Undergraduate Academic Board
Agenda

March 27, 2015
2:00-5:00
ADM 204

I. Roll

() Alberta Harder (FS)
() Utpal Dutta (FS)
() Francisco Miranda (Chair)
() Barbara Harville (CAS)
( ) Vacant (CAS)
( ) Vacant (CAS)
( ) Vacant (CBPP)
( ) Vacant (COH)
( ) Vacant (COH)
() Irasema Ortega (COE)
() Carrie King (CTC)
() Jeff Hoffman (SOE)
() Kevin Keating (LIB)
() Rick Adams (KPC)
() Sheri Denison (Mat-su)
() Jared Griffin (Kod)
() Christina Stuive (ADV)

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

II. Approval of the Agenda (pg. 1-2)

III. Approval of Meeting Summary (pg. 3-4)

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

VII. Program/Course Action Request- Second Readings

Chg		University Honors Program (pg. 5-21)

VIII. Program/Course Action Request- First Readings

Chg	MATH A105	Intermediate Algebra (3 cr)(3+0)(pg. 22-28)
Chg	MATH A261	Introduction to Discrete Mathematics (3 cr)(3+0)(pg. 29-31)
Add	MATH A309	Introduction to Number Theory (3 cr)(3+0)(pg. 32-34)
Add	MATH A424	Advanced Engineering Mathematics: Linear Algebra & Numerical Analysis (3 cr)(3+0)(pg. 35-37)
Add	MATH A425	Advanced Engineering Mathematics: Partial Differential Equations and Complex Variables (3 cr)(3+0)(pg. 38-40)
Chg	MATH A426	Numerical Analysis (3 cr)93+0)(pg. 41-43)
Add	MATH A431	Introduction to Differential Geometry (3 cr)(3+0)(pg. 44-46)
Chg		Minor, Mathematics (pg. 47-50)
Chg		Bachelor of Arts, Mathematics (pg. 51-57)
Chg		Bachelor of Science, Mathematics (pg. 58-62)
Add	PETR A101	Industrial Hand Tools (1 cr)(0+3)(pg. 63-68)
Add	ME A460	Turbomachinery (stacked with ME A660)(3 cr)(2+2)(pg. 69-72)
Chg	BIOM A490	Selected Lecture Topics in Biomedicine (stacked with BIOM A690) (1-3 cr)(1-3+0)(pg. 73-82)
Chg	MUS A221	History of Western Art Music I (3 cr)(3+0)(pg. 83-88)

Chg	MUS A222	History of Western Art Music II (3 cr)(3+0)(pg. 89-93)
Add	AKNS A461	Decolonizing Methodologies (cross-listed with ANTH A460) (3 cr)(3+0)(pg. 94-97)
Chg		Minor, Alaska Native Studies (pg. 98-100)
Add	ANTH A461	Decolonizing Methodologies (cross-listed with AKNS A461) (3cr)(3+0)(pg. 101-105)
Chg		Bachelor of Arts, Anthropology (pg. 106-109)
Chg		Bachelor of Science, Anthropology (pg. 110-113)
Chg	AET A101	Fundamentals of CASS for Building Construction (4 cr)(2+4)(pg. 114-122)
Chg	AET A102	Methods of Building Construction (3 cr)(3+0)(pg. 123-129)
Chg	AET A111	Civil Construction Drawings (3 cr(2+3)(pg. 130-134)
Chg	AET A121	Architectural Construction Drawings (3 cr)(2+3)(pg. 135-139)
Chg	AET A123	Codes and Standards (3 cr)(3+0)(pg. 140-146)
Chg	AET A131	Structural Construction Designs (3 cr)(2+3)(pg. 147-151)
Chg	AET A142	Mechanical and Electrical Technology (4 cr)(3+2)(pg. 152-158)
Chg	AET A143	Mechanical and Electrical Construction Drawings (3 cr)(2+3)(pg. 159-163)
Chg	AET A181	Intermediate CADD for Building Construction (4 cr)(2+4)(pg. 164-169)
Chg	AET A213	Civil Technology (4 cr)(2+4)(pg. 170-175)
Chg	AET A231	Structural Technology (4 cr)(2+4)(pg. 176-181)
Dlt	AET A282	Advanced CADD Techniques (4 cr)(2+4)(pg. 182)
Dlt	AET A283	CADD Software Customization (3 cr)(2+3)(pg. 183)
Dlt		Occupational Endorsement Certificate, CADD for Building Construction (pg. 184)
Chg		Undergraduate Certificate, Structural Technology Certificate (pg. 185-189)
Chg		Undergraduate Certificate, Mechanical/Electrical Technology Certificate (pg. 190-193)
Chg		Undergraduate Certificate, Civil Technology Certificate (pg. 194-198)
Chg		Undergraduate Certificate, Architectural Technology Certificate (pg. 199-203)
Chg		Associate of Applied Science, Architectural and Engineering Technology (pg. 204-208)
Dlt	CM A101	Fundamentals of CADD for Building Construction (4 cr)(2+4)(pg. 209-211)
Dlt	CM A102	Methods of Building Construction (3 cr)(3+0)(pg. 212)
Dlt	CM A123	Codes and Standards (3 cr)(3+0)(pg. 213)
Dlt	CM A142	Mechanical and Electrical Technology (4 cr)(3+2)(pg. 214)
Dlt	CM A231	Structural Technology (4 cr)(2+4)(pg. 215)
Chg	CM A331	Statistics and Strengths of Materials (3 cr)(3+0)(pg. 216-220)
Chg	CM A495	Advanced Construction Management Internship (3 cr)(1+15)(pg. 221-226)

VII. Old Business

Second Read of the 2015-2015 Purge List: Academic Courses (pg. 227-234)

IX. New Business

X. Informational Items and Adjournment:

March 20, 2015
2:00-5:00
ADM 204

I. Roll

(x) Alberta Harder (FS)
(x) Utpal Dutta (FS)
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(e) Barbara Harville (CAS)
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Ex-Officio Members
(e) Susan Kalina
(x) Lora Volden
(x) Scheduling and Publications

II. Approval of the Agenda (pg. 1-2)
Approved

III. Approval of Meeting Summary (pg. 3-5)
Approved

IV. Administrative Report

A. Vice Provost for Undergraduate Academic Affairs Susan Kalina

B. University Registrar Lora Volden
Fall courses will be viewable on Monday, March 23rd.
Priority registration opens up on Friday, April 3rd.

V. Chair's Report

A. UAB Chair- Francisco Miranda

B. GERC

VII. Program/Course Action Request- Second Readings

Chg University Honors Program (pg. 6- 22)
Postponed to Friday, March 27, 2015

VIII. Program/Course Action Request- First Readings

Chg BA A231 Fundamentals of Supervision (3 cr)(3+0)(pg. 23-27)
Postponed until faculty initiator can attend

Chg LS A101 Intro to Academic Library Research (1 cr)(1+0)(pg. 28-32)
Approved for second reading

Chg DN A119 Principles of Nutrition (3 cr)(3+0(pg. 33-38)
Approved for second reading

Chg DN A492 Senior Seminar in Dietetics (1 cr)(1+0)(pg. 39-42)
Approved for second reading

Chg Associate of Applied Science, Culinary Arts (pg. 43-48)
Approved for second reading

Chg Bachelor of Science in Dietetics (pg. 49-61)
Approved for second reading

Add EE A317 Electrical Machines and Energy Conversion (3 cr)(3+0)(pg. 62-64)
Accepted for first reading

Chg ENGR A105A Engineering Graphics (1 cr)(1+0)(pg. 65-67)
Approved for second reading

Chg ENGR A105B Computer Aided Graphics (1 cr)(1+0)(pg. 68-70
Approved for second reading

Dlt ENGR A105C Engineering Computer-Aided Design III (1 cr)(2+3)(pg. 71)
Approved for second reading

VII. Old Business

IX. New Business

X. Informational Items and Adjournment: 3:00pm

University Honors College Curriculum Proposal Summary

The University Honors College Task Force has developed a proposal for new UHC curriculum. The attached proposal does not address all curricular items housed in UHC, it is a proposal for how to transform the main honors program (The Honors Core Program). It leaves aside the two other curricular items in UHC, the 49Th State Fellows and the Complex Systems Program. The UHCTF thought it best to implement the main program in Fall 2015 while taking more time to decide on the future of the ancillary programs.

The proposal has several innovations. The primary change is splitting the honors curriculum into lower and upper division options. The second innovation is the designations of certain sections of a course as honors section. A separate memo is included which proposes this policy change.

Options in the University Honors Program

The tiered approach to honors offers many advantages over a four year program.

- University honors compatible with every undergraduate degree granting program on campus, including associates degrees.
- Makes explicit that honors has two different pedagogical functions, (a) to enhance basic college skills and content learning and (b) to promote more in depth exploration of the student's major through independent experiential learning.
- Splitting the program allows each option to pursue its unique set out of outcomes.
- Splitting the program allows for better assessment of outcomes.
- Increases opportunities for students as many are only interested in one of the two focal points of honors program.
- The inclusion of associates degree students in honors creates the opportunity for delivering honors to students at the community campuses through e-learning.
- The upper division honors option allows easy entry into honors for transfer students and students who have developed academic strength through the first half of their academic career.
- Each option individually and the two jointly achieve the National Collegiate Honors Council's standard of honors programs contributing at least 20% to a student's credit hours.
- The expanded offerings in the lower division option creates stronger cohorts, which are highly correlated with student success and retention.
- The lower division option prepares students for high impact learning in undergraduate research, community engagement, and interdisciplinary courses.
- The upper division option has expanded the ways to complete an honors capstone from the current program (community engagement capstone or

thesis capstone). This expansion makes the program compatible with every four year degree offered at UAA.

While the UHCTF is working on a comprehensive set of recommendations for the Provost, we have been given approval to submit the curriculum ahead of the full report.

UHC Task Force
Curriculum Proposal Approved 1/28/15

University Honors Programs

Option A: Honors in the Liberal Arts

Students are required to take the following courses:

1. Honors designated section of ENGL A111 or ENGL A214
2. HNRS A192
3. Honors designated section of COMM A241
4. HNRS A292
5. Either URS A121 or CEL A292 or CPLX A200

Total Credits 15

Option B: University Scholar

Students are required to take the following courses (**3-6 credits**):

1. Either URS A121 or CEL A292 or CPLX A200 (this category automatically satisfied if completed for Honors in the Liberal Arts)
2. HNRS A490 or a disciplinary equivalent

And one of the following senior projects (**6 credits**):

1. HNRS A310 and HNRS A495 or CEL A395 (or disciplinary equivalent)

or

2. HNRS A499 or disciplinary equivalent (thesis course in major) (6 credits)

Total credits 9-12

For both:
Minimum GPA for good standing 3.0, Grade of B or higher required for all honors course requirements, GPA of 3.5 required to earn honors designation at graduation.

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College HC Honors College	1b. Department

2. Complete Program Title/Prefix
University Honors Program

3. Type of Program

Choose one from the appropriate drop down menu: Undergraduate: or Graduate:
Other: specify type in box 2 CHOOSE ONE

This program is a Gainful Employment Program: ☐ Yes or ☒ No

4. Type of Action:

PROGRAM	**PREFIX**
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

5. Implementation Date (semester/year)
From: 08/2015 To: 09/9999

6a. Coordination with Affected Units Department, School, or College: CAS, English, JPC

Initiator Name (typed): Eric Murphy Initiator Signed Initials: _____ Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 2/13/2015

6c. Coordination with Library Liaison Date: 2/12/2015

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function. *
*Copy the text directly from the program website of the online catalog and paste into a Word document.

8. Justification for Action

Program review in 2013 and program prioritization both indicated a need to transform the academic programs in the honors college. This change to the honors core program creates 2 options within the program. The first is 15 credit lower division course of study that is compatible with all associate and baccalaureate degrees. This option allows for honors to be offered to students in associates programs (including those at community campuses) for the first time. The second option is an upper division offering requiring 12 credits of study including a 6 hour capstone. Having an upper division honors option makes honors accesssible for transfer students and students whose skills and interest develop markedly in their academic career. The requirements are in keeping with the best practices prescribed by National Collegiate Honors Council, including class size, number of credit hours, and combination of courses offered through the Honors College and honors sections of disciplinary courses. This core program will expose students to high impact practices through interdisciplinary studies (CPLX 200), community engagement (CEL 292), and undergraduate research (URS 121).

Initiator (faculty only)	Date	☐ Approved ☐ Disapproved	Dean/Director of School/College — Date
Eric Murphy. Initiator (TYPE NAME)			
☐ Approved ☐ Disapproved	Department Chair — Date	☐ Approved ☐ Disapproved	Undergraduate/Graduate Academic Board Chair — Date
☐ Approved ☐ Disapproved	College/School Curriculum Committee Chair — Date	☐ Approved ☐ Disapproved	Provost or Designee — Date

UNIVERSITY HONORS COLLEGE

The mission of the University Honors College is to be a catalyst for scholarly excellence in undergraduate education. The college advances, coordinates and administers active learning and undergraduate research opportunities for students across the campus. Through its multidisciplinary academic and student support programs, the college serves as a locus for inquiry, discovery, leadership and engagement.

The college houses the Office of Undergraduate Research and Scholarship and three university honors programs: the University Honors Core Program, the Natural and Complex Systems Program, and the Forty-Ninth State Fellows Program. Students enrolled in these programs are also enrolled in the disciplinary school or college in which they complete their degree programs. University Honors students may pursue any major or minor they wish at the university.

All Honors courses have an emphasis on critical thinking and analytical reading, taking on challenging activities through interdisciplinary projects, and preparing students for participating in independent research in their disciplines.

