;
8. Adopt critical perspectives for understanding the forces of globalization and diversity; and
9. Integrate knowledge and employ skills gained to synthesize creative thinking, critical judgment and personal experience in a meaningful and coherent manner.

Meets category definition from Board of Regents Regulation
(www.alaska.edu/bor/policy-regulations/)

Addresses and assesses GER student learning outcomes for the classification descriptions described in the catalog (www.uaa.alaska.edu/records/catalogs/catalogs.cfm) and this handbook

**Oral communication skills.** Students:
- develop both their message creation and message interpretation skills in order to be more successful communicators.
- develop an awareness of the role of communication in a variety of human relationships.
- develop and implement effective and appropriate communication skills, including the ability to develop, organize, present and critically evaluate messages; analyze audiences; and adapt to a variety of in-person communication settings.

**Quantitative skills.** Students:
- develop their algebraic, analytic and numeric skills; use them to solve applied problems.
- correctly explain their mathematical reasoning.

**Written communication skills.** Students:
- practice methods for establishing credibility, reasoning critically and appealing to the emotions and values of their audience.
- write for a variety of purposes and audiences by employing methods of rhetorical and cultural analysis.
- develop the tools to read, think and write analytically about print and nonprint texts and to generate texts that engage their own perceptions while synthesizing the ideas of texts and scholars.
demonstrate their ability to communicate effectively by selecting form and content that fits the situation; adhering to genre conventions; adapting their voice, tone, and level of formality to that situation; and controlling stylistic features such as sentence variety, syntax, grammar, usage, punctuation and spelling.

**Fine arts.** Students should be able to:
- identify and describe works of art by reference to media employed, historical context and style, and structural principles of design and composition.
- interpret the meaning or intent of works of art and assess their stylistic and cultural importance by reference to their historical significance, their relationship to earlier works and artists, and their overall impact of subsequent artistic work.

**Humanities.**

Students who complete a **content-oriented** course in the humanities should be able to:
- identify texts or objects, place them in the historical context of the discipline,
- articulate the central problems they address and provide reasoned assessments of their significance.

Students who complete a **skills oriented** humanities course in **logic** should be able to:
- identify the premises and conclusions of brief written arguments,
- evaluate their soundness or cogency, and recognize common fallacies.
- use a formal technique to determine the validity of simple deductive arguments and
- evaluate the adequacy of evidence according to appropriate inductive standards.

Students who complete a **skill-oriented** humanities course in a **language** should:
- demonstrate proficiency in listening, speaking and writing.

**Natural sciences.** Student will:
- Be able to apply the scientific method by formulating questions or problems, proposing hypothetical answers or solutions, testing those hypotheses, and reaching supportable conclusions.
- demonstrate an understanding of the fundamentals of one or more scientific disciplines,
- demonstrate a knowledge of the discoveries and advances made within that discipline, and the impact of scientific information in sculpting thought and in providing the foundations for the technology in use at various times in history.

Students completing the laboratory class will:
- demonstrate the ability to work with the tools and in the settings encountered by professionals in the discipline,
- critically observe materials, events or processes, and
- accurately record and analyze their observations.

**Social sciences.** Students will be able to:
- describe the discipline she or he has studied and discuss the key principles or themes that unify it.
- describe and contrast key scientific theories and theoretical approaches in a discipline and the ways in which these theories structure social scientists’ thinking and research.
- demonstrate the ability to think critically about how society works and how our social realities are created by diverse social processes and cultural practices. Describe the wide range of social science data and the importance of using empiricism, both qualitative and quantitative, in making claims about the social world and in setting evidence-based social policy.
- explain and use basic social science methods and summarize the assumptions behind and the limitations of inductive or deductive approaches that might include: the formulation of
research questions and hypotheses; data collection and analysis; and testing, verifying, and rejecting hypotheses.

**Integrative capstone.** Students must:
- demonstrate the ability to integrate knowledge by accessing, judging and comparing knowledge gained from diverse fields and by critically evaluating their own views in relation to those fields.

- Provides rationale for retaining or adding this course to the GER menu
- Integrative capstone courses that restrict registration to completion of Tier I GERs should use the following registration restriction verbiage: Completion of Tier I (basic college-level skills) courses.

Actions involving changes in GER are referred to the GERC after first reading at UAB. After GERC review and approval, the second reading takes place at UAB.

2. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. Signed CAR.

      Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

   b. Completed CCG.

      If the new or revised course affects a degree or certificate, a separate signed PAR must be submitted for each program change, together with revised catalog copy in Word using the track changes function. A Word copy of the current catalog is available on the Governance website (www.uaa.alaska.edu/records/catalogs/catalogs.cfm).

   c. Signed Fee Request Form (one per course) for courses with new, deleted or revised fees.
      (www.uaa.alaska.edu/governance/coordination/index.cfm). The Fee Request Form is not required if there are no changes to existing fees.

3. Coordination should be done early in the process and consists of three steps:
   a. Coordination memo or email. Coordination is required when the new course has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.

      A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet is required listing the reference, the impacted program/course/catalog copy, and the impact (program requirements, electives, selectives, course prerequisite, corequisites).

   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the revision or new course. The email must include contact information, as well as:
      - School and department (CAR boxes 1a and 1c),
      - course prefix (CAR box 2),
      - course number (CAR box 3),
      - course title (CAR box 6),
      - Add/Change/Delete and if change, a summary list of changes (CAR box 8),
      - course description (CAR box 15),
• justification for action (CAR box 19),
• any other relevant information.

Do not attach the CAR/PAR or the CCG to the email. The coordination email must be sent at least 10 working days before being presented at UAB/GAB.

c. The faculty initiator is required to send the CAR and CCG to the library liaison for that department (http://consortiumlibrary.org/find/subject_liaison_librarians).

4. GER courses are approved through the curriculum approval process outlined in section 3.
5. GER changes should have a Fall implementation date. To ensure approval is received in time, the faculty initiator should consult the curricular production calendar on the Governance website. Curriculum must have first reading at UAB by the third Friday in February to be considered for Fall implementation.

6.3 Deletion of a GER Course

UAA policy states that a course may not remain on the GER list if it has not been offered successfully at least once during the past four semesters, excluding summer sessions. The purge list of GER courses will be provided to UAB by the Office of the Registrar each spring. Review of the GER list will be done annually by UAB in the spring semester.
Section 7 - Programs

7.1 Minor Revisions to Programs

Minor Revisions to Programs are changes that do not ‘substantially alter the student learning outcomes of the program’

Also refer to UA Regulation 10.04.02 www.alaska.edu/bor/policy-regulations/

Minor program revisions are approved through the standard curriculum review process at UAA as outlined in section 3. The final approval rests with the Provost. Reviews by SAC, the BOR and NWCCU are not necessary.

The school/college must discuss the proposal to determine the magnitude of the change and the document requirements with the OAA.

OAA contact persons are Accreditation Liaison Officer and either the Vice Provost for Undergraduate Academic Affairs for undergraduate programs or the Vice Provost for Research and Graduate Studies for graduate programs (ayoaa@uaa.alaska.edu).

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. PAR signed by the faculty initiator, the department chair, the curriculum committee chair, and the dean or director or designee (www.uaa.alaska.edu/governance/coordination/index.cfm). A faculty member may sign no more than two signature lines on the PAR. Exceptions to this rule may be permissible with supporting documentation.

   *Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.*

   b. Complete program catalog copy in Word using the track changes function including student learning outcomes for the program. A Word copy of the current catalog is available on the Governance website (www.uaa.alaska.edu/governance) under Quick Links.

   c. All course CARs and CCGs for new and revised courses.

   d. Four-Year Course Offering Plan for the program.

   e. Signed Resource Implication Form.

   f. Signed Fee Request Form (for new, deleted or revised fees).

   g. Programs designated as Gainful Employment programs must also complete additional documentation for the Financial Aid office.

2. Coordination should take place early in the process and consists of three steps:

   a. Coordination memo or email. Coordination is required when the revision has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Examples are when courses are deleted/added to a program or when prerequisites/registration restrictions are changed. Proof of coordination must be provided to the Governance Office.

   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the revision. The email must include contact information, as well as:

   - School and department (PAR boxes 1a and 1b),
The program approval process is outlined in section 3.

7.2 Programs which have MATH, ENGL, and/or COMM requirements

7.2.1 Programs which have MATH program requirements:

It is recommended that programs with specific MATH requirements use the following language in specifying the requirement:

“MATH A or any MATH course for which MATH A is in the prerequisite chain.”

Rationale: In programs with specific mathematics requirements (e.g., MATH A105), students can meet those requirements with either

a. A course specifically required by the program (e.g., MATH A105) or
b. A higher-level mathematics course (e.g., MATH A200) that has the specifically -required course (e.g., MATH A105) in its pre-requisite chain.

Rationale: This change will allow students who have taken MATH A200 to use this course in a program that requires MATH A105 without going through the petition process. Rewriting the requirement as indicated will reduce the number of petitions students must submit.

7.2.2 Programs which have ENGL A111 as a specific major requirement:

It is recommended that programs with a specific ENGL requirements use the following language in specifying the requirement:

“ENGL A111 or ENGL A1W- Written Communication GER.”

Rationale: In programs with ENGL A111 as a specific major requirement, students can meet that requirement with either

a. ENGL A111 or
b. Transfer course which meets Written Communication GER
Rationale: This change will allow use of transfer course work which meets Written Communication GER standards without going through the petition process. Rewriting the requirement as indicated will reduce the number of petitions students must submit.

7.2.3 Programs which have COMM A111, COMM A235, COMM A237, or COMM A241 as a specific major requirements:

It is recommended that programs with specific GER COMM requirement use the following language in specifying the requirement:

“Oral Communication Skills GER.”

Rationale: In programs which list Oral Communication Skills GER, students can meet those requirements with either

a. COMM A111, COMM A235, COMM A237, or COMM A241 or
b. Transfer course which meets Oral Communication GER

Rationale: Many programs currently have a specific requirement which mirrors that Oral Communication GER (Requires COMM A111, COMM A235, COMM A237, or COMM A241). Students who transfer in a communication class which meets GER but not specifically one of those courses must complete a petition. Rewriting the requirement as indicated will reduce the number of petitions students must submit.

7.3 New Non-Doctoral Programs and Major Changes to ALL Programs

The initiating department must discuss a proposal for a major revision of an existing program or the development of a new program with the appropriate dean and OAA before the curriculum proposal is presented to the college curriculum committee/UAB/GAB for review. Schools/colleges are encouraged to contact OAA early in the approval process. Proposals should include information listed in Section 4 of this handbook. OAA contact persons are the Vice Provost for Undergraduate Academic Affairs (ayoaa@uaa.alaska.edu) for assistance with undergraduate programs and the Vice Provost for Research and Graduate Studies for graduate programs.

This section applies to Workforce Credentials, Undergraduate Certificates, Associate Degrees, Baccalaureate Degrees, Minors, Post-Baccalaureate Certificates, Graduate Certificates and Master’s Degrees except as noted.

Also refer to UA Regulation 10.04.02 www.alaska.edu/bor/policy-regulations/

1. The OAA assists the faculty initiators in preparing the documents necessary for review and approval by the Board of Regents and NWCCU as needed. Depending on the nature of the proposal, these forms address the following issues:

a. Relationship of the proposed program relative to the educational mission of the University of Alaska and the MAU.

b. Collaboration with other universities and community colleges within the UA system.

c. History of the development of the proposed program or program changes.

d. Demand for the program, relation to State of Alaska long-range development, relation to other programs in the University that might depend on or interact with the proposed program, including the GER.
e. State needs met by the proposed program.

f. Availability of appropriate student services for program participants. A schedule for implementation of the program.

g. Student opportunities, student learning outcomes, and enrollment projections.

h. Rationale for the new program and educational objectives, program student learning outcomes, and plans for assessment.

i. Opportunities for research and community engagement for admitted students.

j. Faculty and staff workload implications.

k. Fiscal Plan for the proposed program

l. Library, equipment, and additional resource requirements, including availability, appropriateness and quality.

m. New facility or renovated space requirements.

n. Concurrence of appropriate advisory councils.

2. The following documents must be submitted to OAA before the program can be sent to SAC, BOR, and NWCCU for review and approval, as necessary. These documents will not be reviewed by the academic boards. Forms and templates for these submittals are obtained from OAA.

   a. Four-Year Course Offering Plan for the Program.

   b. A budget worksheet.

   c. Board of Regents Program Action Request Form

   d. Board of Regents Prospectus and Executive Summary forms) which address all requirements and policies approved by SAC and BOR.

   e. Resource Implication Form and a signed Fee Request Form (if needed).

   f. An Academic Assessment Plan for review by the Academic Assessment Committee.

   g. A risk management plan where required. This is developed in conjunction with the program’s Dean/Director, the Director of Risk Management, and legal counsel as needed.

3. In addition to the above documents, the following must be submitted to the Governance Office. These documents will be reviewed by the appropriate academic board for all new program proposals and proposals for major program changes (with the exception of Workforce Credentials) (aygov@uaa.alaska.edu):

   a. A cover memo summarizing the proposal.

   b. Signed PAR (www.uaa.alaska.edu/governance/coordination/index.cfm).

      Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

   c. Complete catalog copy in Word using the track changes function, including student learning outcomes for the program or a web address linked to the student learning outcomes. A Word copy of the current catalog is available on the Governance website (www.uaa.alaska.edu/governance/).

   d. CARs and CCGs for all new and revised courses.

4. The approval process for new programs and programs with major changes is outlined in section 3.
5. Degree and certificate requirements are effective from fall through summer of each catalog publication.

7.4 New Doctoral Programs

The initiating department must discuss a proposal for a new doctoral program with the appropriate dean and Vice Provost for Research and Graduate Studies before the curriculum proposal is presented to the college curriculum committee/GAB for review. Schools/colleges are encouraged to contact the Vice Provost for Research and Graduate Studies early in the approval process. Proposals should include information listed in Section 3.8 of this handbook.

1. The Vice Provost for Research and Graduate Studies assists the faculty initiators in preparing the documents necessary for review and approval by the Board of Regents and NWCCU as needed. These documents are described in Section 3.8.
   a. Justification Proposal. This proposal addresses criteria that are used to determine the viability and need for the program.
   b. Full Proposal. This proposal consists of the suite of curriculum documents needed to see the program through the UAA curriculum process, SAC review, BOR approval, and NWCCU acceptance.

2. The following documents must be submitted to OAA before the program can be sent on the SAC, the BOR, and NWCCU as necessary. These documents will not be reviewed by the academic boards. Forms and templates for these submittals are obtained from OAA.
   a. Four-Year Course Offering Plan for the Program.
   b. A budget worksheet.
   c. Board of Regents Program Action Request Form
   d. Board of Regents Prospectus and Executive Summary forms (www.alaska.edu/bor/policy-regulations/) which addresses all requirements and policies approved by the Statewide Academic Council (SAC) (http://www.alaska.edu/research/sac/) and the Board of Regents.
   e. Resource Implication Form and a signed Fee Request Form (if needed).
   f. An Academic Assessment Plan for review by the Academic Assessment Committee.
   g. A risk management plan where required. This is developed in conjunction with the program’s Dean/Director, the Director of Risk Management, and legal counsel as needed.

3. In addition to the above documents, the following must be submitted to the Governance Office. These documents will be reviewed by GAB for all new doctoral program proposals (aygov@uaa.alaska.edu):
   a. A cover memo summarizing the proposal.
   b. The full proposal document outlined in section 3.8
   c. Signed PAR (www.uaa.alaska.edu/governance/coordination/index.cfm).

Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

   d. Complete catalog copy in Word using the track changes function, including student learning outcomes for the program or a web address linked to the student learning outcomes.
7.5 Academic Program Suspension of Admissions

There are a variety of reasons why program faculty and academic deans/campus directors consider suspending admissions to an academic program. These may include, among others, temporary circumstances (e.g., insufficient faculty to meet substantial enrollment increases), planned major revisions to the program (e.g., deleting a track or changing the degree level), or potential program deletion (discussed in greater detail in the next section).

The following steps should be followed when suspending admissions to a program:

1. **Program Suspension:** Academic dean/campus director submits a memo to the provost requesting suspension of admission. Requests for suspension should indicate the implementation date, reason for the suspension, planned duration, impact on currently enrolled students and plans to advise and accommodate them during the suspension in accordance with each student’s catalog year, and identification of impact on other UAA programs or departments. By the conclusion of the fifth year of suspension, the academic dean or campus director must request, in consultation with program faculty, to reinstate admission, extend the suspension, or initiate the deletion process.

2. **Internal Notification:** Program suspensions should be communicated to faculty and administrators within the MAU according to the following guidelines.
   a. For programs offered on a community campus, the applicable academic dean or campus director (as determined by the UAA Catalog chapter in which the program is published) should be notified prior to the suspension of the program. For programs offered on multiple campuses, each applicable dean or campus director should be notified prior to suspension of the program.
   b. Faculty should be notified of program suspensions through an email to the faculty curriculum coordination listserv (uaa-faculty@lists.uaa.alaska.edu) and through inclusion as an information item on the Undergraduate Academic Board (for undergraduate programs) or Graduate Academic Board (for graduate programs) agenda.

3. **UA System and Accreditation Notification:** Following the approval of program suspension by the provost, Academic Affairs will notify the Statewide Academic Council (SAC) and Northwest Commission on Colleges and Universities (NWCCU). Program suspensions require notification to these bodies, not approval.

4. **Administrative Protocols:** The following are non-curricular considerations for program suspension.
   a. The provost has final approval authority for program suspensions. Once approved by the provost, the request is forwarded to the registrar to formally suspend admissions. The chancellor is notified of the action before notification goes to SAC and the NWCCU.
   b. Personnel implications will be addressed in accordance with applicable collective bargaining agreements and personnel policies and regulations. Program funds will be assigned to other department, college, or institutional priorities through established processes.
7.6  Academic Program Deletion

Program deletions may be initiated for a number of reasons. These may include, among others, low enrollment, few graduates, or changing job markets. After a period of suspension, and in conjunction with evidence collected from within and outside the institution, a decision can be made to modify, eliminate, or supersede the existing program with one more relevant. Considerations should include the impact on students currently enrolled in the program, on directly related employment sectors, and on other related departments within the university.

1. **Program Suspension:** Following the process described in the Program Suspension Policy, the academic dean/campus director submits a memo to the provost requesting suspension of admissions into the program, to ensure that no new students are admitted into the program until the final determination is made. Requests for suspension should indicate the implementation date, reason for the suspension, planned duration, and identification of impact on other UAA programs or departments. By the conclusion of the fifth year of suspension, the academic dean or campus director must request, in consultation with program faculty, to reinstate admission, extend the suspension, or initiate the deletion process.
   a. For programs offered on a community campus, the applicable academic dean or campus director (as determined by the UAA Catalog chapter in which the program is published) should be notified prior to the suspension of the program. For programs offered on multiple campuses, each applicable dean or campus director should be notified prior to suspension of the program.

2. **Consultation with Academic Affairs:** To initiate the program deletion process, consultation with OAA must occur. This consultation will include a discussion of the process and an overview of the templates required for program deletion. **OAA may waive or modify this requirement where appropriate, such as a program which has been suspended for more than five years with no currently enrolled majors.**
   a. The process will address the rationale for the proposed deletion, the demand for the program, the impact and implications on academic departments in UAA and other Major Academic Units (MAUs), impact on external stakeholders, the financial status of the program, and potential options to resolve the concerns which led to the proposed deletion.
   b. If the decision is to delete the program, programs must accommodate all currently admitted students with a completion plan that meets each student’s catalog deadlines and requirements. This completion plan should outline the timeframe and priorities for resources to accommodate completion of students impacted by the proposed program deletion.
   c. Proposals to delete programs offered on multiple campuses or through collaborative arrangements between two or more academic units should be coordinated with the academic deans and campus directors of the relevant program as is appropriate to their situations.

3. **Development of Proposal to Delete or Modify Program:** This proposal should be developed using the established curriculum approval process. If the department decides to modify the existing program, or to supersede it with a new program, the curriculum is developed as a program change so that deletion of the existing program and initiation of its replacement are approved simultaneously.

The following documents must be submitted to the Governance Office. These documents will be reviewed by the appropriate academic board for all program deletion proposals (uaa_gov@uaa.alaska.edu):

   a. A cover memo summarizing the proposal. A cover memo template can be found on the Governance curriculum website (www.uaa.alaska.edu/governance/coordination/index.cfm).
   b. Signed PAR (www.uaa.alaska.edu/governance/coordination/index.cfm).

   Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

Departments are also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the program deletion. The email must include contact information, as well as:
4. **UA System and Accreditation Approval:** Following the internal curriculum approval process, Academic Affairs will work with program faculty to submit program deletions for approval by the Statewide Academic Council (SAC), Board of Regents, and Northwest Commission on Colleges and Universities (NWCCU).
   a. *Note:* Authority to approve deletion of Occupational Endorsement Certificates and Workforce Credentials is delegated to the chancellor, and does not require action by SAC or the Board of Regents. These program deletions should be submitted to SAC for notification purposes and to the NWCCU for final approval.

5. **Administrative Protocols:** The following are non-curricular considerations for program deletion.
   a. **Program Deletion from Banner:** When the program is deleted in Banner, students may no longer remain enrolled in the program, and the degree or certificate cannot be awarded. This administrative deletion will be postponed until there are no enrolled students in the major through graduation or expiration of admissions. Once approved by the NWCCU, the registrar will be notified to formally delete the program.
   b. **Personnel and Budget:** Personnel implications will be addressed in accordance with applicable collective bargaining agreements and personnel policies and regulations. Program funds will be assigned to other department, college, or institutional priorities through established processes.
   c. **Decisions Relative to Departments and Divisions:** This policy applies exclusively to academic programs. Decisions relative to departments and divisions will be managed within the college and institution through established processes.
Section 8 - Policy Additions and Changes

New or revised academic policies are proposed to the UAB/GAB. If approved they will be forwarded by the Governance Office to the UAA Faculty Senate, then to the OAA, and finally to the Chancellor’s Office.

UAA Proposals should include:

1. Proposed policy language (include catalog copy in Word using the track changes function if policy is revised).
2. Documents in which proposed language will be inserted (catalog, curriculum handbook, etc.).
3. Proposed implementation date.

Upon recommendation of the Provost, the Chancellor reviews and acts on academic policies.

______________________
Section 9 - Step-By-Step Instructions for the Course Content Guide

When developing a new course the CCG should be developed first. Considerations are: level, title, goals and student learning outcomes, content, and bibliography. This information is then transferred to the CAR. The Course Content Guide should provide a concise description of the course. Topical areas, instructional goals and student learning outcomes should be clearly related to each other. It is recommended that the CCG contain five or fewer pages. While there is not a standard template for the CCG, current CARs and CCGs can be found at http://curric.uaa.alaska.edu/curric/courses/.

It is also recommended that the faculty initiator consult with the school/college curriculum committee.

The CCG for new courses and course changes must include the following which will be transferred to the CAR:

1. The date on which the Course Content Guide was initiated or revised
2. Information directly also on the CAR
   A. College or School – Choose from the following the school or college initiating action:
      AA Academic Affairs
      AS College of Arts and Sciences
      CB College of Business and Public Policy
      CH College of Health
      CT Community and Technical College
      EA College of Education
      EN School of Engineering
      HC University Honors College
      KP Kenai Peninsula College
      KO Kodiak College
      MA Matanuska-Susitna College
   B. Course Prefix – The prefix affected by the curriculum proposal. Approval of new prefixes must be obtained before the approval of related new/revised curriculum/program changes. See instruction on the PAR form regarding requesting a new prefix.
   C. Course Number (for a new course, contact the Office of the Registrar for a number)
      i. Reuse of Course Number Rule: When a permanent course number becomes inactive through deletion or purging, it will not be assigned to another course. However, a course can be reinstated using the same number.
      ii. Types of Courses
         a. Academic Courses: Courses with these numbers count toward undergraduate and graduate degrees and certificates as described. Each course includes a component for evaluation of student performance. Student effort is indicated by credit hours. One credit hour represents three hours of student work per week for a 15-week semester (e.g., one class-hour of lecture and two hours of study or three class-hours of laboratory) for a minimum of 750 minutes of total student engagement, which may include exam periods. Equivalencies to this standard may be approved by the chief academic officer of the university or community college. Academic credit courses are numbered as follows.

The numbering sequence signifies increasing sophistication in a student’s ability to extract, summarize, evaluate and apply relevant class material. Students are expected to demonstrate learning skills commensurate with the appropriate course level, and to meet, prior to registration, prerequisites for all courses as listed with the course descriptions.
UAA and UA Course Level Descriptions (see also the UAA catalog, Chapter 7 and University Regulation R10.04.09):

- **Lower division courses usually taken by freshmen and sophomores**
  - A100-A199: Freshman-level, lower division courses.
  - A200-A299: Sophomore-level, lower division courses

- **Upper division courses usually taken by juniors and seniors**
  - A300-A399: Junior-level, upper division courses
  - A400-A499: Senior-level, upper division courses

- **Graduate-level courses**
  - A600-A699: Require a background in the discipline, and an ability to contribute to written and oral discourse on advanced topics in the field.

b. **Preparatory/Developmental Courses**
  - A050-A099: Preparatory/developmental courses with these numbers provide basic or supplemental preparation for introductory college courses. They are not applicable to transcripted certificates or associate, baccalaureate, or graduate degrees, even by petition.

c. **Noncredit Courses**
  - A001-A049: Noncredit courses are offered as career development, continuing education, or community interest instruction. Not applicable to any degree or certificate requirements (even by petition).

d. **Continuing Education Unit (CEU) courses**
  - AC001-AC049: CEU courses are awarded upon completion of a course of study that is intended for career development or personal enrichment. CEU courses may not be used in degree or certificate programs or be converted to academic credit.

e. **Professional Development Courses**
  - A500-A599: Courses with these numbers are designed to provide continuing education for professionals at a post-baccalaureate level. These courses are not applicable to university degree or certificate program requirements, are not interchangeable with credit courses, even by petition, and may not be stacked with any other course.

**NOTE:** All permanent numbered courses (A050-A499 and A600-A699) are included in the UAA catalog. If a discipline/department/school/college/community campus does not want a permanent numbered course to be included in the UAA catalog, that exclusion will need UAB/GAB recommendation and approval of the Vice Provost for Undergraduate Academic Affairs (for undergraduate courses) or the Vice Provost for Research and Graduate Studies (for graduate courses).

iii. **Course Numbers: Second and Third Digits** – The second and third digits of course numbers in the -90 range are used for specific course types.

- **90 Selected topics:** A generic “umbrella” course category identifying a defined field or subject area within a discipline. Topics can change from semester to semester within that field or subject area.

- **92 Seminar or Workshops:**
  
  **Seminar:** Specifically designed for student participation in exchanging ideas and academic experiences around a central core of subject matter.
  
  **Workshop:** A formal higher education offering with intensive instruction and
information in a given field.

93 Special topics: Offered only once to meet short-term needs and are not intended to become part of the permanent catalog.

94 Trial (experimental): Trial indicates that the faculty wish to offer the course before making the course permanent. May be offered up to three times as a -94 course. Coordination with the faculty listserv (uaa_faculty@lists.uaa.alaska.edu) for 094, 194, 294, 394, and 494 courses must occur at least 10 working days before submittal to the Governance Office.

95 Internship and Practicum

Internship: A student work experience in which the employer or agency is the student’s immediate supervisor, is active in planning the expected student learning outcomes, and is involved in the evaluation of the student’s achievements.

Practicum: A student work experience for which the academic department established the objectives and student learning outcomes.

97 Independent study: Address topics or problems chosen by the student with appropriate approval. Topics must not duplicate and must differ significantly from catalog courses.

98 Individual research: Consist of individual research by the student, directly supervised by a faculty member or faculty committee.

99 Thesis: Involve writing and/or completion of a thesis by the student.

D. Number of Credits/CEUs and Contact Hours – Include the number of semester credits or CEUs for the course. If variable, indicate the minimum and maximum, e.g. 1-3 credits or CEUs. The number of credits/CEUs is in direct relation to the contact hours. If the course is noncredit, enter the appropriate range of contact hours.

• Over a 15-week semester, 1 contact hour is equivalent to 50 minutes.

• One credit for a lecture course is typically equivalent to 1 contact hour/week for a total of 15 contact hours for the course (or 750 minutes of actual class time [50 minutes/contact hour x 15 contact hours = 750 minutes]).

• One credit for a supervised laboratory course is typically awarded 2 contact hours/week for a total of 30 hours (2 x 15 weeks = 30) or 1,500 total contact minutes (30 x 50 minutes/contact hour = 1,500 minutes) of supervised lab time.

• One credit of unsupervised laboratory time such as some practica, student teaching, internships, or field work credits is typically awarded 3 contact hours/week or more. Many courses, because of the nature of their subject matter or mode of delivery, require additional student time.

• For a lecture course, at least two hours of work outside the class is expected for each credit. For a supervised laboratory class, in addition to 2 contact hours/week in the laboratory, at least one additional hour of outside work is expected for each credit (or a total of 3 contact hours/week in the laboratory will satisfy this requirement).

• For courses that are provided in a period less than the standard 15-week semester, the (Lecture + Lab) section should be completed as if the course would be taught in a 15-week period. Additional description should be provided in Box 19 (“Justification for Action”) of the CAR and in the CCG to explain the actual course length and required hours per week. For noncredit CEU courses, the total number of lecture and laboratory contact hours for the course should be stated.
i. **Summary**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>15 weeks (standard semester length)</td>
</tr>
<tr>
<td>One (1) Contact Hour</td>
<td>50 minutes per week (or 750 minutes for the course)</td>
</tr>
<tr>
<td>Outside Work</td>
<td>Additional time typically outside of classroom or laboratory</td>
</tr>
<tr>
<td>One (1) credit</td>
<td>1 contact hour per week of lecture (15 contact hours of lecture for course)</td>
</tr>
<tr>
<td></td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>2 contact hours per week of supervised laboratory (or practica) if outside work is needed (30 contact hours for the course)</td>
</tr>
<tr>
<td></td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>3 contact hours per week of supervised laboratory (or practica) if no outside work is needed (45 contact hours for the course)</td>
</tr>
</tbody>
</table>

(Lecture + Laboratory) = refers to the number of contact hours for lecture and laboratory per week based on a 15-week semester

ii. **Examples**

- **(3+0)** = A typical lecture-only course. Equivalent to a 3-credit course with 3 contact hours of lecture and 0 hours of laboratory per week for a total of 135 hours for the course [45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours].

- **(2+2)** = A combined lecture and laboratory course. Equivalent to a 3-credit course with 2 contact hours of lecture and 2 hours of supervised laboratory per week for a total of 135 hours for the course (30 contact hours of lecture and 60 hours outside lecture plus 30 hours lab plus 15 hours outside lab).

- **(3+2)** = A combined lecture and laboratory course. Equivalent to a 4-credit course with 3 contact hours of lecture and 2 hours of supervised laboratory per week for a total of 180 hours for the course (45 contact hours of lecture and 90 hours outside lecture plus 30 hours of lab and 15 hours outside of lab).

- **(3+3)** = A combined lecture and laboratory course. Equivalent to a 4-credit course with 3 contact hours of lecture and 3 hours of laboratory (supervised or unsupervised) per week for a total of 180 hours for the course (45 contact hours of lecture and 90 hours outside lecture plus 45 hours of lab and 0 hours outside of lab).

- **(0+9)** = A practicum or field work type course. Equivalent to a 3-credit course with 0 contact hours of lecture and 9 hours of practicum or field work laboratory (supervised or unsupervised) per week for a total of 135 hours for the course (0 contact hours of lecture plus 135 hours of lab and 0 hours outside of lab).

iii. **CEU** = The CEU is a unit of measure for noncredit activities. The CEU can be used to document an individual’s participation in formal classes, courses, and programs as well as in nontraditional modes of noncredit education, including various forms of independent, informal, and experiential study and learning.
Examples:

- 0.1 CEU = 1 hour of instruction and no additional hours of work for the course.
- 1 CEU = 10 hours of instruction and no additional hours of work for course.
- 1.5 CEUs = 15 hours of instruction and no additional hours of work for course.
- 3.5 CEUs = 20 hours of instruction and 15 hours of required additional work appropriate to the objectives of the course for course.
- 2 CEUs = 20 hours of instruction and no additional work, or 40 hours of laboratory or clinical work.

iv. Minimum Course Length (Compressibility Policy) – The Compressibility Policy states, “Courses scheduled for less than a full semester may not be offered for more than one credit each week (seven days).” Two credits require a minimum of eight days and 3 credits require a minimum of 15 days.

E. Course Title – Insert full title of the course. Titles of existing courses in the data base cannot be used for new/revised courses, except for the following types of courses: dissertation, internship, practicum, project, research, selected topic, seminar, thesis.

F. Grading Basis – Identifies how performance in the course is to be graded (A-F or P/NP [pass/no pass] for academic and professional development courses; NG [no grade] for CEUs and noncredit offerings).

G. Implementation Date – Insert the semester and year that the addition, deletion or change will be implemented. See section 10.2, Box 11, for further clarification regarding implantation dates.

- Careful consideration needs to be given to permanent courses affecting degrees and certificates.

- Course additions or modifications must be made in conjunction with publication of the class schedule/listing. Since academic units are responsible for providing an adequate transition for students from one set of program requirements to another, units should consider the official implementation date of program changes when implementing the approved changes.

H. Cross Listing (if applicable) – Cross-listed courses are courses approved under multiple prefixes and offered at the same time and location.

i. Cross-listed courses are courses approved under multiple prefixes and offered at the same time and location.

ii. Each cross-listed course must have a separate CCG and CAR for each prefix.

iii. Everything except the course prefix must be identical.

iv. Each department is responsible for preparing and providing the appropriate CCG, CAR, supporting documentation. These must be submitted at the same time for UAB/GAB review.

v. When courses are cross-listed, they must be offered and printed in UAA’s schedules and catalog under each prefix. For example, JPC/JUST A413 is listed both in Justice and in Journalism and Public Communications. Cross-listed classes must be offered at the same time in a semester. Each department is responsible for the scheduling and schedule maintenance of their prefix’s section, including additions, changes and deletions.

I. Stacking (if applicable)

i. Stacked courses are courses from the same prefix but at different levels offered at the same time and location.
ii. Existing and new courses may not be stacked unless approved as stacked courses by UAB/GAB.

iii. Courses may not be stacked informally for scheduling purposes.

iv. The course description and course content guide of a stacked course must clearly articulate the difference in experience, performance and evaluation of students at different levels, including graduate students vs. undergraduate students.

v. Courses that are at the 500 level may not be stacked with any other course.

vi. If stacking status is requested, rationale must be provided.

vii. Courses at the 300 level may not be stacked with 600-level courses.

All graduate-level courses must meet certain criteria established by the GAB. In addition, when 400-level courses are stacked with 600-level courses, the faculty initiator must consider the impact of stacking the course on the graduate student experience and how that affects the criteria for 600-level courses. If a graduate-level course is stacked with a 400-level course, or if undergraduate students are taking the course as part of their baccalaureate degree, the justification must clearly describe how the quality of the graduate students’ experience will be maintained in a mixed-level classroom.

The following guidelines may assist in determining whether a course is suitable for stacking according to graduate criteria:

i. **Do the prerequisites (not registration restrictions) differ for the 400- vs. 600-level versions of the course?**
   
   It is difficult to justify stacked courses in which the graduates and undergraduates have a significantly different knowledge base relevant to the course material. If the knowledge is required for the course, the prerequisites must be comparable. If the knowledge is only required for extra coursework performed by the graduate students, this difference should be stated explicitly and addressed in the instructional goals, student learning outcomes and course activities sections of the CCG.

ii. **Is the course format predominantly discussion- or seminar-based?**

   This type of course is not likely to be suitable for stacking, as the discussion level/theoretical base can differ significantly between graduate and undergraduate students. In addition, the ratio between undergraduate and graduate students should be addressed. Courses that are evenly divided may provide a more balanced environment than a course in which only one or two graduate students are present.

iii. **Is the course format predominantly lecture-based? (Is the main intent of the course to provide a detailed knowledge set?)**

   a. **Is the PRIMARY source of information/reading the primary research literature of the field?**
      
      This course is not likely to be suitable for stacking, as undergraduate students generally lack the knowledge base and experience to derive all information from the primary literature.

   b. **Is the PRIMARY source of information/reading material derived from textbooks or other less-specialized literature?**
      
      This course is likely to be suitable for stacking. However, the performance expectations for graduate students should be explicitly defined, with special emphasis on how these expectations differ from the 400-level students.
Some suggested student learning outcomes/assessments that may be appropriate for 600-level students in a stacked course:

i. Extra reading assignments based in the primary research literature, evaluated via written critical reviews and/or oral presentations

ii. Extra writing assignments that evince ability to synthesize research fields (comprehensive scholarly reviews or synthesis of other disciplinary areas with the course material)

iii. Assignments to measure the ability of graduate students to integrate course material into experimental design, such as writing formal research grant proposals, or oral or written presentation of how the course material informs the student’s own thesis research

iv. Separate exams for graduate students that measure not only comprehension of the lecture material but the ability to integrate and apply the material at more advanced levels, such as hypothesis formulation and experimental design, or the ability to interpret raw research data

v. Teaching experiences, in which graduate students instruct undergraduates, lead discussion groups or present analysis of primary research, offer another context in which graduate students may demonstrate and more advanced knowledge and be assessed accordingly.

As a result of completing this course, students will be able to:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Typical Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>demonstrate the ability to conduct a literature search on the course topic material</td>
<td>written critical reviews and/or oral presentation of literature reviews</td>
</tr>
<tr>
<td>Synthesize research fields</td>
<td>comprehensive scholarly reviews or synthesis of other disciplinary areas with the course material produced by the student</td>
</tr>
<tr>
<td>Integrate course material into experimental design</td>
<td>Written formal research grant proposals, oral or written presentation of how the course material informs the student’s own thesis research</td>
</tr>
<tr>
<td>Integrate and apply the course material at advanced levels</td>
<td>Exams requiring students to formulate hypothesis, design experiments, or interpret raw research data</td>
</tr>
<tr>
<td>Instruct undergraduates, lead discussion groups, or otherwise present the course material to other audiences.</td>
<td>Observed teaching exercises, teaching evaluations, performance of their students on examinations</td>
</tr>
</tbody>
</table>

J. Course Description – Identifies the intent of the course. For courses, a 20- to 50-word description is preferred.

Special Notes are also identified in this field. Special notes indicate certain requirements of the student or the course that are not identified in the course description (e.g., “May be repeated for credit with a change in subtitle,” or “Offered Spring Semesters”).

K. Course Attributes (GER if applicable)

L. Course Prerequisite(s)/Test Score(s), Corequisite(s), Registration Restriction(s) – Identifies requirements which must be achieved prior to enrolling in a course. It is assumed that faculty may waive any of the requirements. All prerequisite, corequisite; registration restriction, etc indicated on the CAR will be automatically enforced through Banner.
i. **Course Prerequisite** – Identifies a course (by prefix and number) which must be successfully completed (D or better is understood, unless C or better is stated) prior to taking the course.

A course prerequisite which **may** be taken concurrently must also be included in this area (this differs from a co-requisite which **must** be taken concurrently).

**Test Scores** – Identifies test scores which must be successfully achieved prior to taking the course. This may include UAA approved placement tests, SAT, ACT, or others. Specific test scores are not required.

ii. **Corequisites** – Identifies a course which **must** be taken concurrently and requires simultaneous enrollment and withdrawal.

iii. **Other Restrictions** – Identifies additional requirements that a student must have satisfied prior to registering for the course (e.g. instructor permission, college or school admission\(^a\), major\(^b\), class standing\(^c\), or level\(^d\)). Must be enforced by the program/department/instructor.

\(^a\) College or school admission – identifies a college/school to which a student must be admitted to in order to enroll in the course.

\(^b\) Major – identifies a major which a student must have declared in order to enroll in the course.

\(^c\) Class – identifies a class standing which a student must have attained in order to enroll in the course (0-29 credits = freshman; 30-59 credits = sophomore; 60-89 = junior, 90+ = senior).

\(^d\) Level – identifies a level which a student must be at in order to enroll in the course (graduate or undergraduate).

Responsibility for confirming prerequisites and registration restrictions lies with the department. It is assumed that the faculty may waive or enforce any of these requirements, subject to program, department and college policy.

M. **Course Fee:** Yes or No – Indicates that there are student fees associated with the course.

*Note: The sections of the CAR referenced above and the CCG must match word for word.*

3. **Course level justification** – Provide a justification for the level to which the course has been assigned.

**Course Level Expectations for Academic Course Levels** – In general, advances in course level (lower, upper, and graduate) correlate with sophistication of academic work. It should be noted that some students find introductory courses more demanding than advanced, specialized courses. In such courses, a more comprehensive approach and the first exposure to new ways of thinking may be harder for some individuals than covering a smaller, more familiar area in much greater detail.

The following definitions describe the expectations for the academic course levels:

A. **Lower Division Courses**

**A100-A199:** Introduce a field of knowledge and/or develop basic skills. These are usually foundation or survey courses.

**A200-A299:** Provide more depth than 100-level courses and/or build upon 100-level courses. These courses may connect foundation or survey courses with advanced work in a given field, require previous college experiences, or develop advanced skills.

B. **Upper Division Courses**
Require a background in the discipline recognized through course prerequisites, junior/senior standing or competency requirements. These courses demand well-developed writing skills, research capabilities and/or mastery of tools and methods of the discipline.

A300-A399: Build upon previous course work and require familiarity with the concepts, methods, and vocabulary of the discipline.

A400-A499: Require the ability to analyze, synthesize, compare and contrast, research, create, innovate, develop, elaborate, transform, and/or apply course materials to solving complex problems. These courses are generally supported by a substantial body of lower-level courses.

C. Graduate-Level Courses

A600-A699 – Require a background in the discipline, and an ability to contribute to written and oral discourse on advanced topics in the field at a level beyond that required by a bachelor’s degree. Require the ability to read, interpret and evaluate primary literature in the field. Students analyze raw data, evaluate models used in research and draw independent conclusions. Preparation includes demonstrated accomplishment in a specific course or discipline, or completion of a significant and related program of studies. Student activities are often self-directed and aimed not only at the formation of supportable conclusions, but also at a clear understanding of the process used in those formations.

For graduate-level coursework the justification must:

i. Address descriptors of 600-699 courses from Chapter 7 of the UAA catalog.

ii. Specify registration restrictions, e.g. “Admission to **** degree/certificate program” or “Graduate Status” where appropriate.

iii. State the disciplinary background.

iv. Specify prerequisites, e.g. “Graduate Status.”

v. Describe how the course provides students with opportunities for independent critical thinking.

vi. Describe how the course enables students to meet the following goals when they are appropriate to the field:

   a. Competence in a specialized field of knowledge
   b. Extensive experience with specialized client relationships
   c. Application of expert knowledge within a recognized professional practice
   d. Analysis and synthesis of primary scholarship or research
   e. Self-directed written research projects
   f. Mastery of theoretical knowledge

Course Level Expectations for Preparatory/Developmental Course Levels – The following definitions describe the expectations for the preparatory/developmental course levels (courses not applicable to transcripted certificates or associates, baccalaureate or graduate degrees):

A050-A099: Provide supplemental preparation for introductory college courses.

4. Instructional Goals and Student Learning Outcomes

A. Instructional Goals: Identifies what the instructor intends to accomplish in the course. Instructional goals should describe in broad terms what the instructor expects the student to learn from the course.
B. **Student Learning Outcomes:** Identifies what the student should know and/or be able to do as a result of completing the course. Student learning outcomes must be specific, measurable, achievable, relevant and timely. Student evaluation methods must assess the accomplishment of the students in each outcome.

C. **Goals and Student Learning Outcomes:** Should be clearly related to the appropriate course level. See course level definitions below and in the discussion of CAR Box 3 in section 5 of this handbook. The verbs listed in Appendix C are gathered into categories designed to assist in the description of student outcomes.

5. **Guidelines for Evaluation or Assessment Methods**

A. Program Student learning outcomes and their assessments are treated in detail in the program’s Academic Assessment Plan. This plan is evaluated for new and modified programs.

B. Student learning outcomes for courses are included in the CCG along with the means used to assess them. A tabular representation of student learning outcomes and typical assessment methods is preferred by GAB. UAB currently accepts tabular or bulleted versions. See examples below.

C. Identify typical evaluation methods appropriate to the level and type of course for determining how well the goals and student learning outcomes have been met. The level of detail given here should be sufficient to give instructors guidance concerning the nature and rigor of the evaluation techniques expected without unduly restricting teaching methods.

*Note: All academic programs at UAA are assessed. Student learning outcomes for courses should be compatible with Program Student Learning Outcomes and should be assessed in similar ways. For more detailed information about assessment, see Appendix E. For specific information about your program’s assessment procedures, see the college assessment coordinator.*

### Example 1

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students demonstrate the ability to distinguish between facts and opinions and determine the extent to which the facts provided support the arguments being made.</td>
<td>Performance on two separate short papers criticizing published arguments on both sides of a controversial issue.</td>
</tr>
<tr>
<td>Students demonstrate the ability to troubleshoot and repair a microprocessor based instrument system according to manufacturer’s standards</td>
<td>Performance on practical project assigned in lab. Performance on projects assigned during internship</td>
</tr>
<tr>
<td>Students demonstrate skill in the use of various media in the artistic expression of human emotion</td>
<td>Peer and faculty review and rating according to established departmental criteria of studio projects in at least three types of media.</td>
</tr>
<tr>
<td>Students demonstrate the ability to design an electro-mechanical system to accomplish a control function defined by the instructor, in accordance with applicable standards and codes.</td>
<td>Demonstration of successful functioning of the system through simulation or mock-up.</td>
</tr>
</tbody>
</table>

### Example 2

**Instructional Goals:**
This course is designed to fulfill the needs of general education requirements and to provide a foundation in general chemistry specifically for health science majors. It is intended to be a survey of general and organic chemistry with significant emphasis on health-related material. The periodic table, atomic and molecular structure, bonding, and chemical reactions, skills in measurements, balancing chemical equations and problem solving are emphasized.

The instructor will:
1. Present models of the periodic table, atomic and molecular structure, chemical bonding and reactions for development of observational skills and conceptual foundations in chemistry.
2. Present questions to initiate discussion, help students differentiate, link and integrate ideas and develop their own concepts, to articulate their thinking and explain models and solutions.

3. Provide multiple human health-related contexts for applying concepts and invite students to defend and verify their models and their solutions to problems.

**Student Learning Outcomes:**

After completing this course, the student will be able to:

1. Recognize and interpret chemical models of the periodic table, atomic and molecular structure, bonding and chemical reactions.

2. Apply science methodology with emphasis on exploring and verifying measurements and chemical equations in health-related problems rather than memorizing facts and answering “algorithmic” questions.

3. Demonstrate effective, efficient communication skills for discussing, chemistry concepts across multiple human-health related contexts including historical discoveries and technological advances.

**Assessment Measures:**

Various assessment tools can be used at the instructor’s discretion, including: quizzes, in-class presentations, short reports, take-home exams, creative work, homework, and a comprehensive standardized exam.

6. **Topical course outline (not a syllabus)** – List the topics covered each time the course is taught (additional topics may be covered in the course). Topical areas, instructional goals and student learning outcomes should be clearly related to each other.

   For selected topics courses, provide a topical outline (not a syllabus) of a sample course and a discussion on the range of topics to be presented and the expected depth of the typical presentation.

7. **Suggested text(s)** – Provide current suggested texts or recommended readings in alphabetical order. Similar texts are expected to be used in the actual course. Texts should be current (published within the last ten years) unless they are classics in the discipline.

8. **Bibliography** – Provide a list of the literature, in alphabetical order, that forms a foundation for the ideas and/or skills to be taught in the course. The concise and selective bibliography indicates texts, papers and other resources that the students and the instructor will find particularly valuable in meeting the course student learning outcomes.

   Suggested texts and bibliography should be presented in an acceptable style (e.g. APA, MLA, or Gregg). Be prepared to identify the style used.
Section 10 - Step-By-Step Instructions for the Course Action Request

Please visit the course search website (http://www.curric.uaa.alaska.edu/course_search.cfm) for assistance in filling out your Curriculum Action Request (CAR) form. This searchable website provides box-by-box information for active courses that can be easily transferred to the boxes on the CAR form.

10.1 The CAR Form

<table>
<thead>
<tr>
<th>Course Action Request</th>
<th>University of Alaska Anchorage</th>
<th>Proposal to Initiate, Add, Change, or Delete a Course</th>
</tr>
</thead>
</table>

1a. School or College
choose one

1b. Division
choose one

1c. Department

2. Course Prefix
3. Course Number
4. Previous Course Prefix & Number
5a. Credits/CEUs
5b. Contact Hours
   (Lecture + Lab)

6. Complete Course Title
   (Administrative Title for Transcribed Unit calculation)

7. Type of Course
   - Academic
   - Preparatory/Development
   - Non-credit
   - CEU
   - Professional Development

8. Type of Action:
   - Add
   - Change
   - Delete
   If a change, mark appropriate box:
   - Credits
   - Title
   - Grading Basis
   - Course Description
   - Test Score Prerequisites
   - Other Restrictions
     - Class Level
     - College
     - (please specify)
   - Cross listed
     - Stacked

9. Repeat Status
   - choose one
   - # of Repeats
   - Max Credits

10. Grading Basis
    - A-F
    - Pass/Fail
    - NG

11. Implementation Date
    - Semester
    - Year

12. Cross Listed with
    - Name

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
    Please type into fields provided. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/curricpetition

13b. Coordinator Email
    Date
    Initials
    Signed Initials
    Date

13c. Coordinated with the Library Liaison
    Date

14. General Education Requirement
    - Oral Communication
    - Written Communication
    - Critical Thinking
    - Humanities
    - Natural Sciences
    - Social Sciences
    - Quantitative Skills
    - Technical/Professional Competencies

15. Course Description
    (Suggested length 30 to 50 words)

16a. Course Prerequisite(s)
    (list prefix and number or test code and score)

16b. Co-requisite(s)
    (concurrent enrollment required)

16c. Other Restrictions
    - College
    - Major
    - Class
    - Level

17. Mark if course has fees

18. Mark if course is a selected topic course

19. Justification for Action

   - Initiate (Faculty only)
   - Date
   - Approved
   - Disapproved
   - Date

   - Initial (TYPE NAME)
   - Approved
   - Disapproved
   - Date

   - Department Chair
   - Date
   - Approved
   - Disapproved

   - Undergraduate/Graduate Academic
   - Board Chair
   - Date

   - Approved
   - Disapproved
   - Provost or Designee
   - Date
10.2 Instructions for Completing the CAR

Box 1a. School or College
Choose from the drop-down menu the school or college initiating action.
AA Academic Affairs
AS College of Arts and Sciences
CB College of Business and Public Policy
CH College of Health
CT Community and Technical College
EA College of Education
EN School of Engineering
HC University Honors College
KP Kenai Peninsula College
KO Kodiak College
MA Matanuska-Susitna College

Box 1b. Division
Using the drop-down box, insert the division initiating action. Note: Changing the name of a division or academic department requires Provost approval and memorandum to Governance as an informational item.

College of Arts and Sciences
AFAR Division of Performing and Fine Arts
AHUM Division of Humanities
AMSC Division of Mathematical and Natural Sciences
ASSC Division of Social Sciences

College of Business and Public Policy
ADBP Division of Business Programs
ADEP Division of Economics and Public Policy

Community and Technical College
AAVI Division of Aviation Technology
ABCT Division of Computer Networking and Office Technologies
A CAH Division of Culinary Arts and Hospitality
ACDT Division of Construction and Design Technology
ADCE Division of Community Education
ADTP Division of Transportation and Power
ADVE Division of Career and Technical Education
APER Division of Physical Education and Recreation
APRS Division of Preparatory Studies

College of Education
No Division Code

School of Engineering
No Division Code

College of Health
AHLS Division of Health and Safety
ADHS Division of Human Services and Health Sciences
ADSN Division of Nursing
AJUS Division of Justice
ASWK Division of Social Work
Box 1c. Department
Insert department initiating action. Note: Changing the name of a division or academic department requires Provost approval and a memorandum to Governance as an informational item.

Box 2. Course Prefix
Insert the course prefix affected by the curriculum proposal. Approval of new course prefixes must be obtained before the approval of related new/revised curriculum/program changes. See instruction on the PAR form regarding requesting a new prefix in Section 11.

Box 3. Course Number
Insert the course number. If a new number is indicated, then check with the Curriculum Specialist in the Office of the Registrar (aypublications@uaa.alaska.edu).

Reuse of Course Number Rule: When a permanent course number becomes inactive through deletion or purging, it will not be assigned to another course. However, a course can be reinstated using the same number.

1. Types of Courses
   A. Academic Credit Courses
      Courses numbered A100-A499 and A600-A699 count toward undergraduate and graduate degrees and certificates. Each course includes a component for evaluation of student performance. Student effort is indicated by credit hours. One credit hour represents three hours of student work per week for a 15-week semester (e.g., one class-hour of lecture and two hours of study or three class-hours of laboratory) for a minimum of 750 minutes of total student engagement, which may include exam periods. Equivalencies to this standard may be approved by the chief academic officer of the university or community college. Academic credit courses are numbered as follows.
      
      The numbering sequence signifies increasing sophistication in a student’s ability to extract, summarize, evaluate and apply relevant class material. Students are expected to demonstrate learning skills commensurate with the appropriate course level, and to meet, prior to registration, prerequisites for all courses as listed with the course descriptions.
      
      UAA and UA course level descriptions (see also the UAA catalog, Chapter 7 and University Regulation R10.04.09):

   i. Lower division courses usually taken by freshmen and sophomores
      
      A100-A199: Freshman-level, lower division courses.
      A200-A299: Sophomore-level, lower division courses

   ii. Upper division courses usually taken by juniors and seniors
      
      A300-A399: Junior-level, upper division courses
      A400-A499: Senior-level, upper division courses

   iii. Graduate-level courses
      
      A600-A699 – require a background in the discipline, and an ability to contribute to written and oral discourse on advanced topics in the field.

   B. Preparatory/Developmental Courses
      
      Courses with these numbers (A050-A099) provide basic or supplemental preparation for introductory college courses. They are not applicable to transcripted certificates or associate, baccalaureate, or graduate degrees, even by petition.
C. **Noncredit Courses**

   **A001-A049**: Noncredit courses are offered as career development, continuing education, or community interest instruction. Not applicable to any degree or certificate requirements (even by petition).

D. **Continuing Education Unit (CEU) courses**

   **AC001-AC049**: CEU courses are awarded upon completion of a course of study that is intended for career development or personal enrichment. CEU courses may not be used in degree or certificate programs or be converted to academic credit.

E. **Professional Development Courses**

   **A500-A599**: Courses with these numbers are designed to provide continuing education for professionals at a post-baccalaureate level. These courses are not applicable to university degree or certificate program requirements, are not interchangeable with credit courses, even by petition, and may not be stacked with any other course.

**NOTE**: All permanent numbered courses (A050-A499 and A600-A699) are included in the UAA catalog. If a discipline/department/school/college/community campus does not want a permanent numbered course to be included in the UAA catalog, that exclusion will need UAB/GAB recommendation and approval of the Vice Provost for Undergraduate Academic Affairs (for undergraduate courses) or Vice Provost for Research and Graduate Studies (for graduate courses).

1. **Course Numbers: Second and Third Digits**

   The second and third digits of course numbers in the -90 range are used for specific course types.

   **-90 Selected topics**: These are a generic “umbrella” course category identifying a defined field or subject area within a discipline. These courses allow departments to offer new topics in a discipline as demand warrants, and to keep the curriculum up to date. Subject matter of selected topics courses within a discipline is chosen to provide instruction not covered by regular catalog offerings. May be offered as a seminar, lecture, laboratory or workshop. There is no limit to the number of times a selected topic subtitle may be offered.

   **-92 Seminar or Workshops**

      **Seminar**: Specifically designed for student participation in exchanging ideas and academic experiences around a central core of subject matter.

      **Workshop**: A formal higher education offering with intensive instruction and information in a given field.

   **-93 Special topics**: Offered only once to meet short-term needs and are not intended to become part of the permanent catalog.

   **-94 Trial (experimental)**: Trial indicates that the faculty wish to offer the course before making the course permanent. May be offered up to three times as a -94 course.

   **-95 Internship and Practicum**

      **Internship**: A student work experience in which the employer or agency is the student’s immediate supervisor, is active in planning the expected student learning outcomes, and is involved in the evaluation of the student’s achievements.

      **Practicum**: A student work experience for which the academic department established the objectives and student learning outcomes.

   **-97 Independent study**: Address topics or problems chosen by the student with appropriate approval. Topics must not duplicate and must differ significantly from catalog courses.
Individual research: Consist of individual research by the student, directly supervised by a faculty member or faculty committee.

Thesis: Involve writing and/or completion of a thesis by the student.

Box 4. Previous Course Prefix & Number
Indicate if the course was offered previously under a different prefix and/or number, including -93s or -94s, and what that number was. If the course was not offered previously, insert “N/A.” or if the prefix and the number has not changed, insert “N/A.”

Reinstatement of a course
When an inactive course is being reinstated with the same course prefix and number, place the word Reinstate in box 4. In box 8, Type of Action, select change.

Box 5a. Credits/CEUs
Insert the number of semester credits or CEUs for the course. If variable, indicate the minimum and maximum, e.g. 1-3 credits or CEUs. The number of credits/CEUs is in direct relation to the contact hours. If the course is noncredit, enter the appropriate range of contact hours.

Box 5b. Contact Hours (Lecture + Lab) per week (15-week semester)
Insert the number of lecture and laboratory (or practicum) hours each week for the course that is offered over a 15-week semester. One contact hour is equivalent to 50 minutes.

One credit for a lecture course is typically equivalent to 1 contact hour/week for a total of 15 contact hours for the course [or 750 minutes of actual class time (50 minutes/contact hour x 15 contact hours = 750 minutes)].

One credit for a supervised laboratory course is typically awarded 2 contact hours/week for a total of 30 hours (2 x 15 weeks = 30) or 1,500 total contact minutes (30 x 50 minutes/contact hour = 1500 minutes) of supervised lab time.

One credit of unsupervised laboratory time such as some practica, student teaching, internships, or field work credits, is typically awarded 3 contact hours/week or more. Many courses, because of the nature of their subject matter or mode of delivery, require additional student time.

For a lecture course, at least two hours of work outside the class is expected for each credit. For a supervised laboratory class, in addition to 2 contact hours/week in the laboratory, at least one additional hour of outside work is expected for each credit (or a total 3 contact hours/week in the laboratory will satisfy this requirement).

For courses that are provided in a period less than the standard 15-week semester, the (Lecture + Lab) section should be completed as if the course would be taught in a 15-week period. Additional description should be provided in Box 19 (“Justification for Action”) of the CAR and in the CCG to explain the actual course length and required hours per week. For noncredit CEU courses, the total number of lecture and laboratory contact hours for the course should be stated.

1. Summary
   Semester = 15 weeks (standard semester length)
   One (1) Contact Hour = 50 minutes per week (or 750 minutes for the course)
   Outside Work = Additional time typically outside of classroom or laboratory
   One (1) credit = 1 contact hour per week of lecture (15 contact hours of lecture for course)
   or
   2 contact hours per week of supervised laboratory (or practica) if
outside work is needed (30 contact hours for the course) 

or

3 contact hours per week of supervised laboratory (or practica) if no outside work is needed (45 contact hours for the course)

(Lecture + Laboratory) = refers to the number of contact hours for lecture and laboratory per week based on a 15-week semester

2. Examples

- (3+0) = A typical lecture-only course. Equivalent to a 3-credit course with 3 contact hours of lecture and 0 hours of laboratory per week for a total of 135 hours for the course [45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours].

- (2+2) = A combined lecture and laboratory course. Equivalent to a 3-credit course with 2 contact hours of lecture and 2 hours of supervised laboratory per week for a total of 135 hours for the course (30 contact hours of lecture plus 60 hours outside lecture plus 30 hours lab plus 15 hours outside lab).

- (3+2) = A combined lecture and laboratory course. Equivalent to a 4-credit course with 3 contact hours of lecture and 2 hours of supervised laboratory per week for a total of 180 hours for the course (45 contact hours of lecture and 90 hours outside lecture plus 30 hours of lab and 15 hours outside lab).

- (3+3) = A combined lecture and laboratory course. Equivalent to a 4-credit course with 3 contact hours of lecture and 3 hours of laboratory (supervised or unsupervised) per week for a total of 180 hours for the course (45 contact hours of lecture and 90 hours outside lecture plus 45 hours of lab and 0 hours outside of lab).

- (0+9) = A practicum or field work type course. Equivalent to a 3-credit course with 0 contact hours of lecture and 9 hours of practicum or field work laboratory (supervised or unsupervised) per week for a total of 135 hours for the course (0 contact hours of lecture plus 135 hours of lab and 0 hours outside of lab).

3. The CEU

The CEU is a unit of measure for noncredit activities. The CEU can be used to document an individual’s participation in formal classes, courses, and programs as well as in nontraditional modes of noncredit education, including various forms of independent, informal, and experiential study and learning.

Examples:

0.1 CEU = 1 hour of instruction and no additional hours of work for the course
1 CEU = 10 hours of instruction and no additional hours of work for course
1.5 CEUs = 15 hours of instruction and no additional hours of work for course
3.5 CEUs = 20 hours of instruction and 15 hours of required additional work appropriate to the objectives of the course for course
2 CEUs = 20 hours of instruction and no additional work, or 40 hours of laboratory or clinical work

4. Minimum Course Length (Compressibility Policy)

The Compressibility Policy states: “Courses scheduled for less than a full semester may not be offered for more than 1 credit each week (seven days).” Two credits require a minimum of eight days and 3 credits require a minimum of 15 days.

Box 6. Complete Course Title

Insert full title of the course/program. If the title of the course is greater than 30 characters (including spaces), insert a title of 30 characters or less (including spaces) in the field underneath the full title. This abbreviated title will
appear on transcripts. Abbreviations used should be readily recognizable or accepted abbreviations within the discipline. Titles of existing courses in the database cannot be used for new/revised courses, except for the following types of courses: dissertation, internship, practicum, project, research, selected topic, seminar, thesis.

Box 7. Type of Course
Identifies type of course offered.

1. Academic Courses (numbered 100-499 and 600-699)
   A. Program Requirement - A credit course specifically required by degree, certificate, or a Minor program.
   B. Program Selective - A credit course within a group of courses from which a student is required to select.
   C. General Education Requirement - A credit course that is approved to fulfill part of the general education distribution requirements of the University.
   D. Elective - A credit course selected by the student that is neither a degree program requirement nor a program selective, but which is applicable towards the minimum number of credits required for the degree or certificate.

2. Preparatory/Developmental Courses (050-099): Preparatory/Developmental courses with these numbers provide basic or supplemental preparation for introductory college courses. They are not applicable to transcripted certificates or associate, baccalaureate, or graduate degrees, even by petition. (See Box 3. Course Number, for further information).

3. Nondegree Courses
   A. Noncredit Courses (000-049) - These are noncredit and nondegree courses, programs, and/or activities that respond to relevant community education needs and interests and that typically do not have specifically defined student learning outcomes.
   B. CEUs (denoted by “AC” rather than just “A” before course number) - A course that provides further development of a trade, profession, or personal improvement.
   C. Professional Development Courses (A500-A599) - Designed to provide continuing education for professionals at the post-baccalaureate level. These courses are not applicable to university degree or certificate program requirements, are not interchangeable with credit courses, even by petition, and may not be stacked with any other course. (See Box 3. Course Number, above for further information).

Box 8. Type of Action
Identifies whether the CAR is for a course addition, change, or deletion. If the action is a course change, identify all the changes being made.

If the course change results in a program change, a separate PAR must be completed for each action and must identify the element(s) being changed.

If a permanent number is being requested after the course has run successfully as a -93 or -94, this is an addition, not a change, since the addition of a permanent course is being proposed.

Box 9. Repeat Status
Identifies the Repeat Status of the course.

- Yes means the course may be repeated for credit
- No means it cannot be repeated for credit

If repeat status is marked as Yes, the Number of Repeats and Maximum Hours must be indicated.
The Number of Repeats indicates the number of additional times the course may be taken for credit (does not include the original enrollment). The Maximum Hours indicates the total number of credits that may be applied towards a degree.

Example

HIST A390  3 credits
Repeat Status: Yes  Number of Repeats: 1  Max Credits: 6

Box 10.  Grading Basis
Identifies how performance in the course is to be graded (A-F or P/NP [Pass/No Pass] for academic and professional development courses; NG [no grade] for CEUs and noncredit offerings).

Box 11.  Implementation Date
Using the drop-down menus, insert the semester and year that the addition, deletion, or change will be implemented.

1. Courses
   The end semester is needed for nonpermanent courses only (-93s, -94s, bridge courses). For permanent courses, leave the semester field blank and 9999 for the end year. Careful consideration needs to be given to permanent courses affecting degrees and certificates. New programs and courses may be added for any term; however changes to existing programs can only have a fall implementation date. Careful consideration needs to be given to ensure final approval can be made prior to printing of catalog. For this reason it is suggested that changes to programs be ready for first reading no later than first week of March.
   
   Course additions or modifications must be made in conjunction with publication of the class schedule. Since academic units are responsible for providing an adequate transition for students from one set of program requirements to another, units should consider the official implementation date of program changes when implementing the approved changes. The current production calendar can be found on the Governance website at www.uaa.alaska.edu/governance. New course offerings have greater flexibility but implementation dates for course changes will not be allowed for a term in which registration has already begun. When a course change is required as part of a program change for fall semester, first readings for the course should take place no later than the first week in February. This is to ensure final approval prior to fall registration opening.

2. Program or Academic Policy
   The overall principles affecting the date for implementation of academic policy or program change include the following:

   A. Students must receive adequate notice of a program change.
   B. Staff must have adequate time to implement the change effectively.

   Generally this is interpreted to mean that program changes, including new programs, must be advertised in the university catalog.

   Based on the current schedule of catalog distribution in the spring or summer, most program changes should take effect in the fall semester following catalog distribution. Exception to this policy will be made only in exceptional circumstances. Permission of the OAA is required for implementation at an earlier date. Requests for an earlier date must detail the procedures the academic unit will use to notify affected students and facilitate the transition to the new requirements.

Box 12.  Cross-Listed or Stacked

1. Cross-listed
A. Cross-listed courses are courses approved under multiple prefixes and offered at the same time and location.
B. Each cross-listed course must have a separate CAR for each prefix.
C. Everything except the course prefix must be identical.
D. The department chair of the coordinating department must signify approval of the cross-listing by signing Box 12 of the CAR.
E. Each department is responsible for preparing the appropriate CAR and providing supporting documentation. These must be submitted at the same time for UAB/GAB review.
F. When courses are cross-listed, they must be offered and printed in UAA’s schedules and catalog under each prefix. For example, ART/JPC A324 is listed both under Art and Journalism and Public Communications.

2. Stacked
A. Stacked courses are courses from the same prefix but at different levels offered at the same time and location.
B. Existing and new courses may not be stacked unless approved as stacked courses by UAB/GAB.
C. Courses may not be stacked informally for scheduling purposes.
D. The course description and course content guide of a stacked course must clearly articulate the difference in experience, performance, and evaluation of students at different levels, including graduate students vs. undergraduate students.
E. Courses at the 300 level may not be stacked with 600-level courses.
F. A500-A599 level (professional development) courses may not be stacked with any other course
G. If stacking status is requested, rationale must be provided.

If the graduate-level course is stacked with a 400-level course, or if undergraduate students are taking the course as part of their baccalaureate degree, the justification must clearly describe how the quality of the graduate students’ experience will be maintained in a mixed-level classroom. (See Section 9 for guidance on the CCG.)

Box 13a. Impacted Courses or Programs
Do NOT complete Box 13a for new courses.

The intent of Box 13a is twofold:
1. To provide a list of all courses, programs, college requirements, and catalog copy that contain reference to the course under revision in the current UAA catalog. This includes the initiating department.
2. To document coordination* with impacted programs and departments.

If the course revision impacts the program catalog copy of the initiating department, a Program/PREFIX Action Request must be completed and submitted with track-changed catalog copy. The current catalog copy in Word is available on the Governance website (www.uaa.alaska.edu/governance)

In order to find courses and programs impacted by this revision, use the .pdf file provided on the Office of the Registrar’s website (http://uaa.alaska.edu/records/catalogs/catalogs.cfm). Open the link to the latest catalog and use the find function in Adobe to search for the course prefix and number. You should fill out a line of the table for every program, (including type of degree, e.g. AA, AAS, BA, BS, MA, MS, Certificate), course, or college requirement that the revised course appears in.
Three or fewer lines (impacts) can be recorded directly into the table on the CAR. More than three requires the creation of a separate coordination spreadsheet is required listing the impacted programs or courses, the specific impact (e.g. program requirement, program selective**, credits required, prerequisite, corequisite, registration restriction), type and date of coordination, and the name of the department chair/coordinator contacted. An example of the Box13a. spreadsheet can be found on the Governance website at http://uaa.alaska.edu/governance/coordination/index.cfm.

**Courtesy Coordination**
Sometimes coordination with a department or program must occur even though there is no impact in the catalog. The department initiating the proposal is responsible for coordinating with each impacted program chair/coordinator, even if the impact is not found in the catalog. The term courtesy coordination can be used to document this type of situation.

**Items that are NOT entered into Box 13a.**
- You do not have to list impacts to classes that the revised class is stacked or cross listed with if you have already completed Box 12.

* Coordination is the requirement that all faculty initiators of curriculum actions identify and notify all academic units that may be affected by the curriculum change of the precise nature of their proposal. Coordination is always expected between and among affected department chairs/coordinators and deans in Anchorage, as well as directors of community campuses.

** program selective - A credit course within a group of courses from which a student is required to select.

**Example of Box 13a (Coordination and Courtesy Coordination)**

CIS A330 (Database Management Systems)

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Logistics and Supply Chain Management, BBA</td>
<td>3/25/2011</td>
<td>Philip Price</td>
</tr>
<tr>
<td>CIS A360</td>
<td>3/25/2011</td>
<td>Minnie Yen</td>
</tr>
<tr>
<td>CIS A410</td>
<td>3/25/2011</td>
<td>Minnie Yen</td>
</tr>
<tr>
<td>CIS A430</td>
<td>3/25/2011</td>
<td>Minnie Yen</td>
</tr>
<tr>
<td>Computer Science BA, BS</td>
<td>3/25/2011</td>
<td>Sam Thiru</td>
</tr>
</tbody>
</table>

Do not send proposals as attachments when sending email notices to the faculty listserv since large files can cause difficulty with email delivery.
Box 13b. **Coordination Email Submitted to Faculty Listserv**

Enter the date of the email send to the faculty listserv ([uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)). Initiating faculty are required to send an email notification to faculty listserv giving a brief overview of the proposal including:

- School and department (CAR boxes 1a and 1c),
- course prefix (CAR box 2),
- course number (CAR box 3),
- course title (CAR box 6),
- Add/Change/Delete and if change, a summary list of changes (CAR box 8),
- course description (CAR box 15),
- justification for action (CAR box 19),
- any other relevant information.

Do not send proposals as attachments when sending email notices to the faculty listserv since large files can cause problems. The coordination email must be sent at least 10 working days before being presented at UAB/GAB.

Box 13c. **Coordination with Library Liaison**

The faculty initiator is required to send the CAR and CCG to the library liaison for that department ([http://consortiumlibrary.org/find/subject_liaison_librarians](http://consortiumlibrary.org/find/subject_liaison_librarians)), with a copy of the email sent to the Governance Office.

Box 14. **GERs**

Identifies whether the course is a GER and which type of GER it is. The department initiating the proposal is responsible for submitting supporting documentation for the change, addition, or deletion.

Box 15. **Course Description**

Identifies the intent of the course. For courses, a 20- to 50-word description is preferred.

**Special Notes** are also identified in this field. Special notes indicate certain requirements of the student or the course that are not identified in the course description (e.g. “May be repeated for credit with a change in subtitle,” or “Offered Spring Semesters”).

A program proposal must include new catalog copy with a copy of the old catalog copy if applicable. For program proposals type “see attached catalog copy” in the box.

Box 16a. **Course Prerequisite(s)**

Identifies prerequisites which must be achieved prior to enrolling in a course. The prerequisite course (listed with prefix and number in alpha-numerical order) must be successfully completed prior to taking the course. Course prerequisites should be grouped using parenthesis and brackets similar to how you would group mathematical expressions. See the examples below.

Unless a minimum grade is specified for a prerequisite class, any grade value (including I, F, and W) will mark the class as satisfying the prerequisite if prerequisite checking has been turned on. For instance, if a student withdrew from a class and received a W, that student would be identified by Banner as having fulfilled any prerequisite requirement for the class they withdrew from. It is always assumed that faculty may waive the prerequisite or the minimum grade requirement.
A course prerequisite which **may** be taken concurrently must also be included in this box using the additional language “or concurrent enrollment.” This differs from a corequisite which should be placed in Box 16c. See the section on Box 16c. for detailed information about corequisites.

Any additional information that appears as text should be placed in Box 16e (Other Restrictions).

Prerequisite examples:

ECON A429 (Business Forecasting)
{CIS A110, BA A273, and [BA A377 or ECON A321]} with minimum grade of C

EDFN A303 (Foundations of Teaching and Learning)
[EDFN A301 or concurrent enrollment] and [EDSE A212 or PSY A245]

EE A324 (Electromagnetics II)
[EE A314 or PHYS A314] and MATH A302

ENGL A311 (Advanced Composition)
[ENGL A211 or ENGL A212 or ENGL A213 or ENGL A214] with minimum grade of C

FIRE A214 (Fire Protection Systems)
FIRE A101 and FIRE A105 and FIRE A121 and [MATH A105 or MATH A107 or MATH A108 or MATH A109 or MATH A172 or MATH A200 or MATH A201 or MATH A272]

SWK A342 (Human Behavior in the Social Environment)
PSY A150 and [BIOL A102 or BIOL A111 or BIOL A112 or BIOL A115 or BIOL A116 or LSIS A102 or LSIS A201]

Note: Automatic prerequisite checking is available when a Prerequisites Form is submitted. This form is not part of the curriculum process, but is submitted directly to the Registrar’s Office. It is available via www.uaa.alaska.edu/records/faculty_resources/upload/Prerequisites_Form.pdf

Test Scores:
Identify test scores which must be successfully achieved prior to taking the course. This may include UAA Approved Placement Tests, SAT, ACT, or others. Specifically test scores are not required. It is assumed that faculty may waive the requirement.

Courses wishing to implement placement test scores as part of pre-requisite checking should indicate “or appropriate placement score.” There should also be an attached memo for each CAR indicating what the appropriate placement score is. If a change occurs to the cut score, the department will need to submit a memo to the Office of the Registrar and the Governance Office which would outline the new cut scores and list specifically which courses are impacted.

**Box 16b. Corequisite(s)**
Identifies a course (must be listed with prefix and number) which **must** be taken concurrently; requires simultaneous enrollment and withdrawal. It is assumed that faculty may waive the requirement.

Example for NURS A180
Corequisite: NURS A125 and NURS A125L

Note: If the department has an alternative corequisite or a list of options for corequisites, do not include “or” in this box; do not include text information in this box. That information should be placed in box 16e (Other Restrictions).
Box 16c. Other Restriction(s)
Identifies additional requirements that a student must have satisfied prior to registering for the course (e.g., college or school admission\textsuperscript{a}, major\textsuperscript{b}, class standing\textsuperscript{c}, or level\textsuperscript{d}). The name of the college or school, major, class standing, or level required should be specified in Box 16d. When these boxes are checked, Banner will automatically enforce the restrictions. It is assumed that faculty may waive the requirement.