University Honors offers smaller classes with excellent faculty, guided individual and team-based research, personalized academic advising and mentoring, special leadership and internship opportunities, community involvement, and enhanced scholarship prospects. Honors courses will approach the course subject matter with more intensity and rigor than is demanded of typical courses. Students will also participate together in a range of honors activities that are designed to enhance intellectual and personal opportunities. Intensive advising by college faculty and staff is an important element of University Honors, and Honors students are required to meet regularly with advisors.

Academic Programs

There are various options that students can select within the University Honors College: the University Honors Program, the Natural and Complex Systems Program, and the Forty-Ninth State Fellows Program. The University Honors Program is split into two options: Option A, Honors in the Liberal Arts is a lower-division set of courses that satisfy University General Education requirements in Written Communication Skills, Oral Communication Skills, Humanities, Social and Natural Sciences. Option B, Honors Scholar, focuses on experiential and interdisciplinary learning, culminating in a senior capstone project. Students can chooses to take either option independently or both. Option A accommodates students in Associate programs while Option B accommodates transfer students and students whose interests develop during their academic career at UAA.

Students who complete the requirements of their disciplinary school or college and the program requirements of the University Honors College in good standing will graduate as Honors graduates. Students who complete these requirements with a GPA of 3.50 or above will earn the designation of Honors in the Liberal Arts (Option A) or University Honors Scholar (Option B) University Honors Scholar on their transcripts and diplomas.

The Natural and Complex Systems (NCS) Program includes additional courses that focus on scientific, research-based projects that integrate student work across the natural, physical, engineering,

mathematical and computer sciences. This option is open to honors students in all disciplines but is targeted particularly toward students in science-oriented degrees. Honors students may take courses in the NCS Program if they meet the course prerequisites.

The Forth-Ninth State Fellows Program includes additional curriculum in democratic institutions and leadership. Focusing on politics, history, and Alaska, it consists of selected courses, weekly tutorials and extracurricular activities. Spaces are limited in this intensive program and students typically apply prior to their freshman year to begin the program as they start their studies at UAA.

A limited number of students are admitted to the University Honors Program, the NCS Program and the Forty-Ninth State Fellows Program each year. All baccalaureate degree-seeking students who are motivated to pursue honors-level work are encouraged to apply.

In addition to the University Honors College, many departments at UAA offer departmental honors options. Students may complete both university and departmental honors requirements with dual designations upon graduation, and in some cases departmental honors courses may be substituted for one or more University Honors College requirements. Students pursuing departmental honors and non-honors students may enroll in some University Honors College courses with permission of the University Honors College and on a space-available basis.

Admission to the University Honors College

1. Admission to the University Honors College is limited to baccalaureate degree-seeking students. Admission is separate from and in addition to general UAA admission requirements.
2. Students must submit a completed University Honors College application, including supporting documents, to the University Honors College Office (RH 115). Supporting documents include
    a. high school transcripts and SAT or ACT scores for incoming freshmen,
    b. university transcripts and GPA for transfer students, and
    c. an essay on personal goals.
3. In general, students applying to the University Honors College from high school or transferring into the program with previous college-level work must have at least a 3.00 GPA, and show strong evidence of ability to reach and maintain a 3.50 GPA level at UAA within a reasonable time. However, the initial GPA entrance requirement should be interpreted as a general guideline, and not as an absolute criterion; all students who believe that they can succeed and benefit in an honors program are encouraged to apply.

The University Honors College offers two options within the University Honors Program: The Honors in the Liberal Arts option enables two-year-Degree-seeking students to earn University Honors. The University Honors Scholar option enables transfer students and UAA students who develop an interest in honors in the course of their baccalaureate degrees to earn University Honors. *Note:* Students can also elect to earn both Honors in the Liberal Arts and University Honors Scholar awards.

Honors Program Student Learning Outcomes

Option A: Honors in the Liberal Arts

The specific educational outcomes that support the program objectives are to produce Honors graduates who are able to demonstrate

- advanced critical and analytical skills.
- effective oral and written communication skills
- knowledge of social science research methods and their application across a variety of disciplines.
- Integration of knowledge and skills across a range of disciplines.

Option B: Honors Scholar

The specific educational outcomes that support the program objectives are to produce Honors graduates who are able to

- conceive and execute independent research or community engagement projects
- integrate multiple disciplines in the implementation of research and praxis

University Honors Scholar

Graduation Requirements

1. Students must meet all General University Requirements, General Education Requirements, school/college requirements, and major requirements as printed in the UAA Catalog.
2. Students must complete the following University Honors Core Curriculum requirements (16 credits) with a grade of B or higher.

A: Honors in the Liberal Arts Option *	
HNRS A192 Honors Seminar: Enduring Books	3
HNRS A292 Honors Seminar in Social Science	3
An honors designated section of ENGL A111 or ENGL A214	3
An honors designated section of COMM A241	3
and one of the following courses:	
URS A121 Methods of Inquiry	3
CPLX A200 Introduction to Complexity	3
CEL A292 Introduction to Civic Engagement	3
Total Credits	**15**
*Each course in this option satisfies a GER.	
B: University Honors Scholar Option	
Select one of the following courses:	
URS A121 Methods of Inquiry	3
CPLX A200 Introduction to Complexity	3
CEL A292 Introduction to Civic Engagement	3
and	
HNRS A490 Senior Honors Seminar or disciplinary equivalent	3
and one of the following senior capstone projects (6 credits):	
A. HNRS A310 Community Service: Theory and Practice	3

and	
CEL A395 Civic Engagement Internship	3
or	
HNRS A495 Honors Internship	3
B. HNRS A499 or disciplinary equivalent	6
Total Credits	**12**

3. Students must have earned a cumulative grade point average of 3.50 or higher, as defined under Graduation with Honors.
4. As part of the advising/mentoring process, Honors students' progress will be evaluated every semester. Students whose performance indicates potential difficulties in meeting the Honors graduation requirements will be counseled on how to correct these difficulties, but if performance improvements do not result, the student may be removed from the college. - See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/uhc/#naturalandcomplexsystemsncsprogramtext

Natural and Complex Systems (NCS) Program

The Natural and Complex Systems Program focuses on scientific, research-based projects that integrate student work across the natural, physical, engineering, mathematical and computer sciences. Students admitted to the NCS Program receive the designation "University Honors Scholar: Natural and Complex Systems" on their transcripts upon successful completion of the program requirements.

Admission to the NCS Program

The NCS Program is open to students in all disciplines who have been admitted to the University Honors College. Honors students may take courses in the NCS Program if they meet the course prerequisites. Students wanting to enroll in this program should contact the University Honors College office for permission to register.

Requirements to Graduate as a University Honors Scholar: Natural and Complex Systems

1. Students must meet all General University Requirements, General Education Requirements, school/college requirements, and major requirements as printed in the UAA catalog.
2. Students must complete the following University Honors program requirements and the NCS Program requirements with a grade of B or higher (19 credits):
3. Program requirements with a grade of C or higher (18 credits):

Honors Foundation Courses		
HNRS A192	Honors Seminar: Enduring Books *	3
HNRS A292	Honors Seminar in Social Science *	3
HNRS A310	Community Service: Theory and Practice	3
NCS Program Courses		
BIOL/CPLX A200	Introduction to Complexity *	3
Honors Senior Project // Thesis Requirements		
HNRS A490	Senior Honors Seminar (special section designated for NCS Program) *	6
Total Credits		**18**

* *Indicates courses that satisfy GERs*

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/uhc/#naturalandcomplexsystemsncsprogramtext

* *Indicates courses that satisfy GERs*

4. Students must have earned a cumulative grade point average of 3.50 or higher, as defined under Graduation with Honors.

5. As part of the advising/mentoring process, Honors students' progress will be evaluated every semester. Students whose performance indicates potential difficulties in meeting the Honors graduation requirements will be counseled on how to correct these difficulties, but if performance improvements do not result, the student may be removed from the college.

Forty-Ninth State Fellows Program

Admission to this program is currently suspended. Contact the University Honors College for more information. - See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/uhc/#fortyninthstatefellowsprogramtext

UNIVERSITY HONORS COLLEGE

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The college houses the Office of Undergraduate Research and Scholarship and three university honors programs: the University Honors Core Program, the Natural and Complex Systems Program, and the Forty-Ninth State Fellows Program. Students enrolled in these programs are also enrolled in the disciplinary school or college in which they complete their degree programs. University Honors students may pursue any major or minor they wish at the university~~, and foundation University Honors courses will satisfy General Education Requirements in humanities and social science~~.

All Honors courses have an emphasis on critical thinking and analytical reading, taking on challenging activities through interdisciplinary projects, and preparing students for participating in independent research in their disciplines.

~~Students who complete the requirements of their disciplinary school or college and the program requirements of the University Honors College in good standing will graduate as Honors graduates. Students who complete these requirements with a GPA of 3.50 or above will earn the designation of University Honors Scholar on their transcripts and diplomas.~~

University Honors offers smaller classes with excellent faculty, guided individual and team-based research, personalized academic advising and mentoring, special leadership and internship opportunities, community involvement, and enhanced scholarship prospects. Honors courses will approach the course subject matter with more intensity and rigor than is demanded of typical courses. Students will also participate together in a range of honors activities that are designed to enhance intellectual and personal opportunities. Intensive advising by college faculty and staff is an important element of University Honors, and Honors students are required to meet regularly with advisors.

Academic Programs

There are various options that students can select within the University Honors College: the University Honors ~~Core~~ Program, the Natural and Complex Systems Program, and the Forty-Ninth State Fellows Program. The University Honors ~~Core~~ Program is split into two options: Option A, Honors in the Liberal Arts is a lower-division set of courses that satisfy University General Education requirements in Written Communication Skills, Oral Communication Skills, Humanities, Social and Natural Sciences. Option B, Honors Scholar, focuses on experiential and interdisciplinary learning, culminating in a senior capstone project. Students can chooses to take either option independently or both. Option A accommodates students in Associate programs while Option B accommodates transfer students and students whose interests develop during their academic career at UAA. ~~requirements, taken by all Honors students, include courses in humanities, social sciences and community service. All Honors courses have an emphasis on critical thinking and analytical reading, taking on challenging activities through interdisciplinary projects, and preparing students for participating in independent research in their disciplines.~~

Students who complete the requirements of their disciplinary school or college and the program requirements of the University Honors College in good standing will graduate as Honors graduates. Students who complete these requirements with a GPA of 3.50 or above will earn the designation of Honors in the Liberal Arts (Option A) or University Honors Scholar (Option B) University Honors Scholar on their transcripts and diplomas.

The Natural and Complex Systems (NCS) Program includes additional courses that focus on scientific, research-based projects that integrate student work across the natural, physical, engineering, mathematical and computer sciences. This option is open to honors students in all disciplines but is targeted particularly toward students in science-oriented degrees. Honors students may take courses in the NCS Program if they meet the course prerequisites.

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A limited number of students are admitted to the University- Honors ~~Core~~ Program, the NCS Program and the Forty-Ninth State Fellows Program each year. All baccalaureate degree-seeking students who are motivated to pursue honors-level work are encouraged to apply.

In addition to the University Honors College, many departments at UAA offer departmental honors options. Students may complete both university and departmental honors requirements with dual designations upon graduation, and in some cases departmental honors courses may be substituted for one or more University Honors College requirements. S~~In addition, s~~tudents pursuing departmental honors and non-honors students may enroll in some University Honors College courses with permission of the University Honors College and on a space-available basis.

Admission to the University Honors College

1. Admission to the University Honors College is limited to baccalaureate degree-seeking students. Admission is separate from and in addition to general UAA admission requirements.

2. Students must submit a completed University Honors College application, including supporting documents, to the University Honors College Office (RH 115). Supporting documents include
    a. high school transcripts and SAT or ACT scores for incoming freshmen,
    b. university transcripts and GPA for transfer students, and
    c. an essay on personal goals.~~,~~
    ~~d. and a completed reference form from two previous teachers (either high school or college).~~

    ~~Application packets may be obtained from the University Honors College office.~~

3. In general, students applying to the University Honors College from high school or transferring into the program with previous college-level work must have at least a 3.00 GPA, and show strong

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evidence of ability to reach and maintain a 3.50 GPA level at UAA within a reasonable time. However, the initial GPA entrance requirement should be interpreted as a general guideline, and not as an absolute criterion; all students who believe that they can succeed and benefit in an honors program are encouraged to apply.

~~Admission to the University Honors College will be determined by the Honors College Admission Committee. Admission is based on an overall evaluation of the student's probability of success in the college, and not on any single criterion or formula. The committee may ask the applicant for additional information and/or suggest an interview. Applicants will be ranked and are admitted on a space-available basis. In some cases the committee may initially grant conditional admission, which will be changed to formal admission if the student demonstrates ability to do honors work.~~

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- Integration of knowledge and skills across a range of disciplines.

Option B: Honors Scholar

The specific educational outcomes that support the program objectives are to produce Honors graduates who are able to

- conceive and execute independent research or community engagement projects
- integrate multiple disciplines in the implementation of research and praxis

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University Honors Scholar

Graduation Requirements

1. Students must meet all General University Requirements, General Education Requirements, school/college requirements, and major requirements as printed in the UAA Catalog.

2. Students must complete the following University Honors Core Curriculum requirements (16 credits) with a grade of B or higher.

A: Honors in the Liberal Arts Option *	
HNRS A192 Honors Seminar: Enduring Books	3
HNRS A292 Honors Seminar in Social Science	3
An honors designated section of ENGL A111 or ENGL A214	3
An honors designated section of COMM A241	3
and one of the following courses:	
URS A121 Methods of Inquiry	3
CPLX A200 Introduction to Complexity	3
CEL A292 Introduction to Civic Engagement	3
Total Credits	**15**
*Each course in this option satisfies a GER.	
B: University Honors Scholar Option	
Select one of the following courses:	
URS A121 Methods of Inquiry	3
CPLX A200 Introduction to Complexity	3
CEL A292 Introduction to Civic Engagement	3
and	
HNRS A490 Senior Honors Seminar or disciplinary equivalent	3
and one of the following senior capstone projects (6 credits):	
A. HNRS A310 Community Service: Theory and Practice	3
and	
CEL A395 Civic Engagement Internship	3
or	
HNRS A495 Honors Internship	3
B. HNRS A499 or disciplinary equivalent	6
Total Credits	**12**

~~a grade of C or higher:~~

~~Honors Foundation Courses (Honors Core)~~

~~HNRS A192~~	~~Honors Seminar: Enduring Books~~ [1]	~~3~~
~~HNRS A292~~	~~Honors Seminar in Social Science~~ [1]	~~3~~
~~HNRS A310~~	~~Community Service: Theory and Practice~~	~~3~~

~~Honors Senior Project/Thesis Requirements (Honors Core)~~

~~HNRS A392~~	~~Honors Thesis Seminar~~	~~1~~

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~~Select one of the following:~~ ~~6~~

~~HNRS A490~~ ~~Senior Honors Seminar (6 credits over two semesters)~~ ~~[1]~~

~~A course proposed by the student and approved by the Honors College dean (3 credits minimum; may be an existing course or independent study) plus senior thesis or project (3 credits minimum; either departmental thesis/project, or HNRS A499 Honors Thesis)~~

~~An upper division course listed in the catalog as a specific departmental honors requirement (3 credits minimum) and Senior thesis or project (3 credits minimum; either departmental thesis/project, or HNRS A499 Honors Thesis)~~

~~Six-credit thesis/project (either departmental thesis/project, and/or HNRS A499 Honors Thesis).~~

~~Total Credits~~ ~~16~~

~~[1]~~	~~Indicates courses that satisfy GERs~~

~~Total University Honors Program credits required (9 core + 7 upper division): 16~~

3. Students must have earned a cumulative grade point average of 3.50 or higher, as defined under Graduation with Honors.
4. As part of the advising/mentoring process, Honors students' progress will be evaluated every semester. Students whose performance indicates potential difficulties in meeting the Honors graduation requirements will be counseled on how to correct these difficulties, but if performance improvements do not result, the student may be removed from the college. - See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/uhc/#naturalandcomplexsystemsncsprogramtext

Natural and Complex Systems (NCS) Program

The Natural and Complex Systems Program focuses on scientific, research-based projects that integrate student work across the natural, physical, engineering, mathematical and computer sciences. Students admitted to the NCS Program receive the designation "University Honors Scholar: Natural and Complex Systems" on their transcripts upon successful completion of the program requirements.

Admission to the NCS Program

The NCS Program is open to students in all disciplines who have been admitted to the University Honors College. Honors students may take courses in the NCS Program if they meet the course prerequisites. Students wanting to enroll in this program should contact the University Honors College office for permission to register.

Requirements to Graduate as a University Honors Scholar: Natural and Complex Systems

1. Students must meet all General University Requirements, General Education Requirements, school/college requirements, and major requirements as printed in the UAA catalog.

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2. Students must complete the following University Honors ~~Core~~ program requirements and the NCS Program requirements with a grade of B~~C~~ or higher (19 credits):

3. Program requirements with a grade of C or higher (18 credits):

Honors Foundation Courses		
HNRS A192	Honors Seminar: Enduring Books *	3
HNRS A292	Honors Seminar in Social Science *	3
HNRS A310	Community Service: Theory and Practice	3
NCS Program Courses		
BIOL/CPLX A200	Introduction to Complexity *	3
Honors Senior Project // Thesis Requirements		
HNRS A490	Senior Honors Seminar (special section designated for NCS Program) *	6
Total Credits		**18**

* *Indicates courses that satisfy GERs*

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/uhc/#naturalandcomplexsystemsncsprogramtext

~~2.~~

~~Honors Foundation Courses (Honors Core)~~		
~~HNRS A192~~	~~Honors Seminar: Enduring Books *~~	~~3~~
~~HNRS A292~~	~~Honors Seminar in Social Science *~~	~~3~~
~~HNRS A310~~	~~Community Service: Theory and Practice~~	~~3~~
~~NCS Program Courses~~		
~~BIOL/CPLX A200~~	~~Introduction to Complexity *~~	~~3~~
~~Honors Senior Project // Thesis Requirements (Honors Core)~~		
~~HNRS A392~~	~~Honors Thesis Seminar~~	~~1~~
~~HNRS A490~~	~~Senior Honors Seminar (special section designated for NCS Program) *~~	~~6~~
~~Total Credits~~		~~19~~

* *Indicates courses that satisfy GERs*

4. Students must have earned a cumulative grade point average of 3.50 or higher, as defined under Graduation with Honors.

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5. As part of the advising/mentoring process, Honors students' progress will be evaluated every semester. Students whose performance indicates potential difficulties in meeting the Honors graduation requirements will be counseled on how to correct these difficulties, but if performance improvements do not result, the student may be removed from the college.

~~4.~~ Forty-Ninth State Fellows Program

~~5.~~ Admission to this program is currently suspended. Contact the University Honors College for more information. - See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/uhc/#fortyninthstatefellowsprogramtext~~ - See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/uhc/#naturalandcomplexsystemsncsprogramtext See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/uhc/#text~~

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

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Mathematics & Statistics

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
MATH	A105		3	(3+0)

6. Complete Course Title
Intermediate Algebra

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
- ☐ Automatic Restrictions
  - ☐ 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

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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See attached list		
2.		
3.		

Initiator Name (typed): Mark Fitch Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 1/21/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 1/21/15

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)*
Topics include expressions, equations and applications involving linear, quadratic, rational and radical functions; graphs of linear and quadratic functions; functions and their inverses; introduction to exponential and logarithmic functions; and systems of linear equations.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
MATH A55 with a minimum grade of C or MATH A060 with a 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)*
If the prerequisite is not satisfied, an approved UAA placement test is required.

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
BOR resolution

Initiator (faculty only) Date

Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic 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: Fall 2014

II. Curriculum Action Request

A. College:	College of Arts and Sciences
B. Course Prefix:	MATH
C. Course Number:	A105
D. Number of Credits:	3
E. Contact Hours:	3+0
F. Course Title:	Intermediate Algebra
G. Grading Basis:	A-F
H. Implementation Date:	Fall 2015
I. Cross-listed/Stacked:	N/A
J. Course Description:	Topics include expressions, equations and applications involving linear, quadratic, rational and radical functions; graphs of linear and quadratic functions; functions and their inverses; introduction to exponential and logarithmic functions; and systems of linear equations.
K. Course Prerequisites:	MATH A055 with a minimum grade of C or MATH A060 with a minimum grade of C
L. Course Co-requisites:	N/A
M. Other Restrictions:	N/A
N. Registration Restrictions:	If the prerequisite is not satisfied, an approved UAA placement test is required.
O. Course Fees:	Yes

III. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. The instructor will:
1. Use appropriate mathematical language and symbols to develop and communicate solutions
2. Demonstrate quantitative and analytical techniques

B. Student Learning Outcomes. Students will be able to:
1. Combine, compose, evaluate and graph functions and inverse functions
2. Demonstrate graphical competency for linear, quadratic, absolute value, rational and square root functions
3. Graph and interpret exponential and logarithmic functions
4. Solve applied problems using appropriate algebraic techniques

IV. Guidelines for evaluation

Assessment may be based on homework assignments, quizzes, tests, and a midterm examination. A comprehensive final exam will be given.

V. Course Level Justification

The course is a prerequisite for General Education Quantitative Skills courses at UAA. It is required for the Associate of Arts degree, and is also required for many certificate and

Associate of Applied Science degree programs.

VI. Topical Course Outline

1.0 Simplification and Solving
- 1.1 Absolute value in graphing, equations, and inequalities
- 1.2 Solving systems of linear equations
- 1.3 Solving systems of linear inequalities (optional)
- 1.4 Review of factoring techniques
- 1.5 Simplifying rational expressions and solving equations with rational expressions

2.0 Radicals
- 2.1 Radical expressions and applications of radicals
- 2.2 Rational exponents
- 2.3 Evaluating and simplifying radical expressions
- 2.4 Adding and subtracting radical expressions
- 2.5 Multiplying and dividing radical expressions including use of the conjugate
- 2.6 Solving equations with radical expressions
- 2.7 Arithmetic with complex numbers

3.0 Graphing
- 3.1 Review of the rectangular coordinate system
- 3.2 Review of equations and graphing of lines
- 3.3 Graphing non-linear equations by plotting points
- 3.4 Graphing by transformations including translation, reflection, and scaling

4.0 Quadratics
- 4.1 Solving quadratic equations using factoring
- 4.2 Solving quadratic equations using the quadratic formula
- 4.3 Solving equations in a quadratic form
- 4.4 Completing the square to graph parabolas and circles
- 4.5 Graphing circles and more parabolas
- 4.6 Quadratic inequalities

5.0 Functions
- 5.1 Function definition and notation
- 5.2 Algebra and composition of functions
- 5.3 Inverse functions

6.0 Logarithms and Exponentials
- 6.1 Exponential functions including base e
- 6.2 Logarithmic functions including base e

7.0 Applications
- 7.1 Proportions
- 7.2 Interest problems

7.3 Geometry problems
7.4 Distance problems

VI. Suggested Texts

Bittinger M., Beecher J., & Johnson B. (2015). *Introductory Algebra*, (12th ed.). Addison Wesley.

Gustafson R., Karr R., & Massey M. (2014). *Beginning and Intermediate Algebra*, (7th ed.). Cengage.

VII. Bibliography

Arem, C. (2009). *Conquering Math Anxiety*. Brooks/Cole Cengage.

Tobias, S. (1995). *Overcoming Math Anxiety*. Norton & Company.

MATH A105

Box 13a on CAR

	Impacted Program/Course	Date of Coordination	Chair/Coordinator
1	AAS, Accounting	1/21/2015	Pat Fort
2	AAS, Air Traffic Control	1/21/2015	Rocky Capozzi
3	AAS, Apprenticeship Technologies	1/21/2015	Sally Spieker
4	AAS, Architectural & Engineering Technology	1/21/2015	Donald Ketner
5	AAS, Aviation Administration	1/21/2015	Rocky Capozzi
6	AAS, Aviation Maintenance Technology	1/21/2015	Rocky Capozzi
7	AAS, Computer Electronics	1/21/2015	Allen Houtz
8	AAS, Computer Systems Technology	1/21/2015	Harry Banks
9	AAS, Diagnostic Medical Sonography	1/21/2015	Ryan Parnell
10	AAS, Early Childhood Development	1/21/2015	Hilary Seitz
11	AAS, Fire & Emergency Services Technology	1/21/2015	Jim Foster
12	AAS, General Business	1/21/2015	Ray Zagorski
13	AAS, Industrial Process Instrumentation	1/21/2015	Allen Houtz
14	AAS, Occupational Safety & Health	1/21/2015	Lynda Kreps
15	AAS, Paramedical Technology	1/21/2015	Paul Perry/Kathy Griffin
16	AAS, Process Technology	1/21/2015	Allen Houtz
17	AAS, Professional Piloting	1/21/2015	Rocky Capozzi
18	AAS, Radiologic Technology	1/21/2015	Robert McClung
19	AAS, Small Business Administration	1/21/2015	Edward Forrest
20	AAS, Technology	1/21/2015	Heather Corriere
21	AAS, Welding & Nondestructive Testing Technology	1/21/2015	Robert McCauley
22	Associate of Arts	1/21/2015	Patricia Linton
23	BS Dietetics	1/21/2015	Carrie King
24	Occupational Endorsement Certificate, CAD for Building Constru	1/21/2015	Donald Ketner
25	OEC Non-Destructive Testing Technology	1/21/2015	Jonathan Goins
26	OEC Sustainable Energy	1/21/2015	Mark Masteller
27	Undergraduate Certificate, Architectural Drafting	1/21/2015	Donald Ketner
28	Undergraduate Certificate, Aviation Maintenance Technology	1/21/2015	Rocky Capozzi
29	Undergraduate Certificate, Civil Drafting	1/21/2015	Donald Ketner
30	Undergraduate Certificate, Industrial Safety Program Support	1/21/2015	Lynda Kreps
31	Undergraduate Certificate, Mechanical and Electrical Drafting	1/21/2015	Donald Ketner