\textsuperscript{a} College or school admission – identifies a college/school to which a student must be admitted in order to enroll in the course.

\textsuperscript{b} Major – identifies a major which a student must have declared in order to enroll in the course.

\textsuperscript{c} Class – identifies a class standing which a student must have attained in order to enroll in the course (0-29 credits = freshman; 30-59 credits = sophomore; 60-89 = junior, 90+ = senior).

\textsuperscript{d} Level – identifies a level which a student must be at in order to enroll in the course (graduate or undergraduate).

Checking the level box in 16d is mandatory for all graduate level 600 courses.

Box 16d. Registration Restriction(s)
Identifies additional requirements that a student must have satisfied prior to registering for the course (e.g. instructor permission, departmental permission). Must be enforced by the program/department/instructor. It is assumed that faculty may waive the requirement.

NOTE: Responsibility for confirming prerequisites, test scores, co-requisites, registration restrictions, and other restrictions lies with the department. It is assumed that the faculty may waive or enforce any of these requirements, subject to program, department and college policy.

Box 17. Mark if Course Has Fees
Indicates whether there is a student fee associated with the course. Do not include fee amount on CAR. This information is published under the course description in the catalog as “Special Fees,” and in the schedule with specific amounts. If the only action requested is a change in fees, no CAR is required.

New fees, changes in course fees, and deletions of course fees must be submitted on the Fee Request Form (\url{www.uaa.alaska.edu/governance/coordination/index.cfm}) and need the approval of the Provost. Refer to the Board of Regents Policy and Regulation Part V Chapter X for course fee information \url{www.alaska.edu/bor/policy-regulations/}.

Box 18. Mark if Course is a Selected Topic Course
Check box to indicate that course is a selected topic course; that the subtitle or topic of the course changes. Most selected topics courses are repeatable with a change in subtitle, and this box will help ensure that scheduling is done properly, and that student transcripts will show subtitle changes ensuring repeat credit is received.

Box 19. Justification for Action
For an existing course, justification needs to be provided for each proposed change as indicated in Box 8. Each proposed change must be noted, e.g. updates to CCG, Goals and Student Learning Outcomes, etc. For a new course, justification needs to be provided such as student or community interest or how the proposed course or change strengthens existing offerings. The supporting data must be supplied if the course is required for certification or accreditation.
Section 11 - Step-By-Step Instructions for the Program/Prefix Action Request (PAR)

11.1 The PAR Form

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>choose one</td>
<td></td>
</tr>
</tbody>
</table>

2. Complete Program Title/Prefix

3. Type of Program

<table>
<thead>
<tr>
<th>Choose one from the appropriate drop down menu:</th>
<th>Undergraduate:</th>
<th>or</th>
<th>Graduate:</th>
<th>CHOOSE ONE</th>
</tr>
</thead>
</table>

This program is a Gainful Employment Program: [ ] Yes or [ ] No

4. Type of Action: [ ] PROGRAM [ ] PREFIX

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>PREFIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Add</td>
<td>[ ] Add</td>
</tr>
<tr>
<td>[ ] Change</td>
<td>[ ] Change</td>
</tr>
<tr>
<td>[ ] Delete</td>
<td>[ ] Inactivate</td>
</tr>
</tbody>
</table>

5. Implementation Date (semester/year)

From: / To: /

6a. Coordination with Affected Units

Department, School, or College:

Faculty Initiator Name (typed): ______
Faculty Initiator Signed Initials: ______
Date: ________________

6b. Coordination Email submitted to Faculty Listserv ([uaa-faculty@lists.uaa.alaska.edu])

Date: ______

6c. Coordination with Library Liaison

Date: ______

7. Title and Program Description - Please attach the following:

[ ] Cover Memo

[ ] Catalog Copy in Word using the track changes function

8. Justification for Action

<table>
<thead>
<tr>
<th>Initiator (facult only)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiator (TYPE NAME)</td>
<td></td>
</tr>
</tbody>
</table>

[ ] Approved
[ ] Disapproved

Dean/Director of School/College

Date

[ ] Approved
[ ] Disapproved

Undergraduate/Graduate Academic Board Chair

Date

[ ] Approved
[ ] Disapproved

Provost or Designee

Date

[ ] Approved
[ ] Disapproved

Department Chair

Date

[ ] Approved
[ ] Disapproved

College/School Curriculum Committee Chair

Date
11.2 Instructions for Completing the PAR

Box 1a. School/College
Using the drop-down box, insert school or college initiating action.
AA  Academic Affairs
AS  College of Arts and Sciences
CB  College of Business and Public Policy
CH  College of Health
CT  Community and Technical College
EA  College of Education
EN  School of Engineering
HC  University Honors College
KP  Kenai Peninsula College
KO  Kodiak College
MA  Matanuska-Susitna College

Box 1b. Department
Insert department initiating action. Note: Changing the name of a division or academic department requires Provost approval and a PAR notifying Governance.

Box 2. Complete Program Title/Prefix
Insert full title of the proposed program or prefix.

Box 3. Type of Program
Insert Type of Program proposed. The maximum number of credits required by a degree program, per Board of Regents Policy (BOR Policy and Regulation 10.04.030), are noted below:

- Occupational Endorsement Certificate
- Undergraduate Certificate
- Associates (AA/AAS)
- Baccalaureate (BA/BS)
- Minor
- Post-Baccalaureate Certificate
- Graduate Certificate
- Graduate
- Doctoral
- Other

If the program is determined to be a Gainful Employment program, then check the “Yes” box; otherwise, check the “No” box. Meet with Associate Vice Chancellor for Enrollment Management to determine a program’s status. Additional documentation is required for programs which are identified as Gainful Employment programs.

Box 4. Type of Action
Check if the PAR is for an addition, deletion, or change to a program. Alternatively, the type of action may indicate a request for a new prefix, change to a prefix, or inactivation of a prefix.

Box 5. Implementation Date
Insert the semester and year that the addition, deletion, or change will be implemented.

The overall principles affecting the date for implementation of academic policy or program change include the following:

- Students must receive adequate notice or a program/prefix change.
- Staff must have adequate time to implement the change effectively.
Generally this is interpreted to mean that program/prefix changes, including new programs, must be advertised in the university catalog.

Based on the current schedule of catalog distribution in the spring or summer, most program changes should take effect in the fall semester following catalog distribution. Exception to this policy will be made only in exceptional circumstances. Permission of the OAA is required for implementation at an earlier date. Requests for an earlier date must detail the procedures the academic unit will use to notify affected students and facilitate the transition to the new requirements.

Box 6a. Coordination with Affected Units
Coordination is the requirement that all faculty initiators of program/prefix actions identify and notify all academic units who may be affected by the curriculum change of the precise nature of their proposal. Coordination is always expected between and among department chairs and deans in Anchorage, as well as directors of community campuses.

- The purpose of coordination is to:
  A. Allow affected units who may have a legitimate interest in the program/prefix proposal, opportunities to review and comment on such proposals before they are considered by the college curriculum committees and the UAB/GAB.
  B. Encourage collaboration among all academic units.
  C. Maintain and improve quality of program offerings.

- An affected unit is defined as a department or academic unit whose curriculum will be affected by the proposed program action.

- Coordination with affected units is required in the following cases:
  A. When the program, courses, or content proposed bridges material regularly included in other disciplines.
  B. When the program includes or requires prerequisite courses from other degree programs, sites, or campuses.
  C. When the proposed program can reasonably be expected to use courses offered by other disciplines.
  D. When a subsequent allocation of resources resulting from the proposal will impact the unit’s ability to deliver academic courses required in other programs.

- Coordination should be initiated very early in the program development process – before finalization of the proposal.

- Coordination includes:
  A. Sending proposal to department chairs of affected units
  B. Actively seeking collaboration, comments and suggestions
  C. Allowing 10 working days from the published date of notification of affected units before moving the proposal through the established levels of review.

- Evidence of coordination with affected units is required by inclusion of a copy of the email sent to the UAA listserv and to the department chairs of affected units. If necessary, affected units should communicate directly with the initiating department. Affected academic units are then encouraged to submit written support or objection to UAB/GAB and/or to speak to the proposal at the appropriate Board meeting. If no written comments are received by the UAB/GAB within 10 working days of the notification date, it is assumed that there are no objections to the proposal.
After coordination is complete, in Box 6a; type in the department, schools, or colleges coordinated with; type the faculty initiator’s name; write in the faculty initiator’s initials and the date.

Box 6b. Coordination Email Submitted to Faculty Listserv
Initiating faculty are required to send an email notification to faculty listserv at: uaa-faculty@lists.uaa.alaska.edu giving a brief overview of the proposal including:

- School and department (PAR boxes 1a and 1b),
- Complete Program Title (PAR box 2),
- Type of Program (PAR box 3),
- Type of Action (Add/Change/Delete) (PAR box 4),
- justification for action (PAR box 8),
- any other relevant information.

The email must be sent at least 10 working days before being presented at UAB/GAB.

Do not send proposals as attachments when sending email notices to the faculty listserv since large files can cause problems.

Box 6c. Coordination with Library Liaison
Coordination with the library liaison should occur early in the curriculum process. The faculty initiator is required to send the PAR to the library liaison for that department (http://consortiumlibrary.org/about/directory/liaisons.php), with a copy of the email sent to the Governance Office. Type in the date of coordination to indicate that the coordination has been done.

Box 7. Title and Program Description
Include a description of the intent of the program in the form of an attached cover memo. A program proposal must also include catalog copy with text changes and a clean copy of how the new catalog text will appear.

Box 8. Justification for Action
Insert the need for and/or reasoning behind the proposed action, such as student or community interest or how the proposal strengthens existing offerings.
Section 12 - Catalog Copy Formatting

The following outlines the requirements for formatting all program catalog copy submitted to UAB or GAB. Included are two sample program catalog copy sections. Refer to the UAA catalog (www.uaa.alaska.edu/records/catalogs/catalogs.cfm) for more examples.

Catalog copy from the published catalog can be found in Word format on the Governance site at www.uaa.alaska.edu/governance/.

**Basic Format:**

Department Name  
Contact information, location, web address

1. General discipline information
   A. Degree or Certificate program name and description  
   B. Overview and career information  
   C. Student Learning Outcomes: Include Student Learning Outcomes for the program in the catalog copy.  
   D. Honors: Header in the catalog should read: “Honors in Discipline”, e.g., Honors in English.  
   E. Accreditation  
   F. Research possibilities  
   G. Gainful Employment statement (if needed)

2. Admission Requirements
   A. Preparation  
   B. Pre-major  
   C. Major

3. Advising

4. Academic Progress Requirements

5. Graduation Requirements
   A. General University  
   B. General Education Requirements (GERs)  
   C. College  
   D. Major degree requirements  
   E. Other graduation requirements

6. Faculty

**Notes for creating and submitting catalog copy:**

- **You must use the Word formatted catalog copy available at www.uaa.alaska.edu/governance/**.

- Courses must have their full titles and correct credit amounts and those must match what is currently in the catalog.

- Within a department or discipline, the order of undergraduate programs should be:  
  1. Honors  
  2. Occupational endorsement certificates
3. Undergraduate certificates
4. Associates degrees
5. Bachelor of Arts
6. Bachelor of Science
7. Minors

For graduate programs should be:
1. Graduate certificates
2. Masters degrees
3. Ph.D. programs

- Required credit amounts should be aligned to the right (see the following two examples). If a class has its credits aligned to the right it will be interpreted that this class is a requirement.

- Electives (or selectives) will have their credit amounts shown in parenthesis and will appear one space after the title of the course (see the following two examples). If a course has its credit amount in parenthesis after the title it will be interpreted as not required (i.e., a class a student can choose to take to fill a requirement).

- If, within a list of required classes, a student must take 3 credits, for example, but has a choice of two or more classes to fulfill that requirement, the required credit amount should be aligned to the right on the same line as the first elective. All of the electives should still have their credits in parentheses after the course title. Each course should be separated by a line on which an “or” appears (and nothing else). This is what it should look like:

<table>
<thead>
<tr>
<th>Upper Division Biology (choose one of the following)</th>
<th>3-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL A310 Principles of Physiology (3)</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>BIOL A415 Comparative Animal Physiology (4)</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>BIOL A461 Molecular Biology (3)</td>
<td></td>
</tr>
<tr>
<td>CHEM A105 General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM A105L General Chemistry I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM A106 General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM A106L General Chemistry II Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM A253 Principles of Inorganic Chemistry</td>
<td>3</td>
</tr>
</tbody>
</table>

- The list of courses must appear in alphabetical order by prefix, and then in numerical order by course number.
- Faculty are listed in alphabetical order by instructor last name. Degrees or credential letters are not included (i.e., Ph.D., P.E., etc.). Faculty position title and email address are included.
EXAMPLE 1:

ELEMENTARY EDUCATION

Professional Studies Building (PSB), Room 224, (907) 786-4481
www.uaa.alaska.edu/coe

Bachelor of Arts, Elementary Education (with Teacher Certification)

Individuals interested in undergraduate elementary teacher preparation may obtain either a BA in Elementary Education or a Post-Baccalaureate Certificate in Elementary Education with elementary teacher certification. See Chapter 11, Post-Baccalaureate Certificate Programs, for more information.

The BA in Elementary Education is a professional degree nationally recognized by the Association of Childhood Education International (ACEI). Unique features of the program include an emphasis on culturally responsive teaching in Alaska’s context; a strong liberal studies focus; exposure to a range of teaching and curriculum design approaches, including integration of educational technology; and focused field experiences, developmentally sequenced and in a variety of school/classroom settings. Applicants are encouraged to take EDFN A101 Introduction to Education (3 credits) to learn more about the field of education. Elementary Education supports an Honors Track option. See an advisor for course guidance.

Student Learning Outcomes

Student learning outcomes for the program are based on the Standards for Alaska’s Teachers located at www.eed.state.ak.us/standards and the Association for Childhood Education International (ACEI) standards located at www.acei.org. Within a culturally responsive framework, program graduates will:

1. Construct learning opportunities that support K-6 students’ development, acquisition of knowledge, and motivation.
2. Design and implement curriculum that supports K-6 students’ learning of language arts, science, mathematics, social studies, the arts, health, and physical education.
3. Plan and implement instruction based on knowledge of K-6 students, learning, theory, curriculum, and community.
4. Create appropriate instructional opportunities to address diversity.
5. Use teaching strategies that encourage development of critical thinking and problem solving.
6. Foster active engagement in learning and create supportive learning environments.
7. Use effective communication strategies to foster inquiry and support interaction among K-6 students.
8. Use formal and informal assessments to inform and improve instructional practice.
9. Reflect on practice and engage in professional growth activities.
10. Establish positive collaborative relationships with families, colleagues, and the community.

Admission Requirements

Admission to the University of Alaska Anchorage: Elementary Education Major

Applicants must complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations. Application forms are available at: www.uaa.alaska.edu/admissions.

Admission to the Department of Teaching and Learning, College of Education: Elementary Education Major

In order to be admitted to the Department of Teaching and Learning, students must:

1. Submit an application to the Department of Teaching and Learning.
2. Complete the Tier I Basic College-Level Skills General Education Requirements.
3. Have a cumulative GPA of 2.75.
4. Have a GPA of 3.00 in Major Requirements.

5. Successfully complete the Praxis I: Pre-Professional Skills Test (PPST). Contact the Department of Teaching and Learning for current passing scores.

6. Successfully complete the following courses with a grade of C or higher: EDEL A205 Becoming an Elementary Teacher and EDSE A212 Human Development and Learning.

7. Submit Interested Person Report.

   Note: Admission to the Department of Teaching and Learning is competitive. Qualified applicants are accepted on a space-available basis. Admission to the university as an Elementary Education major does not guarantee admission to the department.

**Admission to Field Experiences**

Admission to field experiences is separate from admission to the program and may be limited by community partners. See Field Placements located at the beginning of the College of Education section of this chapter.

Applications for EDEL A495A, Elementary Education Practicum II, and Elementary Internship courses must be submitted by the semester before enrolling in EDEL A495A, Elementary Education Practicum II. Qualified applicants are accepted on a space-available basis. Admission to the Department of Teaching and Learning does not guarantee admission to the field experiences.

The Elementary Programs Admission Committee determines a candidate’s readiness to enroll in all field experiences. The candidate must realize that requirements set forth below constitute minimum preparation, and it may be the judgment of the committee that the candidate needs further work to develop content knowledge or skills to work with children.

**EDEL A495A, Elementary Practicum II and Internship Admission Criteria**

EDEL A495A, Elementary Education Practicum II, increases the time in the classroom and the planning and teaching experiences, with focus on the classroom environment, math and science. The Elementary Internship includes a capstone seminar and extensive, supervised teaching experiences in an elementary classroom. Emphasis is placed on meeting the Alaska Beginning Teacher Standards. Criteria include the following:

1. Meet all the requirements for and be admitted to the Department of Teaching and Learning as an Elementary Education major.
2. Submit an application form for admission to Internship, including a resume and letter of introduction, by the department’s published deadline.
3. Participate in a screening interview.
4. Complete all prerequisite courses.
5. Successfully complete the Praxis II: Elementary Content Knowledge (0014). Contact the Department of Teaching and Learning for current passing score.
6. Have a cumulative GPA of 2.75.
7. Have a GPA of 3.00 in Major Requirements.
8. Apply for the Student Teaching Authorization Certificate. This application includes fingerprinting and a criminal background check. Fee required. Contact COE advisors for more information.
Academic Progress

Satisfactory progress in the practicum courses (EDEL A395 and EDEL A495A) is required for enrollment in the internship (EDEL A495B). All Major Requirements, EDSE A212 and MATH A205 must be completed with a grade of C or higher in order to obtain an institutional recommendation for elementary teacher certification.

Graduation Requirements

Candidates must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C Background Check Requirements

See Field Placements located at the beginning of the College of Education section of this chapter.

D. Liberal Studies Area

Complete the liberal studies area. These courses are selected to provide future elementary teachers with the skills and background knowledge in the various subjects they will be expected to teach. The selection is based on national and state standards for content preparation. Some of the liberal studies courses may also be used to meet General Education Requirements (GERs).

Sciences Core (15-24 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSIS A102</td>
<td>Origins: Earth-Solar System-Life (5)</td>
<td>5-8</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>GEOL A111</td>
<td>Physical Geology (4)</td>
<td>4</td>
</tr>
<tr>
<td>OR</td>
<td>ASTR A103</td>
<td>Solar System Astronomy (3)</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td>ASTR 103L</td>
<td>Solar System Astronomy Laboratory (1)</td>
<td>1</td>
</tr>
<tr>
<td>OR</td>
<td>ASTR A104</td>
<td>Stars, Galaxies and Cosmology (3)</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td>ASTR A104L</td>
<td>Stars, Galaxies and Cosmology Laboratory (1)</td>
<td>1</td>
</tr>
<tr>
<td>LSIS A201</td>
<td>Life on Earth (5)</td>
<td>5-8</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>BIOL A102</td>
<td>Introductory Biology (3)</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td>BIOL A103</td>
<td>Introductory Biology Laboratory (1)</td>
<td>1</td>
</tr>
<tr>
<td>OR</td>
<td>BIOL A115</td>
<td>Fundamentals of Biology I (4)</td>
<td>4</td>
</tr>
<tr>
<td>OR</td>
<td>BIOL A116</td>
<td>Fundamentals of Biology II (4)</td>
<td>4</td>
</tr>
<tr>
<td>LSIS A202</td>
<td>Concepts and Processes: Natural Sciences (5)</td>
<td>5-8</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>CHEM A103</td>
<td>Survey of Chemistry (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

If you have subheadings for different types of courses, you can use italics, bold, underline, or tabs to set them apart. It is a good idea to include a total credit amount as well.

If a student has a choice between two electives to fill a required course, put the elective credit amounts in parentheses next to the course titles, as usual, but put the required credit amount aligned to the right on the same line as the first course. Separate the two electives with an “or” on its own line.
CHEM A103L  Survey of Chemistry Laboratory (1)
and one of the following lecture/lab combinations:
PHYS A115  Physical Science (3)
and
PHYS A115L  Physical Science Laboratory (1)
or
PHYS A123  Basic Physics I (3)
and
PHYS A123L  Basic Physics I Laboratory (1)

Social Sciences (SS) and Humanities (HUM) Core (36-39 credits)
Students must meet GERs for Baccalaureate Degrees including 6 credits of social sciences (SS) from two different disciplines and 6 credits of humanities (HUM).

ANTH A250  The Rise of Civilization (3)  3
or
HIST A390A  Themes in World History (3)

HIST A131  History of United States I (3)  3
or
HIST A132  History of United States II (3)
or
HIST A355  Major Themes in US History (3)

EDSE A212  Human Development and Learning (3)  ENGL A121  Introduction to Literature (3)  3
or
ENGL A201  Masterpieces of World Literature I (3)
or
ENGL A202  Masterpieces of World Literature II (3)

HUM A211  Introduction to Humanities I (3)  3
or
HUM A212  Introduction to Humanities II (3)
or
HNRS A192  Honors Seminar: Enduring Books (3)

LSSS A111  Cultural Foundations of Human Behavior (3)  3
or
HNRS A292  Seminar in Social Science (3)
or
ANTH A202  Cultural Anthropology (3)

LSIC A231  Truth, Beauty, and Goodness (3)  3
or
PHIL A301  Ethics (3)

LSSS A311  People, Places, and Ecosystems  3
or
ENVI A211  Environmental Science: Systems and Processes (3)

LSIC A331  Power, Authority, and Governance (3)  3

Double-check all course titles. They must exactly match the full titles published in the catalog course name.
SOC/PS A351  Political Sociology (3) 
LSSS A312  Individuals, Groups, and Institutions (3)  3 
or 
PSY A111  General Psychology (3) 
and 
SOC A101  Introduction to Sociology(3) 
or 
SOC A375  Social Psychology (3) 
or 
PSY A375  Social Psychology (3) 
or 
LSIC A332  Science, Technology and Culture (3)  3 

Select one course from fine arts GERs  3 

**Mathematical Skills (9-13 credits)** 
MATH A205  Communicating Mathematical Ideas and 
STAT A252  Elementary Statistics (3)  3-4 
or 
STAT A253  Applied Statistics for the Sciences (4) 
and 
Select one additional course from quantitative skills GERs  3-6 

**Oral and Written Communication Skills (9 credits)** 
Select one course from oral communication GERs  3 
Select two courses from written communication GERs  6 

### E. Major Requirements 
It is recommended that students complete EDFN A101 Introduction to Education prior to enrolling in the following major courses. It is strongly recommended that you see an advisor to stay on track. Field experiences in public schools are required as part of most courses. 

1. Complete the following core courses (22 credits) 
   EDEC A242  Family and Community Partnerships (3)  3 
or 
   HNRS A310  Community Service: Theory and Practice (3) 
   EDEL A205  Becoming an Elementary Teacher  2 
   EDFN A206  Introduction to Assessment in Education  1 
   EDFN A300  Philosophical and Social Context of American Education (3)  3 
or 
   EDFN A304  Comparative Education (3) 
   EDFN A301  Foundations of Literacy and Language Development  3 
   EDFN A302  Foundations of Educational Technology  2 
   EDEL A392  Elementary Education Seminar I: Culturally Responsive Teaching  2 

All required courses have the credits aligned to the right. 
Groups of electives have the required course number listed to the right, and... 
Elective course credit amounts are shown in parentheses after the course name.
2. Complete the following methods courses (18 credits)
   - EDEC A106 Creativity and the Arts in Early Childhood 3
   - EDEL A325 Teaching Literacy in Elementary Schools 6
   - EDEL A327 Teaching Social Studies in Elementary Schools 2
   - EDEL A426 Teaching Mathematics in Elementary Schools 3
   - EDEL A428 Teaching Science in Elementary Schools 2
   - PEP A345 Incorporating Health and Physical Activity into the Pre-K-6 Classroom 2

   **Concurrent enrollment in multiple courses is required. See an advisor for details.

3. Complete the following field experiences and internship (16-19 credits)
   - EDEL A395 Elementary Education Practicum I: Literacy and Social Studies 2
   - EDEL A492A Elementary Education Seminar II: Learning Environment 2
   - EDEL A492B Elementary Education Seminar III: Teaching Capstone 3
   - EDEL A495A Elementary Education Practicum II: Learning Environment, Mathematics, Science 3
   - EDEL A495B Elementary Education Internship 6-9
   - For Honors Option Senior Requirement:
     - HRNS A499 Thesis (3)
     - and
     - EDEL A495B Elementary Education Internship (6)

4. A total of 125-141 credits is required for the degree, of which 42 credits must be upper division.

**BAEL and Honors College Option**

Take the following Honors College Core Program Courses (16 credits)

- HNRS A192 Honors Seminar: Enduring Books 3
- HNRS A292 Honors Seminar in Social Science 3
- HNRS A310 Community Service: Theory and Practice 3
- HNRS A392 Honors Thesis Seminar 1
- HNRS A499 Honors Thesis 3

   and taken concurrently with EDEL A495B Internship (6) 3

   (three credits of Internship apply to the Senior Requirement)

*Important: See an advisor if considering the Honors Option.*
Institutional Recommendation,

Elementary Teacher Certification (K-6)

Following are the requirements for an institutional recommendation:

1. Major requirements completed with a grade of C or higher.
2. Cumulative GPA of 2.75.
3. Cumulative GPA of 3.00 in all Major Requirements, EDSE A212 and MATH A205.
4. Passing scores on the Praxis I (PPST) and Praxis II (0014) exams.
5. Internship satisfactorily completed.
6. BA in Elementary Education degree conferred.

EXAMPLE 2:

ARCTIC ENGINEERING

Engineering Building (ENGR), Room 201, (907) 786-1900
http://www.uaa.alaska.edu/schoolofengineering/programs/arctic/

The Arctic Engineering program is designed to provide graduate education for engineers who must deal with the unique challenge of design, construction and operations in the cold regions of the world. The special problems created by the climatic, geological and logistical conditions of the Arctic and sub-Arctic require knowledge and techniques not usually covered in the normal engineering courses. Development of petroleum and other natural resources has accentuated the demand for engineers trained in northern operations, both from private industries involved in development and government agencies planning or regulating these activities. Of primary importance is a thorough knowledge of heat transfer processes and properties of frozen ground and frozen water, which are basic to most engineering activities in the Arctic. The areas of hydraulics, hydrology, materials and utility operations are also uniquely affected by Arctic considerations.

Master of Science,
Arctic Engineering

The Master of Science of Arctic Engineering requires completion of a set of core courses that will prepare an engineer to understand and adapt prior engineering knowledge and skills to problems of cold regions. The program also allows students to study advanced elective courses in a particular area of specialized interest. Research activities carried out by faculty of the UAA School of Engineering provide opportunities for project reports dealing with current Arctic knowledge. A graduate advisory committee of at least three members is appointed to guide each admitted student to degree completion. Two members must be UAA Engineering faculty members.

Student Learning Outcomes

On successful completion of the program, students will have gained sufficient knowledge to:

1. Recognize natural conditions and engineering challenges that are unique to cold regions;
2. Interpret associated specialized language and units of measure;
3. Locate, interpret, and apply public information about the physical conditions of cold regions;
4. Apply fundamental physical principles for solutions to common cold regions engineering problems;
5. Assess need for complex specialized Arctic engineering solutions;
6. Determine physical and thermal properties, evaluate frost heave rates, and estimate heat flow in soils, prevent foundation failure due to seasonally or perennially frozen ground by appropriate project site exploration and design of constructed features;

7. Determine mathematical and physical properties governing heat and mass transfer in cold climates;

8. Determine temperature profiles in structure walls, roofs, and foundations, predict moisture content and mass flow rates in structures;

9. Acquire, integrate, and interpret data from public archives regarding site conditions associated with planning and design of community utility systems and formulate field measurement programs to determine site conditions for planning and design;

10. Analyze properties of lake, river, and sea ice, predict behavior of ice under natural conditions, and predict ice forces on engineering structures; and

11. Apply the sum of specialized Arctic engineering knowledge and skills gained in the program toward solution of a practical engineering problem and report this to fellow specialists.

**Admission Requirements**

All students admitted to the Arctic Engineering program must have previously earned a baccalaureate degree in an engineering discipline with a cumulative undergraduate GPA of at least 3.00. Probationary admission may be granted by the Civil Engineering Department for students whose cumulative undergraduate GPA is between 2.50 and 3.00, but who have successfully completed graduate studies at the 3.00 level or better and have other evidence of their potential for success in graduate engineering studies. Probationary terms will typically call for successful completion of a pre-approved sequence of 9 credits of graduate engineering courses. Admitted students are also responsible for completion of prerequisites for Arctic engineering program courses, which may not have been included in their undergraduate education.

**Graduation Requirements**

See the beginning of this chapter for University Requirements for Graduate Degrees.

**Major Requirements**

1. Candidates must complete the following core courses (9 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE A603</td>
<td>Arctic Engineering*</td>
<td>3</td>
</tr>
<tr>
<td>CE A681</td>
<td>Frozen Ground Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ME A685</td>
<td>Arctic Heat and Mass Transfer</td>
<td>3</td>
</tr>
</tbody>
</table>

   *Students who have completed CE A403 Arctic Engineering with a grade of C or better, or students who have passed the ES ACO30 Fundamentals of Arctic Engineering or ES ACO31 Introduction to Arctic Engineering before being admitted to the program must replace CE A603 with an elective, 3-credit course accepted by the student’s graduate advisory committee.

2. Candidates must also complete at least three additional courses from the following Arctic engineering program elective courses (9 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE A682</td>
<td>Ice Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CE A683</td>
<td>Arctic Hydrology and Hydraulic Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CE A684</td>
<td>Arctic Utility Distribution</td>
<td>3</td>
</tr>
<tr>
<td>CE A689</td>
<td>Cold Regions Pavement Design</td>
<td>3</td>
</tr>
</tbody>
</table>

3. Candidates must complete additional graduate electives (9 credits) in mathematical, science or engineering subjects related to or supportive of the student's program of study, as approved by the student’s advisory committee to fulfill the minimum 30-credit degree requirement. One technical undergraduate elective course at the 400 level may be applicable with prior permission of the student’s advisory committee and provided a grade of B or better is achieved. All coursework applied toward degree requirements must be approved by the student’s advisory committee.

4. Each student must complete the following course (3 credits) after approval of a project proposal by the student's advisory committee:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE A686</td>
<td>Civil Engineering Project</td>
<td>3</td>
</tr>
</tbody>
</table>
The Arctic engineering project should have the following characteristics:

a. The Arctic engineering project must solve a practical engineering problem to the extent that original developments by the candidate are evident in the project report.

b. The project problem and solution must be presented in the context of the current state of the art by means of a thorough review of pertinent literature.

c. The project must include innovative components directly involving cold regions engineering.

d. The project must have sufficient scope to clearly demonstrate the candidate’s advanced technical expertise in cold regions engineering.

e. The project report must demonstrate command of knowledge and skills directly associated with the candidate’s graduate program of study.

f. The written project report, in the judgment of the candidate’s advisory committee, must be publishable in the proceedings of a cold regions engineering specialty conference.

g. The work must require a level of effort consistent with three semester hours of credit (approximately 45 to 60 hours per credit hour or 135 to 180 hours total effort).

5. A total of 30 credits is required for the degree.

FACULTY

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Tom Ravens, Professor, AFTMR@uaa.alaska.edu
Orson Smith, Professor, AFOPS@uaa.alaska.edu
Zhaohui Yang, Associate Professor, AFZY@uaa.alaska.edu
Hannele Zubeck, Professor/Chair, AFHKZ@uaa.alaska.edu
Appendix A - Links to Templates

The following templates can be found at www.uaa.alaska.edu/governance/coordination/index.cfm:

- **Budget Worksheet** - Provides detailed budget information for a new program.
- **Coordination Spreadsheet Template** - Provides format for submission of coordination to the academic boards when a course affects more than three other courses or programs (box 13a of the CAR)
- **Fee Request Form** - Fee requests, associated with particular curriculum proposals, will be reviewed by the Office of Academic Affairs. The Provost’s approval is required before fees are implemented. See Board of Regents Policy and Regulations Part V Chapter X for course fee information [http://www.alaska.edu/bor/policy-regulations](http://www.alaska.edu/bor/policy-regulations).
- **Four-Year Course Offering Plan** - Identifies the Four-Year Course Offering Plan for a new program.
- **Resource Implication Form** - Identifies fiscal impacts of a proposed action.

The following templates can be obtained from OAA:

- **Board of Regents** - Provides detailed information required by Statewide for new programs or major program changes.

The following template is available from the Academic Assessment Committee Website [http://www.uaa.alaska.edu/governance/academic_assessment_committee/index.cfm](http://www.uaa.alaska.edu/governance/academic_assessment_committee/index.cfm)

- **Academic Assessment Plan** - Identifies the outcomes and assessment strategies for a new program or a major or minor program change.
Appendix B - Links to Examples

Click on the link to see examples of the following:

- **Budget Worksheet:**  
  www.uaa.alaska.edu/governance/coordination/index.cfm

- **Course Action Request (CAR):**  
  www.uaa.alaska.edu/governance/coordination/index.cfm

- **Course Content Guide (CCG):**  
  www.uaa.alaska.edu/governance/coordination/index.cfm

- **Coordination Spreadsheet:**  
  www.uaa.alaska.edu/governance/coordination/index.cfm

- **Faculty Matrix:**  
  www.uaa.alaska.edu/governance/coordination/index.cfm

- **Program/Prefix Action Request (PAR):**  
  http://www.uaa.alaska.edu/governance/curriculumexamples.cfm

- **Academic Assessment Plan:**  
  www.uaa.alaska.edu/governance/coordination/index.cfm

- **Prospectus:**  
  www.uaa.alaska.edu/governance/coordination/index.cfm

- **Risk Management Plan:**  
  www.uaa.alaska.edu/governance/curriculumexamples.cfm
## Appendix C - Observable Verbs

### Cognitive Domain Observable Verbs

The cognitive domain contains skills that deal with the intellect and attaining knowledge. These lists are provided for assistance, but their use is not required.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Application</th>
<th>Analysis</th>
<th>Synthesis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge</strong></td>
<td><strong>Application</strong></td>
<td><strong>Analysis</strong></td>
<td><strong>Synthesis</strong></td>
</tr>
<tr>
<td>Recalls information</td>
<td>Uses knowledge or generalizations in a new situation</td>
<td>Breaks down knowledge into parts and shows relationships among parts</td>
<td>Brings together parts of knowledge to forms a whole and builds relationships for new situations</td>
</tr>
<tr>
<td>Comprehends</td>
<td>Associates</td>
<td>Analyzes</td>
<td>Arranges</td>
</tr>
<tr>
<td>Arranges</td>
<td>Chooses</td>
<td>Appraises</td>
<td>Assembles</td>
</tr>
<tr>
<td>Counts</td>
<td>Compares</td>
<td>Calculates</td>
<td>Collects</td>
</tr>
<tr>
<td>Describes</td>
<td>Computes</td>
<td>Categorizes</td>
<td>Combines</td>
</tr>
<tr>
<td>Draws</td>
<td>Contrasts</td>
<td>Compares</td>
<td>Compiles</td>
</tr>
<tr>
<td>Duplicates</td>
<td>Converts</td>
<td>Concludes</td>
<td>Composes</td>
</tr>
<tr>
<td>Identifies</td>
<td>Defends</td>
<td>Constructs</td>
<td>Constructs</td>
</tr>
<tr>
<td>Indicates</td>
<td>Differentiates</td>
<td>Correlates</td>
<td>Creates</td>
</tr>
<tr>
<td>Labels</td>
<td>Discusses</td>
<td>Criticizes</td>
<td>Designs</td>
</tr>
<tr>
<td>Lists</td>
<td>Dramatizes</td>
<td>Debates</td>
<td>Develops</td>
</tr>
<tr>
<td>Matches</td>
<td>Estimates</td>
<td>Deduces</td>
<td>Devises</td>
</tr>
<tr>
<td>Memorizes</td>
<td>Explains</td>
<td>Detects</td>
<td>Formulates</td>
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<tr>
<td>Names</td>
<td>Extends</td>
<td>Determines</td>
<td>Generalizes</td>
</tr>
<tr>
<td>Orders</td>
<td>Extrapolates</td>
<td>Develops</td>
<td>Generates</td>
</tr>
<tr>
<td>Outlines</td>
<td>Generalizes</td>
<td>Diagnoses</td>
<td>Integrates</td>
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<tr>
<td>Points to Produce</td>
<td>Gives Examples</td>
<td>Differentiates</td>
<td>Manages</td>
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<tr>
<td>Quotes</td>
<td>Infers</td>
<td>Discriminates</td>
<td>Manages</td>
</tr>
<tr>
<td>Reads</td>
<td>Interprets</td>
<td>Distinguishes</td>
<td>Organizes</td>
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<tr>
<td>Recalls</td>
<td>Picks</td>
<td>Estimates</td>
<td>Plans</td>
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<tr>
<td>Recites</td>
<td>Reports</td>
<td>Evaluates</td>
<td>Prescribes</td>
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<tr>
<td>Recognizes</td>
<td>Restates</td>
<td>Examines</td>
<td>Prepares</td>
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<tr>
<td>Records</td>
<td>Reviews</td>
<td>Experiments</td>
<td>Produces</td>
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<tr>
<td>Relates</td>
<td>Rewrites</td>
<td>Generalizes</td>
<td>Proposes</td>
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<tr>
<td>Repeats</td>
<td>Schedules</td>
<td>Identifies</td>
<td>Predicts</td>
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<tr>
<td>Reproduces</td>
<td>Sketches</td>
<td>Infers</td>
<td>Rearranges</td>
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<tr>
<td>Selects</td>
<td>Summarizes</td>
<td>Inspects</td>
<td>Reconstructs</td>
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<tr>
<td>Tabulates</td>
<td>Translates</td>
<td>Initiates</td>
<td>Reorganizes</td>
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<td>Traces</td>
<td></td>
<td>Inventories</td>
<td>Revises</td>
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<tr>
<td>Writes</td>
<td></td>
<td>Predicts</td>
<td>Sets up</td>
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<td>Questions</td>
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<td>Relates</td>
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<td></td>
<td></td>
<td>Transforms</td>
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<tr>
<td>Comprehension – Interpret information in one's own words</td>
<td>Evaluation – Make judgments on basis of given criteria</td>
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<td>Associates</td>
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<td>Classify</td>
<td>Argues</td>
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<td>Cite examples of</td>
<td>Assesses</td>
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<td>Compares</td>
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<td>Gives examples</td>
<td>Revises</td>
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<td>Interpolates</td>
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<td>Translates</td>
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</tbody>
</table>
Affective Domain Observable Verbs

The affective domain contains skills that deal with emotions, feelings, and values. You will notice that these verbs span differently than cognitive verbs as pertains to level.