32	Undergraduate Certificate, Mechanical Technology	1/21/2015	Fritz Miller
33	Undergraduate Certificate, Petroleum Technology	1/21/2015	Allen Houtz
34	Undergraduate Certificate, Retail Management	1/21/2015	Jeri Rubin
35	Undergraduate Certificate, Structural Drafting	1/21/2015	Donald Ketner
36	Undergraduate Certificate, Welding Technology	1/21/2015	Fritz Miller
37	ACCT A101	1/21/2015	Pat Fort
38	ACCT A201	1/21/2015	Pat Fort
39	AET A101	1/21/2015	Donald Ketner
40	AET A142	1/21/2015	Donald Ketner
41	AET A213	1/21/2015	Donald Ketner
42	AET A231	1/21/2015	Donald Ketner
43	ATP A100	1/21/2015	Rocky Capozzi
44	BA A215	1/21/2015	Edward Forrest
45	BA A225	1/21/2015	Edward Forrest
46	BA A233	1/21/2015	Edward Forrest
47	BA A394H	1/21/2015	Edward Forrest
48	BIOL A294A	1/21/2015	Fred Rainey
49	CHEM A103	1/21/2015	Eric Holmberg
50	CHEM A105	1/21/2015	Eric Holmberg
51	CM A101	1/21/2015	Donald Ketner
52	CM A142	1/21/2015	Donald Ketner
53	CM A163	1/21/2015	Donald Ketner
54	CM A202	1/21/2015	Donald Ketner
55	CM A213	1/21/2015	Donald Ketner
56	CM A231	1/21/2015	Donald Ketner
57	CM A263	1/21/2015	Donald Ketner
58	CS A101	1/21/2015	Frank Moore
59	CS A109	1/21/2015	Frank Moore
60	CS A110	1/21/2015	Frank Moore
61	CS A111	1/21/2015	Frank Moore
62	CS A207	1/21/2015	Frank Moore
63	CSCE A201	1/21/2015	Frank Moore
64	ECON A210	1/21/2015	Paul Johnson
65	ECON A310	1/21/2015	Paul Johnson

MATH A105

Box 13a on CAR

66	ENVI A201	1/21/2015	Dorn VanDommelen
67	ENVI A202	1/21/2015	Dorn VanDommelen
68	ENVI A211	1/21/2015	Dorn VanDommelen
69	ENVI A211L	1/21/2015	Dorn VanDommelen
70	ET A102	1/21/2015	Allen Houtz
71	FIRE A121	1/21/2015	Jim Foster
72	FIRE A155	1/21/2015	Jim Foster
73	GEOG A211	1/21/2015	Dorn VanDommelen
74	GEOG A211L	1/21/2015	Dorn VanDommelen
75	GEOL A313	1/21/2015	Kristine Crossen
76	GEOL A321	1/21/2015	Kristine Crossen
77	HS A379	1/21/2015	Rhonda Johnson
78	LSIS A102	1/21/2015	Sarah Gerken
79	OSH A112	1/21/2015	Lynda Kreps
80	OSH A180	1/21/2015	Lynda Kreps
81	OSH A240	1/21/2015	Lynda Kreps
82	PETR A106		
83	PHYS A101	1/21/2015	Katherine Rawlins
84	PHYS A123	1/21/2015	Katherine Rawlins
85	PRT A130	1/21/2015	Allen Houtz
86	PRT A140	1/21/2015	Allen Houtz
87	PRT A294	1/21/2015	Allen Houtz
88	PSY A260	1/21/2015	Claudia Lampman
89	PSY A260L	1/21/2015	Claudia Lampman
90	PSY A375	1/21/2015	Claudia Lampman
91	TECH A101	1/21/2015	Sally Spieker
92	URS A121	1/21/2015	John Mouracade
93	WELD A261	1/21/2015	Kelly Smith
94	WELD A263	1/21/2015	Kelly Smith
95	WELD A410	1/21/2015	Kelly Smith

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

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Mathematics & Statistics

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
MATH	A261	MATH A231	3	(3+0)

6. Complete Course Title
Introduction to Discrete Mathematics
Intro to Discrete Mathematics
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
- ☐ Automatic Restrictions
  - ☐ 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

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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1.		
2.		
3.		

Initiator Name (typed): _____ Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 02/18/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 02/18/15

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 concepts of discrete mathematics including relations and graph theory along with prerequisite topics including sets, logic, and mathematical proof.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
MATH A151 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
Periodic update of curriculum

Initiator (faculty only) Date

Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic 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: Fall 2014

II. Curriculum Action Request

A. College:	College of Arts and Sciences
B. Course Prefix:	MATH
C. Course Number:	A261
D. Number of Credits:	3
E. Contact Hours:	3+0
F. Course Title:	Introduction to Discrete Mathematics
G. Grading Basis:	A-F
H. Implementation Date:	Fall 2015
I. Cross-listed/Stacked:	N/A
J. Course Description:	Introduces concepts of discrete mathematics including relations and graph theory along with prerequisite topics including sets, logic, and mathematical proof.
K. Course Prerequisites:	MATH A151 with a 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. Emphasize the importance of logic and support for statements in problem solving.
2. Present material in sets, logic, proof, relations, and graph theory.
3. Present applications of discrete mathematics in computer science and computer systems engineering.

B. Student Learning Outcomes. The students will
1. Be able to read and understand definitions, statements of theorems, and simple proofs
2. Be able to identify and use appropriate models for discrete phenomena
3. Be able to identify properties of graphs, evaluate simple counts, and identify properties of relations

IV. Course Level Justification

This course requires skills in interpreting mathematics taught in freshman level courses. This course is similar to discrete mathematics courses taught nationwide at the sophomore level.

V. Topical Course Outline

A. Logic
a) Logical connectives
b) Quantifiers

    c) Boolean algebra
B. Sets
    a) Types of sets
    b) Operations including union, intersection, power sets, Cartesian products, and complement
    c) Applications such as indexing, hashes, strings, and lists
C. Mathematical Proof
    a) Direct
    b) Contradiction
    c) Mathematical Induction
D. Relations
    a) Relation properties including inheritance and closure
    b) Equivalence relations
    c) Partially ordered sets
    d) Examples including mod
E. Functions
    a) Definition
    b) Properties including one-to-one and onto
    c) Examples such as floor and recursively defined
F. Graph Theory
    a) Graph properties
    b) Isomorphism
    c) Trees
G. Enumeration
    a) Permutations and combinations
    b) Inclusion/exclusion
    c) Recurrence relations
    d) Applications such as complexity and probability

VI. Suggested Texts

Rosen, K. *Discrete Mathematics and Its Applications.* 7th ed. New York, NY: McGraw Hill; 2012.

VII. Bibliography

Epp,S. *Discrete Mathematics with Applications.* 4th ed. Belmont, CA: Brooks/Cole; 2010.

Grimaldi, R. *Discrete and Combinatorial Mathematics.* 5th ed. Boston, MA: Addison Wesley; 2003.

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

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Mathematics & Statistics

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
MATH	A309		3	(3+0)

6. Complete Course Title
Introduction to Number Theory

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
- ☐ Automatic Restrictions
  - ☐ 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

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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1.		
2.		
3.		

Initiator Name (typed): Mark Fitch Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 02/18/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 02/18/15

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)*
Examines fundamental concepts of number theory including primes, divisibility, congruences, quadratic reciprocity, number theoretic functions, continued fractions, and Diophantine equations.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
MATH A265 with a 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
Adds a nationally standard course that will fulfill a current requirement

Initiator (faculty only) Date
Mark Fitch
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved
Department Chair Date

☐ Approved
☐ Disapproved
College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved
Undergraduate/Graduate Academic 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 2015

II. Curriculum Action Request

A. College:	College of Arts and Sciences
B. Course Prefix:	MATH
C. Course Number:	A309
D. Number of Credits:	3
E. Contact Hours:	3+0
F. Course Title:	Introduction to Number Theory
G. Grading Basis:	A-F
H. Implementation Date:	Fall 2015
I. Cross-listed/Stacked:	N/A
J. Course Description:	Examines fundamental concepts of number theory including primes, divisibility, congruences, quadratic reciprocity, number theoretic functions, continued fractions, and Diophantine equations.
K. Course Prerequisites:	MATH A265 with a 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. Introduce students to the concepts of divisibility and primes, Diophantine equations, congruence, quadratic reciprocity, and continued fractions
2. Present proofs of classical theorems in number theory
3. Provide problems for students to apply these concepts

B. Student Learning Outcomes. Students will be able to:
1. Solve linear and quadratic Diophantine equations
2. Calculate values of basic number theory functions
3. Prove basic number theoretic theorems and corollaries

IV. Guidelines for Evaluation

Assessment may be based on homework assignments, quizzes, tests, papers, and in-class presentations.

V. Course Level Justification

Requires the ability to understand, create and write proofs using the methods, notation and vocabulary of upper-division mathematics.

VI. Topical Course Outline

1.0 Review of Divisibility Theory in the Integers
- 1.1 The Division Algorithm
- 1.2 Greatest Common Divisor and the Euclidean Algorithm

2.0 Components of Number Theory
- 2.1 Historical Motivation
  - 2.1.1 Famous problems: Goldbach Conjecture, distribution of primes, etc.
  - 2.1.2 Mersenne primes, perfect and amicable numbers

2.2 Theory of Congruences
- 2.2.1 Definition and basic properties
- 2.2.2 Binary and decimal representations of integers
- 2.2.3 Linear congruences and systems of linear congruences (Chinese Remainder Theorem)
- 2.2.4 Fermat's and Wilson's theorems

2.3 Number Theoretic Functions
- 2.3.1 Definitions
- 2.3.2 Properties
- 2.3.3 Mobius Inversion Formula

2.4 Primitive Roots and Indices
- 2.4.1 Order of an integer modulo n
- 2.4.2 Primitive roots
  - 2.4.2.1 Primitive roots for primes
  - 2.4.2.2 Primitive roots for composites

2.5 Quadratic Reciprocity
- 2.5.1 The Legendre Symbol
- 2.5.2 Quadratic residues
- 2.5.3 Quadratic reciprocity

2.6 Continued Fractions
- 2.6.1 Finite continued fractions
- 2.6.2 Infinite continued fractions

VII. Suggested Texts

Burton, David. *Elementary Number Theory*, 7th edition. McGraw-Hill, 2010.

Pommersheim, James, Marks, Tim, and Flapan, Erica L. *Number Theory: A Lively Introduction with Proofs, Applications and Stories*. Wiley, 2010.

Strayer, James, *Elementary Number Theory*. Waveland Press, 2002.

VIII. Bibliography

*Niven, I., H. Zuckerman, H. Montgomery, *An Introduction to the Theory of Numbers*, 5th Edition. Wiley, 1991.

Rosen, Kenneth. *Elementary Number Theory and its Applications*, 6th Edition, McGraw Hill, 2010.

*****Classic text

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

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Mathematics & Statistics

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
MATH	A424		3	(3+0)

6. Complete Course Title
Advanced Engineering Mathematics: Linear Algebra & Numerical Analysis
Adv Eng Math A
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
- ☐ Automatic Restrictions
  - ☐ 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

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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1.		
2.		
3.		

Initiator Name (typed): Mark Fitch Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 02/18/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 02/18/15

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)*
Emphasizes mathematics used in engineering. Includes applications of matrices, vector spaces, inner products, and linear transformations; numerical interpolation, approximation, and differentiation; finite difference methods for ordinary and partial differential equations; numerical stability.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
MATH A302 with a minimum grade of C and PHYS A211 with a 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)*
Completion of a programming course with a minimum grade of C

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Increased demand from engineering students

Initiator (faculty only) Date
Mark Fitch
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic 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 2015

II. Curriculum Action Request

A. College:	College of Arts and Sciences
B. Course Prefix:	MATH
C. Course Number:	A424
D. Number of Credits:	3
E. Contact Hours:	3+0
F. Course Title:	Advanced Engineering Mathematics: Linear Algebra & Numerical Analysis
G. Grading Basis:	A-F
H. Implementation Date:	Fall 2015
I. Cross-listed/Stacked:	N/A
J. Course Description:	Emphasizes mathematics used in engineering. Includes applications of matrices, vector spaces, inner products, and linear transformations; numerical interpolation, approximation, and differentiation; finite difference methods for ordinary and partial differential equations; numerical stability.
K. Course Prerequisites:	MATH A302 with a minimum grade of C and PHYS A211 with a minimum grade of C
L. Course Co-requisites:	N/A
M. Other Restrictions:	N/A
N. Registration Restrictions:	Completion of a programming course with a minimum grade of C
O. Course Fees:	No

III. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. The instructor will:
1. Demonstrate advanced mathematics used to analyze and design engineering systems
2. Develop for students the fundamental concepts of linear algebra
3. Acquaint students with various numerical techniques for approximating the solutions of linear algebraic systems, and of ordinary and partial differential equations that are commonly encountered by engineers and scientists
4. Enable students to use the above noted mathematical techniques in ways applicable to engineering and scientific research and analyses

B. Student Learning Outcomes. Students will be able to:
1. Apply linear algebra to engineering systems, including the approximation of solutions
2. Apply numerical methods against ordinary and partial differential equations typically encountered in engineering and the sciences

C. Assessment Measures. Students will:
1. Demonstrate understanding of course material via homework, examinations, and projects

IV. Course Level Justification

This course is designed to enable engineering students to solve problems common to research and professional engineering practice using advanced mathematics which requires MATH A302.

V. Topical Course Outline

1. Matrices

1.1 Matrices and their Properties
1.2 Systems of Linear Equations
1.3 Determinants
1.4 Eigenvalues, Diagonalization, Matrix Powers

2. Vector Spaces
   2.1 Definition and Examples
   2.2 Linear Transformations
   2.3 Inner Products and Norms
   2.4 Orthogonality and Expansions
   2.5 Modeling of Physical Systems

3. Introduction to Numerical Methods
   3.1 Sources of Numerical Error; Order of Convergence
   3.2 Numerical Interpolation and Approximation
   3.3 Numerical Differentiation and Integration
   3.4 Numerical Solution of Matrix Systems; Approximation of Eigenvalues

4. Finite Difference Methods
   4.1 Ordinary Differential Equations
      i. Explicit Methods with a Focus on Runge-Kutta-Fehlberg
      ii. Implicit Methods with Foci on Techniques used within 4.2.iii below
      iii. Stability and Error Control
   4.2 Partial Differential Equations
      i. Development of the Heat, Potential, and Wave Equations
      ii. Common Boundary Conditions
      iii. Elementary Explicit and Implicit Methods
      iv. Stability Properties

VI. Suggested Texts

Zill, D., and Wright, W. (2014). *Advanced Engineering Mathematics*. Jones & Bartlett Learning.

Kreyzig, E. (2011). *Advanced Engineering Mathematics*. John Wiley & Sons.

Greenberg, M. (2004). *Advanced Engineering Mathematics*. Prentice Hall.

O'Neil, P. (2012). *Advanced Engineering Mathematics*. Cengage.

Bali, N., Goyal, M., and Watkins, C. (2007). *Advanced Engineering Mathematics*. Infinity Science Press.

James, G. (2010). *Advanced Engineering Mathematics*. Pearson.

VII. Biography

Sadun, L. (2000). *Applied Linear Algebra*. Prentice Hall.

Chapra, S. and Canale, R. (2010). *Numerical Methods for Engineers*. McGraw-Hill.

Hoffman, J. (2001). *Numerical Methods for Engineers and Scientists*. Marcel Decker.

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

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Mathematics & Statistics

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
MATH	A425		3	(3+0)

6. Complete Course Title
Advanced Engineering Mathematics: Partial Differential Equations and Complex Variables
Adv Eng Math B
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
- ☐ Automatic Restrictions
  - ☐ 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

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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1.		
2.		
3.		

Initiator Name (typed): Mark Fitch Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 02/18/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 02/18/15

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)*
Emphasizes mathematics used in engineering. Includes Fourier series and transforms, Bessel functions, Legendre polynomials, linear partial differential equations, and complex variables. Develops the wave, heat and potential equations via first principles. Introduces the method of characteristics as applied to shock phenomena.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
MATH A302 with a minimum grade of C and PHYS A211 with a 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)*
Completion of a programming course with a minimum grade of C

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Increased demand from engineering students

Initiator (faculty only) Date
Mark Fitch
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic 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: Fall 2015

II. Curriculum Action Request

A. College:	College of Arts and Sciences
B. Course Prefix:	MATH
C. Course Number:	A425
D. Number of Credits:	3
E. Contact Hours:	3+0
F. Course Title:	Advanced Engineering Mathematics: Partial Differential Equations and Complex Variables
G. Grading Basis:	A-F
H. Implementation Date:	Fall 2015
I. Cross-listed/Stacked:	N/A
J. Course Description:	Emphasizes mathematics used in engineering. Includes Fourier series and transforms, Bessel functions, Legendre polynomials, linear partial differential equations, and complex variables. Develops the wave, heat and potential equations via first principles. Introduces the method of characteristics as applied to shock phenomena.
K. Course Prerequisites:	MATH A302 with a minimum grade of C and PHYS A211 with a minimum grade of C
L. Course Co-requisites:	N/A
M. Other Restrictions:	N/A
N. Registration Restrictions:	Completion of a programming course with a minimum grade of C
O. Course Fees:	No

III. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. The instructor will:
1. Demonstrate advanced mathematics used to analyze and design engineering systems
2. Acquaint students with Fourier series and transforms, Bessel functions, and Legendre polynomials, and the method of separation of variables as applied to the wave, heat, and potential equations in the presence of commonly used boundary conditions. Demonstrate the method of characteristics and its application to simple shock phenomena
3. Acquaint students with complex numbers, functions, series, integration, conformal maps, and their application to problems commonly encountered in two dimensional fluid mechanics and heat transfer
4. Enable students to use the above noted mathematical techniques in ways applicable to engineering and scientific research and analyses

B. Student Learning Outcomes. Students will be able to:
1. Solve linear partial differential equations common to engineering systems within Cartesian, circular, and spherical domains
2. Apply the techniques of complex variables to solve two dimensional fluid mechanics and heat transfer problems

C. Assessment Measures. Students will:
1. Demonstrate understanding of course material via homework, examinations, and projects

IV. Course Level Justification

This course is designed to enable engineering students to solve problems common to research and professional engineering practice using advanced mathematics which requires MATH A302.

V. Topical Course Outline

1. Orthogonal Expansions and Transforms
   - 1.1 Fourier Series and Transform
   - 1.2 Bessel Functions
   - 1.3 Legendre Polynomials

2. Partial Differential Equations
   - 2.1 Introduction to the Wave, Heat, and Potential Equations
   - 2.2 Introduction to Boundary Conditions
   - 2.3 Separation of Variables Methodology
   - 2.4 Introduction to Shock Phenomena and the Method of Characteristics

3. Complex Analysis
   - 3.1 Geometry and Arithmetic of Complex Numbers
   - 3.2 Complex Functions and Series
   - 3.3 Complex Integration
   - 3.4 Conformal Mappings
   - 3.5 Two Dimensional Fluid Mechanics and Heat Transfer Problems

VI. Suggested Texts

Zill, D., and Wright, W. (2014). *Advanced Engineering Mathematics.* Jones & Bartlett Learning.

Kreyzig, E. (2011). *Advanced Engineering Mathematics*. John Wiley & Sons.

Greenberg, M. (2004). *Advanced Engineering Mathematics*. Prentice Hall.

O'Neil, P. (2012). *Advanced Engineering Mathematics*. Cengage.

Bali, N., Goyal, M., and Watkins, C. (2007). *Advanced Engineering Mathematics*. Infinity Science Press.

James, G. (2010). *Advanced Engineering Mathematics*. Pearson.

VII. Biography

Mathews, J. and Howell, R. (2012). *Complex Analysis for Mathematics & Engineering*. Jones & Bartlett Publishers.

Zill, D. and Shanahan, P. (2009). *A First Course in Complex Analysis with Applications*. Jones & Bartlett Publishers.

Davis, J. (2013). *Introduction to Applied Partial Differential Equations*. W. H. Freeman & Company.

Jeffrey, A. (2003). *Applied Partial Differential Equations*. Academic Press.

Knobel, R. (2000). *An Introduction to the Mathematical Theory of Waves*. Amer. Math. Soc.

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

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Mathematics & Statistics

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
MATH	A426		3	(3+0)

6. Complete Course Title
Numerical Analysis

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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ 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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See attached list.		
2.		
3.		

Initiator Name (typed): Mark Fitch Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 11/21/14
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 11/21/14

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)*
Numerical solutions of linear systems and eigenvalue problems, and nonlinear equations and systems. Numerical differentiation and integration. Numerical solutions of ordinary and partial differential equations. Introduction to approximation theory, homotopy, and error and stability analysis; theoretical framework for convergence analysis.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
MATH A265 with a 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)*
Completion of a programming course with a minimum grade of C

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Updated course prerequisites

Initiator (faculty only) Date
Mark Fitch
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic 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: Fall 2014

II. Curriculum Action Request

A.	College:	College of Arts and Sciences
B.	Course Prefix:	MATH
C.	Course Number:	A426
D.	Number of Credits:	3
E.	Contact Hours:	3+0
F.	Course Title:	Numerical Analysis
G.	Grading Basis:	A-F
H.	Implementation Date:	Fall 2015
I.	Cross-listed/Stacked:	N/A
J.	Course Description:	Numerical solutions of linear systems and eigenvalue problems, and nonlinear equations and systems. Numerical differentiation and integration. Numerical solutions of ordinary and partial differential equations. Introduction to approximation theory, homotopy, and error and stability analysis; theoretical framework for convergence analysis.
K.	Course Prerequisites:	MATH A265 with a minimum grade of C
L.	Course Co-requisites:	N/A
M.	Other Restrictions:	N/A
N.	Registration Restrictions:	Completion of a programming course with a minimum grade of C
O.	Course Fees:	No

III. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. The instructor will:
1. Provide an introduction to the theory and application of numerical techniques, as applied to problems commonly encountered in mathematics and other relevant disciplines.
2. Address the merits of various techniques developed and how to properly select a technique for application.

B. Student Learning Outcomes. Students will be able to:
1. Describe the advantages and disadvantages associated with different numerical techniques.
2. Select and implement the appropriate numerical technique for a given problem.
3. Understand the theoretical framework of numerical techniques, including the proofs of convergence and stability where applicable.

IV. Guidelines for evaluation

Assessment may be based on homework assignments, quizzes, tests, a midterm examination, and final examination.

V. Course Level Justification

Students must be proficient in understanding and developing mathematical proofs which begins in MATH A265 Fundamentals of Mathematics but which is typically achieved for analysis topics after completing junior level courses.

VI. Topical Course Outline

A. Introduction to error sources and error estimates.
B. Techniques for linear systems and their eigenvalues & eigenvectors
   a) Direct methods
   b) Iterative methods
C. Techniques for nonlinear equations and systems.
   a) Fixed-Point iteration and contraction
   b) Newton-Raphson-Brown
   c) Homotopy and continuation methods
   d) Error analysis and accelerated convergence
   e) Roots of polynomials
D. Techniques for interpolation and approximation of functions
   a) Polynomial approximation
   b) Divided Differences
   c) Rational function approximation
   d) Hermite & Cubic Spline interpolation
   e) Least squares approximation
   f) Trigonometric & other orthogonal function approximations
   g) Fast Fourier transform
E. Techniques for numerical differentiation and integration
   a) Basic numerical differentiation formulae
   b) Richardson's extrapolation
   c) Composite & Romberg integration
   d) Adaptive quadrature
   e) Gaussian quadrature
F. Finite Difference techniques for Ordinary Differential Equations
   a) Explicit methods
   b) Implicit methods
   c) Error control & stability
   d) Stiff equations
G. Finite Difference techniques for Partial Differential Equations
   a) A comparison of explicit and implicit techniques focusing on stability questions

VI. Suggested Text

Burden, Richard L., Faires, J. Douglas, Burden, Annette M. (available 2015). *Numerical Analysis*. (10th ed.). Brooks/Cole Cengage.

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

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Mathematics & Statistics

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
MATH	A431		3	(3+0)

6. Complete Course Title
Introduction to Differential Geometry
Intro to Differential Geometry
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
- ☐ Automatic Restrictions
  - ☐ 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

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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1.		
2.		
3.		

Initiator Name (typed): Mark Fitch Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 02/18/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 02/18/15

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)*
Develops the theory of curves and surfaces in Euclidean spaces. Presents major constructions and theorems including the Frenet-Serret apparatus, geodesics, Gauss' Theorema Egregium, and the Gauss-Bonnet Theorem. Introduces abstract manifolds.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
MATH A265 with a minimum grade of C and MATH A314 with a 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
Adds a nationally standard subject that will fulfill a current requirement

Initiator (faculty only) Date
Mark Fitch
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic 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: Fall 2014

II. Curriculum Action Request

A. College:	College of Arts and Sciences
B. Course Prefix:	MATH
C. Course Number:	A431
D. Number of Credits:	3
E. Contact Hours:	3+0
F. Course Title:	Introduction to Differential Geometry
G. Grading Basis:	A-F
H. Implementation Date:	Fall 2015
I. Cross-listed/Stacked:	N/A
J. Course Description:	Develops the theory of curves and surfaces in Euclidean spaces. Presents major constructions and theorems including the Frenet-Serret apparatus, geodesics, Gauss' *Theorema Egregium*, and the Gauss-Bonnet Theorem. Introduces abstract manifolds.
K. Course Prerequisites:	MATH A265 with a minimum grade of C and MATH A314 with a 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. Introduce students to the concepts of differential geometry
2. Present proofs of major theorems of differential geometry
3. Introduce examples and applications of differential geometry to mathematics and other areas of study

B. Student Learning Outcomes. Students will be able to:
1. Recognize curves and surfaces and their properties
2. Understand proofs of key theorems
3. Prove differential geometric results

IV. Guidelines for evaluation

Assessment may be based on homework assignments, quizzes, tests, a midterm examination, and final examination.

V. Course Level Justification

Students must have previous experience with abstraction of mathematical concepts and knowledge of the fundamentals of set theory and analysis. The MATH A314 prerequisite ensures that the concept of a vector space will be familiar to the student.

VI. Topical Course Outline

1.0 Review of Euclidean plane and 3-space

2.0 Calculus in Euclidean spaces

3.0 Plane and space curves

4.0 Local surface theory

5.0 Global surface theory

6.0 Topics selected from

- 6.1 Minimal Surfaces
- 6.2 Manifold theory
- 6.3 Riemannian geometry

VI. Suggested Texts

Banchoff, T., and Lovett, S. (2010). *Differential Geometry of Curves and Surfaces.* AK Peters, Ltd.

Kuhnel, W. (2005). *Differential Geometry: Curve-Surfaces-Manifolds*. American Mathematical Society.

O'Neill, B. (2006). *Elementary Differential Geometry*. Academic Press.

Oprea, J. (2007). *Differential Geometry and Its Applications*. Mathematical Association of America.

VII. Bibliography

*Boothby, W. (1986). *An Introduction to Differentiable Manifolds and Riemannian Geometry* (2nd ed.). Academic Press

*Henderson, D. (1998). *Differential Geometry: A Geometric Introduction.* Prentice Hall.

Lovett, S. (2010). *Differential Geometry of Manifolds.* AK Peters, Ltd.

*Millman, R., and Parker, G. (1977). *Elements of Differential Geometry*. Prentice Hall.

*Morgan, F. (1998). *Riemannian Geometry: A Beginner's Guide.* AK Peters.

*Seminal works in the field.

Memorandum

To: CAS Course and Curriculum

From: Department of Mathematics & Statistics

Date: 3/23/2015

Re: Program Changes

The Department of Mathematical Sciences is proposing the following changes to the Bachelor of Arts, Mathematics; Bachelor of Science, Mathematics; and Minor in Mathematics

Adding two courses as selectives.

The changes are designed to provide an appropriately broad set of selectives for students.