<table>
<thead>
<tr>
<th>Receiving</th>
<th>Responding</th>
<th>Valuing</th>
<th>Organization</th>
<th>Internalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to attend to a particular stimuli</td>
<td>Active participation when attending to stimuli</td>
<td>Worth or value student attaches to something</td>
<td>Bringing together different values, resolving conflicts between them</td>
<td>Value system controls behavior to develop a characteristic behavior that is pervasive, consistent, and predictable.</td>
</tr>
</tbody>
</table>

- Asks
- Chooses
- Follows
- Gives
- Holds
- Selects
- Shows interest
- Accepts responsibility
- Answers
- Assists
- Be willing to
- Complies
- Conforms
- Enjoys
- Greets
- Helps
- Obeys
- Performs
- Practices
- Presents
- Reports
- Selects
- Tells
- Associates with
- Assumes responsibility
- Believes in
- Be convinced
- Completes
- Describes
- Differentiates
- Has faith in
- Initiates
- Invites
- Justifies
- Participates
- Proposes
- Selects
- Shares
- Subscribes to
- Works
- Adheres to
- Alters
- Arranges
- Classifies
- Combines
- Defends
- Establishes
- Forms judgments
- Identifies with
- Integrates
- Organizes
- Weighs alternatives
- Acts
- Changes behavior
- Develops a code of behavior
- Develops a philosophy of life
- Influences
- Judges
- Problems/issues
- Listens
- Performs
- Practices
- Proposes
- Qualifies
- Questions
- Serves
- Shows mature attitude
- Solves
- Verifies
Psychomotor Domain Observable Verbs

The psychomotor domain contains skills that deal with one's physical development and well being.

<table>
<thead>
<tr>
<th><strong>Imitating</strong></th>
<th><strong>Manipulating</strong></th>
<th><strong>Perfecting</strong></th>
<th><strong>Articulating</strong></th>
<th><strong>Naturalizing</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Observes a skill and attempts to repeat it, or see a finished product and attempts to replicate it while attending to an exemplar.</td>
<td>Performs the skill or produces the product in a recognizable fashion by following general instructions.</td>
<td>Independently performs the skill or produces the product, with apparent ease, at an expert level.</td>
<td>Modifies the skill or produces the product to fit new situations while maintaining nearly flawless perfection and showing great ease of execution.</td>
<td>Automatically, flawlessly and effortlessly perform the skill or produces the product tailored to the situation.</td>
</tr>
<tr>
<td>Attempts</td>
<td>Completes</td>
<td>Achieves</td>
<td>Adapts</td>
<td>Naturally</td>
</tr>
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Appendix D - The Undergraduate & Graduate Academic Boards

The Undergraduate and Graduate Academic Boards review and approve academic policies. They also review and approve new or revised courses/programs/prefixes initiated by faculty and undertake other tasks assigned by the UAA Faculty Senate (Reference: UAA Faculty Senate Bylaws of the Constitution Article V Section 3[a-d]).

Membership

Voting Members

Undergraduate Academic Board (UAB)

Each academic unit elects its UAB representative(s) according to Section 3.a. of the Bylaws of the UAA Faculty Senate Constitution. This includes one non-Senate faculty representative from each of the schools and colleges (except the College of Arts and Sciences, which has two), one adjunct faculty member, one library faculty representative, one faculty member from each community campus, and one faculty member from Student Affairs. Members serve two-year terms with one half of the members elected each year. In addition, the Senate chooses four senators to serve on the board as follows:

- Arts and Sciences (1)
- At-large members (3)

Students may appoint one undergraduate-degree-seeking or certificate-seeking student to voting membership on the UAB. It is the responsibility of the Union of Students at UAA (USUAA) to select this representative.

Graduate Academic Board (GAB)

Each academic unit elects its GAB representative according to Section 3.c. of the Bylaws of the UAA Faculty Senate Constitution. Members of the board must be faculty involved in graduate programs. This includes non-Senate faculty representative(s) from each degree granting school/college and the library as elected by the faculty within their respective units. Members serve two-year terms with one half of the members elected each year. In addition, the Senate chooses four senators to serve on the board as follows:

- Arts and Sciences (1)
- At-large members (3)

Students may appoint one graduate-degree-seeking student to voting membership on the GAB. It is the responsibility of the USUAA to select this representative.

Nonvoting Members

One representative from the Office of Academic Affairs, appointed by the Provost, one representative from the Office of the Registrar, and one representative from Enrollment Management, Publications and Scheduling, shall be ex-officio and nonvoting members of the Undergraduate and Graduate Academic Boards.

Responsibilities

Membership

- Members are responsible for attending all meetings.
- If a member is unable to attend, that member is responsible for providing a replacement.
- Members act as a liaison between the UAB/GAB and the member’s department/school/college.
- Members must inform departments in their school/college when their proposals are on the agenda.
- Members must review the agenda and attachments prior to each meeting.
Chair

- The presiding chairs of UAB/GAB are elected by their respective boards and must have served on the respective board for a minimum of one year.
- The chair is responsible for attending all meetings.
- If the chair is unable to attend, he/she appoints an acting chair.
- The chair acts as a liaison between UAB/GAB and others as necessary.
- The chairs sign CARs and represent UAB/GAB at UAA Faculty Senate meetings.
- The chairs serve as members of UAA Faculty Senate Executive Board and may represent UAA in system governance issues.
- The chairs may represent the faculty on an ad hoc basis during the year and attend special meetings (such as meeting prospective employee candidates, meeting the Board of Regents, or serving on special task forces).

Meeting Schedule

Regular Meetings

Undergraduate Academic Board

During the academic year, UAB meets at 2 p.m. each Friday, except for the first Friday of each month which is the day the UAA Faculty Senate meets. Meetings commence the first week after faculty contracts begin. The schedule is given to UAB members at the beginning of each academic year and posted on the Governance website.

Graduate Academic Board

During the academic year, GAB meets at 9:30 a.m. the second and fourth Fridays of each month. Meetings commence the first week after faculty contracts begin. The schedule is given to GAB members at the beginning of each academic year and posted on the Governance website.

Summer Meetings

Neither UAB/GAB meets during June or July. If any curricular items need action during the summer, the UAB/GAB chair or designee reviews the paperwork with a volunteer group of continuing UAB/GAB members. Under such circumstances, the UAA Faculty Senate Executive Committee acts on behalf of the UAA Faculty Senate (UAA Faculty Senate Constitution Article IV Section 11). Approved actions must be reported to UAB/GAB at the first UAB/GAB meeting of the academic year. No policy changes are considered during the summer.

Meeting Notification

All meetings are public meetings. Meeting announcements, agendas, and locations are posted on the Governance webpage.

Agenda and Summary

Structure

Date, Time, and Location

The agenda lists the date, time, and place of the meeting. Meetings may be teleconferenced if necessary.

I. Roll

II. Approval of the Agenda

III. Approval of Meeting Summary
IV. Administrative Report
V. Chair’s Report
VI. Course Action Request (CAR) or Program/Prefix Action Request (PAR)-Second Reading
VII. CAR or PAR-First Reading
VIII. Old Business
IX. New Business
X. Informational Items
XI. Adjournment

Definitions

Meeting Summary
The meeting summary includes the roll, all action items, a list of information items, and time of adjournment.

First Reading
- Representatives from the department/school/college must attend the UAB/GAB meeting when their proposal is discussed. If no representative is present, the proposal is tabled.
- All proposals are routinely accepted for First Reading unless tabled (for a specific length of time and for a stated purpose), removed from the agenda (usually by the department/school/college that initiated the item) or formally not accepted for First Reading (usually the item is then sent back to the department/school/college for revision).
- Proposals not properly coordinated before First Reading will be tabled.
- Actions involving changes in General Education Requirements (GER) are referred to the General Education Review Committee (GERC).
- Proposals accepted for First Reading are usually placed on the next agenda for Second Reading. Proposals can be accepted with suggested changes. UAB/GAB, administration, or the submitting department may suggest changes.
- No vote is necessary to accept an item for First Reading.
- Acceptance for First Reading does not predetermine automatic approval at Second Reading.
- Board members should work closely with their department/school/college regarding all recommendations made at UAB/GAB meetings and assist their colleagues in the preparation of the proper paperwork.

CARs and PARs
- CARs and PARs initiated by faculty are required to request curriculum actions. For more information, see the chapters on CARs and PARs.
- Academic Policy: A variety of sources including individuals, departments, schools, colleges, administration, and other boards and committees may initiate new or revised academic policy proposals. Revised policy proposals should include a copy of both the old and new policies with rationale/justification for the new policy or revision. All policy proposals are reviewed and must be approved by UAB/GAB, UAA Faculty Senate, and the administration.

Second Reading
- Second readings usually occur at the next regularly scheduled meeting. All proposals placed on the agenda for Second Reading are voted on by a show of hands or yes/no if audio-conferenced.
- UAB/GAB usually act on proposals at Second Reading but may postpone action if further deliberation or information is necessary.

Informational Items
- The Board may discuss these items and/or request that the items be placed on a future agenda for
Meeting Procedure

UAB/GAB meetings are governed by Robert’s Rules of Order. A quorum is a majority of the voting members present. Voting is done by a show of hands or yes/no if audio-conferenced. Votes are recorded as For, Against, Abstain, or Unanimous. A simple majority carries the vote. In the event of a tie, the chair casts the deciding vote.

*Note: Proxy voting is not permitted by any UAA faculty boards and committees. Proxy voting is incompatible with the essential characteristics of a deliberative assembly in which membership is individual, personal, and nontransferable, in that voting should take place subsequent to discussion and deliberation.*

Administrative Support

The Governance Office provides administrative support to UAB/GAB. The Governance Office works closely with the chairs of the boards and prepares and posts the agendas, summaries, and reports on the governance webpage at [www.uga.alaska.edu/governance](http://www.uga.alaska.edu/governance). In addition, the office will work with appropriate departments to provide guidance in the preparation and approval of all required actions. The Governance Office, the UAB/GAB chairs and representatives from the Office of Academic Affairs act as liaisons between the Undergraduate Academic Board, the Graduate Academic Board, the Office of Academic Affairs, the Chancellor, and other UAA departments as necessary.
Student Learning Outcomes should:
- Communicate what students will be able to do after they successfully complete the program/course
- Be representative of the program/course performance, defining for students the accomplishments expected from program/course participation
- Be verifiable through replication by third-party inspection
- Be relevant to the curriculum

Measurements may be direct and/or indirect. Examples of each are below:
- Direct measurements: exams, graded assignments related to outcomes, professionally judged demonstrations or performances, portfolios
- Indirect measurements: student self-perceptions, employer surveys or job placement, focus groups

Assessment of student learning outcomes should use properties of good evidence:
- Comprehensiveness – measures a full range of outcomes
- Multiple judgment – uses several sources
- Multiple dimensions – indicates different facets of student performance related to student learning outcomes to show strengths and weaknesses
- Directness – involves direct scrutiny of student performance
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Please follow the link below to the Distance Education Handbook:


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Section 1 - Introduction

1.1 Academic Boards of the Faculty Senate Principles of Operation

- Excellence in teaching, learning, and research is the indispensable core value of the University of Alaska Anchorage (UAA) mission, goals and activities. The Graduate Academic Board (GAB) and the Undergraduate Academic Board (UAB) of the Faculty Senate are the principal peer review committees charged to guide the University’s curricular processes.

- The university evaluates its achievements against appropriate regional, national, and international benchmarks. The academic boards devise evidence-based methods for the curriculum approval. The Curriculum Handbook is periodically revised to reflect policy and procedural changes.

- The academic boards are charged to identify areas for improvement, foster collaboration, and encourage an ethos of critical self-evaluation for all curriculum.

- The work of the academic boards is part of the normal and continuous cycle of curricular planning, monitoring, and improvement. It is emphasized that although the curricular products of the faculty reviewed and approved by the board are useful for purposes of external review, they are primarily intended to promote and maintain excellence in teaching, learning, and research.

These Guidelines in the Curriculum Handbook describe the University of Alaska Anchorage’s process for approving all academic coursework developments. These guidelines should be used in conjunction with departmental requirements as appropriate.

Basis for Academic Board Review

Academic board approval is required for the following:

1. New permanent courses that will appear on the student’s transcript with academic credit.

2. New departmental programs such as:
   
   A. Undergraduate programs
      i. Occupational Endorsement Certificates
      ii. Undergraduate Certificates
      iii. Associate Degrees
      iv. Baccalaureate Degrees
      v. Minors

   B. Post-baccalaureate Certificates

   C. Graduate programs
      i. Graduate Certificates
      ii. Graduate Degrees

The maximum number of credits that may be required by a degree or certificate program will be for each level (BOR Policy and Regulation 10.04.030):

- Occupational Endorsement Certificates 29 credits
- Certificate 60 credits
- Associate Degree 75 credits
- Bachelor's Degree 132 credits
- Minors no maximum
- Master's Degree 45 credits
- Graduate Certificate 29 credits
Post-Baccalaureate Certificate  60 credits
Doctoral Degree See program requirements

3. New policies or revisions to existing policies that affect the method of approval, content, or delivery of university courses or programs.

4. Substantial revision to the academic content of a course including
   A. Additions, modifications or deletions of major subject areas
   B. Any course that has not been offered at least once during the past 4 years (i.e., Course on a purge list that the discipline informs the Board it intends to deliver. See section 5.3 for additional information).

5. Changes having an impact on the study options available to prospective students, including changes to
   A. Selection/admission procedures and standards
   B. Prerequisites, co-requisites, and registration restrictions.

6. Changes responding to the professions, employers, or the wider community.

7. Changes resulting from the program’s response to academic assessment processes. Please refer to the current Academic Assessment Handbook for additional guidance regarding these activities.

8. Changes made to maintain the currency and vitality of the curriculum. It is recommended that no individual course be allowed to age more than 10 years without review and update by the program faculty. However, it is understood that all programs will differ with respect to the frequency of need for update and/or revisions.
Section 2 - Curriculum Screening Criteria

2.1 Issues in Curriculum Review

2.1.1 Curriculum Review
A request for a curriculum change should be reviewed for format, content, and the impact it has on the entire curriculum and general direction of the school or college in relation to the university. Curriculum review bodies are asked to review any change carefully with respect to the program initiating the change and to other academic programs.

At any time a curriculum change is brought before a review body, the program or course will be reviewed in total as outlined in this handbook.

If a Course Action Request (CAR) for a credit-bearing course, program, or policy is submitted for processing and that CAR has been disapproved at any level prior to UAB/GAB review, then that particular curricular action is placed on the agenda of UAB/GAB for review and recommendation.

Pertinent academic considerations:

A. Course or program is designed with the appropriate content and student learning outcomes, with learning experiences that enable students to achieve the stated learning outcomes, and with evaluation methods that enable faculty to assess student achievement of those learning outcomes.

B. Justification for the change

C. Effect on resources within the program

D. Frequency of course offerings for new programs. *Note: Deans/Directors may require this information for new courses.*

E. Impact on other affected UAA programs and courses

F. Implementation Dates must be in line with catalog and scheduling deadlines.

2.1.2 Academic Considerations Addressed in Review
The faculty member initiating the curriculum action should be prepared to address the following and any other appropriate issues that members of the curriculum review committees may ask when the curriculum action is presented to the appropriate boards/committees at each level of review.

A. Academic considerations for a new course proposal:

i. School/college offering this course is the appropriate academic unit
ii. Appropriate prerequisites for content and level
iii. Availability of prerequisites for this course
iv. Frequency of scheduling of course
v. Justification for stacking or cross listing
vi. Duplication with any other existing courses is explained
vii. Documented coordination with the impacted/affected departments
viii. Identifiable accreditation or nationally accepted practice standards
ix. Rationale for requiring this course in a program
x. If a new prefix is requested, the prefix must be approved prior to developing the curriculum

B. Courses that will become program electives/selectives:

i. Effect of this course on other electives/selectives
ii. Enhancement of a program by this course
iii. Increase in options for specialization within the major
iv. Effect on scheduling of other program electives

C. Courses that will become General Education Requirements (GERs):
i. Addresses GER student learning outcomes from the GER Preamble
ii. Meets category definition from Board of Regents Regulation (www.alaska.edu/bor/policy-regulations/)
iii. Addresses and assesses GER student learning outcomes for the classification descriptions described in the catalog (www.uaa.alaska.edu/records/catalogs/catalogs.cfm) and this handbook
iv. Provides rationale for adding this course to the GER menu

D. Resource implication considerations for new course proposals:
   i. Commitment from resource manager to support course offerings
   ii. Effects on other offerings within a program or school
   iii. Effect on offering other required courses
   iv. Effect on electives and selectives
   v. If the course was offered as a trial course, the number of times it was offered and the number of enrollments

2.1.3 Review of Program Proposals
A. Program description adequately expresses the program characteristics, requirements and student learning outcomes.
B. The proposing unit is clearly prepared to present the program based on available faculty numbers and expertise, support staff, fiscal resources, facilities and equipment.
C. Needs analysis for the new program is attached.
D. Coordination has occurred with appropriate departments, schools, and colleges and documentation is submitted to the Governance Office.
E. Possible duplication of an existing program is addressed.
F. All courses used in the creation or modification of a degree or certificate program have current Course Content Guides on file in the Office of the Registrar. These must contain all of the required elements described in Section 9 of this handbook. If courses are ill-defined or outdated they must be revised at the same time or before the program addition or modification is proposed.
G. When proposing multiple certificates in a given discipline their requirements must differ by at least 6 credits. Otherwise the program should be proposed as a single certificate with emphasis areas.

2.1.4 Program Student Learning Outcomes
A. Program Student Learning Outcomes are to be clearly stated as the knowledge or abilities that students are expected to demonstrate upon successful completion of the program.
B. Program Student Learning Outcomes and a plan for their assessment are to be developed in accordance with the guidance and requirements found in the Academic Assessment Handbook (http://www.uaa.alaska.edu/governance/academic_assessment_committee/handbook.cfm).
C. Program Student Learning Outcomes are to be published in the catalog for student use in evaluating and selecting their academic program.
D. Programs whose external accreditors require program objectives should state these clearly as the knowledge or abilities that students are expected to demonstrate after completion of the program.
E. A complete and valid Academic Assessment Plan must be presented by the Academic Assessment Committee and the Office of Academic Affairs (OAA) at ayaac@uaa.alaska.edu in accordance with the requirements of the Academic Assessment Handbook. Note: Academic boards do not evaluate the Program Student Learning Outcomes or Academic Assessment Plan or resource implications; however the Academic Assessment Plan must be complete, approved through the Dean, and submitted to ayaac@uaa.alaska.edu for review by the Academic Assessment Committee when a new program is submitted to the academic boards. Following AAC review of the Academic Assessment Plan, an informational item is sent to the Faculty Senate.
F. If this action requires BOR review, see Regents’ Policy and Regulation (www.alaska.edu/bor/policy-regulations/).

G. If this action requires notifying the Commission on Colleges refer to their website at www.nwccu.org.
Section 3 - Curriculum Approval Process
for Courses, Programs and Prefixes

Any new degree program, and/or new course required for a degree program, wherever initiated within UAA, requires approval by UAB/GAB. Programs include certificates and occupational endorsements; associate, baccalaureate, post-baccalaureate, and graduate degrees; Minors; and regional studies. Non-credit courses, CEU courses, and Workforce Credential programs are not reviewed or approved by UAB/GAB as indicated in the curriculum approval process below.

3.1 Curriculum Approval Process

1. Except as noted in sections 3.2 and 3.3, all courses, programs (with the exception of doctoral programs), and prefixes follow the approval process presented in this section. The approval process for doctoral programs is found in section 3.8.

2. Curriculum must be initiated by a faculty member, reviewed by the department’s curriculum committee/chair, the school/college curriculum committee, and finally the dean/director of the school/college.

3. The term “faculty initiator” will use the definition of faculty from the Faculty Senate Constitution (http://www.uaa.alaska.edu/governance/facultysenate/constitution.cfm) except in the special cases listed.

Special cases: There may be special circumstances where a program has no tenure-track or term faculty. In these cases, an adjunct faculty member who has been approved to teach a course or has special expertise in the content area of the program may initiate course and program curriculum changes under the sponsorship of a tenure-track or term faculty member as defined above. It is recommended that the initiating faculty member and the faculty sponsor sign the CAR/PAR.

New programs must be initiated by tenure-track or term faculty as defined in the Faculty Senate Constitution. An adjunct faculty member who has expertise in the area may be consulted by the faculty initiator(s).

4. All templates are available on the Governance website at www.uaa.alaska.edu/governance. Faculty initiators should ensure that documents are prepared using Microsoft Word. Course proposals must be submitted using the CAR, and program/prefix proposals must be submitted using the PAR.

5. Proposers of any curriculum action should refer initial questions to their discipline-specific curriculum committees. Further assistance may be sought from college curriculum committees, and in the last resort the Governance Office, to ensure the proposal is considered in a timely fashion.

6. Coordination should take place early in the curriculum process. Steps for coordination are found in sections 4, 5, 6, and 7 depending on the curriculum action under consideration.

7. The faculty initiator is responsible for the development of the required documents outlined in sections 4, 5, 6, and 7 and submission to the appropriate organizations. It is strongly recommended that the faculty initiator consult with Scheduling and Publications in the Registrar’s office when developing the CAR and PAR documents as outlined sections 10 and 11 of this handbook. Assistance with developing the CCG can be obtained from the school’s representatives on the academic boards, from the college curriculum committee, and section 9 of this handbook.

8. Curriculum proposals are reviewed by the college/school curriculum committee. The committee chair signs the CAR following the committee’s review.

9. A hard copy of the proposal is forwarded to the appropriate dean/director for review.

10. Following review, the dean/director signs the CAR and a hard copy of the curriculum proposal is forwarded to the Governance Office along with an electronic version in Microsoft Word format of the full proposal. Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.
Section 3 – Curriculum Approval Process

- The Governance Office forwards noncredit, continuing education unit (CEU), -93s, -94s, and 500-level courses to the Office of the Registrar to be entered into the system.
- The Governance Office forwards Workforce Credential proposals to OAA for review and approval.
- Courses and programs to be published in the catalog, and prefix requests, are sent to UAB/GAB for review.

11. Any items needing UAB/GAB review must be received in the Governance Office by 9 a.m. Monday in order to be on the agenda for the Friday meeting of the same week. Initiating faculty member or faculty representative must present courses, programs and prefixes to UAB/GAB. Representatives should be prepared to answer all relevant questions as described in 2.1.2 or the proposal will be tabled. OAA will consult with initiating faculty during the review of Workforce Credentials.

12. After appropriate reviews are complete, the course, program or prefix appears in the next catalog or schedule for which the publication deadline was met, unless a later implementation date has been approved. See below for more information on implementation dates and deadlines for inclusion in the catalog. Note: meeting these deadlines does not guarantee all approvals can be obtained in time for inclusion in the next catalog.

New programs may have an implementation date of summer, fall, or spring. For new programs to be included in the catalog, first reading by the boards should be no later than the first meeting in January (See the UAA Curriculum and Catalog Production Calendar located on the Governance website [www.uaa.alaska.edu/governance] for current dates.

Existing programs with changes must have an implementation date of fall so that correct curriculum is in effect in current catalog. Changes to programs must be initiated with enough time to reach final approval prior to submission of catalog for printing (Recommend first reading no later than first meeting in March).

New courses may have an implementation date of summer, fall, or spring. Changes to existing courses may not be implemented for a term once registration has opened, implementation dates must be chosen for a future term. Note: course changes related to program changes must have an implementation date of fall. In order to have approval prior to fall registration opening, it is suggested that first reading take place no later than the first week in February.

13. After the final reading by UAB/GAB, the initiating faculty member is responsible for the preparation of the corrected final documents and submission to the Governance Office before UAA Faculty Senate takes action.

14. The Governance Office prepares the UAB/GAB reports for the UAA Faculty Senate. The Senate then reviews and acts on the proposed courses and prefixes.

15. OAA reports decisions regarding Workforce Credential proposals to the Faculty Senate through the Governance Office and to the BOR through SAC.

16. UAB/GAB chair signs CAR/PAR documents after approval by the Faculty Senate.

17. The Vice Provost for Undergraduate Academic Affairs reviews and acts on undergraduate courses and undergraduate and post-baccalaureate programs. The Vice Provost for Research and Graduate Studies reviews and acts on graduate courses and programs. The two Vice Provosts collaborate on the approval of prefixes.

18. New programs and programs with major changes (with the exception of Minors, Occupational Endorsements and Workforce Credentials) require approval through the BOR. After approval by the Faculty Senate, OAA works with the faculty initiator to prepare and submit the necessary documents (see section 7.3).

19. After approval by the Faculty Senate, the Vice Provost for Undergraduate Academic Affairs works with faculty initiators for Minors, Occupational Endorsements and Workforce Credentials to obtain approval as required from OAA and the Chancellor’s office and to prepared documents notifying NWCCU of the curriculum actions. Note: Workforce Credentials do not require Faculty Senate approval.
20. All new programs and programs with major changes require approval through the NWCCU. After approval by the BOR, OAA works with the faculty initiator to prepare and submit the necessary documents (see section 7.3). The appropriate Vice Provost approves new programs and programs with major changes only after approval is received from the NWCCU.

21. After final approvals are obtained from the Chancellor, Regents, and/or the NWCCU, the appropriate Vice Provost approves the curriculum and returns the folders to the Governance Office. The Governance Office sends the approved courses, programs and prefixes to the Office of the Registrar.

22. New certificate programs may require an additional review and approval by the US Department of Education (US DoE) before admitted students are eligible for federal financial aid. This review is initiated by the UAA Director of Student Financial Aid after BOR approval of the program. US DoE approval usually occurs within 90 days of submission.

This approval process is depicted in Figures 3.1, 3.2, 3.3, and 3.4 for specific types of courses, programs, and prefixes.

### 3.2 Approval for Minor Changes to Undergraduate Credit Courses

#### 3.2.1 All Undergraduate Credit Courses Numbered 050 – 499

1. If a course title change is proposed by the prefix (initiating) department, and approved through the regular curriculum process, then the course title will be automatically changed wherever the course title appears in the catalog. The initiating department is required to coordinate with all impacted departments, using Box 13a of the CAR, and an additional spreadsheet, if necessary. e.g., ENGL A450 required in English for Speakers of Other Languages (ESOL) 7-12 Concentration (Graduate program in COE).

2. If prerequisites within the prefix department are changed in 050-499 courses, the initiating department must complete a CAR to be approved through the regular curriculum process. No Course Content Guide will be required so long as the course has been updated within the past 4 years. The initiating department is required to coordinate with all impacted departments. The impacted departments must be listed in Box 13a of the CAR, with an additional spreadsheet, if necessary.

3. If registration restrictions within the prefix department are changed in 050-499 courses, the initiating department must complete a Course Action Request (CAR) to be approved through the regular curriculum process. No Course Content Guide (CCG) will be required so long as the course has been updated within the past 4 years. The initiating department is required to coordinate with all impacted departments. The impacted departments must be listed in Box 13a of the CAR, with an additional spreadsheet, if necessary.

#### 3.2.2 Lower Division Undergraduate Credit Courses Numbered 050 – 299 Only

Minor changes that do not substantially affect the intent or content of lower division courses are handled by the school/college curriculum committee or community campus instructional council. These changes include the following that do not affect the quality of the curriculum:

1. Course number change at the same level
2. Grammatical change in course description
3. Co-requisite changes that only affect the prefix department
4. Fee change
5. Course description change that does not change course intent (e.g., USSR to Russia, Word 2003 to Word 2010)
6. Updating of the bibliography.
The school/college curriculum committee or community campus instructional council is responsible for ensuring that proper coordination has occurred. Upon final approval by the college dean or director, courses with the types of changes listed above are forwarded to the Governance Office for transmittal to the Office of the Registrar.

These course actions are placed on the UAB agenda as informational items. Any UAB member may request that an information item be changed to an action item. No action can be taken on an action item until after it has been placed on the next meeting’s agenda.

### 3.3 Approval of Minor Catalog Changes

The following catalog changes are considered minor changes and do not have to be reviewed by the UAB/GAB. These changes can be implemented by program faculty during the annual catalog copy review processes conducted by the Office of the Registrar.

**Minor Changes:**
1. Contact information, location, and web address
2. General Discipline information
   a. Degree or Certificate program
   b. Overview and career information
   c. Accreditation
   d. Research possibilities
2. Advising
3. Academic Progress Requirements

### 3.4 Approval for substantive changes to courses numbered 050 - 299, for all changes to courses numbered 300 - 499, and for additions or deletions of all academic credit courses.

Additions, deletions, or changes that have a substantive effect on the intent, content or student learning outcomes of any courses numbered 050 to 299 require approval through the established governance process and UAB action as shown at the beginning of this section.

Additions, deletions or changes to any 300- or 400-level course with a permanent number, wherever initiated within UAA, require approval through the established governance process and UAB action as shown at the beginning of this section.

The approval process for these courses is found in section 3.1 and is depicted in Figure 3.1.

### 3.5 Approval of 600-Level Courses

A new or revised 600-level course with a permanent number, wherever initiated within UAA, requires GAB action. School/college curriculum committee or community campus instructional council takes responsibility for the following changes that do not affect the intent and quality of the curriculum:
1. Title change
2. Course number change at the same level
3. Grammatical change in course description
4. Prerequisite change that involves only the prefix department
5. Fee change
6. Course description change that does not change course intent (e.g., USSR to Russia, Word 2003 to Word 2010)
7. Updating of the bibliography

Upon final approval by the college dean or director, courses with the types of changes listed in 1-7 are forwarded to the Governance Office for transmittal to the Office of the Registrar. These course actions are placed on the GAB agenda as informational items. Any GAB member may request that an information item be changed to an action item. No action can be taken on an action item until after it has been approved by the GAB.

The community campus director will work with the appropriate school/college dean to obtain review and approval for offering of a graduate course.

The approval process for 600 level courses is found in section 3.1 and is depicted in Figure 3.1.

3.6 Approval of 500-Level Courses
These courses are offered for professional development credit only. The UAB is responsible for UAA policy associated with 500-level courses.

The appropriate dean/director or designee has authority for initial approval and offering of 500-level courses. Each college offering 500-level courses must have policies and procedures in place that guarantee appropriate faculty review and course quality.

Approved courses are forwarded through the Governance Office to the Office of the Registrar to be entered into the system and are listed in the curriculum log posted on the Governance website (www.uaa.alaska.edu/governance).

The approval process for 500 level courses is found in section 3.1 and is depicted in Figure 3.2.

3.7 Approval of Non Credit Courses Numbered AC000-AC049 or A000-A049 and changes to these courses
These courses are not offered for academic credit. Courses numbered AC000-AC049 earn Continuing Education Units (CEU) and may be used for Workforce Credentials. These courses are approved as indicated in the approval process outlined in section 3.1.

The approval process for non-credit and CEU courses is found in section 3.1 and is depicted in Figure 3.2.

3.8 Approval of Doctoral Programs
The program approval process in section 3.1 is not applicable to doctoral programs.

*It is necessary for programs to consult with OAA before starting work on doctoral program proposals. The primary point of contact with OAA is the Vice Provost for Research and Graduate Studies.*

The doctoral approval process consists of two stages: A Justification Proposal and a Full Proposal.
Justification Proposal

The Justification Proposal is a relatively brief document that addresses how the proposed doctoral program meets specific criteria important to the process for deciding if the program is viable and needed. This proposal requires that the basic structure of the program be well designed to meet standards that will ensure that the program is likely to be successful. At this stage, the curriculum pieces (PAR, CAR, and CCG) are not to be included. Section 3.8.1 is the Justification Proposal Outline and includes all the criteria for the proposal. The Justification Proposal follows the normal curriculum approval process through the Provost and Chancellor with additional review by the Graduate Council and the Dean of Graduate Studies.

Full Proposal

The Full Proposal is an expansion on the Justification Proposal and includes the curriculum documents. The Full Proposal's main purpose is to demonstrate that the proposed program meets the standards of all applicable accreditation agencies. The program must identify all relevant accreditation standards and demonstrate how the program meets the standards. This document is essentially an accreditation self-study document. As a part of the Full Proposal package, the program will fill out a checklist where they will indicate that certain criteria important to the institution are addressed in the package. If a particular item on the checklist is not included in the accreditation analysis, then the program will be required to include an analysis of how the particular institutional requirement is met. Section 3.8.2 is the Full Proposal Outline and includes all the criteria for the proposal. The Full Proposal follows the normal curriculum approval process through the Provost and Chancellor with additional review by the Graduate Council and the Dean of Graduate Studies. Once approved at UAA the full proposal is forwarded to the UA Board of Regents and the NWCCU by the UAA Office of Academic Affairs.

3.8.1 Justification Proposal

The purpose of this document is to articulate to individuals and groups in the campus curriculum approval process the relevant details of the proposed program so that decisions can be made relative to the viability of the proposed program. The proposal must include the following sections and address the identified issues. Do not include curriculum (i.e., PAR, CARs, and CCGs) documents at this stage.

The justification proposal is be to reviewed and approved, with signatures, by the proposing department, the applicable college or school curriculum committee and Dean, the Graduate Council and Dean of the Graduate School, the Graduate Academic Board, the Faculty Senate, and the Provost.

Prior to approval by the Provost an external review (which may include a site visit if determined to be needed at the justification level) shall be conducted. This review is to focus on need, demand, program quality, and physical resources. The review panel is to consist of three highly qualified individuals from the profession and/or peer institutions in the specific field/discipline of the proposed program. The unit proposing the doctorate recommends potential members of the review panel; however the members of the review panel are selected and appointed by the Provost.

1. Brief Description of the Proposed Doctorate (Maximum of one page, 1.5 spaced and 12 point font)
   (Name, degree initials, proposed by (person, department, college), brief description of the target group of students, brief description of the key characteristics of the degree; mission statement; Key objectives as expressed as learner outcomes-no more than six; mode of offering; relationship to, and impact on, existing programs and courses)

2. Justification of the Proposal on the Basis of Need (Maximum of two pages; include as appendices statements from professional associations etc.)
   (Typical headings include: needs in the profession, needs in the state, needs in terms of training high level leaders, relevance for higher education employment, employment demands)

3. Justification of the Proposal on the Basis of Prospective Student Demand (Maximum of two pages; include as appendices the survey used)
4. **Identify Several Peer Programs (Maximum of one page)**
   (Are there any similar programs at UA, other Alaska universities; describe, and provide web links for, peer programs and name of their universities)

5. **Brief Description of the Entry Requirements (Maximum of one page)**
   (Clearly articulate admissions requirements, such as Degree level, previous professional experience, or other prerequisite requirements. Describe the process for selecting students. Note that each doctoral program is required to have an admissions committee of at least three members.)

6. **Faculty Qualifications (Maximum one page; summarize in a table with 6 columns as below)**
   (Personnel; highest degree; top 5 refereed publications in the last five years; no more than 5 key presentations in the last 5 years; external competitive research grants won in the last 5 years; significant industrial/professional experience in that field in the last 5 years)

7. **Student Services (Maximum of one page)**
   (Indicate advising, office space, scholarships, graduate assistantships, student assistantships, conference attendance)

8. **Facilities and Resources (Maximum of two pages; to be signed by the Dean)**
   (Need for staffing, additional faculty, technicians, additional lab space, additional plant, equipment, technology, consumables, library resources network infrastructure, etc.)

9. **Budget and Cost Analysis (Maximum of one page)**
   (Specific budget proposal; revenue streams; sustainability; up-front costs; ongoing costs; external funding; UA funding)

10. **Identify Relevant Accreditation Agencies and Their Criteria (Maximum of two pages)**
    (NWCCU, State, National, and other professional organizations; provide links to the accreditation's web sites & criteria; How does the program meet basic eligibility and what are the biggest challenges in meeting the criteria.)

11. **Program Catalog Copy**
    (Proposed catalog copy; new course titles, numbers, and descriptions)

### 3.8.2 Full Proposal

This document is used to show how the proposed program meets institutional and accrediting body criteria. The full curriculum (i.e., PAR, CARs, and CCGs) for the program is also to be included. This document is, in essence, an abbreviated self-study showing how the program meets applicable accreditation standards.

The full proposal is to be reviewed and approved, with signatures, by the proposing department, the applicable college or school curriculum committee and Dean, the Graduate Council and Dean of the Graduate School, the Graduate Academic Board, and the Faculty Senate.

Prior to approval by the Provost, the external review panel used in the justification proposal shall do a review of the full proposal and provide comments to the program and Provost.

The Office of Academic Affairs will work with the program to develop a final submittal to SAC, the UA Board of Regents, and the Northwest Commission on Colleges and Universities (NWCCU).