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College AS CAS	1b. Department Mathematics & Statistics

2. Complete Program Title/Prefix
Minor Mathematics

3. Type of Program

Choose one from the appropriate drop down menu: Undergraduate: Minor or Graduate: CHOOSE ONE

This program is a Gainful Employment Program: ☐ Yes or ☒ No

4. Type of Action:

PROGRAM	**PREFIX**
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

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

6a. Coordination with Affected Units Department, School, or College:

Initiator Name (typed): Mark Fitch Initiator Signed Initials: _____ Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 02/18/15

6c. Coordination with Library Liaison Date: 02/18/15

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function. *
*Copy the text directly from the program website of the online catalog and paste into a Word document.

8. Justification for Action
Adding two courses to provide sufficient breadth of selectives.

Initiator (faculty only) Date Mark Fitch 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 College/School Curriculum Committee Chair Date	☐ Approved ☐ Disapproved Provost or Designee Date

Students majoring in another subject who wish to minor in Mathematics must complete the following requirements. A total of 18 credits is required for the minor, 6 of which must be approved upper division Mathematics credits.

MATH A251	Calculus I	4
MATH A252	Calculus II	4
MATH A253	Calculus III	4
Complete two courses from the following list.		6
MATH A302	Ordinary Differential Equations	
MATH A303	Introduction to Modern Algebra	
MATH A305	Introduction to Geometries	
MATH A306	Discrete Methods	
MATH A309	Introduction to Number Theory	
MATH A314	Linear Algebra	
MATH A321	Analysis of Several Variables	
MATH A324	Introduction to Real Analysis	
MATH A371	Stochastic Processes	
MATH A407	Mathematical Statistics I	
MATH A408	Mathematical Statistics II	
MATH A410	Introduction to Complex Analysis	
MATH A420	Historical Mathematics	
MATH A422	Partial Differential Equations	
MATH A423	Advanced Engineering Mathematics	
MATH A424	Advanced Engineering Mathematics: Linear Algebra & Numerical Analysis	
MATH A425	Advanced Engineering Mathematics: Partial Differential Equations and Complex Variables	
MATH A426	Numerical Analysis	
MATH A430	Concepts of Topology	
MATH A431	Introduction to Differential Geometry	
MATH A490A	Selected Topics in Pure Mathematics *	
MATH A490B	Selected Topics in Applied Mathematics *	
Total Credits		18

* A maximum of 6 credits of MATH A490A and/or MATH A490B may be applied to the degree requirements.

Students majoring in another subject who wish to minor in Mathematics must complete the following requirements. A total of 18 credits is required for the minor, 6 of which must be approved upper division Mathematics credits.

MATH A2~~00~~51	Calculus I	4
MATH A2~~01~~52	Calculus II	4
MATH A2~~02~~53	Calculus III	4
Complete two courses from the following list.		6
MATH A302	Ordinary Differential Equations	
MATH A303	Introduction to Modern Algebra	
MATH A305	Introduction to Geometries	
MATH A306	Discrete Methods	
MATH A309	Introduction to Number Theory	
MATH A314	Linear Algebra	
MATH A321	Analysis of Several Variables	
MATH A324	~~Advanced Calculus~~Introduction to Real Analysis	
MATH A371	Stochastic Processes	
MATH A407	Mathematical Statistics I	
MATH A408	Mathematical Statistics II	
MATH A410	Introduction to Complex Analysis	
MATH A420	Histori~~cal~~ ~~of~~ Mathematics	
MATH A422	Partial Differential Equations	
MATH A423	Advanced Engineering Mathematics	
MATH A424	Advanced Engineering Mathematics: Linear Algebra & Numerical Analysis	
MATH A425	Advanced Engineering Mathematics: Partial Differential Equations and Complex Variables	
MATH A426	Numerical Analysis~~Methods~~	
MATH A430	Concepts of Topology	
MATH A431	Introduction to Differential Geometry	
MATH A490A	Selected Topics in Pure Mathematics *	
MATH A490B	Selected Topics in Applied Mathematics *	
Total Credits		18

* A maximum of 6 credits of MATH A490A and/or MATH A490B may be applied to the degree requirements.

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College AS CAS	1b. Department Mathematics & Statistics

2. Complete Program Title/Prefix
BA Mathematics

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	**PREFIX**
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

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

6a. Coordination with Affected Units Department, School, or College:

Initiator Name (typed): Mark Fitch Initiator Signed Initials: _____ Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 02/18/15

6c. Coordination with Library Liaison Date: 02/18/15

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function. *
*Copy the text directly from the program website of the online catalog and paste into a Word document.

8. Justification for Action
Adding two courses to provide sufficient breadth of selectives.

Initiator (faculty only) Date Mark Fitch 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	College/School Curriculum Committee Chair Date	☐ Approved ☐ Disapproved	Provost or Designee Date

Admission Requirements

Satisfy the Application and Admission Requirements for Baccalaureate Programs.

Graduation Requirements

1. Satisfy the General University Requirements for Baccalaureate Degrees.
2. Complete the General Education Requirements for Baccalaureate Degrees.
3. Complete the College of Arts and Sciences Requirements.
4. Complete the Major Requirements below.

Major Requirements

Core Courses		
MATH A251	Calculus I	4
MATH A252	Calculus II	4
MATH A253	Calculus III	4
MATH A265	Fundamentals of Mathematics	3
MATH A303	Introduction to Abstract Algebra	3
MATH A306	Discrete Methods	3
MATH A314	Linear Algebra	3
MATH A324	Introduction to Real Analysis	3
Select one of the following from Analysis and Topology:		3
MATH A321	Analysis of Several Variables	
MATH A410	Introduction to Complex Analysis	
MATH A430	Concepts of Topology	
MATH A431	Introduction to Differential Geometry	
Select one of the following from Applied Math:		3
MATH A302	Ordinary Differential Equations	
MATH A422	Partial Differential Equations	
MATH A426	Numerical Analysis	
PHYS A456	Nonlinear Dynamics and Chaos	
Select one of the following from Statistics:		3-4
STAT A307	Probability and Statistics	
STAT A308	Intermediate Statistics for the Sciences	
STAT A402	Scientific Sampling	
STAT A403	Regression Analysis	

STAT A404	Analysis of Variance	
STAT A407	Time Series Analysis	
STAT A408	Multivariate Statistics	
STAT A490	Selected Topics	
MATH A371	Stochastic Processes	
MATH A407	Mathematical Statistics I	
MATH A408	Mathematical Statistics II	
Select one of the following other mathematics courses:		3
MATH A305	Introduction to Geometries	
MATH A309	Introduction to Number Theory	
MATH A420	Historical Mathematics	
Select any six additional credits from any of the four categories above or from the following		6
MATH A490A*	Special Topics in Pure Mathematics	
MATH A490B*	Special Topics in Applied Mathematics	
MATH A495*	Mathematics Practicum	
MATH A498*	Individual Research	
Total Credits		45-46

*A maximum of 6 credits of MATH A490A, MATH A490B, MATH A495, and/or MATH A498 *may be applied to the degree requirements.*

Additional Requirements

- All Mathematics majors must take a standardized test of knowledge of mathematics approved by the Mathematics faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.
- All Mathematics majors must complete a portfolio demonstrating their mathematics knowledge. There is no grade for this requirement. The portfolio will normally be submitted in the semester of graduation.

A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Honors in Mathematics

Students majoring in Mathematics are eligible to graduate with departmental honors if they satisfy the following requirements:

1. Meet the requirements for Graduation with Honors
2. Meet the requirements for a BA/BS degree in Mathematics.
3. Earn a grade point average of 3.50 or above in the major requirements.
4. Complete a minimum of 12 upper division credits required for the major in residence.

- See more at:
http://catalog.uaa.alaska.edu/undergraduateprograms/cas/mathematics/ba-mathematics/#sthash.LNcBhMsd.dpuf

Admission Requirements

Satisfy the Application and Admission Requirements for Baccalaureate Programs.

Graduation Requirements

1. Satisfy the General University Requirements for Baccalaureate Degrees.
2. Complete the General Education Requirements for Baccalaureate Degrees.
3. Complete the College of Arts and Sciences Requirements.
4. Complete the Major Requirements below.

Major Requirements

Core Courses		
MATH A251	Calculus I	4
MATH A252	Calculus II	4
MATH A253	Calculus III	4
MATH A265	Fundamentals of Mathematics	3
MATH A303	Introduction to Abstract Algebra	3
MATH A306	Discrete Methods	3
MATH A314	Linear Algebra	3
MATH A324	Introduction to Real Analysis	3
Select one of the following from Analysis and Topology:		3
MATH A321	Analysis of Several Variables	
MATH A410	Introduction to Complex Analysis	
MATH A430	Concepts of Topology	
MATH A431	Introduction to Differential Geometry	
Select one of the following from Applied Math:		3
MATH A302	Ordinary Differential Equations	
MATH A422	Partial Differential Equations	
MATH A426	Numerical Analysis	
PHYS A456	Nonlinear Dynamics and Chaos	
Select one of the following from Statistics:		3-4
STAT A307	Probability and Statistics	
STAT A308	Intermediate Statistics for the Sciences	
STAT A402	Scientific Sampling	
STAT A403	Regression Analysis	

STAT A404	Analysis of Variance	
STAT A407	Time Series Analysis	
STAT A408	Multivariate Statistics	
STAT A490	Selected Topics	
MATH A371	Stochastic Processes	
MATH A407	Mathematical Statistics I	
MATH A408	Mathematical Statistics II	
Select one of the following other mathematics courses:		3
MATH A305	Introduction to Geometries	
MATH A309	Introduction to Number Theory	
MATH A420	Historical Mathematics	
Select any six additional credits from any of the four categories above or from the following		6
MATH A490A*	Special Topics in Pure Mathematics	
MATH A490B*	Special Topics in Applied Mathematics	
MATH A495*	Mathematics Practicum	
MATH A498*	Individual Research	
Total Credits		45-46

*A maximum of 6 credits of MATH A490A, MATH A490B, MATH A495, and/or MATH A498 *may be applied to the degree requirements.*

Additional Requirements

- All Mathematics majors must take a standardized test of knowledge of mathematics approved by the Mathematics faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.
- All Mathematics majors must complete a portfolio demonstrating their mathematics knowledge. There is no grade for this requirement. The portfolio will normally be submitted in the semester of graduation.

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Students majoring in Mathematics are eligible to graduate with departmental honors if they satisfy the following requirements:

1. Meet the requirements for Graduation with Honors
2. Meet the requirements for a BA/BS degree in Mathematics.
3. Earn a grade point average of 3.50 or above in the major requirements.
4. Complete a minimum of 12 upper division credits required for the major in residence.

- See more at:
http://catalog.uaa.alaska.edu/undergraduateprograms/cas/mathematics/ba-mathematics/#sthash.LNcBhMsd.dpuf

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College AS CAS	1b. Department Mathematics & Statistics

2. Complete Program Title/Prefix
BS Mathematics

3. Type of Program

Choose one from the appropriate drop down menu: Undergraduate: Bachelor of Science or Graduate: CHOOSE ONE

This program is a Gainful Employment Program: ☐ Yes or ☒ No

4. Type of Action:

PROGRAM	**PREFIX**
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

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

6a. Coordination with Affected Units Department, School, or College:

Initiator Name (typed): Mark Fitch Initiator Signed Initials: _____ Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 02/18/15

6c. Coordination with Library Liaison Date: 02/18/15

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function. *
*Copy the text directly from the program website of the online catalog and paste into a Word document.

8. Justification for Action
Adding two courses to provide sufficient breadth of selectives.

Initiator (faculty only) Date Mark Fitch 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 College/School Curriculum Committee Chair Date	☐ Approved ☐ Disapproved Provost or Designee Date

Admission Requirements

Satisfy the Application and Admission Requirements for Baccalaureate Programs.

Graduation Requirements

1. Satisfy the General University Requirements for Baccalaureate Degrees.
2. Complete the General Education Requirements for Baccalaureate Degrees.
3. Complete the College of Arts and Sciences Requirements.
4. Complete the Major Requirements below.

Major Requirements

Core Courses		
MATH A251	Calculus I	4
MATH A252	Calculus II	4
MATH A253	Calculus III	4
MATH A265	Fundamentals of Mathematics	3
MATH A303	Introduction to Abstract Algebra	3
MATH A306	Discrete Methods	3
MATH A314	Linear Algebra	3
MATH A324	Introduction to Real Analysis	3
Select one of the following from Analysis and Topology:		3
MATH A321	Analysis of Several Variables	
MATH A410	Introduction to Complex Analysis	
MATH A430	Concepts of Topology	
MATH A431	Introduction to Differential Geometry	
Select one of the following from Applied Math:		3
MATH A302	Ordinary Differential Equations	
MATH A422	Partial Differential Equations	
MATH A426	Numerical Analysis	
PHYS A456	Nonlinear Dynamics and Chaos	
Select one of the following from Statistics:		3-4
STAT A307	Probability and Statistics	
STAT A308	Intermediate Statistics for the Sciences	
STAT A402	Scientific Sampling	
STAT A403	Regression Analysis	

STAT A404	Analysis of Variance	
STAT A407	Time Series Analysis	
STAT A408	Multivariate Statistics	
STAT A490	Selected Topics	
MATH A371	Stochastic Processes	
MATH A407	Mathematical Statistics I	
MATH A408	Mathematical Statistics II	
Select one of the following other mathematics courses:		3
MATH A305	Introduction to Geometries	
MATH A309	Introduction to Number Theory	
MATH A420	Historical Mathematics	
Select any six additional credits from any of the four categories above or from the following		6
MATH A490A*	Special Topics in Pure Mathematics	
MATH A490B*	Special Topics in Applied Mathematics	
MATH A495*	Mathematics Practicum	
MATH A498*	Individual Research	
Total Credits		45-46

*A maximum of 6 credits of MATH A490A, MATH A490B, MATH A495, and/or MATH A498 *may be applied to the degree requirements.*

Additional Requirements

- All Mathematics majors must take a standardized test of knowledge of mathematics approved by the Mathematics faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.
- All Mathematics majors must complete a portfolio demonstrating their mathematics knowledge. There is no grade for this requirement. The portfolio will normally be submitted in the semester of graduation.