Required Outline:
1. **Introduction and Program Overview**  
   (Name, degree initials, proposed by (person, department, college), brief description of the key characteristics of the degree; mission statement; key objectives expressed as learner outcomes-no more than six)

2. **Program Accrediting Standards (if any)**  
   (Identify accrediting agency with hyperlinks to their standards; an item by item list of the standards and how the program plans to meet them)

3. **NWCCU Accrediting Standards**  
   (an item by item list of criteria and how the program plans to meet the criteria)

4. **Institutional Checklist.**  
   (As a minimum, the Full Proposal must address the following items. It is probable that many of the items are addressed in prior sections of the full proposal, so the requirement of this section is to provide an index to the parts of the proposal that address the indicated concerns. In the event that a specific concern has not been addressed, please provide discussion about how the proposed program addresses the concern. See the Justification Proposal instructions for the type of information required.)
   - Justification on the Basis of Need:  
     Found in section ___________________
   - Justification on the Basis of Prospective Student Demand:  
     Found in section ___________________
   - Identify Several Peer Programs:  
     Found in section ___________________
   - Entry Requirements:  
     Found in section ___________________
   - Faculty Qualifications:  
     Found in section ___________________
   - Student Services:  
     Found in section ___________________
   - Facilities and Resources:  
     Found in section ___________________
   - Budget and Cost Analysis:  
     Found in section ___________________

5. **Curriculum Documents**  
   (PAR, Catalog Copy, CARs, and CCGs)

6. **Program-Academic Assessment Plan**

7. **Board of Regents PAR and Executive Summary**
NOTE: Coordination with affected units and faculty listserv (uaa-faculty@lists.uaa.alaska.edu) must occur at least 10 working days before consideration by UAB or GAB. See section 5 for details.

Also see section 5 for required documents and instructions.
Figure 3.2: Non-Permanent (-93, -94) Credit Course, 500-Level Course, and Noncredit/CEU Approval Process

NOTE: Coordination with the faculty listserv (uaa-faculty@lists.uaa.alaska.edu) must occur at least 10 working days before submittal to the Governance Office. See section 5 for details. Also see section 5 for required documents and instructions.
A major revision of an existing program or the development of a new program must be discussed with the Office of Academic Affairs at ayoa@uaa.alaska.edu or 907-786-1054 before the curriculum proposal is presented to UAB/GAB. It is best to meet with OAA at the start of program development.

NOTE: Coordination with affected units and faculty listserv (uaa-faculty@lists.uaa.alaska.edu) must occur at least 10 working days before consideration by UAB or GAB. See section 7 for details.

Figure 3.3: Program Approval Process

A major revision of an existing program or the development of a new program must be discussed with the Office of Academic Affairs at ayoa@uaa.alaska.edu or 907-786-1054 before the curriculum proposal is presented to UAB/GAB. It is best to meet with OAA at the start of program development.
Before the curriculum proposal is presented to the school/college committees and UAB/GAB, consult with the Office of the Registrar at aypublications@uaa.alaska.edu for a new prefix.

NOTE: Coordination with affected units and faculty listserv (uaa-faculty@lists.uaa.alaska.edu) must occur at least 10 working days before consideration by UAB or GAB. See section 4 for details.

Also see section 4 for required documents and instructions.
A suspension to an existing program must be discussed with the Office of Academic Affairs at ayoaa@uaa.alaska.edu or 907-786-1054.

**Figure 3.5: Degree and Certificate Suspension Approval Process**

Suspension Initiated by Faculty and/or College/School Academic Dean/Campus Director

Consult With Office of Academic Affairs

College/School Dean/Director

Coordination with Affected College/School Dean/Director for Programs Offered on Multiple Campuses & Community Campus Programs

OAA/Provost Approval

- Notification
- Notification
- Notification
- Notification
- Notification (Undergrad Progs)
- Notification (Grad Progs)

Northwest Commission on Colleges and Universities

Statewide Academic Council

Chancellor

Faculty Curriculum Listserv

Undergraduate Academic Board

Graduate Academic Board

Registrar
A deletion to an existing program must be discussed with the Office of Academic Affairs at ayoaa@uaa.alaska.edu or 907-786-1054.

Figure 3.5: Degree and Certificate Deletion Approval Process

Deletion Initiated by Faculty and/or College/School Dean/Director

Program Suspension
(See suspension approval process for greater detail)

Consult With Office of Academic Affairs

Develop Proposal Based on Relevant Considerations

Department Curriculum Committee/Chair

College/School Curriculum Committee

College/School Dean/Director

Governance Office

Undergraduate Academic Board (UAB)

Faculty Senate

Graduate Academic Board (GAB)

OAA/Provost

Chancellor

Statewide Academic Council

UA President

Board of Regents*

Northwest Commission on Colleges and Universities

Office of the Registrar

*Requires 60-day advance notice to have items placed on the agenda
Section 4 - Prefixes

Responsibility for prefixes and their associated courses are assigned to academic departments. All proposals to add, change, inactivate or transfer a prefix must originate with the academic program currently assigned to the prefix.

4.1 Changes to or Replacement of a Prefix

The school/college must discuss the change or replacement of prefix with the OAA before the proposal is presented to the UAB/GAB for review. OAA contact persons are the Vice Provost for Undergraduate Academic Affairs or the Assistant Vice Provost (ayoaa@uaa.alaska.edu, ph 907-786-1054).

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. A cover memo summarizing the proposal.
   b. Signed Program/Prefix Action Request (PAR: www.uaa.alaska.edu/governance/coordination/index.cfm)

   Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

   If the change of prefix affects a degree or certificate, a separate signed PAR must be submitted for each program change, together with revised catalog copy in Word using the track changes function. A Word copy of the current catalog is available on the Governance website. (www.uaa.alaska.edu/governance).

2. Coordination should take place early in the curriculum process and consists of two steps:
   a. Coordination memo or email. Coordination is required when the change of prefix has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.

   A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet (www.uaa.alaska.edu/governance/coordination/index.cfm) is required listing the reference and the impact (program requirements, electives, selectives, course prerequisite, corequisites).

   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the addition or inactivation of the prefix. The coordination email must include contact information, as well as:
      - School and department (PAR boxes 1a and 1b),
      - Prefix (PAR box 2),
      - Type of Action (Add/Change/Delete) (PAR box 4),
      - justification for action (PAR box 8),
      - any other relevant information.

   The email must be sent at least 10 working days before being presented at UAB/GAB.

3. Approval of changes to or replacement of a prefix follows the curriculum approval process outlined in Section 3.
4.2   Addition of a Prefix

The school/college must discuss the addition of a prefix with the OAA before the proposal is presented to the UAB/GAB for review. OAA contact persons are the Vice Provost for Undergraduate Academic Affairs and the Assistant Vice Provost (ayoaa@uaa.alaska.edu, ph 907-786-1054).

A new prefix must be requested from the Office of the Registrar. Email address is aypublications@uaa.alaska.edu

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. A cover memo summarizing the proposal.
   b. Signed PAR (www.uaa.alaska.edu/governance/coordination/index.cfm).

       Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

   c. If the addition of the prefix affects a degree or certificate, a separate signed PAR must be submitted for each program change, together with revised catalog copy in Word using the track changes function. A Word copy of the current catalog is available on the Governance website (www.uaa.alaska.edu/governance/).

2. Coordination should take place early in the curriculum process and consists of two steps:
   a. Coordination memo or email. Coordination is required when the new prefix has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.
   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the addition of the prefix. The email must include contact information, as well as:

       • School and department (PAR boxes 1a and 1b),
       • Prefix (PAR box 2),
       • Type of Action (Add/Change/Delete) (PAR box 4),
       • justification for action (PAR box 8),
       • any other relevant information.

   The email must be sent at least 10 working days before being presented at UAB/GAB.

3. Approval of addition of a prefix follows the curriculum approval process outlined in Section 3.

4.3   Inactivation of a Prefix

The school/college must discuss the inactivation of a prefix with the OAA before the proposal is presented to the UAB/GAB for review. OAA contact persons are the Vice Provost for Undergraduate Academic Affairs and the Assistant Vice Provost (ayoaa@uaa.alaska.edu, ph 907-786-1054).

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. A cover memo summarizing the proposal.
   b. Signed PAR (www.uaa.alaska.edu/governance/coordination/index.cfm).
Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

If the inactivation of the prefix affects a degree or certificate, a separate signed PAR must be submitted for each program change, together with revised catalog copy in Word using the track changes function. A Word copy of the current catalog is available on the Governance website (www.uaa.alaska.edu/governance/).

2. Coordination should take place early in the curriculum process and consists of two steps:

   a. Coordination memo or email. Coordination is required when the inactivated prefix has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.

      A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet is required listing the reference and the impact (program requirements, electives, selectives, course prerequisite, corequisites).

   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the addition or inactivation of the prefix. The email must include contact information, as well as:

      • School and department (PAR boxes 1a and 1b),
      • Prefix (PAR box 2),
      • Type of Action (Add/Change/Delete) (PAR box 4),
      • justification for action (PAR box 8),
      • any other relevant information.

      The email must be sent at least 10 working days before being presented at UAB/GAB.

3. Approval to inactivate a prefix follows the curriculum approval process outlined in Section 3.

4.4 Transfer of a Prefix

A proposal to transfer responsibility for a prefix and its associated courses to an academic department other than the department currently assigned to the prefix requires approval from the Provost. The proposal consists of a memorandum of understanding between the departments stating the requested action and the reason for the action. The memorandum is to be signed by the department chairs of the two departments and the dean/director of each department. The memorandum of understanding is forwarded to OAA for consideration. Proposals approved by the Provost are forwarded to the Office of the Registrar to update relevant records.
Section 5 - Courses

5.1 Changes or Revisions to a Course

It is advisable to write the Course Content Guide (CCG) first. The information from the CCG can then be pasted into the CAR. Before developing the CCG, the following need to be considered in addition to the course content: type of course, level, number, whether it will be stacked or cross-listed, prerequisites and registration restrictions, instructor goals and student learning outcomes.

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. CAR signed by the faculty initiator, department chair, college curriculum committee chair, and the dean or director or designee. A faculty member may sign no more than two signature lines on the CAR. Exceptions to this rule may be permissible with supporting documentation.
      
      Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.
   b. Completed CCG.
   c. If the revised course changes the requirements of the program in which the course is housed, a signed PAR and catalog copy in Word using the track changes function must be provided. (See section 7)
   d. Signed Fee Request Form (one per course) for courses with new, deleted or revised fees. ([www.uaa.alaska.edu/governance/coordination/index.cfm](http://www.uaa.alaska.edu/governance/coordination/index.cfm)). The Fee Request Form is not required if there are no changes to existing fees.

2. Coordination should take place early in the curriculum process and consists of three steps:
   a. Coordination memo or email. Coordination is required when the revised course has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.
   b. A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet is required listing the reference, the impacted program/course/catalog copy, and the impact (program requirements, electives, selectives, course prerequisite, corequisites).
   c. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the revision. The coordination email must include contact information as well as:
      - School and department (CAR boxes 1a and 1c),
      - course prefix (CAR box 2),
      - course number (CAR box 3),
      - course title (CAR box 6),
      - Add/Change/Delete and if change, a summary list of changes (CAR box 8),
      - course description (CAR box 15),
      - justification for action (CAR box 19),
      - any other relevant information.
Do not attach the CAR/PAR or the CCG to the email. The coordination email must be sent at least 10 working days before being presented at UAB/GAB.

3. The faculty initiator is required to send the CAR and CCG to the library liaison for that department (http://consortiumlibrary.org/find/subject liaison librarians). It is suggested that this be done early in the curriculum process.

4. If the revised course is a GER, the appropriate guidelines must be followed (See Section 6). GER review templates are available at www.uaa.alaska.edu/governance/GER.

5. A course may not be scheduled nor registration for a course at UAA take place before the appropriate curriculum approval process has been completed and approved and the course has been entered into the system.

6. Changes or revisions to existing courses are approved through the curriculum approval process outlined in section 3.

5.2 Adding a New Course

It is advisable to write the CCG first. The information from the CCG can then be pasted into the CAR. Before developing the CCG, the following need to be considered in addition to the course content: type of course, level, number, whether it will be stacked or cross-listed, prerequisites and registration restrictions, instructional goals and student learning outcomes.

A course may not be scheduled nor registration for a course at UAA take place before the appropriate curriculum approval process has been completed and approved and the course has been entered into the system.

5.2.1 Permanent Credit Courses (050-499 and 600-699)

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. CAR signed by the faculty initiator, department chair, college curriculum committee chair, and the dean or director or designee.
      
      Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.
   
   b. Completed CCG.
   
   c. If the new course changes the requirements of the program in which the course is housed, a signed PAR and catalog copy in Word using the track changes function must be provided.
   
   d. Signed Resource Implication Form (one per discipline). Signed Fee Request Form (one per course) for courses with new or revised fees (www.uaa.alaska.edu/governance/coordination/index.cfm). The Fee Request Form is not required if the course does not have fees or an existing general program fee is to be applied.

2. Coordination should take place early in the curriculum process and will consist of three steps:
   a. Coordination memo or email. Coordination is required when the new course has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.
      
      A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet is required listing the
reference, the impacted program/course/catalog copy, and the impact (program requirements, electives, selectives, course prerequisite, corequisites).

b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the new course. The coordination email must include contact information as well as:
   - School and department (CAR boxes 1a and 1c),
   - course prefix (CAR box 2),
   - course number (CAR box 3),
   - course title (CAR box 6),
   - Add/Change/Delete and if change, a summary list of changes (CAR box 8),
   - course description (CAR box 15),
   - justification for action (CAR box 19),
   - any other relevant information.

Do not attach the CAR/PAR or the CCG to the email. The coordination email must be sent at least 10 working days before being presented at UAB/GAB.

c. The faculty initiator is required to send the CAR and CCG to the Library Liaison for that department (http://consortiumlibrary.org/find/subject_liaison_librarians).

3. If the new course is proposed as a GER, the appropriate guidelines must be followed (See Section 6). GER review templates are available at www.uaa.alaska.edu/governance/GER).

4. The curriculum approval process to be followed is found in section 3.1 and is depicted in Figure 3.1

5.2.2 Non-Permanent (-93, -94) Credit Course, 500-Level Course, and Noncredit/CEU Course

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. CAR signed by the faculty initiator, department chair, college curriculum committee chair, and the dean or director or designee.

   Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

   b. Completed CCG.

   c. If the new course changes the requirements of the program in which the course is housed, a signed PAR and catalog copy in Word using the track changes function must be provided.

   d. Signed Resource Implication Form (one per discipline).

   e. Signed Fee Request Form (one per course) for courses with new or revised fees (www.uaa.alaska.edu/governance/coordination/index.cfm). The Fee Request Form is not required if the course does not have fees or an existing general program fee is to be applied.

2. Coordination should take place early in the curriculum process and consists of three steps:
   a. Coordination memo or email. Coordination is required when the new course has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.

   A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet is required listing the
reference, the impacted program/course/catalog copy, and the impact (program requirements, electives, selectives, course prerequisite, corequisites).

b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the new course. The email must include contact information, as well as:

- School and department (CAR boxes 1a and 1c),
- course prefix (CAR box 2),
- course number (CAR box 3),
- course title (CAR box 6),
- Add/Change/Delete and if change, a summary list of changes (CAR box 8),
- course description (CAR box 15),
- justification for action (CAR box 19),
- any other relevant information.

Do not attach the CAR/PAR or the CCG to the email. The coordination email must be sent at least 10 working days before being presented at UAB/GAB.

c. The faculty initiator is required to send the CAR and CCG to the Library Liaison for that department (http://consortiumlibrary.org/find/subject_liaison_librarians).

3. The curriculum approval process to be followed is found in section 3.1 and is depicted in Figure 3.2
5.3 Deleting a Course

1. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. CAR signed by the faculty initiator, the department chair, the college curriculum committee chair, and the dean or director or designee.
      
      Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.
   b. Signed PAR, if needed. If the course deletion affects a degree or certificate, a separate signed PAR must be submitted for each program, together with revised catalog copy in Word using the track changes function.

2. When Filling out the CAR, only the following boxes need to be completed:
   - Course Prefix (Box 2)
   - Course Number (Box 3)
   - Complete Course Title (Box 6)
   - Type of Action (Box 8)
   - Implementation Date (Box 11)
   - Cross Listed or Stacked (Box 12)
   - Coordination Email Date (Box 13b.)
   - Justification for Action (Box 19)

3. Coordination should take place early in the curriculum process and consists of two steps:
   a. Coordination memo or email. Coordination is required when the deleted course has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.
      
      A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet (www.uaa.alaska.edu/governance/coordination/index.cfm) is required listing the reference, the impacted program/course/catalog copy, and the impact (program requirements, electives, selectives, course prerequisite, corequisites).
      
      Reference to a deleted course in impacted programs and courses will be struck from the catalog and from Banner.
   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the deletion. The email must include contact information, and must be sent at least 10 working days before being presented at UAB/GAB.

4. Purge List
   A purge list is compiled annually for courses not offered successfully in the previous four academic years. If a course has not been successfully offered in the previous four academic years, then that course will be purged from the catalog unless the department responsible for the course provides a clear justification for retaining the course in the catalog. This justification must be submitted to UAB/GAB for review.
      
      Reference to a purged course in impacted programs and courses will be struck from the catalog and from Banner.
5. **GER Course Purge List**

UAA policy states that a course may not remain on the GER list if it has not been offered successfully at least once during the past four semesters, excluding summer. The list of GER courses will be provided to UAB by the Office of the Registrar each spring. Review of the GER list will be done annually by UAB in the spring semester.
Section 6 - General Education Requirement (GER)

6.1 General Education and General Course Requirements

The Associate of Arts degree program and programs at the baccalaureate level must comply with the UAA General Education Requirements specified for that program in the catalog. Associate of Applied Science degree programs and undergraduate certificate programs of 30 credits or more must have identifiable general education components in the areas of communication, computation and human relations. These components must be at the collegiate level, must require a combined effort equivalent to at least 6 academic credits (for the program), and their student learning outcomes must be assessed.

The student learning outcomes of these general requirements may be met through specific courses or through activities embedded in the major requirements. If embedded, programs will be asked to identify the number and types of exercises used to fulfill these requirements and to describe their assessment methods.

When an action involves a change in GER, the UAB will refer the action, preferably with recommendations, to the General Education Review Committee (GERC).

When an action involves a change in the GER, the faculty initiator must communicate with all affected faculty in school/colleges, community campuses (including Prince William Sound Community College), deans, and their assistants.

All GER courses must have instructional goals and assessable student learning outcomes that are consistent with the current UAA catalog GER category descriptors and the appropriate GER Student Learning Outcomes. See the Governance webpage at www.uaa.alaska.edu/governance/GER.

All GER courses are subject to ongoing review and approval through the normal Governance process on a cycle, proposed by the departments and approved by the colleges, which must not exceed 10 years.

The GERC is a standing committee of the UAB reporting to the UAB.

The GERC review process is as follows:

1. Department/school/college prepare proposal and coordinate
2. UAB agenda (first reading)
3. GER Committee of UAB
4. UAB agenda (second reading)
5. Faculty Senate (approved actions of UAB only)
6. Administration (approved actions of the UAA Faculty Senate only)

6.2 Revision of or Request for GER Course

It is advisable to write the CCG first. The information from the CCG can then be pasted into the CAR. Before developing the CCG, the following need to be considered in addition to the course content: type of course, level, number, whether it will be stacked or cross-listed, prerequisites and registration restrictions, instructor goals and student learning outcomes.

1. Additional Considerations:
   • Inter MAU coordination to facilitate transfer between campuses.
     o Courtesy coordination is recommended to determine potential transfer conflicts.
Check other campus’ catalogs to see if they have a course with the same prefix and number.

If this is the case and the course is not a GER, consider using a new, unused (at all MAUs) course number if making this course a GER at UAA. The registrar’s office can provide assistance with course number suggestions.

If a new number is inappropriate, please bring transfer concerns to the attention of the GERC.

The appropriate GER template must be applied (www.uaa.alaska.edu/governance/)

Addresses appropriate GER student learning outcome(s) from the GER Preamble (www.uaa.alaska.edu/records/catalogs/catalogs.cfm)

1. Communicate effectively in a variety of contexts and formats;
2. Reason mathematically and analyze quantitative and qualitative data competently to reach sound conclusions;
3. Relate knowledge to the historical context in which it developed and the human problems it addresses;
4. Interpret different systems of aesthetic representation and understand their historical and cultural contexts;
5. Investigate the complexity of human institutions and behavior to better understand interpersonal, group and cultural dynamics;
6. Identify ways in which science has advanced the understanding of important natural processes;
7. Locate and use relevant information to make appropriate personal and professional decisions;
8. Adopt critical perspectives for understanding the forces of globalization and diversity; and
9. Integrate knowledge and employ skills gained to synthesize creative thinking, critical judgment and personal experience in a meaningful and coherent manner.

Meets category definition from Board of Regents Regulation (www.alaska.edu/bor/policy-regulations/)

Addresses and assesses GER student learning outcomes for the classification descriptions described in the catalog (www.uaa.alaska.edu/records/catalogs/catalogs.cfm) and this handbook

Oral communication skills. Students:
- develop both their message creation and message interpretation skills in order to be more successful communicators.
- develop an awareness of the role of communication in a variety of human relationships.
- develop and implement effective and appropriate communication skills, including the ability to develop, organize, present and critically evaluate messages; analyze audiences; and adapt to a variety of in-person communication settings.

Quantitative skills. Students:
- develop their algebraic, analytic and numeric skills; use them to solve applied problems.
- correctly explain their mathematical reasoning.

Written communication skills. Students:
- practice methods for establishing credibility, reasoning critically and appealing to the emotions and values of their audience.
- write for a variety of purposes and audiences by employing methods of rhetorical and cultural analysis.
- develop the tools to read, think and write analytically about print and nonprint texts and to generate texts that engage their own perceptions while synthesizing the ideas of texts and scholars.
demonstrate their ability to communicate effectively by selecting form and content that fits the situation; adhering to genre conventions; adapting their voice, tone, and level of formality to that situation; and controlling stylistic features such as sentence variety, syntax, grammar, usage, punctuation and spelling.

- **Fine arts.** Students should be able to:
  - identify and describe works of art by reference to media employed, historical context and style, and structural principles of design and composition.
  - interpret the meaning or intent of works of art and assess their stylistic and cultural importance by reference to their historical significance, their relationship to earlier works and artists, and their overall impact of subsequent artistic work.

- **Humanities.**
  Students who complete a **content-oriented** course in the humanities should be able to:
  - identify texts or objects, place them in the historical context of the discipline,
  - articulate the central problems they address and provide reasoned assessments of their significance.

  Students who complete a **skills oriented** humanities course in **logic** should be able to:
  - identify the premises and conclusions of brief written arguments,
  - evaluate their soundness or cogency, and recognize common fallacies.
  - use a formal technique to determine the validity of simple deductive arguments and evaluate the adequacy of evidence according to appropriate inductive standards.

  Students who complete a **skill-oriented** humanities course in a **language** should:
  - demonstrate proficiency in listening, speaking and writing.

- **Natural sciences.** Student will:
  - Be able to apply the scientific method by formulating questions or problems, proposing hypothetical answers or solutions, testing those hypotheses, and reaching supportable conclusions.
  - demonstrate an understanding of the fundamentals of one or more scientific disciplines,
  - demonstrate a knowledge of the discoveries and advances made within that discipline, and the impact of scientific information in sculpting thought and in providing the foundations for the technology in use at various times in history.

  Students completing the laboratory class will:
  - demonstrate the ability to work with the tools and in the settings encountered by professionals in the discipline,
  - critically observe materials, events or processes, and
  - accurately record and analyze their observations.

- **Social sciences.** Students will be able to:
  - describe the discipline she or he has studied and discuss the key principles or themes that unify it.
  - describe and contrast key scientific theories and theoretical approaches in a discipline and the ways in which these theories structure social scientists’ thinking and research.
  - demonstrate the ability to think critically about how society works and how our social realities are created by diverse social processes and cultural practices. Describe the wide range of social science data and the importance of using empiricism, both qualitative and quantitative, in making claims about the social world and in setting evidence-based social policy.
  - explain and use basic social science methods and summarize the assumptions behind and the limitations of inductive or deductive approaches that might include: the formulation of
research questions and hypotheses; data collection and analysis; and testing, verifying, and rejecting hypotheses.

**Integrative capstone.** Students must:
- demonstrate the ability to integrate knowledge by accessing, judging and comparing knowledge gained from diverse fields and by critically evaluating their own views in relation to those fields.

- Provides rationale for retaining or adding this course to the GER menu
- Integrative capstone courses that restrict registration to completion of Tier I GERs should use the following registration restriction verbiage: Completion of Tier I (basic college-level skills) courses.

Actions involving changes in GER are referred to the GERC after first reading at UAB. After GERC review and approval, the second reading takes place at UAB.

2. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. Signed CAR.

   *Note: The Governance Office will accept electronic signed CARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.*

   b. Completed CCG.

   If the new or revised course affects a degree or certificate, a separate signed PAR must be submitted for each program change, together with revised catalog copy in Word using the track changes function. A Word copy of the current catalog is available on the Governance website ([www.uaa.alaska.edu/records/catalogs/catalogs.cfm](http://www.uaa.alaska.edu/records/catalogs/catalogs.cfm)).

   c. Signed Fee Request Form (one per course) for courses with new, deleted or revised fees. ([www.uaa.alaska.edu/governance/coordination/index.cfm](http://www.uaa.alaska.edu/governance/coordination/index.cfm)). The Fee Request Form is not required if there are no changes to existing fees.

3. Coordination should be done early in the process and consists of three steps:
   a. Coordination memo or email. Coordination is required when the new course has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.

   A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet is required listing the reference, the impacted program/course/catalog copy, and the impact (program requirements, electives, selectives, course prerequisite, corequisites).

   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the revision or new course. The email must include contact information, as well as:

   - School and department (CAR boxes 1a and 1c),
   - course prefix (CAR box 2),
   - course number (CAR box 3),
   - course title (CAR box 6),
   - Add/Change/Delete and if change, a summary list of changes (CAR box 8),
   - course description (CAR box 15),
• justification for action (CAR box 19),
• any other relevant information.

Do not attach the CAR/PAR or the CCG to the email. The coordination email must be sent at least 10 working days before being presented at UAB/GAB.

c. The faculty initiator is required to send the CAR and CCG to the library liaison for that department (http://consortiumlibrary.org/find/subject_liaison_librarians).

4. GER courses are approved through the curriculum approval process outlined in section 3.
5. GER changes should have a Fall implementation date. To ensure approval is received in time, the faculty initiator should consult the curricular production calendar on the Governance website. Curriculum must have first reading at UAB by the third Friday in February to be considered for Fall implementation.

6.3 Deletion of a GER Course

UAA policy states that a course may not remain on the GER list if it has not been offered successfully at least once during the past four semesters, excluding summer sessions. The purge list of GER courses will be provided to UAB by the Office of the Registrar each spring. Review of the GER list will be done annually by UAB in the spring semester.
Section 7 - Programs

7.1 Minor Revisions to Programs

Minor Revisions to Programs are changes that do not ‘substantially alter the student learning outcomes of the program’

Also refer to UA Regulation 10.04.02 [www.alaska.edu/bor/policy-regulations/]

Minor program revisions are approved through the standard curriculum review process at UAA as outlined in section 3. The final approval rests with the Provost. Reviews by t SAC, the BOR and NWCCU are not necessary.

The school/college must discuss the proposal to determine the magnitude of the change and the document requirements with the OAA.

OAA contact persons are Accreditation Liaison Officer and either the Vice Provost for Undergraduate Academic Affairs for undergraduate programs or the Vice Provost for Research and Graduate Studies for graduate programs ([ayoaa@uaa.alaska.edu]).

1. The following must be submitted to the Governance Office ([aygov@uaa.alaska.edu]):
   a. PAR signed by the faculty initiator, the department chair, the curriculum committee chair, and the dean or director or designee ([www.uaa.alaska.edu/governance/coordination/index.cfm]). A faculty member may sign no more than two signature lines on the PAR. Exceptions to this rule may be permissible with supporting documentation.
      
      Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.
   b. Complete program catalog copy in Word using the track changes function including student learning outcomes for the program. A Word copy of the current catalog is available on the Governance website ([www.uaa.alaska.edu/governance]) under Quick Links.
   c. All course CARs and CCGs for new and revised courses.
   d. Four-Year Course Offering Plan for the program.
   e. Signed Resource Implication Form.
   f. Signed Fee Request Form (for new, deleted or revised fees).
   g. Programs designated as Gainful Employment programs must also complete additional documentation for the Financial Aid office.

2. Coordination should take place early in the process and consists of three steps:
   a. Coordination memo or email. Coordination is required when the revision has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Examples are when courses are deleted/added to a program or when prerequisites/registration restrictions are changed. Proof of coordination must be provided to the Governance Office.
   b. The faculty initiator is also required to send an email to [uaa-faculty@lists.uaa.alaska.edu] explaining the revision. The email must include contact information, as well as:
      - School and department (PAR boxes 1a and 1b),
• Complete Program Title (PAR box 2),
• Type of Program (PAR box 3),
• Type of Action (Add/Change/Delete) (PAR box 4),
• justification for action (PAR box 8),
• any other relevant information.

The email must be sent at least 10 working days before being presented at UAB/GAB.

c. The faculty initiator is required to send the CARs and CCGs to the library liaison for that department (http://consortiumlibrary.org/find/subject_liaison_librarians).

The program approval process is outlined in section 3.

7.2 Programs which have MATH, ENGL, and/or COMM requirements

7.2.1 Programs which have MATH program requirements:

It is recommended that programs with specific MATH requirements use the following language in specifying the requirement:

“MATH A or any MATH course for which MATH A is in the prerequisite chain.”

Rationale: In programs with specific mathematics requirements (e.g., MATH A105), students can meet those requirements with either

a. A course specifically required by the program (e.g., MATH A105) or
b. A higher-level mathematics course (e.g., MATH A200) that has the specifically –required course (e.g., MATH A105) in its pre-requisite chain.

Rationale: This change will allow students who have taken MATH A200 to use this course in a program that requires MATH A105 without going through the petition process. Rewriting the requirement as indicated will reduce the number of petitions students must submit.

7.2.2 Programs which have ENGL A111 as a specific major requirement:

It is recommended that programs with a specific ENGL requirements use the following language in specifying the requirement:

“ENGL A111 or ENGL A1W- Written Communication GER.”

Rationale: In programs with ENGL A111 as a specific major requirement, students can meet that requirement with either

a. ENGL A111 or
b. Transfer course which meets Written Communication GER.
Rationale: This change will allow use of transfer course work which meets Written Communication GER standards without going through the petition process. Rewriting the requirement as indicated will reduce the number of petitions students must submit.

7.2.3 Programs which have COMM A111, COMM A235, COMM A237, or COMM A241 as a specific major requirements:

It is recommended that programs with specific GER COMM requirement use the following language in specifying the requirement:

“Oral Communication Skills GER.”

Rationale: In programs which list Oral Communication Skills GER, students can meet those requirements with either

a. COMM A111, COMM A235, COMM A237, or COMM A241 or
   b. Transfer course which meets Oral Communication GER

Rationale: Many programs currently have a specific requirement which mirrors that Oral Communication GER (Requires COMM A111, COMM A235, COMM A237, or COMM A241). Students who transfer in a communication class which meets GER but not specifically one of those courses must complete a petition. Rewriting the requirement as indicated will reduce the number of petitions students must submit.

7.3 New Non-Doctoral Programs and Major Changes to ALL Programs

The initiating department must discuss a proposal for a major revision of an existing program or the development of a new program with the appropriate dean and OAA before the curriculum proposal is presented to the college curriculum committee/UAB/GAB for review. Schools/colleges are encouraged to contact OAA early in the approval process. Proposals should include information listed in Section 4 of this handbook. OAA contact persons are the Vice Provost for Undergraduate Academic Affairs (ayoaa@uaa.alaska.edu) for assistance with undergraduate programs and the Vice Provost for Research and Graduate Studies for graduate programs.

This section applies to Workforce Credentials, Undergraduate Certificates, Associate Degrees, Baccalaureate Degrees, Minors, Post-Baccalaureate Certificates, Graduate Certificates and Master’s Degrees except as noted.

Also refer to UA Regulation 10.04.02 www.alaska.edu/bor/policy-regulations/

1. The OAA assists the faculty initiators in preparing the documents necessary for review and approval by the Board of Regents and NWCCU as needed. Depending on the nature of the proposal, these forms address the following issues:

   a. Relationship of the proposed program relative to the educational mission of the University of Alaska and the MAU.

   b. Collaboration with other universities and community colleges within the UA system.

   c. History of the development of the proposed program or program changes.

   d. Demand for the program, relation to State of Alaska long-range development, relation to other programs in the University that might depend on or interact with the proposed program, including the GER.
e. State needs met by the proposed program.

f. Availability of appropriate student services for program participants. A schedule for implementation of the program.

g. Student opportunities, student learning outcomes, and enrollment projections.

h. Rationale for the new program and educational objectives, program student learning outcomes, and plans for assessment.

i. Opportunities for research and community engagement for admitted students.

j. Faculty and staff workload implications.

k. Fiscal Plan for the proposed program

l. Library, equipment, and additional resource requirements, including availability, appropriateness and quality.

m. New facility or renovated space requirements.

n. Concurrence of appropriate advisory councils.

2. The following documents must be submitted to OAA before the program can be sent to SAC, BOR, and NWCCU for review and approval, as necessary. These documents will not be reviewed by the academic boards. Forms and templates for these submittals are obtained from OAA.

   a. Four-Year Course Offering Plan for the Program.

   b. A budget worksheet.

   c. Board of Regents Program Action Request Form

   d. Board of Regents Prospectus and Executive Summary forms) which address all requirements and policies approved by SAC and BOR.

   e. Resource Implication Form and a signed Fee Request Form (if needed).

   f. An Academic Assessment Plan - student learning outcomes assessment plan for review by the Academic Assessment Committee.

   g. A risk management plan where required. This is developed in conjunction with the program’s Dean/Director, the Director of Risk Management, and legal counsel as needed.

3. In addition to the above documents, the following must be submitted to the Governance Office. These documents will be reviewed by the appropriate academic board for all new program proposals and proposals for major program changes (with the exception of Workforce Credentials) (aygov@uaa.alaska.edu):

   a. A cover memo summarizing the proposal.

   b. Signed PAR (www.uaa.alaska.edu/governance/coordination/index.cfm).

      Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

   c. Complete catalog copy in Word using the track changes function, including student learning outcomes for the program or a web address linked to the student learning outcomes. A Word copy of the current catalog is available on the Governance website (www.uaa.alaska.edu/governance/).

   d. CARs and CCGs for all new and revised courses.

4. The approval process for new programs and programs with major changes is outlined in section 3.
5. Degree and certificate requirements are effective from fall through summer of each catalog publication.

7.4 **New Doctoral Programs**

*The initiating department must discuss a proposal for a new doctoral program with the appropriate dean and Vice Provost for Research and Graduate Studies before the curriculum proposal is presented to the college curriculum committee/GAB for review. Schools/colleges are encouraged to contact the Vice Provost for Research and Graduate Studies early in the approval process. Proposals should include information listed in Section 3.8 of this handbook.*

1. The Vice Provost for Research and Graduate Studies assists the faculty initiators in preparing the documents necessary for review and approval by the Board of Regents and NWCCU as needed. These documents are described in Section 3.8.
   a. Justification Proposal. This proposal addresses criteria that are used to determine the viability and need for the program.
   b. Full Proposal. This proposal consists of the suite of curriculum documents needed to see the program through the UAA curriculum process, SAC review, BOR approval, and NWCCU acceptance.

2. The following documents must be submitted to OAA before the program can be sent on the SAC, the BOR, and NWCCU as necessary. These documents will not be reviewed by the academic boards. **Forms and templates for these submittals are obtained from OAA.**
   a. Four-Year Course Offering Plan for the Program.
   b. A budget worksheet.
   c. Board of Regents Program Action Request Form
   d. Board of Regents Prospectus and Executive Summary forms ([www.alaska.edu/bor/policy-regulations/](http://www.alaska.edu/bor/policy-regulations/)) which addresses all requirements and policies approved by the Statewide Academic Council (SAC) ([http://www.alaska.edu/research/sac/](http://www.alaska.edu/research/sac/)) and the Board of Regents.
   e. Resource Implication Form and a signed Fee Request Form (if needed).
   f. A student learning outcomes assessment plan ([Academic Assessment Plan](#)) for review by the Academic Assessment Committee.
   g. A risk management plan where required. This is developed in conjunction with the program’s Dean/Director, the Director of Risk Management, and legal counsel as needed.

3. **In addition to the above documents, the following must be submitted to the Governance Office.**
   *These documents will be reviewed by GAB for all new doctoral program proposals ([aygov@uaa.alaska.edu](mailto:aygov@uaa.alaska.edu)):*
   a. A cover memo summarizing the proposal.
   b. The full proposal document outlined in section 3.8
   c. Signed PAR ([www.uaa.alaska.edu/governance/coordination/index.cfm](http://www.uaa.alaska.edu/governance/coordination/index.cfm)).
      
      *Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.*
   d. Complete catalog copy in Word using the track changes function, including student learning outcomes for the program or a web address linked to the student learning outcomes. A Word
7.5 Academic Program Suspension of Admissions

There are a variety of reasons why program faculty and academic deans/campus directors consider suspending admissions to an academic program. These may include, among others, temporary circumstances (e.g., insufficient faculty to meet substantial enrollment increases), planned major revisions to the program (e.g., deleting a track or changing the degree level), or potential program deletion (discussed in greater detail in the next section).

The following steps should be followed when suspending admissions to a program:

1. **Program Suspension**: Academic dean/campus director submits a memo to the provost requesting suspension of admission. Requests for suspension should indicate the implementation date, reason for the suspension, planned duration, impact on currently enrolled students and plans to advise and accommodate them during the suspension in accordance with each student’s catalog year, and identification of impact on other UAA programs or departments. By the conclusion of the fifth year of suspension, the academic dean or campus director must request, in consultation with program faculty, to reinstate admission, extend the suspension, or initiate the deletion process.