A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Admission Requirements

Satisfy the Application and Admission Requirements for Baccalaureate Programs.

Graduation Requirements

1. Satisfy the General University Requirements for Baccalaureate Degrees.
2. Complete the General Education Requirements for Baccalaureate Degrees.
3. Complete the College of Arts and Sciences Requirements.
4. Complete the Major Requirements below.

Major Requirements

Core Courses		
MATH A251	Calculus I	4
MATH A252	Calculus II	4
MATH A253	Calculus III	4
MATH A265	Fundamentals of Mathematics	3
MATH A303	Introduction to Abstract Algebra	3
MATH A306	Discrete Methods	3
MATH A314	Linear Algebra	3
MATH A324	Introduction to Real Analysis	3
Select one of the following from Analysis and Topology:		3
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MATH A410	Introduction to Complex Analysis	
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PHYS A456	Nonlinear Dynamics and Chaos	
Select one of the following from Statistics:		3-4
STAT A307	Probability and Statistics	
STAT A308	Intermediate Statistics for the Sciences	
STAT A402	Scientific Sampling	
STAT A403	Regression Analysis	

STAT A404	Analysis of Variance	
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STAT A490	Selected Topics	
MATH A371	Stochastic Processes	
MATH A407	Mathematical Statistics I	
MATH A408	Mathematical Statistics II	
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MATH A305	Introduction to Geometries	
MATH A309	Introduction to Number Theory	
MATH A420	Historical Mathematics	
Select any six additional credits from any of the four categories above or from the following		6
MATH A490A*	Special Topics in Pure Mathematics	
MATH A490B*	Special Topics in Applied Mathematics	
MATH A495*	Mathematics Practicum	
MATH A498*	Individual Research	
Total Credits		45-46

*A maximum of 6 credits of MATH A490A, MATH A490B, MATH A495, and/or MATH A498 *may be applied to the degree requirements.*

Additional Requirements

- All Mathematics majors must take a standardized test of knowledge of mathematics approved by the Mathematics faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.
- All Mathematics majors must complete a portfolio demonstrating their mathematics knowledge. There is no grade for this requirement. The portfolio will normally be submitted in the semester of graduation.

A total of 120 credits is required for the degree, of which 42 credits must be upper division.

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

1a. School or College	1b. Division	1c. Department
KP KPC	No Division Code	Business and Industry

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
PETR	A101	A194	1.0	(0+3)

6. Complete Course Title
Industrial Hand Tools

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
- ☐ Automatic Restrictions
  - ☐ 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

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: 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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See Attached List		
2.		
3.		

Initiator Name (typed): Henry W Haney Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2-19-15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2-18-15

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 industrial handtools and their safe, efficient, and effective use.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
None

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

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

16d. Registration Restriction(s) *(non-codable)*
Admitted students in Process Technology A.A.S. major, Industrial Process Instrumentation A.A.S. major, Petroleum Technology Undergraduate Certificate Program, or Welding Technology Undergraduate Certificate Program.

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Provide choice for electives.

Initiator (faculty only) Date
Henry W Haney
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
Kenai Peninsula College
Course Content Guide

I.	**Initiation Date:**	February 18, 2015
II.	**Course Information**	
A.	College:	Kenai Peninsula College
B.	Course Title:	Industrial Hand Tools
C.	Course Subject/Number:	PETR A101
D.	Credit:	1.0 credits
E.	Contact Time:	0+3
F.	Grading Information:	A-F
G.	Course Description:	Introduces industrial hand tools and their safe, efficient, and effective use.
H.	Status of course relative to degree or certificate programs:	Elective
I.	Lab Fee:	Yes
J.	Coordination:	UAA Faculty Listserv, Process Technology, Petroleum Technology, Industrial Instrumentation, and Welding Technology.
K.	Course Prerequisite:	None
L.	Registration Restrictions:	Admitted students in Process Technology A.A.S. major, Industrial Process Instrumentation A.A.S. major, Petroleum Technology Undergraduate Certificate Program, or Welding Technology Undergraduate Certificate Program.

III. Course Level Justification

This course introduces students, through hands-on experience and lecture, to various types of industrial hand tools and their safe, efficient, and effective use.

IV. Instructional Goals

The instructor will:

A. Identify a variety of industrial hand tools and explain their function.
B. Demonstrate how a variety of industrial hand tools would be used in an effective manner.
C. Provide an overview of industrial hand tool safety, efficiency and proper tool selection.
D. Provide a selection of applicable hands-on projects for students to gain familiarity and confidence through the use of industrial hand tools.

V. Student Learning Outcomes

The student will be able to:	One or more of the following assessment methods will be used:
A. Identify a variety of industrial hand tools	Homework and tests
B. Define the specific uses of a variety of industrial hand tools.	Homework and tests
C. Explain the safe use of a variety of industrial hand tools.	Homework and tests
D. Discuss the efficient use of industrial hand tools.	Homework and tests
E. Select correct industrial hand tools for specific projects.	Projects
F. Demonstrate acquired skills with industrial hand tools through accomplishing a variety of selected projects.	Projects

VI. Course Content Outline

A. Tool use habits
   1. Proper tool selection
   2. Safe tool use: proper clothing, eye protection, hair, and jewelry considerations
   3. Proper tool care
   4. The organized tool box

B. Measuring tools and measurements
   1. Comparison of SAE, Metric, and British measurement systems
   2. Linear and angular measurement
   3. Rulers and measuring tapes
   4. Slide, vernier, and micrometer calipers
   5. Levels and plumb bobs
   6. T-squares, speed squares, and framing squares

C. Wrenches
   1. Pipe wrench sizes: 6” to 36”
   2. Crescent wrench sizes: 6” to 24”
   3. Monkey wrench sizes: 6” to 24”
   4. Box end and open end wrench sizes: ¼” to 1 ½”
   5. Socket wrench drive sizes: ¼” to 1 ½”
   6. Socket wrench socket sizes: 1/16” to 6”
   7. Torque wrenches
   8. Hammer wrenches

D. Gripping tools
   1. Slip joint pliers
   2. Channel lock pliers
   3. Vise grips
   4. Other plier types

E. Cutting tools
    1. Shears and nippers
    2. Wire cutters
    3. Side cutters
    4. Industrial knives
    5. Cold chisels
    6. Hacksaws
F. Striking tools
    1. Hammers
    2. Mallets
    3. Sledges
    4. Brass drifts (specific applications)
G. Screwdrivers (manual and battery-powered)
    1. Flat
    2. Phillips
    3. Other tip types
H. Pneumatic tools
    1. Compressors
    2. Hoses
    3. Tool lubricants
I. Electric tools
    1. Power sources
    2. Power cord selection
    3. Power converters
M. Hydraulic systems
    1. Pump
    2. Hoses fittings
N. Specialty Tools
    1. Gear pullers
    2. Punches
    3. Extractors and easy-outs
    4. Cheater bars
    5. Magnets
    6. Mirrors
    7. Bore scopes
    8. Bolt cutters
    9. Torches
    10. Rags and absorbent materials
O. Shop tools
    1. Portable lifts, hoists and come-alongs
    2. Bench vise and pipe vise
    3. Pipe cutting and threading tools
    4. Hydraulic and mechanical jacks

P. Pipe work specific
    1. Flanges, flange spreaders, gaskets, and alignment spikes
    2. Blinds and spool pieces
    3. Nuts, bolts, and all-thread
    4. Thread preparation
Q. Lubrication
    1. Lube oil and grease
    2. Adhesives and sealants
    3. Anti-seize compounds
    4. Penetrants
R. Abrasive mediums
    1. Sandblasting
    2. Grinding
    3. Sanding
    4. Filing

VII. Suggested Text

U.S. Bureau of Naval Personnel (2008). *Tools and Their Uses* (1st ed.). Thousand Oaks, CA: BN Publishing

VIII. Bibliography

Davis, T. and Nelson, C. (2004). *Audel Millwrights and Mechanics Guide* (5th ed.). Hoboken, NJ: John Wiley & Sons

McCauley, C. (2001). *Shop Reference for Students and Apprentices, From Machinery's Handbook* (2nd ed.). New York, NY: Industrial Press, Inc.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. Process Technology A.A.S.	2-19-15	Henry W. Haney
2. Petroleum Technology Undergraduate Certificate	2-19-15	Henry W. Haney
3. Industrial Process Instrumentation A.A.S	2-19-15	Henry W. Haney
5. Welding Technology Undergraduate Certificate	2-19-15	Fritz Miller

Initiator Name (typed): Henry W. Haney Initiator Signed Initials: _____ Date:_____

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

1a. School or College	1b. Division	1c. Department
EN SOENGR	No Division Code	Mechanical Engineering

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
ME	A460	N/A	3	(2+2)

6. Complete Course Title
Turbomachinery

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
- ☐ Other Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☐ Other (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☐ Course Prerequisites
- ☐ Co-requisites
- ☐ Registration Restrictions

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: 99/9999

12. ☐ Cross Listed with N/A

☒ Stacked with ME A660

Signature Cross-Listed Coordination

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.

Impacted Program/Course	*Catalog Page(s) Impacted*	*Date of Coordination*	*Chair/Coordinator Contacted*
1. Mechanical Engineering	Courtesy Coordination	02/06/2015	Jennifer Brock
2.			
3.			

Initiator Name (typed): Getu Hailu Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 02/06/2015
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 02/06/2015

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 application of energy, momentum, and continuity equations to designing turbomachinery such as pumps, compressors, and turbines. Not available for credit to students who have completed ME A660.

16a. Course Prerequisite(s) *(list prefix and number)*
(ES A341, ES 341L and ME A313) with a grade of C or higher

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)*

17. ☒ Mark if course has fees Standard CoEng fee

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Added to satisfy demand for BSE ME Advanced Engineering Electives.

Initiator (faculty only) Date
Getu Hailu
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chairperson Date

☐ Approved
☐ Disapproved Curriculum Committee Chairperson Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chairperson Date

☐ Approved
☐ Disapproved Provost or Designee Date

COURSE CONTENT GUIDE
University of Alaska Anchorage, College of Engineering

ME A460
Turbomachinery

1. Course Starting Date	Fall 2015
2. Course Information	
A. College	College of Engineering (CoENG)
B. Course Prefix	ME
C. Course Number	A460
D. Number of Credits and Contact Hours	
	Number of Credits: 3
	Contact Hours: 2+2
E. Course Title	Turbomachinery
F. Grading Basis	A-F
G. Implementation Date	Fall 2015
H. Course Description	Introduces the application of energy, momentum, and continuity equations to designing turbomachinery such as pumps, compressors, and turbines. Not available for credit to students who have completed ME A660.
I. Course Prerequisites	(ES A341, ES 341L and ME A313) with minimum grade of C.
J. Course Co-requisites:	N/A
K. Other Restrictions:	N/A
L. Registration Restrictions:	N/A
M. Course Fee	Standard CoENG fee
K. Stacked	Yes, with ME A660

3. Course Level Justification
This course builds upon concepts and models developed in junior level fluid mechanics and thermodynamics courses so is a level commensurate with higher level courses.

4. Instructional Goals
The instructor will

1. Discuss application of energy, momentum, and continuity equations of thermo-fluids to turbomachinery.
2. Explain incompressible, inviscid fluid/rotor energy transfer using Euler's equations.
3. Explain fundamental design principles centrifugal, axial and mixed flow machines, and turbines.
4. Explain how to construct and analyze velocity diagrams for axial and centrifugal rotors and rotor/stator sets.

5. Present effect of blade geometry, dimensionless performance of turbomachines, similarity and scaling laws.
6. Explain cavitation and methods of avoiding cavitation.

5. Student Learning Outcomes and Assessment Methods

Students will be evaluated using a variety of tools at the instructor's discretion which may include but are not limited to those listed below.

Student Learning Outcomes Upon completion of this course, students will be able to:	**Assessment Method**
1. Apply Euler's equation to analyze incompressible, inviscid fluid/rotor energy transfer in turbomachines.	Homework assignments, projects, quizzes, midterm exams, in-class presentations, and a final exam
2. Identify various types of turbomachinery. Explain the differences between true turbomachines and positive displacement devices.	Homework assignments, projects, quizzes, midterm exams, in-class presentations, and a final exam
3. Design radial-flow and radial flow turbomachines. Calculate efficiencies of turbomachines.	Homework assignments, projects, quizzes, midterm exams, in-class presentations, and a final exam
4. Construct and analyze velocity diagrams for centrifugal and axial rotors and rotor/stator sets.	Homework assignments, projects, quizzes, midterm exams, in-class presentations, and a final exam
5. Read and interpret performance curves for pumps, fans, and turbines.	Homework assignments, projects, quizzes, midterm exams, in-class presentations, and a final exam
6. Use scaling laws to predict turbomachine performance, by interpolation or extrapolation from known performance data.	Homework assignments, projects, quizzes, midterm exams, in-class presentations, and a final/comprehensive exam
7. Compute Net Positive Suction Head (NPSH). Determine methods of avoiding cavitation.	Homework assignments, projects, quizzes, midterm exams, in-class presentations, and a final exam

6. Topical Course Outline

This course will cover a variety of topics related to turbomachinery, which may include but are not limited to:

A. Introduction
   History of Turbomachines, types of turbomachines and application of turbomachines
B. Energy Transfer in Turbomachines
   Review of thermo-fluids theory related to turbomachinery
C. Centrifugal Pumps

Fundamental working principles, fundamental principles of design of centrifugal pumps, performance characteristics, pump selection and applications, cavitation

D. Axial Flow Pumps and Fans

Introduction, fundamental theory and design procedure of axial flow pumps and fans, fans selection

E. Centrifugal Fans, Blowers and Compressors

Introduction and classification, fundamental theory and design procedures, performance parameters and characteristics, applications of centrifugal compressors and selection

F. Hydraulic Turbines

Introduction to hydropower, classification of hydro-turbines, performance characteristics and selection of hydro-turbines

G. Dimensional Analysis

Dimensions and dimensional homogeneity, Similarity Laws

7. Suggested Text

Peng, W. W., Fundamentals of Turbomachinery, John Wiley & Sons, Inc., 2008.