2. **Internal Notification**: Program suspensions should be communicated to faculty and administrators within the MAU according to the following guidelines.
   a. For programs offered on a community campus, the applicable academic dean or campus director (as determined by the UAA Catalog chapter in which the program is published) should be notified prior to the suspension of the program. For programs offered on multiple campuses, each applicable dean or campus director should be notified prior to suspension of the program.
   b. Faculty should be notified of program suspensions through an email to the faculty curriculum coordination listserv (uaa-faculty@lists.uaa.alaska.edu) and through inclusion as an information item on the Undergraduate Academic Board (for undergraduate programs) or Graduate Academic Board (for graduate programs) agenda.

3. **UA System and Accreditation Notification**: Following the approval of program suspension by the provost, Academic Affairs will notify the Statewide Academic Council (SAC) and Northwest Commission on Colleges and Universities (NWCCU). Program suspensions require notification to these bodies, not approval.

4. **Administrative Protocols**: The following are non-curricular considerations for program suspension.
   a. The provost has final approval authority for program suspensions. Once approved by the provost, the request is forwarded to the registrar to formally suspend admissions. The chancellor is notified of the action before notification goes to SAC and the NWCCU.
   b. Personnel implications will be addressed in accordance with applicable collective bargaining agreements and personnel policies and regulations. Program funds will be assigned to other department, college, or institutional priorities through established processes.
7.6 Academic Program Deletion

Program deletions may be initiated for a number of reasons. These may include, among others, low enrollment, few graduates, or changing job markets. After a period of suspension, and in conjunction with evidence collected from within and outside the institution, a decision can be made to modify, eliminate, or supersede the existing program with one more relevant. Considerations should include the impact on students currently enrolled in the program, on directly related employment sectors, and on other related departments within the university.

1. Program Suspension: Following the process described in the Program Suspension Policy, the academic dean/campus director submits a memo to the provost requesting suspension of admissions into the program, to ensure that no new students are admitted into the program until the final determination is made. Requests for suspension should indicate the implementation date, reason for the suspension, planned duration, and identification of impact on other UAA programs or departments. By the conclusion of the fifth year of suspension, the academic dean or campus director must request, in consultation with program faculty, to reinstate admission, extend the suspension, or initiate the deletion process.
   a. For programs offered on a community campus, the applicable academic dean or campus director (as determined by the UAA Catalog chapter in which the program is published) should be notified prior to the suspension of the program. For programs offered on multiple campuses, each applicable dean or campus director should be notified prior to suspension of the program.

2. Consultation with Academic Affairs: To initiate the program deletion process, consultation with OAA must occur. This consultation will include a discussion of the process and an overview of the templates required for program deletion. OAA may waive or modify this requirement where appropriate, such as a program which has been suspended for more than five years with no currently enrolled majors.
   a. The process will address the rationale for the proposed deletion, the demand for the program, the impact and implications on academic departments in UAA and other Major Academic Units (MAUs), impact on external stakeholders, the financial status of the program, and potential options to resolve the concerns which led to the proposed deletion.
   b. If the decision is to delete the program, programs must accommodate all currently admitted students with a completion plan that meets each student’s catalog deadlines and requirements. This completion plan should outline the timeframe and priorities for resources to accommodate completion of students impacted by the proposed program deletion.
   c. Proposals to delete programs offered on multiple campuses or through collaborative arrangements between two or more academic units should be coordinated with the academic deans and campus directors of the relevant program as is appropriate to their situations.

3. Development of Proposal to Delete or Modify Program: This proposal should be developed using the established curriculum approval process. If the department decides to modify the existing program, or to supersede it with a new program, the curriculum is developed as a program change so that deletion of the existing program and initiation of its replacement are approved simultaneously.

The following documents must be submitted to the Governance Office. These documents will be reviewed by the appropriate academic board for all program deletion proposals (uaa_gov@uaa.alaska.edu):

   a. A cover memo summarizing the proposal. A cover memo template can be found on the Governance curriculum website (www.uaa.alaska.edu/governance/coordination/index.cfm).

   b. Signed PAR (www.uaa.alaska.edu/governance/coordination/index.cfm).

   Note: The Governance Office will accept electronic signed PARs as long as all signatures up to the Dean/Director level are present and legible and the approved or disapproved boxes are checked.

Departments are also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the program deletion. The email must include contact information, as well as:
- School and department (PAR boxes 1a and 1b),
- Complete Program Title (PAR box 2),
- Type of Program (PAR box 3),
- Type of Action (Add/Change/Delete) (PAR box 4),
- justification for action (PAR box 8),
- any other relevant information.

The email must be sent at least 10 working days before being presented at UAB/GAB.

4. **UA System and Accreditation Approval**: Following the internal curriculum approval process, Academic Affairs will work with program faculty to submit program deletions for approval by the Statewide Academic Council (SAC), Board of Regents, and Northwest Commission on Colleges and Universities (NWCCU).
   
   a. *Note: Authority to approve deletion of Occupational Endorsement Certificates and Workforce Credentials is delegated to the chancellor, and does not require action by SAC or the Board of Regents. These program deletions should be submitted to SAC for notification purposes and to the NWCCU for final approval.*

5. **Administrative Protocols**: The following are non-curricular considerations for program deletion.
   
   a. **Program Deletion from Banner**: When the program is deleted in Banner, students may no longer remain enrolled in the program, and the degree or certificate cannot be awarded. This administrative deletion will be postponed until there are no enrolled students in the major through graduation or expiration of admissions. Once approved by the NWCCU, the registrar will be notified to formally delete the program.
   
   b. **Personnel and Budget**: Personnel implications will be addressed in accordance with applicable collective bargaining agreements and personnel policies and regulations. Program funds will be assigned to other department, college, or institutional priorities through established processes.
   
   c. **Decisions Relative to Departments and Divisions**: This policy applies exclusively to academic programs. Decisions relative to departments and divisions will be managed within the college and institution through established processes.
Section 8 - Policy Additions and Changes

New or revised academic policies are proposed to the UAB/GAB. If approved they will be forwarded by the Governance Office to the UAA Faculty Senate, then to the OAA, and finally to the Chancellor’s Office.

UAA Proposals should include:

1. Proposed policy language (include catalog copy in Word using the track changes function if policy is revised).
2. Documents in which proposed language will be inserted (catalog, curriculum handbook, etc.).
3. Proposed implementation date.

Upon recommendation of the Provost, the Chancellor reviews and acts on academic policies.
Section 9 - Step-By-Step Instructions for the Course Content Guide

When developing a new course the CCG should be developed first. Considerations are: level, title, goals and student learning outcomes, content, and bibliography. This information is then transferred to the CAR. The Course Content Guide should provide a concise description of the course. Topical areas, instructional goals and student learning outcomes should be clearly related to each other. It is recommended that the CCG contain five or fewer pages. While there is not a standard template for the CCG, current CARs and CCGs can be found at [http://curric.uaa.alaska.edu/curric/courses/](http://curric.uaa.alaska.edu/curric/courses/).

It is also recommended that the faculty initiator consult with the school/college curriculum committee.

The CCG for new courses and course changes must include the following which will be transferred to the CAR:

1. The date on which the Course Content Guide was initiated or revised
2. Information directly also on the CAR
   A. College or School – Choose from the following the school or college initiating action:
      - AA Academic Affairs
      - AS College of Arts and Sciences
      - CB College of Business and Public Policy
      - CH College of Health
      - CT Community and Technical College
      - EA College of Education
      - EN School of Engineering
      - HC University Honors College
      - KP Kenai Peninsula College
      - KO Kodiak College
      - MA Matanuska-Susitna College
   B. Course Prefix – The prefix affected by the curriculum proposal. Approval of new prefixes must be obtained before the approval of related new/revised curriculum/program changes. See instruction on the PAR form regarding requesting a new prefix.
   C. Course Number (for a new course, contact the Office of the Registrar for a number)
      i. Reuse of Course Number Rule: When a permanent course number becomes inactive through deletion or purging, it will not be assigned to another course. However, a course can be reinstated using the same number.
      ii. Types of Courses
         a. Academic Courses: Courses with these numbers count toward undergraduate and graduate degrees and certificates as described. Each course includes a component for evaluation of student performance. Student effort is indicated by credit hours. One credit hour represents three hours of student work per week for a 15-week semester (e.g., one class-hour of lecture and two hours of study or three class-hours of laboratory) for a minimum of 750 minutes of total student engagement, which may include exam periods. Equivalencies to this standard may be approved by the chief academic officer of the university or community college. Academic credit courses are numbered as follows.

The numbering sequence signifies increasing sophistication in a student’s ability to extract, summarize, evaluate and apply relevant class material. Students are expected to demonstrate learning skills commensurate with the appropriate course level, and to meet, prior to registration, prerequisites for all courses as listed with the course descriptions.
UAA and UA Course Level Descriptions (see also the UAA catalog, Chapter 7 and University Regulation R10.04.09):

- **Lower division courses usually taken by freshmen and sophomores**
  - A100-A199: Freshman-level, lower division courses.
  - A200-A299: Sophomore-level, lower division courses

- **Upper division courses usually taken by juniors and seniors**
  - A300-A399: Junior-level, upper division courses
  - A400-A499: Senior-level, upper division courses

- **Graduate-level courses**
  - A600-A699: Require a background in the discipline, and an ability to contribute to written and oral discourse on advanced topics in the field.

b. **Preparatory/Developmental Courses**
  - A050-A099: Preparatory/developmental courses with these numbers provide basic or supplemental preparation for introductory college courses. They are not applicable to transcripted certificates or associate, baccalaureate, or graduate degrees, even by petition.

c. **Noncredit Courses**
  - A001-A049: Noncredit courses are offered as career development, continuing education, or community interest instruction. Not applicable to any degree or certificate requirements (even by petition).

d. **Continuing Education Unit (CEU) courses**
  - AC001-AC049: CEU courses are awarded upon completion of a course of study that is intended for career development or personal enrichment. CEU courses may not be used in degree or certificate programs or be converted to academic credit.

e. **Professional Development Courses**
  - A500-A599: Courses with these numbers are designed to provide continuing education for professionals at a post-baccalaureate level. These courses are not applicable to university degree or certificate program requirements, are not interchangeable with credit courses, even by petition, and may not be stacked with any other course.

**NOTE:** All permanent numbered courses (A050-A499 and A600-A699) are included in the UAA catalog. If a discipline/department/school/college/community campus does not want a permanent numbered course to be included in the UAA catalog, that exclusion will need UAB/GAB recommendation and approval of the Vice Provost for Undergraduate Academic Affairs (for undergraduate courses) or the Vice Provost for Research and Graduate Studies (for graduate courses).

iii. **Course Numbers: Second and Third Digits** – The second and third digits of course numbers in the -90 range are used for specific course types.

- **-90 Selected topics:** A generic “umbrella” course category identifying a defined field or subject area within a discipline. Topics can change from semester to semester within that field or subject area.

- **-92 Seminar or Workshops:**
  - **Seminar:** Specifically designed for student participation in exchanging ideas and academic experiences around a central core of subject matter.
  - **Workshop:** A formal higher education offering with intensive instruction and
-93 **Special topics**: Offered only once to meet short-term needs and are not intended to become part of the permanent catalog.

-94 **Trial** (experimental): Trial indicates that the faculty wish to offer the course before making the course permanent. May be offered up to three times as a -94 course. Coordination with the faculty listserv (uaafaculty@lists.uaa.alaska.edu) for 094, 194, 294, 394, and 494 courses must occur at least 10 working days before submittal to the Governance Office.

-95 **Internship and Practicum**

  **Internship**: A student work experience in which the employer or agency is the student’s immediate supervisor, is active in planning the expected student learning outcomes, and is involved in the evaluation of the student’s achievements.

  **Practicum**: A student work experience for which the academic department established the objectives and student learning outcomes.

-97 **Independent study**: Address topics or problems chosen by the student with appropriate approval. Topics must not duplicate and must differ significantly from catalog courses.

-98 **Individual research**: Consist of individual research by the student, directly supervised by a faculty member or faculty committee.

-99 **Thesis**: Involve writing and/or completion of a thesis by the student.

D. **Number of Credits/CEUs and Contact Hours** – Include the number of semester credits or CEUs for the course. If variable, indicate the minimum and maximum, e.g. 1-3 credits or CEUs. The number of credits/CEUs is in direct relation to the contact hours. If the course is noncredit, enter the appropriate range of contact hours.

- Over a 15-week semester, 1 contact hour is equivalent to 50 minutes.
- One credit for a lecture course is typically equivalent to 1 contact hour/week for a total of 15 contact hours for the course (or 750 minutes of actual class time [50 minutes/contact hour x 15 contact hours = 750 minutes]).
- One credit for a supervised laboratory course is typically awarded 2 contact hours/week for a total of 30 hours (2 x 15 weeks = 30) or 1,500 total contact minutes (30 x 50 minutes/contact hour = 1,500 minutes) of supervised lab time.
- One credit of unsupervised laboratory time such as some practica, student teaching, internships, or field work credits is typically awarded 3 contact hours/week or more. Many courses, because of the nature of their subject matter or mode of delivery, require additional student time.
- For a lecture course, at least two hours of work outside the class is expected for each credit. For a supervised laboratory class, in addition to 2 contact hours/week in the laboratory, at least one additional hour of outside work is expected for each credit (or a total of 3 contact hours/week in the laboratory will satisfy this requirement).
- For courses that are provided in a period less than the standard 15-week semester, the (Lecture + Lab) section should be completed as if the course would be taught in a 15-week period. Additional description should be provided in Box 19 (“Justification for Action”) of the CAR and in the CCG to explain the actual course length and required hours per week. For noncredit CEU courses, the total number of lecture and laboratory contact hours for the course should be stated.
i. Summary

Semester = 15 weeks (standard semester length)

One (1) Contact Hour = 50 minutes per week (or 750 minutes for the course)

Outside Work = Additional time typically outside of classroom or laboratory

One (1) credit = 1 contact hour per week of lecture (15 contact hours of lecture for course)

or

2 contact hours per week of supervised laboratory (or practica) if outside work is needed (30 contact hours for the course)

or

3 contact hours per week of supervised laboratory (or practica) if no outside work is needed (45 contact hours for the course)

(Lecture + Laboratory) refers to the number of contact hours for lecture and laboratory per week based on a 15-week semester

ii. Examples

- **(3+0)** = A typical lecture-only course. Equivalent to a 3-credit course with 3 contact hours of lecture and 0 hours of laboratory per week for a total of 135 hours for the course [45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours].

- **(2+2)** = A combined lecture and laboratory course. Equivalent to a 3-credit course with 2 contact hours of lecture and 2 hours of supervised laboratory per week for a total of 135 hours for the course (30 contact hours of lecture and 60 hours outside lecture plus 30 hours lab plus 15 hours outside lab).

- **(3+2)** = A combined lecture and laboratory course. Equivalent to a 4-credit course with 3 contact hours of lecture and 2 hours of supervised laboratory per week for a total of 180 hours for the course (45 contact hours of lecture and 90 hours outside lecture plus 30 hours of lab and 15 hours outside of lab).

- **(3+3)** = A combined lecture and laboratory course. Equivalent to a 4-credit course with 3 contact hours of lecture and 3 hours of laboratory (supervised or unsupervised) per week for a total of 180 hours for the course (45 contact hours of lecture and 90 hours outside lecture plus 45 hours of lab and 0 hours outside of lab).

- **(0+9)** = A practicum or field work type course. Equivalent to a 3-credit course with 0 contact hours of lecture and 9 hours of practicum or field work laboratory (supervised or unsupervised) per week for a total of 135 hours for the course (0 contact hours of lecture plus 135 hours of lab and 0 hours outside of lab).

iii. CEU – The CEU is a unit of measure for noncredit activities. The CEU can be used to document an individual’s participation in formal classes, courses, and programs as well as in nontraditional modes of noncredit education, including various forms of independent, informal, and experiential study and learning.
Examples:

<table>
<thead>
<tr>
<th>CEU</th>
<th>Instruction Hours</th>
<th>Additional Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>1 hour</td>
<td>None</td>
</tr>
<tr>
<td>1.0</td>
<td>10 hours</td>
<td>None</td>
</tr>
<tr>
<td>1.5</td>
<td>15 hours</td>
<td>None</td>
</tr>
<tr>
<td>3.5</td>
<td>20 hours</td>
<td>15 hours</td>
</tr>
<tr>
<td>2.0</td>
<td>20 hours</td>
<td>None/Labor</td>
</tr>
</tbody>
</table>

iv. Minimum Course Length (Compressibility Policy) – The Compressibility Policy states, “Courses scheduled for less than a full semester may not be offered for more than one credit each week (seven days).” Two credits require a minimum of eight days and 3 credits require a minimum of 15 days.

E. Course Title – Insert full title of the course. Titles of existing courses in the database cannot be used for new/revised courses, except for the following types of courses: dissertation, internship, practicum, project, research, selected topic, seminar, thesis.

F. Grading Basis – Identifies how performance in the course is to be graded (A-F or P/NP [pass/no pass] for academic and professional development courses; NG [no grade] for CEUs and noncredit offerings).

G. Implementation Date – Insert the semester and year that the addition, deletion or change will be implemented. See section 10.2, Box 11, for further clarification regarding implantation dates.

  • Careful consideration needs to be given to permanent courses affecting degrees and certificates.

  • Course additions or modifications must be made in conjunction with publication of the class schedule/listing. Since academic units are responsible for providing an adequate transition for students from one set of program requirements to another, units should consider the official implementation date of program changes when implementing the approved changes.

H. Cross Listing (if applicable) – Cross-listed courses are courses approved under multiple prefixes and offered at the same time and location.

  i. Cross-listed courses are courses approved under multiple prefixes and offered at the same time and location.

  ii. Each cross-listed course must have a separate CCG and CAR for each prefix.

  iii. Everything except the course prefix must be identical.

  iv. Each department is responsible for preparing and providing the appropriate CCG, CAR, supporting documentation. These must be submitted at the same time for UAB/GAB review.

  v. When courses are cross-listed, they must be offered and printed in UAA’s schedules and catalog under each prefix. For example, JPC/JUST A413 is listed both in Justice and in Journalism and Public Communications. Cross-listed classes must be offered at the same time in a semester. Each department is responsible for the scheduling and schedule maintenance of their prefix’s section, including additions, changes and deletions.

I. Stacking (if applicable)

  i. Stacked courses are courses from the same prefix but at different levels offered at the same time and location.
ii. Existing and new courses may not be stacked unless approved as stacked courses by UAB/GAB.

iii. Courses may not be stacked informally for scheduling purposes.

iv. The course description and course content guide of a stacked course must clearly articulate the difference in experience, performance and evaluation of students at different levels, including graduate students vs. undergraduate students.

v. Courses that are at the 500 level may not be stacked with any other course.

vi. If stacking status is requested, rationale must be provided.

vii. Courses at the 300 level may not be stacked with 600-level courses.

All graduate-level courses must meet certain criteria established by the GAB. In addition, when 400-level courses are stacked with 600-level courses, the faculty initiator must consider the impact of stacking the course on the graduate student experience and how that affects the criteria for 600-level courses. If a graduate-level course is stacked with a 400-level course, or if undergraduate students are taking the course as part of their baccalaureate degree, the justification must clearly describe how the quality of the graduate students’ experience will be maintained in a mixed-level classroom.

The following guidelines may assist in determining whether a course is suitable for stacking according to graduate criteria:

i. Do the prerequisites (not registration restrictions) differ for the 400- vs. 600-level versions of the course?
   It is difficult to justify stacked courses in which the graduates and undergraduates have a significantly different knowledge base relevant to the course material. If the knowledge is required for the course, the prerequisites must be comparable. If the knowledge is only required for extra coursework performed by the graduate students, this difference should be stated explicitly and addressed in the instructional goals, student learning outcomes and course activities sections of the CCG.

ii. Is the course format predominantly discussion- or seminar-based?
   This type of course is not likely to be suitable for stacking, as the discussion level/theoretical base can differ significantly between graduate and undergraduate students. In addition, the ratio between undergraduate and graduate students should be addressed. Courses that are evenly divided may provide a more balanced environment than a course in which only one or two graduate students are present.

iii. Is the course format predominantly lecture-based? (Is the main intent of the course to provide a detailed knowledge set?)
   a. Is the PRIMARY source of information/reading the primary research literature of the field?
      This course is not likely to be suitable for stacking, as undergraduate students generally lack the knowledge base and experience to derive all information from the primary literature.
   
   b. Is the PRIMARY source of information/reading material derived from textbooks or other less-specialized literature?
      This course is likely to be suitable for stacking. However, the performance expectations for graduate students should be explicitly defined, with special emphasis on how these expectations differ from the 400-level students.
Some suggested student learning outcomes/assessments that may be appropriate for 600-level students in a stacked course:

i. Extra reading assignments based in the primary research literature, evaluated via written critical reviews and/or oral presentations

ii. Extra writing assignments that evince ability to synthesize research fields (comprehensive scholarly reviews or synthesis of other disciplinary areas with the course material)

iii. Assignments to measure the ability of graduate students to integrate course material into experimental design, such as writing formal research grant proposals, or oral or written presentation of how the course material informs the student’s own thesis research

iv. Separate exams for graduate students that measure not only comprehension of the lecture material but the ability to integrate and apply the material at more advanced levels, such as hypothesis formulation and experimental design, or the ability to interpret raw research data

v. Teaching experiences, in which graduate students instruct undergraduates, lead discussion groups or present analysis of primary research, offer another context in which graduate students may demonstrate and more advanced knowledge and be assessed accordingly.

As a result of completing this course, students will be able to:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Typical Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>demonstrate the ability to conduct a literature search on</td>
<td>written critical reviews and/or oral presentation of literature reviews</td>
</tr>
<tr>
<td>the course topic material</td>
<td></td>
</tr>
<tr>
<td>Synthesize research fields</td>
<td>comprehensive scholarly reviews or synthesis of other disciplinary areas with the</td>
</tr>
<tr>
<td></td>
<td>course material produced by the student</td>
</tr>
<tr>
<td>Integrate course material into experimental design</td>
<td>Written formal research grant proposals, oral or written presentation of how the</td>
</tr>
<tr>
<td></td>
<td>course material informs the student’s own thesis research</td>
</tr>
<tr>
<td>Integrate and apply the course material at advanced levels</td>
<td>Exams requiring students to formulate hypothesis, design experiments, or interpret</td>
</tr>
<tr>
<td></td>
<td>raw research data</td>
</tr>
<tr>
<td>Instruct undergraduates, lead discussion groups, or</td>
<td>Observed teaching exercises, teaching evaluations, performance of their students on</td>
</tr>
<tr>
<td>otherwise present the course material to other audiences.</td>
<td>examinations</td>
</tr>
</tbody>
</table>

J. Course Description – Identifies the intent of the course. For courses, a 20- to 50-word description is preferred.

Special Notes are also identified in this field. Special notes indicate certain requirements of the student or the course that are not identified in the course description (e.g., “May be repeated for credit with a change in subtitle,” or “Offered Spring Semesters”).

K. Course Attributes (GER if applicable)

L. Course Prerequisite(s)/Test Score(s), Corequisite(s), Registration Restriction(s) – Identifies requirements which must be achieved prior to enrolling in a course. It is assumed that faculty may waive any of the requirements. All prerequisite, corequisite; registration restriction, etc indicated on the CAR will be automatically enforced through Banner.
i. **Course Prerequisite** – Identifies a course (by prefix and number) which must be successfully completed (D or better is understood, unless C or better is stated) prior to taking the course.

A course prerequisite which **may** be taken concurrently must also be included in this area (this differs from a co-requisite which **must** be taken concurrently).

**Test Scores** – Identifies test scores which must be successfully achieved prior to taking the course. This may include UAA approved placement tests, SAT, ACT, or others. Specific test scores are not required.

ii. **Corequisites** – Identifies a course which **must** be taken concurrently and requires simultaneous enrollment and withdrawal.

iii. **Other Restrictions** – Identifies additional requirements that a student must have satisfied prior to registering for the course (e.g. instructor permission, college or school admission, major, class standing, or level). Must be enforced by the program/department/ instructor.

- College or school admission – identifies a college/school to which a student must be admitted to in order to enroll in the course.
- Major – identifies a major which a student must have declared in order to enroll in the course.
- Class – identifies a class standing which a student must have attained in order to enroll in the course (0-29 credits = freshmen; 30-59 credits = sophomore; 60-89 = junior, 90+ = senior).
- Level – identifies a level which a student must be at in order to enroll in the course (graduate or undergraduate).

Responsibility for confirming prerequisites and registration restrictions lies with the department. It is assumed that the faculty may waive or enforce any of these requirements, subject to program, department and college policy.

M. **Course Fee**: Yes or No – Indicates that there are student fees associated with the course.

*Note: The sections of the CAR referenced above and the CCG must match word for word.*

3. **Course level justification** – Provide a justification for the level to which the course has been assigned.

**Course Level Expectations for Academic Course Levels** – In general, advances in course level (lower, upper, and graduate) correlate with sophistication of academic work. It should be noted that some students find introductory courses more demanding than advanced, specialized courses. In such courses, a more comprehensive approach and the first exposure to new ways of thinking may be harder for some individuals than covering a smaller, more familiar area in much greater detail.

The following definitions describe the expectations for the academic course levels:

A. **Lower Division Courses**

- **A100-A199**: Introduce a field of knowledge and/or develop basic skills. These are usually foundation or survey courses.

- **A200-A299**: Provide more depth than 100-level courses and/or build upon 100-level courses. These courses may connect foundation or survey courses with advanced work in a given field, require previous college experiences, or develop advanced skills.

B. **Upper Division Courses**
Require a background in the discipline recognized through course prerequisites, junior/senior standing or competency requirements. These courses demand well-developed writing skills, research capabilities and/or mastery of tools and methods of the discipline.

A300-A399: Build upon previous course work and require familiarity with the concepts, methods, and vocabulary of the discipline.

A400-A499: Require the ability to analyze, synthesize, compare and contrast, research, create, innovate, develop, elaborate, transform, and/or apply course materials to solving complex problems. These courses are generally supported by a substantial body of lower-level courses.

C. Graduate-Level Courses

A600-A699 – Require a background in the discipline, and an ability to contribute to written and oral discourse on advanced topics in the field at a level beyond that required by a bachelor’s degree. Require the ability to read, interpret and evaluate primary literature in the field. Students analyze raw data, evaluate models used in research and draw independent conclusions. Preparation includes demonstrated accomplishment in a specific course or discipline, or completion of a significant and related program of studies. Student activities are often self-directed and aimed not only at the formation of supportable conclusions, but also at a clear understanding of the process used in those formations.

For graduate-level coursework the justification must:

i. Address descriptors of 600-699 courses from Chapter 7 of the UAA catalog.

ii. Specify registration restrictions, e.g. “Admission to **** degree/certificate program” or “Graduate Status” where appropriate.

iii. State the disciplinary background.

iv. Specify prerequisites, e.g. “Graduate Status.”

v. Describe how the course provides students with opportunities for independent critical thinking.

vi. Describe how the course enables students to meet the following goals when they are appropriate to the field:
   a. Competence in a specialized field of knowledge
   b. Extensive experience with specialized client relationships
   c. Application of expert knowledge within a recognized professional practice
   d. Analysis and synthesis of primary scholarship or research
   e. Self-directed written research projects
   f. Mastery of theoretical knowledge

Course Level Expectations for Preparatory/Developmental Course Levels – The following definitions describe the expectations for the preparatory/developmental course levels (courses not applicable to transcripted certificates or associates, baccalaureate or graduate degrees):

A050-A099: Provide supplemental preparation for introductory college courses.

4. Instructional Goals and Student Learning Outcomes

A. Instructional Goals: Identifies what the instructor intends to accomplish in the course. Instructional goals should describe in broad terms what the instructor expects the student to learn from the course.
B. **Student Learning Outcomes:** Identifies what the student should know and/or be able to do as a result of completing the course. Student learning outcomes must be specific, measurable, achievable, relevant and timely. Student evaluation methods must assess the accomplishment of the students in each outcome.

C. **Goals and Student Learning Outcomes:** Should be clearly related to the appropriate course level. See course level definitions below and in the discussion of CAR Box 3 in section 5 of this handbook. The verbs listed in Appendix C are gathered into categories designed to assist in the description of student outcomes.

5. **Guidelines for Evaluation or Assessment Methods**

| A. Program Student learning outcomes for programs and their assessments are treated in detail in the program’s Academic Assessment Plan. This plan is evaluated for new and modified programs. |
| B. Student learning outcomes for courses are included in the CCG along with the means used to assess them. A tabular representation of student learning outcomes and typical assessment methods is preferred by GAB. UAB currently accepts tabular or bulleted versions. See examples below. |
| C. Identify typical evaluation methods appropriate to the level and type of course for determining how well the goals and student learning outcomes have been met. The level of detail given here should be sufficient to give instructors guidance concerning the nature and rigor of the evaluation techniques expected without unduly restricting teaching methods. |

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**Note:** All academic programs at UAA are assessed. Student learning outcomes for courses should be compatible with program Student Learning Outcomes and should be assessed in similar ways. For more detailed information about assessment, see Appendix E. For specific information about your program’s assessment procedures, see the college assessment coordinator.

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**Example 1**

<table>
<thead>
<tr>
<th>Student Learning Outcomes and Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Learning Outcomes</strong></td>
</tr>
<tr>
<td>Students demonstrate the ability to distinguish between facts and opinions and determine the extent to which the facts provided support the arguments being made.</td>
</tr>
<tr>
<td>Students demonstrate the ability to troubleshoot and repair a microprocessor based instrument system according to manufacturers standards</td>
</tr>
<tr>
<td>Students demonstrate skill in the use of various media in the artistic expression of human emotion</td>
</tr>
<tr>
<td>Students demonstrate the ability to design an electro-mechanical system to accomplish a control function defined by the instructor, in accordance with applicable standards and codes.</td>
</tr>
</tbody>
</table>

**Example 2**

**Instructional Goals:**
This course is designed to fulfill the needs of general education requirements and to provide a foundation in general chemistry specifically for health science majors. It is intended to be a survey of general and organic chemistry with significant emphasis on health-related material. The periodic table, atomic and molecular structure, bonding, and chemical reactions, skills in measurements, balancing chemical equations and problem solving are emphasized.

The instructor will:
1. Present models of the periodic table, atomic and molecular structure, chemical bonding and reactions for development of observational skills and conceptual foundations in chemistry.
2. Present questions to initiate discussion, help students differentiate, link and integrate ideas and develop their own concepts, to articulate their thinking and explain models and solutions.

3. Provide multiple human health-related contexts for applying concepts and invite students to defend and verify their models and their solutions to problems.

**Student Learning Outcomes:**
After completing this course, the student will be able to:

1. Recognize and interpret chemical models of the periodic table, atomic and molecular structure, bonding and chemical reactions.

2. Apply science methodology with emphasis on exploring and verifying measurements and chemical equations in health-related problems rather than memorizing facts and answering “algorithmic” questions.

3. Demonstrate effective, efficient communication skills for discussing, chemistry concepts across multiple human-health related contexts including historical discoveries and technological advances.

**Assessment Measures:**
Various assessment tools can be used at the instructor’s discretion, including: quizzes, in-class presentations, short reports, take-home exams, creative work, homework, and a comprehensive standardized exam.

6. **Topical course outline (not a syllabus)** – List the topics covered each time the course is taught (additional topics may be covered in the course). Topical areas, instructional goals and student learning outcomes should be clearly related to each other.

   For selected topics courses, provide a topical outline (not a syllabus) of a sample course and a discussion on the range of topics to be presented and the expected depth of the typical presentation.

7. **Suggested text(s)** – Provide current suggested texts or recommended readings in alphabetical order. Similar texts are expected to be used in the actual course. Texts should be current (published within the last ten years) unless they are classics in the discipline.

8. **Bibliography** – Provide a list of the literature, in alphabetical order, that forms a foundation for the ideas and/or skills to be taught in the course. The concise and selective bibliography indicates texts, papers and other resources that the students and the instructor will find particularly valuable in meeting the course student learning outcomes.

   Suggested texts and bibliography should be presented in an acceptable style (e.g. APA, MLA, or Gregg). Be prepared to identify the style used.
Section 10 - Step-By-Step Instructions for the Course Action Request

Please visit the course search website (http://www.curric.uaa.alaska.edu/course_search.cfm) for assistance in filling out your Curriculum Action Request (CAR) form. This searchable website provides box-by-box information for active courses that can be easily transferred to the boxes on the CAR form.

10.1 The CAR Form

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1a. School or College  
1b. Division  
1c. Department

2. Course Prefix  
3. Course Number  
4. Previous Course Prefix & Number  
5a. Credits/CBEs  
5b. Contact Hours

8. Type of Action: Add or Change or Delete

9. Repeat Status choose one  
   - # of Repeats  
   - Max Credits  

10. Grading Basis  
    - A-F  
    - PNP  
    - NS

11. Implementation Date: semester/year
    - From:  
    - To:

12. Cross Listed with
    - Stacked with

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

13b. Coordination Email: Date submitted to Faculty Liaison: (uasfaculty@uaa.alaska.edu)

13c. Coordination with Library Liaison: Date: ______

14. General Education Requirement
    - Oral Communication
    - Written Communication
    - Critical Thinking
    - Natural Sciences
    - Social Sciences
    - Cultural Awareness
    - Quantitative Skills
    - Humanities
    - Global Awareness
    - Information Technology

15. Course Description (suggested length 25 to 50 words)

16a. Course Prerequisites(s) (list prefix and number or text course and area)

16b. Corequisite(s) (concurrent enrollment required)

16c. Other Restriction(s)
    - College  
    - Major  
    - Level

17. Mark if course has fees

19. Justification for Action

---

Approved  
Disapproved

Initiator: (Full Name)  
Date

Approved  
Disapproved

Department Chair  
Date

Approved  
Disapproved

Undergraduate/Graduate Academic Board Chair  
Date

Approved  
Disapproved

Provost or Designee  
Date
10.2 Instructions for Completing the CAR

Box 1a. School or College
Choose from the drop-down menu the school or college initiating action.

AA  Academic Affairs
AS  College of Arts and Sciences
CB  College of Business and Public Policy
CH  College of Health
CT  Community and Technical College
EA  College of Education
EN  School of Engineering
HC  University Honors College
KP  Kenai Peninsula College
KO  Kodiak College
MA  Matanuska-Susitna College

Box 1b. Division
Using the drop-down box, insert the division initiating action. Note: Changing the name of a division or academic department requires Provost approval and memorandum to Governance as an informational item.

College of Arts and Sciences
AFAR  Division of Performing and Fine Arts
AHUM  Division of Humanities
AMSC  Division of Mathematical and Natural Sciences
ASSC  Division of Social Sciences

College of Business and Public Policy
ADBP  Division of Business Programs
ADEF  Division of Economics and Public Policy

Community and Technical College
AAVI  Division of Aviation Technology
ABCT  Division of Computer Networking and Office Technologies
ACAH  Division of Culinary Arts and Hospitality
ACDT  Division of Construction and Design Technology
ADCE  Division of Community Education
ADTP  Division of Transportation and Power
ADVE  Division of Career and Technical Education
APER  Division of Physical Education and Recreation
APRS  Division of Preparatory Studies

College of Education
No Division Code

School of Engineering
No Division Code

College of Health
AHLS  Division of Health and Safety
ADHS  Division of Human Services and Health Sciences
ADSN  Division of Nursing
AJUS  Division of Justice
ASWK  Division of Social Work
Box 1c. Department
Insert department initiating action. *Note: Changing the name of a division or academic department requires Provost approval and a memorandum to Governance as an informational item.*

Box 2. Course Prefix
Insert the course prefix affected by the curriculum proposal. Approval of new course prefixes must be obtained before the approval of related new/revised curriculum/program changes. *See instruction on the PAR form regarding requesting a new prefix in Section 11.*

Box 3. Course Number
Insert the course number. If a new number is indicated, then check with the Curriculum Specialist in the Office of the Registrar (aypublications@uaa.alaska.edu).

*Reuse of Course Number Rule:* When a permanent course number becomes inactive through deletion or purging, it will not be assigned to another course. However, a course can be reinstated using the same number.

1. Types of Courses
   A. Academic Credit Courses

   Courses numbered A100-A499 and A600-A699 count toward undergraduate and graduate degrees and certificates. Each course includes a component for evaluation of student performance. Student effort is indicated by credit hours. One credit hour represents three hours of student work per week for a 15-week semester (e.g., one class-hour of lecture and two hours of study or three class-hours of laboratory) for a minimum of 750 minutes of total student engagement, which may include exam periods. Equivalencies to this standard may be approved by the chief academic officer of the university or community college. Academic credit courses are numbered as follows.

   The numbering sequence signifies increasing sophistication in a student’s ability to extract, summarize, evaluate and apply relevant class material. Students are expected to demonstrate learning skills commensurate with the appropriate course level, and to meet, prior to registration, prerequisites for all courses as listed with the course descriptions.

   UAA and UA course level descriptions (see also the UAA catalog, Chapter 7 and University Regulation R10.04.09):

   i. *Lower division courses usually taken by freshmen and sophomores*

      A100-A199: Freshman-level, lower division courses.  
      A200-A299: Sophomore-level, lower division courses

   ii. *Upper division courses usually taken by juniors and seniors*

      A300-A399: Junior-level, upper division courses 
      A400-A499: Senior-level, upper division courses

   iii. *Graduate-level courses*

      A600-A699 – require a background in the discipline, and an ability to contribute to written and oral discourse on advanced topics in the field.

   B. Preparatory/Developmental Courses

   Courses with these numbers (A050-A099) provide basic or supplemental preparation for introductory college courses. They are not applicable to transcripted certificates or associate, baccalaureate, or graduate degrees, even by petition.
C. **Noncredit Courses**

**A001-A049:** Noncredit courses are offered as career development, continuing education, or community interest instruction. Not applicable to any degree or certificate requirements (even by petition).

D. **Continuing Education Unit (CEU) courses**

**AC001-AC049:** CEU courses are awarded upon completion of a course of study that is intended for career development or personal enrichment. CEU courses may not be used in degree or certificate programs or be converted to academic credit.

E. **Professional Development Courses**

**A500-A599:** Courses with these numbers are designed to provide continuing education for professionals at a post-baccalaureate level. These courses are not applicable to university degree or certificate program requirements, are not interchangeable with credit courses, even by petition, and may not be stacked with any other course.

**NOTE:** All permanent numbered courses (A050-A499 and A600-A699) are included in the UAA catalog. If a discipline/department/school/college/community campus does not want a permanent numbered course to be included in the UAA catalog, that exclusion will need UAB/GAB recommendation and approval of the Vice Provost for Undergraduate Academic Affairs (for undergraduate courses) or Vice Provost for Research and Graduate Studies (for graduate courses).

1. **Course Numbers: Second and Third Digits**

   The second and third digits of course numbers in the -90 range are used for specific course types.

   - **90** **Selected topics:** These are a generic “umbrella” course category identifying a defined field or subject area within a discipline. These courses allow departments to offer new topics in a discipline as demand warrants, and to keep the curriculum up to date. Subject matter of selected topics courses within a discipline is chosen to provide instruction not covered by regular catalog offerings. May be offered as a seminar, lecture, laboratory or workshop. There is no limit to the number of times a selected topic subtitle may be offered.

   - **92** **Seminar or Workshops**

     **Seminar:** Specifically designed for student participation in exchanging ideas and academic experiences around a central core of subject matter.

     **Workshop:** A formal higher education offering with intensive instruction and information in a given field.

   - **93** **Special topics:** Offered only once to meet short-term needs and are not intended to become part of the permanent catalog.

   - **94** **Trial (experimental):** Trial indicates that the faculty wish to offer the course before making the course permanent. May be offered up to three times as a -94 course.

   - **95** **Internship and Practicum**

     **Internship:** A student work experience in which the employer or agency is the student’s immediate supervisor, is active in planning the expected student learning outcomes, and is involved in the evaluation of the student’s achievements.

     **Practicum:** A student work experience for which the academic department established the objectives and student learning outcomes.

   - **97** **Independent study:** Address topics or problems chosen by the student with appropriate approval. Topics must not duplicate and must differ significantly from catalog courses.
Individual research: Consist of individual research by the student, directly supervised by a faculty member or faculty committee.

Thesis: Involve writing and/or completion of a thesis by the student.

Box 4. Previous Course Prefix & Number
Indicate if the course was offered previously under a different prefix and/or number, including -93s or -94s, and what that number was. If the course was not offered previously, insert “N/A.” or if the prefix and the number has not changed, insert “N/A.”

Reinstatement of a course
When an inactive course is being reinstated with the same course prefix and number, place the word Reinstate in box 4. In box 8, Type of Action, select change.

Box 5a. Credits/CEUs
Insert the number of semester credits or CEUs for the course. If variable, indicate the minimum and maximum, e.g. 1-3 credits or CEUs. The number of credits/CEUs is in direct relation to the contact hours. If the course is noncredit, enter the appropriate range of contact hours.

Box 5b. Contact Hours (Lecture + Lab) per week (15-week semester)
Insert the number of lecture and laboratory (or practicum) hours each week for the course that is offered over a 15-week semester. One contact hour is equivalent to 50 minutes.

One credit for a lecture course is typically equivalent to 1 contact hour/week for a total of 15 contact hours for the course [or 750 minutes of actual class time (50 minutes/contact hour x 15 contact hours = 750 minutes)].

One credit for a supervised laboratory course is typically awarded 2 contact hours/week for a total of 30 hours (2 x 15 weeks = 30) or 1,500 total contact minutes (30 x 50 minutes/contact hour = 1500 minutes) of supervised lab time.

One credit of unsupervised laboratory time such as some practica, student teaching, internships, or field work credits, is typically awarded 3 contact hours/week or more. Many courses, because of the nature of their subject matter or mode of delivery, require additional student time.

For a lecture course, at least two hours of work outside the class is expected for each credit. For a supervised laboratory class, in addition to 2 contact hours/week in the laboratory, at least one additional hour of outside work is expected for each credit (or a total 3 contact hours/week in the laboratory will satisfy this requirement).

For courses that are provided in a period less than the standard 15-week semester, the (Lecture + Lab) section should be completed as if the course would be taught in a 15-week period. Additional description should be provided in Box 19 (“Justification for Action”) of the CAR and in the CCG to explain the actual course length and required hours per week. For noncredit CEU courses, the total number of lecture and laboratory contact hours for the course should be stated.

1. Summary

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>15 weeks (standard semester length)</td>
</tr>
<tr>
<td>One (1) Contact Hour</td>
<td>50 minutes per week (or 750 minutes for the course)</td>
</tr>
<tr>
<td>Outside Work</td>
<td>Additional time typically outside of classroom or laboratory</td>
</tr>
<tr>
<td>One (1) credit</td>
<td>1 contact hour per week of lecture (15 contact hours of lecture for course)</td>
</tr>
<tr>
<td></td>
<td>or 2 contact hours per week of supervised laboratory (or practica) if</td>
</tr>
</tbody>
</table>
outside work is needed (30 contact hours for the course)

or

3 contact hours per week of supervised laboratory (or practica) if no outside work is needed (45 contact hours for the course)

(Lecture + Laboratory) = refers to the number of contact hours for lecture and laboratory per week based on a 15-week semester

2. Examples

- (3+0) = A typical lecture-only course. Equivalent to a 3-credit course with 3 contact hours of lecture and 0 hours of laboratory per week for a total of 135 hours for the course [45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours].

- (2+2) = A combined lecture and laboratory course. Equivalent to a 3-credit course with 2 contact hours of lecture and 2 hours of supervised laboratory per week for a total of 135 hours for the course (30 contact hours of lecture and 60 hours outside lecture plus 30 hours lab plus 15 hours outside lab).

- (3+2) = A combined lecture and laboratory course. Equivalent to a 4-credit course with 3 contact hours of lecture and 2 hours of supervised laboratory per week for a total of 180 hours for the course (45 contact hours of lecture and 90 hours outside lecture plus 30 hours of lab and 15 hours outside of lab).

- (3+3) = A combined lecture and laboratory course. Equivalent to a 4-credit course with 3 contact hours of lecture and 3 hours of laboratory (supervised or unsupervised) per week for a total of 180 hours for the course (45 contact hours of lecture and 90 hours outside lecture plus 45 hours of lab and 0 hours outside of lab).

- (0+9) = A practicum or field work type course. Equivalent to a 3-credit course with 0 contact hours of lecture and 9 hours of practicum or field work laboratory (supervised or unsupervised) per week for a total of 135 hours for the course (0 contact hours of lecture plus 135 hours of lab and 0 hours outside of lab).

3. The CEU

The CEU is a unit of measure for noncredit activities. The CEU can be used to document an individual’s participation in formal classes, courses, and programs as well as in nontraditional modes of noncredit education, including various forms of independent, informal, and experiential study and learning.

Examples:

<table>
<thead>
<tr>
<th>CEUs</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 CEU</td>
<td>= 1 hour of instruction and no additional hours of work for the course</td>
</tr>
<tr>
<td>1 CEU</td>
<td>= 10 hours of instruction and no additional hours of work for course</td>
</tr>
<tr>
<td>1.5 CEUs</td>
<td>= 15 hours of instruction and no additional hours of work for course</td>
</tr>
<tr>
<td>3.5 CEUs</td>
<td>= 20 hours of instruction and 15 hours of required additional work appropriate to the objectives of the course for course</td>
</tr>
<tr>
<td>2 CEUs</td>
<td>= 20 hours of instruction and no additional work, or 40 hours of laboratory or clinical work</td>
</tr>
</tbody>
</table>

4. Minimum Course Length (Compressibility Policy)

The Compressibility Policy states: “Courses scheduled for less than a full semester may not be offered for more than 1 credit each week (seven days).” Two credits require a minimum of eight days and 3 credits require a minimum of 15 days.

Box 6. Complete Course Title

Insert full title of the course/program. If the title of the course is greater than 30 characters (including spaces), insert a title of 30 characters or less (including spaces) in the field underneath the full title. This abbreviated title will
appear on transcripts. Abbreviations used should be readily recognizable or accepted abbreviations within the
discipline. Titles of existing courses in the data base cannot be used for new/revised courses, except for the
following types of courses: dissertation, internship, practicum, project, research, selected topic, seminar, thesis.

Box 7. Type of Course
Identifies type of course offered.

1. Academic Courses (numbered 100-499 and 600-699)
   A. Program Requirement - A credit course specifically required by degree, certificate, or a Minor
      program.
   B. Program Selective - A credit course within a group of courses from which a student is required to
      select.
   C. General Education Requirement - A credit course that is approved to fulfill part of the general
      education distribution requirements of the University.
   D. Elective - A credit course selected by the student that is neither a degree program requirement nor a
      program selective, but which is applicable towards the minimum number of credits required for
      the degree or certificate.

2. Preparatory/Developmental Courses (050-099): Preparatory/Developmental courses with these numbers
   provide basic or supplemental preparation for introductory college courses. They are not applicable to
   transcripted certificates or associate, baccalaureate, or graduate degrees, even by petition. (See Box 3.
   Course Number, for further information).

3. Nondegree Courses
   A. Noncredit Courses (000-049) - These are noncredit and nondegree courses, programs, and/or
      activities that respond to relevant community education needs and interests and that typically do
      not have specifically defined student learning outcomes.
   B. CEUs (denoted by “AC” rather than just “A” before course number) - A course that provides further
      development of a trade, profession, or personal improvement.
   C. Professional Development Courses (A500-A599) - Designed to provide continuing education for
      professionals at the post-baccalaureate level. These courses are not applicable to university degree
      or certificate program requirements, are not interchangeable with credit courses, even by petition,
      and may not be stacked with any other course. (See Box 3. Course Number, above for further
      information).

Box 8. Type of Action
Identifies whether the CAR is for a course addition, change, or deletion. If the action is a course change, identify all
the changes being made.

If the course change results in a program change, a separate PAR must be completed for each action and must
identify the element(s) being changed.

If a permanent number is being requested after the course has run successfully as a -93 or -94, this is an addition, not
a change, since the addition of a permanent course is being proposed.

Box 9. Repeat Status
Identifies the Repeat Status of the course.
   - Yes means the course may be repeated for credit
   - No means it cannot be repeated for credit

If repeat status is marked as Yes, the Number of Repeats and Maximum Hours must be indicated.
The Number of Repeats indicates the number of additional times the course may be taken for credit (does not include the original enrollment). The Maximum Hours indicates the total number of credits that may be applied towards a degree.

**Example**

HIST A390 3 credits  
Repeat Status: Yes  
Number of Repeats: 1  
Max Credits: 6

**Box 10. Grading Basis**

Identifies how performance in the course is to be graded (A-F or P/NP [Pass/No Pass] for academic and professional development courses; NG [no grade] for CEUs and noncredit offerings).

**Box 11. Implementation Date**

Using the drop-down menus, insert the semester and year that the addition, deletion, or change will be implemented.

1. **Courses**

   The end semester is needed for nonpermanent courses only (-93s, -94s, bridge courses). For permanent courses, leave the semester field blank and 9999 for the end year. Careful consideration needs to be given to permanent courses affecting degrees and certificates. New programs and courses may be added for any term; however changes to existing programs can only have a fall implementation date. Careful consideration needs to be given to ensure final approval can be made prior to printing of catalog. For this reason it is suggested that changes to programs be ready for first reading no later than first week of March.

   Course additions or modifications must be made in conjunction with publication of the class schedule. Since academic units are responsible for providing an adequate transition for students from one set of program requirements to another, units should consider the official implementation date of program changes when implementing the approved changes. The current production calendar can be found on the Governance website at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance). New course offerings have greater flexibility but implementation dates for course changes will not be allowed for a term in which registration has already begun. When a course change is required as part of a program change for fall semester, first readings for the course should take place no later than the first week in February. This is to ensure final approval prior to fall registration opening.

2. **Program or Academic Policy**

   The overall principles affecting the date for implementation of academic policy or program change include the following:

   A. **Students must receive adequate notice of a program change.**

   B. **Staff must have adequate time to implement the change effectively.**

   Generally this is interpreted to mean that program changes, including new programs, must be advertised in the university catalog.

   Based on the current schedule of catalog distribution in the spring or summer, most program changes should take effect in the fall semester following catalog distribution. Exception to this policy will be made only in exceptional circumstances. Permission of the OAA is required for implementation at an earlier date. Requests for an earlier date must detail the procedures the academic unit will use to notify affected students and facilitate the transition to the new requirements.

**Box 12. Cross-Listed or Stacked**

1. **Cross-listed**
A. Cross-listed courses are courses approved under multiple prefixes and offered at the same time and location.

B. Each cross-listed course must have a separate CAR for each prefix.

C. Everything except the course prefix must be identical.

D. The department chair of the coordinating department must signify approval of the cross-listing by signing Box 12 of the CAR.

E. Each department is responsible for preparing the appropriate CAR and providing supporting documentation. These must be submitted at the same time for UAB/GAB review.

F. When courses are cross-listed, they must be offered and printed in UAA’s schedules and catalog under each prefix. For example, ART/JPC A324 is listed both under Art and Journalism and Public Communications.

2. Stacked

A. Stacked courses are courses from the same prefix but at different levels offered at the same time and location.

B. Existing and new courses may not be stacked unless approved as stacked courses by UAB/GAB.

C. Courses may not be stacked informally for scheduling purposes.

D. The course description and course content guide of a stacked course must clearly articulate the difference in experience, performance, and evaluation of students at different levels, including graduate students vs. undergraduate students.

E. Courses at the 300 level may not be stacked with 600-level courses.

F. A500-A599 level (professional development) courses may not be stacked with any other course

G. If stacking status is requested, rationale must be provided.

If the graduate-level course is stacked with a 400-level course, or if undergraduate students are taking the course as part of their baccalaureate degree, the justification must clearly describe how the quality of the graduate students’ experience will be maintained in a mixed-level classroom. (See Section 9 for guidance on the CCG.)

Box 13a. Impacted Courses or Programs

Do NOT complete Box 13a for new courses.

The intent of Box 13a is twofold:

1. To provide a list of all courses, programs, college requirements, and catalog copy that contain reference to the course under revision in the current UAA catalog. This includes the initiating department.

2. To document coordination* with impacted programs and departments.

If the course revision impacts the program catalog copy of the initiating department, a Program/Prefix Action Request must be completed and submitted with track-changed catalog copy. The current catalog copy in Word is available on the Governance website (www.uaa.alaska.edu/governance)

In order to find courses and programs impacted by this revision, use the .pdf file provided on the Office of the Registrar’s website (http://uaa.alaska.edu/records/catalogs/catalogs.cfm). Open the link to the latest catalog and use the find function in Adobe to search for the course prefix and number. You should fill out a line of the table for every program, (including type of degree, e.g. AA, AAS, BA, BS, MA, MS, Certificate), course, or college requirement that the revised course appears in.
Three or fewer lines (impacts) can be recorded directly into the table on the CAR. **More than three requires the creation of a separate coordination spreadsheet** is required listing the impacted programs or courses, the specific impact (e.g. program requirement, program selective**, credits required, prerequisite, corequisite, registration restriction), type and date of coordination, and the name of the department chair/coordinator contacted. An example of the Box13a. spreadsheet can be found on the Governance website at [http://uaa.alaska.edu/governance/coordination/index.cfm](http://uaa.alaska.edu/governance/coordination/index.cfm).

**Courtesy Coordination**
Sometimes coordination with a department or program must occur even though there is no impact in the catalog. The department initiating the proposal is responsible for coordinating with each impacted program chair/coordinator, even if the impact is not found in the catalog. The term *courtesy coordination* can be used to document this type of situation.

**Items that are NOT entered into Box 13a.**
- You do not have to list impacts to classes that the revised class is stacked or cross listed with if you have already completed Box 12.

* Coordination is the requirement that all faculty initiators of curriculum actions identify and notify all academic units that may be affected by the curriculum change of the precise nature of their proposal. Coordination is always expected between and among affected department chairs/coordinators and deans in Anchorage, as well as directors of community campuses.

** program selective** - A credit course within a group of courses from which a student is required to select.

**Example of Box 13a (Coordination and Courtesy Coordination)**

CIS A330 (Database Management Systems)

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Logistics and Supply Chain Management, BBA</td>
<td>3/25/2011</td>
<td>Philip Price</td>
</tr>
<tr>
<td>CIS A360</td>
<td>3/25/2011</td>
<td>Minnie Yen</td>
</tr>
<tr>
<td>CIS A410</td>
<td>3/25/2011</td>
<td>Minnie Yen</td>
</tr>
<tr>
<td>CIS A430</td>
<td>3/25/2011</td>
<td>Minnie Yen</td>
</tr>
<tr>
<td>Computer Science BA, BS</td>
<td>3/25/2011</td>
<td>Sam Thiru</td>
</tr>
</tbody>
</table>

**Do not** send proposals as attachments when sending email notices to the faculty listserv since large files can cause difficulty with email delivery.
Box 13b. **Coordination Email Submitted to Faculty Listserv**
Enter the date of the email send to the faculty listserv (uaa-faculty@lists.uaa.alaska.edu). Initiating faculty are required to send an email notification to faculty listserv giving a brief overview of the proposal including:

- School and department (CAR boxes 1a and 1c),
- course prefix (CAR box 2),
- course number (CAR box 3),
- course title (CAR box 6),
- Add/Change/Delete and if change, a summary list of changes (CAR box 8),
- course description (CAR box 15),
- justification for action (CAR box 19),
- any other relevant information.

Do not send proposals as attachments when sending email notices to the faculty listserv since large files can cause problems. The coordination email must be sent at least 10 working days before being presented at UAB/GAB.

Box 13c. **Coordination with Library Liaison**
The faculty initiator is required to send the CAR and CCG to the library liaison for that department (http://consortiumlibrary.org/find/subject_liaison_librarians), with a copy of the email sent to the Governance Office.

Box 14. **GERs**
Identifies whether the course is a GER and which type of GER it is. The department initiating the proposal is responsible for submitting supporting documentation for the change, addition, or deletion.

Box 15. **Course Description**
Identifies the intent of the course. For courses, a 20- to 50-word description is preferred.

*Special Notes* are also identified in this field. Special notes indicate certain requirements of the student or the course that are not identified in the course description (e.g. “May be repeated for credit with a change in subtitle,” or “Offered Spring Semesters”).

A program proposal must include new catalog copy with a copy of the old catalog copy if applicable. For program proposals type “see attached catalog copy” in the box.

Box 16a. **Course Prerequisite (s)**
Identifies prerequisites which must be achieved prior to enrolling in a course. The prerequisite course (listed with prefix and number in alpha-numerical order) must be successfully completed prior to taking the course. Course prerequisites should be grouped using parenthesis and brackets similar to how you would group mathematical expressions. See the examples below.

Unless a minimum grade is specified for a prerequisite class, any grade value (including I, F, and W) will mark the class as satisfying the prerequisite if prerequisite checking has been turned on. For instance, if a student withdrew from a class and received a W, that student would be identified by Banner as having fulfilled any prerequisite requirement for the class they withdrew from. It is always assumed that faculty may waive the prerequisite or the minimum grade requirement.
A course prerequisite which **may** be taken concurrently must also be included in this box using the additional language “or concurrent enrollment.” This differs from a corequisite which should be placed in Box 16c. See the section on Box 16c. for detailed information about corequisites.

Any additional information that appears as text should be placed in Box 16e (Other Restrictions).

Prerequisite examples:

**ECON A429** (Business Forecasting)
{CIS A110, BA A273, and [BA A377 or ECON A321]} with minimum grade of C

**EDFN A303** (Foundations of Teaching and Learning)
[EDFN A301 or concurrent enrollment] and [EDSE A212 or PSY A245]

**EE A324** (Electromagnetics II)
[EE A314 or PHYS A314] and MATH A302

**ENGL A311** (Advanced Composition)
[ENGL A211 or ENGL A212 or ENGL A213 or ENGL A214] with minimum grade of C

**FIRE A214** (Fire Protection Systems)
FIRE A101 and FIRE A105 and FIRE A121 and [MATH A105 or MATH A107 or MATH A108 or MATH A109 or MATH A172 or MATH A200 or MATH A201 or MATH A272]

**SWK A342** (Human Behavior in the Social Environment)
PSY A150 and [BIOL A102 or BIOL A111 or BIOL A112 or BIOL A115 or BIOL A116 or LSIS A102 or LSIS A201]

*Note: Automatic prerequisite checking is available when a Prerequisites Form is submitted. This form is not part of the curriculum process, but is submitted directly to the Registrar’s Office. It is available via [www.uaa.alaska.edu/records/faculty_resources/upload/Prerequisites_Form.pdf](http://www.uaa.alaska.edu/records/faculty_resources/upload/Prerequisites_Form.pdf)*

**Test Scores:**
Identify test scores which must be successfully achieved prior to taking the course. This may include UAA Approved Placement Tests, SAT, ACT, or others. Specifically test scores are not required. It is assumed that faculty may waive the requirement.

Courses wishing to implement placement test scores as part of pre-requisite checking should indicate “or appropriate placement score.” There should also be an attached memo for each CAR indicating what the appropriate placement score is. If a change occurs to the cut score, the department will need to submit a memo to the Office of the Registrar and the Governance Office which would outline the new cut scores and list specifically which courses are impacted.

**Box 16b. Corequisite(s)**
Identifies a course (must be listed with prefix and number) which **must** be taken concurrently; requires simultaneous enrollment and withdrawal. It is assumed that faculty may waive the requirement.

Example for NURS A180
Corequisite: NURS A125 and NURS A125L

*Note: If the department has an alternative corequisite or a list of options for corequisites, do not include “or” in this box; do not include text information in this box. That information should be placed in box 16e (Other Restrictions).*
Box 16c. Other Restriction(s)
Identifies additional requirements that a student must have satisfied prior to registering for the course (e.g., college or school admission\(^a\), major\(^b\), class standing\(^c\), or level\(^d\)). The name of the college or school, major, class standing, or level required should be specified in Box 16d. When these boxes are checked, Banner will automatically enforce the restrictions. It is assumed that faculty may waive the requirement.

- **College or school admission** – identifies a college/school to which a student must be admitted to in order to enroll in the course.
- **Major** – identifies a major which a student must have declared in order to enroll in the course.
- **Class** – identifies a class standing which a student must have attained in order to enroll in the course (0-29 credits = freshman; 30-59 credits = sophomore; 60-89 = junior, 90+ = senior).
- **Level** – identifies a level which a student must be at in order to enroll in the course (graduate or undergraduate).

Checking the level box in 16d is mandatory for all graduate level 600 courses.

Box 16d. Registration Restriction(s)
Identifies additional requirements that a student must have satisfied prior to registering for the course (e.g. instructor permission, departmental permission). Must be enforced by the program/department/instructor. It is assumed that faculty may waive the requirement.

**NOTE:** Responsibility for confirming prerequisites, test scores, co-requisites, registration restrictions, and other restrictions lies with the department. It is assumed that the faculty may waive or enforce any of these requirements, subject to program, department and college policy.

Box 17. Mark if Course Has Fees
Indicates whether there is a student fee associated with the course. Do not include fee amount on CAR. This information is published under the course description in the catalog as “Special Fees,” and in the schedule with specific amounts. If the only action requested is a change in fees, no CAR is required.

New fees, changes in course fees, and deletions of course fees must be submitted on the Fee Request Form (www.uaa.alaska.edu/governance/coordination/index.cfm) and need the approval of the Provost. Refer to the Board of Regents Policy and Regulation Part V Chapter X for course fee information www.alaska.edu/bor/policy-regulations/.

Box 18. Mark if Course is a Selected Topic Course
Check box to indicate that course is a selected topic course; that the subtitle or topic of the course changes. Most selected topics courses are repeatable with a change in subtitle, and this box will help ensure that scheduling is done properly, and that student transcripts will show subtitle changes ensuring repeat credit is received.

Box 19. Justification for Action
For an existing course, justification needs to be provided for each proposed change as indicated in Box 8. Each proposed change must be noted, e.g. updates to CCG, Goals and Student Learning Outcomes, etc. For a new course, justification needs to be provided such as student or community interest or how the proposed course or change strengthens existing offerings. The supporting data must be supplied if the course is required for certification or accreditation.
## Section 11 - Step-By-Step Instructions for the Program/Prefix Action Request (PAR)

### 11.1 The PAR Form

Program/Prefix Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>choose one</td>
<td></td>
</tr>
</tbody>
</table>

2. Complete Program Title/Prefix

3. Type of Program

Choose one from the appropriate drop down menu:
- Undergraduate:  
- Graduate:  

This program is a Gainful Employment Program:  
- Yes  
- No

4. Type of Action:

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>PREFIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td>Add</td>
</tr>
<tr>
<td>Change</td>
<td>Change</td>
</tr>
<tr>
<td>Delete</td>
<td>Inactivate</td>
</tr>
</tbody>
</table>

5. Implementation Date (semester/year)

From:  /  To:  /

6a. Coordination with Affected Units

Department, School, or College:

Faculty Initiator Name (typed):  
Faculty Initiator Signed Initials:  
Date:

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)  

Date:

6c. Coordination with Library Liaison  

Date:

7. Title and Program Description - Please attach the following:

- Cover Memo  
- Catalog Copy in Word using the track changes function

8. Justification for Action

<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
</tr>
</thead>
</table>

Initiator (TYPE NAME)  

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dean/Director of School/College</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Department Chair</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Undergraduate/Graduate Academic Board Chair</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Provost or Designee</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College/School Curriculum Committee Chair</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
</tr>
</tbody>
</table>

---

67  Section 11 – PAR Instructions 553
11.2 Instructions for Completing the PAR

Box 1a. School/College
Using the drop-down box, insert school or college initiating action.
AA  Academic Affairs
AS  College of Arts and Sciences
CB  College of Business and Public Policy
CH  College of Health
CT  Community and Technical College
EA  College of Education
EN  School of Engineering
HC  University Honors College
KP  Kenai Peninsula College
KO  Kodiak College
MA  Matanuska-Susitna College

Box 1b. Department
Insert department initiating action. *Note: Changing the name of a division or academic department requires Provost approval and a PAR notifying Governance.*

Box 2. Complete Program Title/Prefix
Insert full title of the proposed program or prefix.

Box 3. Type of Program
Insert Type of Program proposed. The maximum number of credits required by a degree program, per Board of Regents Policy (BOR Policy and Regulation 10.04.030), are noted below:

- Occupational Endorsement Certificate
- Undergraduate Certificate
- Associates (AA/AAS)
- Baccalaureate (BA/BS)
- Minor
- Post-Baccalaureate Certificate
- Graduate Certificate
- Graduate
- Doctoral
- Other

If the program is determined to be a Gainful Employment program, then check the “Yes” box; otherwise, check the “No” box. Meet with Associate Vice Chancellor for Enrollment Management to determine a program’s status. Additional documentation is required for programs which are identified as Gainful Employment programs.

Box 4. Type of Action
Check if the PAR is for an addition, deletion, or change to a program. Alternatively, the type of action may indicate a request for a new prefix, change to a prefix, or inactivation of a prefix.

Box 5. Implementation Date
Insert the semester and year that the addition, deletion, or change will be implemented.

The overall principles affecting the date for implementation of academic policy or program change include the following:

- Students must receive adequate notice or a program/prefix change.
- Staff must have adequate time to implement the change effectively.
Generally this is interpreted to mean that program/prefix changes, including new programs, must be advertised in the university catalog.

Based on the current schedule of catalog distribution in the spring or summer, most program changes should take effect in the fall semester following catalog distribution. Exception to this policy will be made only in exceptional circumstances. Permission of the OAA is required for implementation at an earlier date. Requests for an earlier date must detail the procedures the academic unit will use to notify affected students and facilitate the transition to the new requirements.

Box 6a. Coordination with Affected Units
Coordination is the requirement that all faculty initiators of program/prefix actions identify and notify all academic units who may be affected by the curriculum change of the precise nature of their proposal. Coordination is always expected between and among department chairs and deans in Anchorage, as well as directors of community campuses.

- The purpose of coordination is to:
  A. Allow affected units who may have a legitimate interest in the program/prefix proposal, opportunities to review and comment on such proposals before they are considered by the college curriculum committees and the UAB/GAB.
  B. Encourage collaboration among all academic units.
  C. Maintain and improve quality of program offerings.

- An affected unit is defined as a department or academic unit whose curriculum will be affected by the proposed program action.

- Coordination with affected units is required in the following cases:
  A. When the program, courses, or content proposed bridges material regularly included in other disciplines.
  B. When the program includes or requires prerequisite courses from other degree programs, sites, or campuses.
  C. When the proposed program can reasonably be expected to use courses offered by other disciplines.
  D. When a subsequent allocation of resources resulting from the proposal will impact the unit’s ability to deliver academic courses required in other programs.

- Coordination should be initiated very early in the program development process – before finalization of the proposal.

- Coordination includes:
  A. Sending proposal to department chairs of affected units
  B. Actively seeking collaboration, comments and suggestions
  C. Allowing 10 working days from the published date of notification of affected units before moving the proposal through the established levels of review.

- Evidence of coordination with affected units is required by inclusion of a copy of the email sent to the UAA listserv and to the department chairs of affected units. If necessary, affected units should communicate directly with the initiating department. Affected academic units are then encouraged to submit written support or objection to UAB/GAB and/or to speak to the proposal at the appropriate Board meeting. If no written comments are received by the UAB/GAB within 10 working days of the notification date, it is assumed that there are no objections to the proposal.
• After coordination is complete, in Box 6a; type in the department, schools, or colleges coordinated with; type the faculty initiator’s name; write in the faculty initiator’s initials and the date.

**Box 6b. Coordination Email Submitted to Faculty Listserv**

Initiating faculty are required to send an email notification to faculty listserv at: uaa-faculty@lists.aaa.alaska.edu giving a brief overview of the proposal including:

- School and department (PAR boxes 1a and 1b),
- Complete Program Title (PAR box 2),
- Type of Program (PAR box 3),
- Type of Action (Add/Change/Delete) (PAR box 4),
- justification for action (PAR box 8),
- any other relevant information.

The email must be sent at least 10 working days before being presented at UAB/GAB.

Do not send proposals as attachments when sending email notices to the faculty listserv since large files can cause problems.

**Box 6c. Coordination with Library Liaison**

Coordination with the library liaison should occur early in the curriculum process. The faculty initiator is required to send the PAR to the library liaison for that department (http://consortiumlibrary.org/about/directory/liaisons.php), with a copy of the email sent to the Governance Office. Type in the date of coordination to indicate that the coordination has been done.

**Box 7. Title and Program Description**

Include a description of the intent of the program in the form of an attached cover memo. A program proposal must also include catalog copy with text changes and a clean copy of how the new catalog text will appear.

**Box 8. Justification for Action**

Insert the need for and/or reasoning behind the proposed action, such as student or community interest or how the proposal strengthens existing offerings.
Section 12 - Catalog Copy Formatting

The following outlines the requirements for formatting all program catalog copy submitted to UAB or GAB. Included are two sample program catalog copy sections. Refer to the UAA catalog (www.uaa.alaska.edu/records/catalogs/catalogs.cfm) for more examples.

Catalog copy from the published catalog can be found in Word format on the Governance site at www.uaa.alaska.edu/governance/.

**Basic Format:**
Department Name  
Contact information, location, web address  

1. General discipline information  
   A. Degree or Certificate program name and description  
   B. Overview and career information  
   C. Student Learning Outcomes: Include Student Learning Outcomes for the program in the catalog copy.  
   D. Honors: Header in the catalog should read: “Honors in Discipline”, e.g., Honors in English.  
   E. Accreditation  
   F. Research possibilities  
   G. Gainful Employment statement (if needed)  

2. Admission Requirements  
   A. Preparation  
   B. Pre-major  
   C. Major  

3. Advising  

4. Academic Progress Requirements  

5. Graduation Requirements  
   A. General University  
   B. General Education Requirements (GERs)  
   C. College  
   D. Major degree requirements  
   E. Other graduation requirements  

6. Faculty

**Notes for creating and submitting catalog copy:**

- **You must use the Word formatted catalog copy available at** [www.uaa.alaska.edu/governance/](http://www.uaa.alaska.edu/governance/).

- Courses must have their full titles and correct credit amounts and those must match what is currently in the catalog.

- Within a department or discipline, the order of undergraduate programs should be:  
  1. Honors  
  2. Occupational endorsement certificates
3. Undergraduate certificates
4. Associates degrees
5. Bachelor of Arts
6. Bachelor of Science
7. Minors

For graduate programs should be:
1. Graduate certificates
2. Masters degrees
3. Ph.D. programs

- Required credit amounts should be aligned to the right (see the following two examples). If a class has its credits aligned to the right it will be interpreted that this class is a requirement.

- Electives (or selectives) will have their credit amounts shown in parenthesis and will appear one space after the title of the course (see the following two examples). If a course has its credit amount in parenthesis after the title it will be interpreted as not required (i.e., a class a student can choose to take to fill a requirement).

- If, within a list of required classes, a student must take 3 credits, for example, but has a choice of two or more classes to fulfill that requirement, the required credit amount should be aligned to the right on the same line as the first elective. All of the electives should still have their credits in parentheses after the course title. Each course should be separated by a line on which an “or” appears (and nothing else). This is what it should look like:

  Upper Division Biology (choose one of the following) 3-4
  BIOL A310  Principles of Physiology (3)
  or
  BIOL A415  Comparative Animal Physiology (4)
  or
  BIOL A461  Molecular Biology (3)
  CHEM A105  General Chemistry I  3
  CHEM A105L  General Chemistry I Laboratory  1
  CHEM A106  General Chemistry II  3
  CHEM A106L  General Chemistry II Laboratory  1
  CHEM A253  Principles of Inorganic Chemistry  3

- The list of courses must appear in alphabetical order by prefix, and then in numerical order by course number.

- Faculty are listed in alphabetical order by instructor last name. Degrees or credential letters are not included (i.e., Ph.D., P.E., etc.). Faculty position title and email address are included.
EXAMPLE 1:

ELEMENTARY EDUCATION

Professional Studies Building (PSB), Room 224, (907) 786-4481
www.uaa.alaska.edu/coe

Bachelor of Arts, Elementary Education (with Teacher Certification)

Individuals interested in undergraduate elementary teacher preparation may obtain either a BA in Elementary Education or a Post-Baccalaureate Certificate in Elementary Education with elementary teacher certification. See Chapter 11, Post-Baccalaureate Certificate Programs, for more information.

The BA in Elementary Education is a professional degree nationally recognized by the Association of Childhood Education International (ACEI). Unique features of the program include an emphasis on culturally responsive teaching in Alaska’s context; a strong liberal studies focus; exposure to a range of teaching and curriculum design approaches, including integration of educational technology; and focused field experiences, developmentally sequenced and in a variety of school/classroom settings. Applicants are encouraged to take EDFN A101 Introduction to Education (3 credits) to learn more about the field of education. Elementary Education supports an Honors Track option. See an advisor for course guidance.

Student Learning Outcomes

Student learning outcomes for the program are based on the Standards for Alaska’s Teachers located at www.eed.state.ak.us/standards and the Association for Childhood Education International (ACEI) standards located at www.acei.org. Within a culturally responsive framework, program graduates will:

1. Construct learning opportunities that support K-6 students’ development, acquisition of knowledge, and motivation.
2. Design and implement curriculum that supports K-6 students’ learning of language arts, science, mathematics, social studies, the arts, health, and physical education.
3. Plan and implement instruction based on knowledge of K-6 students, learning, theory, curriculum, and community.
4. Create appropriate instructional opportunities to address diversity.
5. Use teaching strategies that encourage development of critical thinking and problem solving.
6. Foster active engagement in learning and create supportive learning environments.
7. Use effective communication strategies to foster inquiry and support interaction among K-6 students.
8. Use formal and informal assessments to inform and improve instructional practice.
9. Reflect on practice and engage in professional growth activities.
10. Establish positive collaborative relationships with families, colleagues, and the community.

Admission Requirements

Admission to the University of Alaska Anchorage: Elementary Education Major

Applicants must complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations. Application forms are available at: www.uaa.alaska.edu/admissions.

Admission to the Department of Teaching and Learning, College of Education: Elementary Education Major

In order to be admitted to the Department of Teaching and Learning, students must:
1. Submit an application to the Department of Teaching and Learning.
2. Complete the Tier I Basic College-Level Skills General Education Requirements.
3. Have a cumulative GPA of 2.75.
4. Have a GPA of 3.00 in Major Requirements.

5. Successfully complete the Praxis I: Pre-Professional Skills Test (PPST). Contact the Department of Teaching and Learning for current passing scores.

6. Successfully complete the following courses with a grade of C or higher: EDEL A205 Becoming an Elementary Teacher and EDSE A212 Human Development and Learning.

7. Submit Interested Person Report.

Note: Admission to the Department of Teaching and Learning is competitive. Qualified applicants are accepted on a space-available basis.

Admission to the university as an Elementary Education major does not guarantee admission to the department.

Admission to Field Experiences

Admission to field experiences is separate from admission to the program and may be limited by community partners. See Field Placements located at the beginning of the College of Education section of this chapter. Applications for EDEL A495A, Elementary Education Practicum II, and Elementary Internship courses must be submitted by the semester before enrolling in EDEL A495A, Elementary Education Practicum II. Qualified applicants are accepted on a space-available basis. Admission to the Department of Teaching and Learning does not guarantee admission to the field experiences.

The Elementary Programs Admission Committee determines a candidate’s readiness to enroll in all field experiences. The candidate must realize that requirements set forth below constitute minimum preparation, and it may be the judgment of the committee that the candidate needs further work to develop content knowledge or skills to work with children.

EDEL A495A, Elementary Practicum II and Internship

Admission Criteria

EDEL A495A, Elementary Education Practicum II, increases the time in the classroom and the planning and teaching experiences, with focus on the classroom environment, math and science. The Elementary Internship includes a capstone seminar and extensive, supervised teaching experiences in an elementary classroom. Emphasis is placed on meeting the Alaska Beginning Teacher Standards. Criteria include the following:

1. Meet all the requirements for and be admitted to the Department of Teaching and Learning as an Elementary Education major.
2. Submit an application form for admission to Internship, including a resume and letter of introduction, by the department’s published deadline.
3. Participate in a screening interview.
4. Complete all prerequisite courses.
5. Successfully complete the Praxis II: Elementary Content Knowledge (0014). Contact the Department of Teaching and Learning for current passing score.
6. Have a cumulative GPA of 2.75.
7. Have a GPA of 3.00 in Major Requirements.
8. Apply for the Student Teaching Authorization Certificate. This application includes fingerprinting and a criminal background check. Fee required. Contact COE advisors for more information.
**Academic Progress**

Satisfactory progress in the practicum courses (EDEL A395 and EDEL A495A) is required for enrollment in the internship (EDEL A495B). All Major Requirements, EDSE A212 and MATH A205 must be completed with a grade of C or higher in order to obtain an institutional recommendation for elementary teacher certification.

**Graduation Requirements**

Candidates must complete the following graduation requirements:

**A. General University Requirements**

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

**B. General Education Requirements**

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

**C Background Check Requirements**

See Field Placements located at the beginning of the College of Education section of this chapter.

**D. Liberal Studies Area**

Complete the liberal studies area. These courses are selected to provide future elementary teachers with the skills and background knowledge in the various subjects they will be expected to teach. The selection is based on national and state standards for content preparation. Some of the liberal studies courses may also be used to meet General Education Requirements (GERs).

### Sciences Core (15-24 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSIS A102</td>
<td>Origins: Earth-Solar System-Life</td>
<td>5-8</td>
</tr>
<tr>
<td>GEOL A111</td>
<td>Physical Geology</td>
<td></td>
</tr>
<tr>
<td>ASTR A103</td>
<td>Solar System Astronomy</td>
<td></td>
</tr>
<tr>
<td>ASTR 103L</td>
<td>Solar System Astronomy Laboratory</td>
<td></td>
</tr>
<tr>
<td>ASTR A104</td>
<td>Stars, Galaxies and Cosmology</td>
<td></td>
</tr>
<tr>
<td>ASTR A104L</td>
<td>Stars, Galaxies and Cosmology Laboratory</td>
<td></td>
</tr>
<tr>
<td>LSIS A201</td>
<td>Life on Earth</td>
<td>5-8</td>
</tr>
<tr>
<td>BIOL A102</td>
<td>Introductory Biology</td>
<td></td>
</tr>
<tr>
<td>BIOL A103</td>
<td>Introductory Biology Laboratory</td>
<td></td>
</tr>
<tr>
<td>BIOL A115</td>
<td>Fundamentals of Biology I</td>
<td></td>
</tr>
<tr>
<td>BIOL A116</td>
<td>Fundamentals of Biology II</td>
<td></td>
</tr>
<tr>
<td>LSIS A202</td>
<td>Concepts and Processes: Natural Sciences</td>
<td></td>
</tr>
<tr>
<td>CHEM A103</td>
<td>Survey of Chemistry</td>
<td></td>
</tr>
</tbody>
</table>

*If you have subheadings for different types of courses, you can use italics, bold, underline, or tabs to set them apart. It is a good idea to include a total credit amount as well.*

If a student has a choice between two electives to fill a required course, put the elective credit amounts in parentheses next to the course titles, as usual, but put the required credit amount aligned to the right on the same line as the first course.

*Separate the two electives with an “or” on its own line.*
CHEM A103L  Survey of Chemistry Laboratory (1)
and one of the following lecture/lab combinations:

PHYS A115  Physical Science (3)
and
PHYS A115L  Physical Science Laboratory (1)
or
PHYS A123  Basic Physics I (3)
and
PHYS A123L  Basic Physics I Laboratory (1)

Social Sciences (SS) and Humanities (HUM) Core (36-39 credits)

Students must meet GERs for Baccalaureate Degrees including 6 credits of social sciences (SS) from two different
disciplines and 6 credits of humanities (HUM).

ANTH A250  The Rise of Civilization (3) 3
or
HIST A390A  Themes in World History (3)
HIST A131  History of United States I (3) 3
or
HIST A132  History of United States II (3)
or
HIST A355  Major Themes in US History (3)
EDSE A212  Human Development and Learning (3) 3
or
ENGL A121  Introduction to Literature (3) 3
or
ENGL A201  Masterpieces of World Literature I (3)
or
ENGL A202  Masterpieces of World Literature II (3)
HUM A211  Introduction to Humanities I (3) 3
or
HUM A212  Introduction to Humanities II (3)
or
HNRS A192  Honors Seminar: Enduring Books (3)
LSSS A111  Cultural Foundations of Human Behavior (3) 3
or
HNRS A292  Seminar in Social Science (3)
or
ANTH A202  Cultural Anthropology (3)
LSIC A231  Truth, Beauty, and Goodness (3) 3
or
PHIL A301  Ethics (3)
LSSS A311  People, Places, and Ecosystems (3)
or
ENVI A211  Environmental Science: Systems and Processes (3)
LSIC A331  Power, Authority, and Governance (3) 3

Double-check all course titles. They must exactly match the full titles published in the catalog course name.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC/PS A351</td>
<td>Political Sociology (3)</td>
</tr>
<tr>
<td>LSSS A312</td>
<td>Individuals, Groups, and Institutions (3) 3</td>
</tr>
<tr>
<td>PSY A111</td>
<td>General Psychology (3)</td>
</tr>
<tr>
<td>SOC A101</td>
<td>Introduction to Sociology (3)</td>
</tr>
<tr>
<td>SOC A375</td>
<td>Social Psychology (3)</td>
</tr>
<tr>
<td>PSY A375</td>
<td>Social Psychology (3)</td>
</tr>
<tr>
<td>LSIC A332</td>
<td>Science, Technology and Culture (3) 3</td>
</tr>
</tbody>
</table>

Select one course from fine arts GERs 3

### Mathematical Skills (9-13 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH A205</td>
<td>Communicating Mathematical Ideas and</td>
</tr>
<tr>
<td>STAT A252</td>
<td>Elementary Statistics (3)</td>
</tr>
<tr>
<td>STAT A253</td>
<td>Applied Statistics for the Sciences (4)</td>
</tr>
</tbody>
</table>

Select one additional course from quantitative skills GERs 3-6

### Oral and Written Communication Skills (9 credits)

Select one course from oral communication GERs 3

Select two courses from written communication GERs 6

---

**E. Major Requirements**

It is recommended that students complete EDFN A101 Introduction to Education prior to enrolling in the following major courses. It is strongly recommended that you see an advisor to stay on track. Field experiences in public schools are required as part of most courses.

1. Complete the following core courses (22 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC A242</td>
<td>Family and Community Partnerships (3) 3</td>
</tr>
<tr>
<td>HNRS A310</td>
<td>Community Service: Theory and Practice (3)</td>
</tr>
<tr>
<td>EDEL A205</td>
<td>Becoming an Elementary Teacher</td>
</tr>
<tr>
<td>EDFN A206</td>
<td>Introduction to Assessment in Education</td>
</tr>
<tr>
<td>EDFN A300</td>
<td>Philosophical and Social Context of American Education (3)</td>
</tr>
<tr>
<td>EDFN A304</td>
<td>Comparative Education (3)</td>
</tr>
<tr>
<td>EDFN A301</td>
<td>Foundations of Literacy and Language Development</td>
</tr>
<tr>
<td>EDFN A302</td>
<td>Foundations of Educational Technology</td>
</tr>
<tr>
<td>EDEL A392</td>
<td>Elementary Education Seminar I: Culturally Responsive Teaching</td>
</tr>
</tbody>
</table>
2. Complete the following methods courses (18 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC A106</td>
<td>Creativity and the Arts in Early Childhood</td>
<td>3</td>
</tr>
<tr>
<td>EDEL A325</td>
<td>Teaching Literacy in Elementary Schools</td>
<td>6</td>
</tr>
<tr>
<td>EDEL A327</td>
<td>Teaching Social Studies in Elementary Schools</td>
<td>2</td>
</tr>
<tr>
<td>EDEL A426</td>
<td>Teaching Mathematics in Elementary Schools</td>
<td>3</td>
</tr>
<tr>
<td>EDEL A428</td>
<td>Teaching Science in Elementary Schools</td>
<td>2</td>
</tr>
<tr>
<td>PEP A345</td>
<td>Incorporating Health and Physical Activity into the Pre-K-6 Classroom</td>
<td>2</td>
</tr>
</tbody>
</table>

**Concurrent enrollment in multiple courses is required. See an advisor for details.**

3. Complete the following field experiences and internship (16-19 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEL A395</td>
<td>Elementary Education Practicum I: Literacy and Social Studies</td>
<td>2</td>
</tr>
<tr>
<td>EDEL A492A</td>
<td>Elementary Education Seminar II: Learning Environment</td>
<td>2</td>
</tr>
<tr>
<td>EDEL A492B</td>
<td>Elementary Education Seminar III: Teaching Capstone</td>
<td>3</td>
</tr>
<tr>
<td>EDEL A495A</td>
<td>Elementary Education Practicum II: Learning Environment, Mathematics, Science</td>
<td>3</td>
</tr>
<tr>
<td>EDEL A495B</td>
<td>Elementary Education Internship</td>
<td>6-9</td>
</tr>
</tbody>
</table>

For Honors Option Senior Requirement:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRNS A499</td>
<td>Thesis (3)</td>
<td></td>
</tr>
<tr>
<td>EDEL A495B</td>
<td>Elementary Education Internship (6)</td>
<td></td>
</tr>
</tbody>
</table>

4. A total of 125-141 credits is required for the degree, of which 42 credits must be upper division.

**BAEL and Honors College Option**

Take the following Honors College Core Program Courses (16 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNRS A192</td>
<td>Honors Seminar: Enduring Books</td>
<td>3</td>
</tr>
<tr>
<td>HNRS A292</td>
<td>Honors Seminar in Social Science</td>
<td>3</td>
</tr>
<tr>
<td>HNRS A310</td>
<td>Community Service: Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>HNRS A392</td>
<td>Honors Thesis Seminar</td>
<td>1</td>
</tr>
<tr>
<td>HNRS A499</td>
<td>Honors Thesis</td>
<td>3</td>
</tr>
</tbody>
</table>

and taken concurrently with EDEL A495B Internship (6) 3

(three credits of Internship apply to the Senior Requirement)

*Important: See an advisor if considering the Honors Option.*
Institutional Recommendation,

Elementary Teacher Certification (K-6)

Following are the requirements for an institutional recommendation:

1. Major requirements completed with a grade of C or higher.
2. Cumulative GPA of 2.75.
3. Cumulative GPA of 3.00 in all Major Requirements, EDSE A212 and MATH A205.
4. Passing scores on the Praxis I (PPST) and Praxis II (0014) exams.
5. Internship satisfactorily completed.
6. BA in Elementary Education degree conferred.

EXAMPLE 2:

ARCTIC ENGINEERING

Engineering Building (ENGR), Room 201, (907) 786-1900
http://www.uaa.alaska.edu/schoolofengineering/programs/arctic/

The Arctic Engineering program is designed to provide graduate education for engineers who must deal with the unique challenge of design, construction and operations in the cold regions of the world. The special problems created by the climactic, geological and logistical conditions of the Arctic and sub-Arctic require knowledge and techniques not usually covered in the normal engineering courses. Development of petroleum and other natural resources has accentuated the demand for engineers trained in northern operations, both from private industries involved in development and government agencies planning or regulating these activities. Of primary importance is a thorough knowledge of heat transfer processes and properties of frozen ground and frozen water, which are basic to most engineering activities in the Arctic. The areas of hydraulics, hydrology, materials and utility operations are also uniquely affected by Arctic considerations.

Master of Science, Arctic Engineering

The Master of Science of Arctic Engineering requires completion of a set of core courses that will prepare an engineer to understand and adapt prior engineering knowledge and skills to problems of cold regions. The program also allows students to study advanced elective courses in a particular area of specialized interest. Research activities carried out by faculty of the UAA School of Engineering provide opportunities for project reports dealing with current Arctic knowledge. A graduate advisory committee of at least three members is appointed to guide each admitted student to degree completion. Two members must be UAA Engineering faculty members.

Student Learning Outcomes

On successful completion of the program, students will have gained sufficient knowledge to:

1. Recognize natural conditions and engineering challenges that are unique to cold regions;
2. Interpret associated specialized language and units of measure;
3. Locate, interpret, and apply public information about the physical conditions of cold regions;
4. Apply fundamental physical principles for solutions to common cold regions engineering problems;
5. Assess need for complex specialized Arctic engineering solutions;
6. Determine physical and thermal properties, evaluate frost heave rates, and estimate heat flow in soils, prevent foundation failure due to seasonally or perennially frozen ground by appropriate project site exploration and design of constructed features;

7. Determine mathematical and physical properties governing heat and mass transfer in cold climates;

8. Determine temperature profiles in structure walls, roofs, and foundations, predict moisture content and mass flow rates in structures;

9. Acquire, integrate, and interpret data from public archives regarding site conditions associated with planning and design of community utility systems and formulate field measurement programs to determine site conditions for planning and design;

10. Analyze properties of lake, river, and sea ice, predict behavior of ice under natural conditions, and predict ice forces on engineering structures; and

11. Apply the sum of specialized Arctic engineering knowledge and skills gained in the program toward solution of a practical engineering problem and report this to fellow specialists.

**Admission Requirements**

All students admitted to the Arctic Engineering program must have previously earned a baccalaureate degree in an engineering discipline with a cumulative undergraduate GPA of at least 3.00. Probationary admission may be granted by the Civil Engineering Department for students whose cumulative undergraduate GPA is between 2.50 and 3.00, but who have successfully completed graduate studies at the 3.00 level or better and have other evidence of their potential for success in graduate engineering studies. Probationary terms will typically call for successful completion of a pre-approved sequence of 9 credits of graduate engineering courses. Admitted students are also responsible for completion of prerequisites for Arctic engineering program courses, which may not have been included in their undergraduate education.

**Graduation Requirements**

See the beginning of this chapter for University Requirements for Graduate Degrees.

**Major Requirements**

1. Candidates must complete the following core courses (9 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE A603</td>
<td>Arctic Engineering*</td>
<td>3</td>
</tr>
<tr>
<td>CE A681</td>
<td>Frozen Ground Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ME A685</td>
<td>Arctic Heat and Mass Transfer</td>
<td>3</td>
</tr>
</tbody>
</table>

   *Students who have completed CE A403 Arctic Engineering with a grade of C or better, or students who have passed the ES AC030 Fundamentals of Arctic Engineering or ES AC031 Introduction to Arctic Engineering before being admitted to the program must replace CE A603 with an elective, 3-credit course accepted by the student’s graduate advisory committee.

2. Candidates must also complete at least three additional courses from the following Arctic engineering program elective courses (9 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE A682</td>
<td>Ice Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CE A683</td>
<td>Arctic Hydrology and Hydraulic</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Engineering</td>
<td></td>
</tr>
<tr>
<td>CE A684</td>
<td>Arctic Utility Distribution</td>
<td>3</td>
</tr>
<tr>
<td>CE A689</td>
<td>Cold Regions Pavement Design</td>
<td>3</td>
</tr>
</tbody>
</table>

3. Candidates must complete additional graduate electives (9 credits) in mathematical, science or engineering subjects related to or supportive of the student’s program of study, as approved by the student’s advisory committee to fulfill the minimum 30-credit degree requirement. One technical undergraduate elective course at the 400 level may be applicable with prior permission of the student’s advisory committee and provided a grade of B or better is achieved. All coursework applied toward degree requirements must be approved by the student’s advisory committee.

4. Each student must complete the following course (3 credits) after approval of a project proposal by the student’s advisory committee:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE A686</td>
<td>Civil Engineering Project</td>
<td>3</td>
</tr>
</tbody>
</table>
The Arctic engineering project should have the following characteristics:

a. The Arctic engineering project must solve a practical engineering problem to the extent that original developments by the candidate are evident in the project report.

b. The project problem and solution must be presented in the context of the current state of the art by means of a thorough review of pertinent literature.

c. The project must include innovative components directly involving cold regions engineering.

d. The project must have sufficient scope to clearly demonstrate the candidate’s advanced technical expertise in cold regions engineering.

e. The project report must demonstrate command of knowledge and skills directly associated with the candidate’s graduate program of study.

f. The written project report, in the judgment of the candidate’s advisory committee, must be publishable in the proceedings of a cold regions engineering specialty conference.

g. The work must require a level of effort consistent with three semester hours of credit (approximately 45 to 60 hours per credit hour or 135 to 180 hours total effort).

5. A total of 30 credits is required for the degree.

FACULTY

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Appendix A - Links to Templates

The following templates can be found at www.uaa.alaska.edu/governance/coordination/index.cfm:

- **Budget Worksheet** - Provides detailed budget information for a new program.

- **Coordination Spreadsheet Template** - Provides format for submission of coordination to the academic boards when a course affects more than three other courses or programs (box 13a of the CAR)

- **Fee Request Form** - Fee requests, associated with particular curriculum proposals, will be reviewed by the Office of Academic Affairs. The Provost’s approval is required before fees are implemented. See Board of Regents Policy and Regulations Part V Chapter X for course fee information http://www.alaska.edu/bor/policy-regulations.

- **Four-Year Course Offering Plan** - Identifies the Four-Year Course Offering Plan for a new program.

- **Resource Implication Form** - Identifies fiscal impacts of a proposed action.

The following templates can be obtained from OAA:

- **Board of Regents** - Provides detailed information required by Statewide for new programs or major program changes.

The following template is available from the Academic Assessment Committee Website (http://www.uaa.alaska.edu/governance/academic_assessment_committee/index.cfm)

- **Academic Assessment Plan** - Identifies the outcomes and assessment strategies for a new program or a major or minor program change.
Appendix B - Links to Examples

Click on the link to see examples of the following:

- **Budget Worksheet:**
  [www.uaa.alaska.edu/governance/coordination/index.cfm](www.uaa.alaska.edu/governance/coordination/index.cfm)

- **Course Action Request (CAR):**
  [www.uaa.alaska.edu/governance/coordination/index.cfm](www.uaa.alaska.edu/governance/coordination/index.cfm)

- **Course Content Guide (CCG):**
  [www.uaa.alaska.edu/governance/coordination/index.cfm](www.uaa.alaska.edu/governance/coordination/index.cfm)

- **Coordination Spreadsheet:**
  [www.uaa.alaska.edu/governance/coordination/index.cfm](www.uaa.alaska.edu/governance/coordination/index.cfm)

- **Faculty Matrix:**
  [www.uaa.alaska.edu/governance/coordination/index.cfm](www.uaa.alaska.edu/governance/coordination/index.cfm)

- **Program/Prefix Action Request (PAR):**
  [http://www.uaa.alaska.edu/governance/curriculumexamples.cfm](http://www.uaa.alaska.edu/governance/curriculumexamples.cfm)

- **Program Academic Assessment Plan:**
  [www.uaa.alaska.edu/governance/coordination/index.cfm](www.uaa.alaska.edu/governance/coordination/index.cfm)

- **Prospectus:**
  [www.uaa.alaska.edu/governance/coordination/index.cfm](www.uaa.alaska.edu/governance/coordination/index.cfm)

- **Risk Management Plan:**
  [www.uaa.alaska.edu/governance/curriculumexamples.cfm](www.uaa.alaska.edu/governance/curriculumexamples.cfm)
Appendix C - Observable Verbs

Cognitive Domain Observable Verbs

The cognitive domain contains skills that deal with the intellect and attaining knowledge. These lists are provided for assistance, but their use is not required.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Application</th>
<th>Analysis</th>
<th>Synthesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recalls information</td>
<td>Uses knowledge or generalizations in a new situation</td>
<td>Breaks down knowledge into parts and shows relationships among parts</td>
<td>Brings together parts of knowledge to forms a whole and builds relationships for new situations</td>
</tr>
</tbody>
</table>

- Comprehends
- Arranges
- Counts
- Describes
- Draws
- Duplicates
- Identifies
- Indicates
- Labels
- Lists
- Matches
- Memorizes
- Names
- Orders
- Outlines
- Points to
- Produces
- Quotes
- Reads
- Recalls
- Recites
- Recognizes
- Records
- Relates
- Repeats
- Reproduces
- Selects
- Tabulates
- Traces
- Writes

- Associates
- Chooses
- Compares
- Computes
- Contrasts
- Converts
- Defends
- Differentiates
- Discusses
- Dramatizes
- Estimates
- Explains
- Extends
- Extrapolates
- Generalizes
- Gives Examples
- Infers
- Interprets
- Picks
- Reports
- Restates
- Reviews
- Rewrites
- Schedules
- Sketches
- Summarizes
- Translates

- Analyzes
- Appraises
- Calculates
- Categorizes
- Compares
- Concludes
- Constructs
- Contrasts
- Correlates
- Criticizes
- Debates
- Deduces
- Detects
- Determines
- Develops
- Diagnoses
- Differentiates
- Discriminates
- Distinguishes
- Estimates
- Evaluates
- Examines
- Experiments
- Generalizes
- Identifies
- Infers
- Inspects
- Initiates
- Inventories
- Predicts
- Questions
- Relates
- Separates
- Solves
- Tests
- Transforms

- Arranges
- Assembles
- Collects
- Combines
- Compiles
- Composes
- Constructs
- Creates
- Design
- Develops
- Devises
- Formulates
- Generalizes
- Generates
- Integrates
- Manages
- Organizes
- Plans
- Prescribes
- Prepares
- Produces
- Proposes
- Predicts
- Rearranges
- Reconstructs
- Reorganizes
- Revises
- Sets up
- Specifies
- Synthesizes
- Systematizes
- Writes
<table>
<thead>
<tr>
<th>Comprehension – Interpret information in one’s own words</th>
<th></th>
<th>Evaluation – Make judgments on basis of given criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associates</td>
<td></td>
<td>Appraises</td>
</tr>
<tr>
<td>Classify</td>
<td></td>
<td>Argues</td>
</tr>
<tr>
<td>Cite examples of</td>
<td></td>
<td>Assesses</td>
</tr>
<tr>
<td>Compares</td>
<td></td>
<td>Attacks</td>
</tr>
<tr>
<td>Computes</td>
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<td>Chooses</td>
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<tr>
<td>Contrasts</td>
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<td>Compares</td>
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<tr>
<td>Converts</td>
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<td>Concludes</td>
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<tr>
<td>Defends</td>
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<td>Critiques</td>
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<td>Describes</td>
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<td>Defends</td>
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<td>Determines</td>
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<td>Determines</td>
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<td>Differentiates</td>
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<td>Estimates</td>
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<td>Discusses</td>
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<td>Evaluates</td>
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<td>Judges</td>
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<td>Justifies</td>
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<td>Expresses</td>
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<td>Measures</td>
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<tr>
<td>Extends</td>
<td></td>
<td>Predicts</td>
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<tr>
<td>Extrapolates</td>
<td></td>
<td>Ranks</td>
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<tr>
<td>Generalizes</td>
<td></td>
<td>Rates</td>
</tr>
<tr>
<td>Gives examples</td>
<td></td>
<td>Revises</td>
</tr>
<tr>
<td>Identifies</td>
<td></td>
<td>Scores</td>
</tr>
<tr>
<td>Indicates</td>
<td></td>
<td>Selects</td>
</tr>
<tr>
<td>Infers</td>
<td></td>
<td>Supports</td>
</tr>
<tr>
<td>Interprets</td>
<td></td>
<td>Tests</td>
</tr>
<tr>
<td>Interpolates</td>
<td></td>
<td>Validates</td>
</tr>
<tr>
<td>Locates</td>
<td></td>
<td>Values</td>
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<tr>
<td>Practices</td>
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<td>Recognizes</td>
<td></td>
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<tr>
<td>Reports</td>
<td></td>
<td></td>
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<tr>
<td>Restates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rewrites</td>
<td></td>
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</tr>
<tr>
<td>Selects</td>
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<tr>
<td>Simulates</td>
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</tr>
<tr>
<td>Sorts</td>
<td></td>
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<tr>
<td>Summarizes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tells</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Translates</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Affective Domain Observable Verbs

The affective domain contains skills that deal with emotions, feelings, and values. You will notice that these verbs span differently than cognitive verbs as pertains to level.

<table>
<thead>
<tr>
<th>Receiving</th>
<th>Responding</th>
<th>Valuing</th>
<th>Organization</th>
<th>Internalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to attend to a particular stimuli</td>
<td>Active participation when attending to stimuli</td>
<td>Worth or value student attaches to something</td>
<td>Bringing together different values, resolving conflicts between them</td>
<td>Value system controls behavior to develop a characteristic behavior that is pervasive, consistent, and predictable.</td>
</tr>
<tr>
<td>Asks</td>
<td>Accepts</td>
<td>Associates with</td>
<td>Adheres to</td>
<td>Acts</td>
</tr>
<tr>
<td>Chooses</td>
<td>responsibility</td>
<td>assumes responsibility</td>
<td>Alters</td>
<td>Changes behavior</td>
</tr>
<tr>
<td>Follows</td>
<td>Answers</td>
<td>believes in</td>
<td>Arranges</td>
<td>Develops a code of behavior</td>
</tr>
<tr>
<td>Gives</td>
<td>Assists</td>
<td>be convinced</td>
<td>Classifies</td>
<td>Develops a philosophy of life</td>
</tr>
<tr>
<td>Holds</td>
<td>Be willing to</td>
<td>completes</td>
<td>Combines</td>
<td>Influences</td>
</tr>
<tr>
<td>Selects</td>
<td>Complies</td>
<td>describes</td>
<td>Defends</td>
<td>Judges</td>
</tr>
<tr>
<td>Shows interest</td>
<td>Conforms</td>
<td>differentiates</td>
<td>Establishes</td>
<td>problems/issues</td>
</tr>
<tr>
<td></td>
<td>enjoys</td>
<td>has faith in</td>
<td>forms judgments</td>
<td>Listens</td>
</tr>
<tr>
<td></td>
<td>greets</td>
<td>initiates</td>
<td>identifies with</td>
<td>Performs</td>
</tr>
<tr>
<td></td>
<td>helps</td>
<td>invites</td>
<td>integrates</td>
<td>Practices</td>
</tr>
<tr>
<td></td>
<td>obeys</td>
<td>justifies</td>
<td>organizes</td>
<td>Proposes</td>
</tr>
<tr>
<td></td>
<td>performs</td>
<td>participates</td>
<td>weighs alternatives</td>
<td>Qualifies</td>
</tr>
<tr>
<td></td>
<td>practices</td>
<td>proposes</td>
<td></td>
<td>Questions</td>
</tr>
<tr>
<td></td>
<td>presents</td>
<td>selects</td>
<td></td>
<td>Serves</td>
</tr>
<tr>
<td></td>
<td>reports</td>
<td>shares</td>
<td></td>
<td>Shows mature</td>
</tr>
<tr>
<td></td>
<td>selects</td>
<td>subscribes to</td>
<td></td>
<td>attitude</td>
</tr>
<tr>
<td></td>
<td>tells</td>
<td>works</td>
<td></td>
<td>Solves</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Verifies</td>
</tr>
</tbody>
</table>
### Psychomotor Domain Observable Verbs

The psychomotor domain contains skills that deal with one's physical development and well being.

<table>
<thead>
<tr>
<th><strong>Imitating</strong></th>
<th><strong>Manipulating</strong></th>
<th><strong>Perfecting</strong></th>
<th><strong>Articulating</strong></th>
<th><strong>Naturalizing</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Observe a skill and attempts to repeat it, or see a finished product and attempts to replicate it while attending to an exemplar.</em></td>
<td><em>Performs the skill or produces the product in a recognizable fashion by following general instructions.</em></td>
<td><em>Independently performs the skill or produces the product, with apparent ease, at an expert level.</em></td>
<td><em>Modifies the skill or produces the product to fit new situations while maintaining nearly flawless perfection and showing great ease of execution.</em></td>
<td><em>Automatically, flawlessly and effortlessly perform the skill or produces the product tailored to the situation.</em></td>
</tr>
<tr>
<td>Attempts</td>
<td>Completes</td>
<td>Achieves</td>
<td>Adapts</td>
<td>Naturally</td>
</tr>
<tr>
<td>Copies</td>
<td>Does</td>
<td>Automatically</td>
<td>Advances</td>
<td>Perfectly</td>
</tr>
<tr>
<td>Duplicates</td>
<td>Follows</td>
<td>Excels</td>
<td>Alters</td>
<td></td>
</tr>
<tr>
<td>Imitates</td>
<td>Manipulates</td>
<td>Expertly</td>
<td>Customizes</td>
<td></td>
</tr>
<tr>
<td>Reproduces</td>
<td>Plays</td>
<td>Masterfully with</td>
<td>Originates</td>
<td></td>
</tr>
<tr>
<td>Responds</td>
<td>Performs</td>
<td>Improvements with</td>
<td>With fundamental</td>
<td></td>
</tr>
<tr>
<td>Starts</td>
<td>Produces</td>
<td>Refines</td>
<td>revisions</td>
<td></td>
</tr>
<tr>
<td>Tries to</td>
<td>Using a model</td>
<td></td>
<td>With great skill</td>
<td></td>
</tr>
</tbody>
</table>

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Appendix D - The Undergraduate & Graduate Academic Boards

The Undergraduate and Graduate Academic Boards review and approve academic policies. They also review and approve new or revised courses/programs/prefixes initiated by faculty and undertake other tasks assigned by the UAA Faculty Senate (Reference: UAA Faculty Senate Bylaws of the Constitution Article V Section 3[a-d]).

Membership

Voting Members

Undergraduate Academic Board (UAB)

Each academic unit elects its UAB representative(s) according to Section 3.a. of the Bylaws of the UAA Faculty Senate Constitution. This includes one non-Senate faculty representative from each of the schools and colleges (except the College of Arts and Sciences, which has two), one adjunct faculty member, one library faculty representative, one faculty member from each community campus, and one faculty member from Student Affairs. Members serve two-year terms with one half of the members elected each year. In addition, the Senate chooses four senators to serve on the board as follows:

- Arts and Sciences: 1
- At-large members: 3

Students may appoint one undergraduate-degree-seeking or certificate-seeking student to voting membership on the UAB. It is the responsibility of the Union of Students at UAA (USUAA) to select this representative.

Graduate Academic Board (GAB)

Each academic unit elects its GAB representative according to Section 3.c. of the Bylaws of the UAA Faculty Senate Constitution. Members of the board must be faculty involved in graduate programs. This includes non-Senate faculty representative(s) from each degree granting school/college and the library as elected by the faculty within their respective units. Members serve two-year terms with one half of the members elected each year. In addition, the Senate chooses four senators to serve on the board as follows:

- Arts and Sciences: 1
- At-large members: 3

Students may appoint one graduate-degree-seeking student to voting membership on the GAB. It is the responsibility of the USUAA to select this representative.

Nonvoting Members

One representative from the Office of Academic Affairs, appointed by the Provost, one representative from the Office of the Registrar, and one representative from Enrollment Management, Publications and Scheduling, shall be ex-officio and nonvoting members of the Undergraduate and Graduate Academic Boards.

Responsibilities

Membership

- Members are responsible for attending all meetings.
- If a member is unable to attend, that member is responsible for providing a replacement.
- Members act as a liaison between the UAB/GAB and the member’s department/school/college.
- Members must inform departments in their school/college when their proposals are on the agenda.
- Members must review the agenda and attachments prior to each meeting.
Chair

- The presiding chairs of UAB/GAB are elected by their respective boards and must have served on the respective board for a minimum of one year.
- The chair is responsible for attending all meetings.
- If the chair is unable to attend, he/she appoints an acting chair.
- The chair acts as a liaison between UAB/GAB and others as necessary.
- The chairs sign CARs and represent UAB/GAB at UAA Faculty Senate meetings.
- The chairs serve as members of UAA Faculty Senate Executive Board and may represent UAA in system governance issues.
- The chairs may represent the faculty on an ad hoc basis during the year and attend special meetings (such as meeting prospective employee candidates, meeting the Board of Regents, or serving on special task forces).

Meeting Schedule

Regular Meetings

*Undergraduate Academic Board*

During the academic year, UAB meets at 2 p.m. each Friday, except for the first Friday of each month which is the day the UAA Faculty Senate meets. Meetings commence the first week after faculty contracts begin. The schedule is given to UAB members at the beginning of each academic year and posted on the Governance website.

*Graduate Academic Board*

During the academic year, GAB meets at 9:30 a.m. the second and fourth Fridays of each month. Meetings commence the first week after faculty contracts begin. The schedule is given to GAB members at the beginning of each academic year and posted on the Governance website.

Summer Meetings

Neither UAB/GAB meets during June or July. If any curricular items need action during the summer, the UAB/GAB chair or designee reviews the paperwork with a volunteer group of continuing UAB/GAB members. Under such circumstances, the UAA Faculty Senate Executive Committee acts on behalf of the UAA Faculty Senate (UAA Faculty Senate Constitution Article IV Section 11). Approved actions must be reported to UAB/GAB at the first UAB/GAB meeting of the academic year. No policy changes are considered during the summer.

Meeting Notification

All meetings are public meetings. Meeting announcements, agendas, and locations are posted on the Governance webpage.

Agenda and Summary

Structure

*Date, Time, and Location*

The agenda lists the date, time, and place of the meeting. Meetings may be teleconferenced if necessary.

I. Roll

II. Approval of the Agenda

III. Approval of Meeting Summary
IV. Administrative Report

V. Chair’s Report

VI. Course Action Request (CAR) or Program/Prefix Action Request (PAR)-Second Reading

VII. CAR or PAR-First Reading

VIII. Old Business

IX. New Business

X. Informational Items

XI. Adjournment

Definitions

Meeting Summary
The meeting summary includes the roll, all action items, a list of information items, and time of adjournment.

First Reading
- Representatives from the department/school/college must attend the UAB/GAB meeting when their proposal is discussed. If no representative is present, the proposal is tabled.
- All proposals are routinely accepted for First Reading unless tabled (for a specific length of time and for a stated purpose), removed from the agenda (usually by the department/school/college that initiated the item) or formally not accepted for First Reading (usually the item is then sent back to the department/school/college for revision).
- Proposals not properly coordinated before First Reading will be tabled.
- Actions involving changes in General Education Requirements (GER) are referred to the General Education Review Committee (GERC).
- Proposals accepted for First Reading are usually placed on the next agenda for Second Reading. Proposals can be accepted with suggested changes. UAB/GAB, administration, or the submitting department may suggest changes.
- No vote is necessary to accept an item for First Reading.
- Acceptance for First Reading does not predetermine automatic approval at Second Reading.
- Board members should work closely with their department/school/college regarding all recommendations made at UAB/GAB meetings and assist their colleagues in the preparation of the proper paperwork.

CARs and PARs
- CARs and PARs initiated by faculty are required to request curriculum actions. For more information, see the chapters on CARs and PARs.
- Academic Policy: A variety of sources including individuals, departments, schools, colleges, administration, and other boards and committees may initiate new or revised academic policy proposals. Revised policy proposals should include a copy of both the old and new policies with rationale/justification for the new policy or revision. All policy proposals are reviewed and must be approved by UAB/GAB, UAA Faculty Senate, and the administration.

Second Reading
- Second readings usually occur at the next regularly scheduled meeting. All proposals placed on the agenda for Second Reading are voted on by a show of hands or yes/no if audio-conferenced.
- UAB/GAB usually act on proposals at Second Reading but may postpone action if further deliberation or information is necessary.

Informational Items
- The Board may discuss these items and/or request that the items be placed on a future agenda for
Meeting Procedure

UAB/GAB meetings are governed by Robert’s Rules of Order. A quorum is a majority of the voting members present. Voting is done by a show of hands or yes/no if audio-conferenced. Votes are recorded as For, Against, Abstain, or Unanimous. A simple majority carries the vote. In the event of a tie, the chair casts the deciding vote.

Note: Proxy voting is not permitted by any UAA faculty boards and committees. Proxy voting is incompatible with the essential characteristics of a deliberative assembly in which membership is individual, personal, and nontransferable, in that voting should take place subsequent to discussion and deliberation.

Administrative Support

The Governance Office provides administrative support to UAB/GAB. The Governance Office works closely with the chairs of the boards and prepares and posts the agendas, summaries, and reports on the governance webpage at www.aaa.alaska.edu/governance. In addition, the office will work with appropriate departments to provide guidance in the preparation and approval of all required actions. The Governance Office, the UAB/GAB chairs and representatives from the Office of Academic Affairs act as liaisons between the Undergraduate Academic Board, the Graduate Academic Board, the Office of Academic Affairs, the Chancellor, and other UAA departments as necessary.
Appendix E - Guidelines on Student Learning Outcomes for Courses and Programs

*From Council on Higher Education Accreditation – Statement on Shared Responsibilities*

**Student Learning Outcomes should:**
- Communicate what students will be able to do after they successfully complete the program/course
- Be representative of the program/course performance, defining for students the accomplishments expected from program/course participation
- Be verifiable through replication by third-party inspection
- Be relevant to the curriculum

**Measurements may be direct and/or indirect.** Examples of each are below:
- Direct measurements: exams, graded assignments related to outcomes, professionally judged demonstrations or performances, portfolios
- Indirect measurements: student self-perceptions, employer surveys or job placement, focus groups

**Assessment of student learning outcomes should use properties of good evidence:**
- Comprehensiveness – measures a full range of outcomes
- Multiple judgment – uses several sources
- Multiple dimensions – indicates different facets of student performance related to student learning outcomes to show strengths and weaknesses
- Directness – involves direct scrutiny of student performance
Appendix F - Guidelines for UAA Distance Education Courses

Please follow the link below to the Distance Education Handbook:


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