8. Bibliography

Schobeiri, M.T., Turbomachinery Flow Physics and Dynamic Performance, Springer-Verlag, 2012.

Greitzer, E. C., Tan, and Graf, M., Internal Flow: Concepts and Applications, Cambridge University Press, 2004.

Korpela, S., Principles of Turbomachinery, John Wiley & Sons, Inc., 2011.

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

1a. School or College	1b. Division	1c. Department
CH College of Health	No Division Code	WAMI

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
BIOM	A490	N/A	1-3	(1-3+0)

6. Complete Course Title
Selected Lecture Topics in Biomedicine
Selected Topics Biomedicine
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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other Updated CCG (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☒ Cross-Listed/Stacked
- ☐ Course Prerequisites
- ☐ Co-requisites
- ☐ Registration Restrictions
- ☐ General Education Requirement

9. Repeat Status Yes # of Repeats 2 Max Credits 9

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

12. ☐ Cross Listed with

☒ Stacked with BIOM A690

Signature Cross-Listed Coordination

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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1.		
2.		
3.		

Initiator Name (typed): Cindy Knall Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 3/3/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 3/3/15

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)*
Detailed coverage of a selected lecture topic in biomedicine. Special Notes: See schedules for specific subtitles to be offered. Course may be repeated for credit up to 3 times only with change in subtitles.

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

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

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

16d. Registration Restriction(s) *(non-codable)*
Junior or Senior Standing and Faculty Permission

17. ☐ Mark if course has fees

18. ☒ Mark if course is a selected topic course

19. Justification for Action
Stacking with BIOM A690 will better serve UAA students interested in careers in biomedicine either as health care providers or scientists by providing more selected topic opportunities.

Initiator (faculty only) Date
Cindy Knall, PhD
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
College of Health
Course Content Guide

I.	**Date of Initiation:**	Spring 2015
II.	**Curriculum Action Request**	
	A. College:	College of Health
	B. Course Prefix:	BIOM
	C. Course Number:	A490
	D. Number of Credits and Contact Hours:	1-3; 1-3+0
	E. Course Title:	Selected Lecture Topics in Biomedicine
	F. Grading Basis:	A-F
	G. Implementation Date:	Fall 2015
	H. Cross-listed:	N/A
	I. Stacked:	BIOM A690
	J. Course Description:	Detailed coverage of a selected lecture topic in biomedicine. Special Notes: See schedules for specific subtitles to be offered. Course may be repeated for credit up to 3 times only with change in subtitles.
	K. Course Prerequisites:	N/A
	L. Course Co-requisites:	N/A
	M. Automatic Restrictions:	Class
	N. Registration Restrictions:	Junior or Senior Standing and Faculty Permission
	O. Course Fees:	No

III. Course Level Justification

This course is designed as an upper division elective comparable to 400-level courses. This course builds upon knowledge acquired in lower division courses in a typical biology or biochemistry undergraduate degree program. This course requires students to synthesize, compare and contrast, and apply course materials to solve complex problems.

IV. Instructional Goals and Student Learning Outcomes

A. Instructional Goals.

The instructor will:

1. describe, summarize, analyze and relate information on the selected topic to support students in developing comprehension of the subject matter
2. guide students in the critical analysis of information to identify normal and abnormal processes in humans
3. guide students in proposing new ways of investigating and/or treating abnormal processes in humans

B. Student Learning Outcomes and Assessment Measures (Example Course)

Student Learning Outcomes and Assessment Measures	
Student Learning Outcomes Upon completion students will be able to:	Assessment Measures
1. Determine mean electrical axis of the heart under varying conditions and therapeutic interventions	Problem sets
2. Analyze blood gas status of a patient, and predict response to therapeutics	Problem sets
3. Calculate renal clearance and acid-basis status of patients	Problem sets
4. Infer problems with gastrectomy	Case studies
5. Diagnose patients with conditions including heart failure, dyspnea, polyuria, emphysema, and gastric hyper-acidity	Small group case discussions
6. Identify current areas of research for heart failure, dyspnea, polyuria, emphysema, and gastric hyper-acidity	Small group case discussions
7. Describe the fundamental physical and chemical principles underlying basic physiological processes in the cardiovascular, respiratory, renal and gastrointestinal systems	Examinations

V. Topical Course Outline (Example Course)

1. **Introduction**
   a. Diffusion and osmosis
   b. Primary and secondary active transport
   c. Generation of a resting membrane potential
   d. Action potentials
   e. Muscle contraction
2. **Cardiovascular Physiology**
   a. Structure and function of the CV system & heart sounds
   b. Cardiac action potential
   c. Electrocardiogram
   d. Intrinsic and extrinsic control of heart rate and contractility
   e. Starling curve
   f. Cardiac vector analysis
   g. Cardiac arrhythmias
   h. Preload, afterload, contractility and the cardiac cycle
   i. Pressure volume loops
   j. Pressure, flow and resistance
   k. Cardiac and vascular function curves
   l. Determinants and control of mean arterial pressure
   m. Capillary fluid exchange
   n. Blood flow control
   o. Shock

p. Fetal circulation

3. Respiratory Physiology

a. Surface tension and surfactant
b. Gas pressures and partial pressures.
c. Pressure flow and pressure volume relationships
d. Lung volumes and pulmonary function analysis
e. Dynamic airway compression
f. Work of breathing
g. Alveolar ventilation
h. Dead space
i. Oxygen and carbon dioxide transport
j. A-V O_2 difference
k. Pulmonary gas exchange
l. Pulmonary shunts, and V/Q inequalities
m. Sleep apnea and SIDS
n. Central nervous system control of breathing

4. Renal Physiology

a. Fluid compartments
b. Balance
c. Glomerular filtration
d. Tubuloglomerular feedback
e. Renal hemodynamics
f. Renal oxygen consumption
g. Counter current multiplication in the loop of Henle
h. Sodium transport
i. Renin-angiotensin-aldosterone system (RAAS)
j. Potassium transport
k. Bicarbonate and hydrogen ion transport
l. Water transport (ADH)
m. Atrial natriuretic peptide (or factor)
n. Diuretics
o. Calcium and phosphate transport
p. Tubular secretion
q. Renal clearance (inulin, PAH, glucose, free water)
r. Dialysis
s. Micturition

5. Acid-Base Physiology

a. Acids and bases
b. Respiratory disturbances
c. Metabolic disturbances
d. Compensation for acid-base disturbances
e. Anion gap

6. Gastro Intestinal Physiology

a. Gastro intestinal function
b. Enteric nervous system
c. Salivary secretion

d. Swallowing (deglutition)
e. Acid secretion in the stomach
f. Gastrointestinal motility and hormones
g. Pancreatic secretion
h. Protein breakdown
i. Chloride channels and cystic fibrosis
j. Function of the gall bladder and bile
k. Absorption of fats
l. Carbohydrate and amino acid absorption
m. Large intestine
n. Defecation
o. Problems associated with the GI tract

VI. Suggested Texts

Costanzo, L. *Physiology, 5th Edition*. Philadelphia, PA: Elsevier; 2013.

VII. Bibliography (American Medical Association style)

Boron, W.F. and Boulpaep, E.L. *Medical Physiology, 2nd Edition*. Philadelphia, PA: Elsevier; 2012.

Hall, J.E. *Guyton & Hall's Textbook of Medical Physiology, 13th Edition.* Philadelphia, PA: Elsevier; 2015.

Koeppen, B.M. and Stanton, B.A. *Berne & Levy's Physiology, 6th Edition*. Philadelphia, PA: Elsevier; 2010.

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

1a. School or College	1b. Division	1c. Department
CH College of Health	No Division Code	WAMI

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
BIOM	A690	N/A	1-3	(1-3+0)

6. Complete Course Title
Advanced Selected Topics in Biomedicine
Adv Selected Topic Biomedicine
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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other Updated CCG (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☒ Cross-Listed/Stacked
- ☐ Course Prerequisites
- ☐ Co-requisites
- ☒ Registration Restrictions
- ☐ General Education Requirement

9. Repeat Status Yes # of Repeats 2 Max Credits 9

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

12. ☐ Cross Listed with

☒ Stacked with BIOM A490

Signature Cross-Listed Coordination

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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1.		
2.		
3.		

Initiator Name (typed): Cindy Knall Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 3/3/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 3/3/15

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 coverage of a selected topic within biomedicine. Students enrolled in BIOM A690 will be required to complete additional work and at a higher level than students enrolled in BIOM A490 with the same subtitle. Special Notes: With a change in subtitle, course may be repeated for credit. Not available for credit to students who have completed BIOM A490 having the same subtitle. May be repeated for a maximum of 9 credits.

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

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

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

16d. Registration Restriction(s) *(non-codable)*
Graduate Standing and Faculty Permission

17. ☐ Mark if course has fees

18. ☒ Mark if course is a selected topic course

19. Justification for Action
The changes made to this course, including grading basis and stacking with BIOM A490, will better serve UAA based master's and doctoral students with interests in biomedicine by allowing for more opportunities to study specific selected topics.

Initiator (faculty only) Date
Cindy Knall, PhD
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved
Department Chair Date

☐ Approved
☐ Disapproved
College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved
Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved
Provost or Designee Date

University of Alaska Anchorage
College of Health
Course Content Guide

I.	**Date of Initiation:**	Spring 2015
II.	**Curriculum Action Request**	
	A. College:	College of Health
	B. Course Prefix:	BIOM
	C. Course Number:	A690
	D. Number of Credits and Contact Hours:	1-3; 1-3+0
	E. Course Title:	Advanced Selected Topics in Biomedicine
	F. Grading Basis:	A-F
	G. Implementation Date:	Fall 2015
	H. Cross-listed:	N/A
	I. Stacked:	BIOM A490
	J. Course Description:	Advanced coverage of a selected topic within biomedicine. Students enrolled in BIOM A690 will be required to complete additional work and at a higher level than students enrolled in BIOM A490 with the same subtitle. Special Notes: With a change in subtitle, course may be repeated for credit. Not available for credit to students who have completed BIOM A490 having the same subtitle. May be repeated for a maximum of 9 credits.
	K. Course Prerequisites:	N/A
	L. Course Co-requisites:	N/A
	M. Automatic Restrictions:	Level
	N. Registration Restrictions:	Graduate Standing and Faculty Permission
	O. Course Fees:	No

III. Course Level Justification

This course is designed to expose students, pursuing graduate level study in biomedicine, to current research and scholarly topics in a select topic area of biomedicine. The expectation is that students will analyze and evaluate research and clinical data to formulate diagnoses and future avenues of research within biomedicine. This course presumes the students possess skills acquired in a typical biology or biochemistry undergraduate degree program.

IV. Instructional Goals and Student Learning Outcomes

A. Instructional Goals.

The instructor will:

1. describe, summarize, analyze and relate information on the selected topic to support students in developing comprehension of the subject matter
2. guide students in the critical analysis of information to identify normal and abnormal processes in humans
3. guide students in proposing new ways of investigating and/or treating abnormal processes in humans

B. Student Learning Outcomes and Assessment Measures (Example Course)

Student Learning Outcomes and Assessment Measures	
Student Learning Outcomes Upon completion the student will be able to:	Assessment Measures
1. Determine mean electrical axis of the heart under varying conditions and therapeutic interventions	Problem sets
2. Analyze blood gas status of a patient, and predict response to therapeutics	Problem sets
3. Calculate renal clearance and acid-basis status of patients	Problem sets
4. Infer problems with gastrectomy	Case studies
5. Diagnose patients with conditions including heart failure, dyspnea, polyuria, emphysema, and gastric hyper-acidity	Small group case discussions
6. Identify current areas of research for heart failure, dyspnea, polyuria, emphysema, and gastric hyper-acidity	Small group case discussions
7. Describe the fundamental physical and chemical principles underlying basic physiological processes in the cardiovascular, respiratory, renal and gastrointestinal systems	Examinations
8. Evaluate the current literature in an area of relevance to this special topic	Review article written at a professional level
9. Communicate advanced biomedical concepts within the special topic to an undergraduate audience	Presentation to undergraduate students enrolled in the corresponding A490 course

V. Topical Course Outline (Example Course)

1. **Introduction**
   a. Diffusion and osmosis
   b. Primary and secondary active transport
   c. Generation of a resting membrane potential
   d. Action potentials
   e. Muscle contraction
2. **Cardiovascular Physiology**
   a. Structure and function of the CV system & heart sounds
   b. Cardiac action potential
   c. Electrocardiogram
   d. Intrinsic and extrinsic control of heart rate and contractility
   e. Starling curve
   f. Cardiac vector analysis
   g. Cardiac arrhythmias
   h. Preload, afterload, contractility and the cardiac cycle
   i. Pressure volume loops
   j. Pressure, flow and resistance
   k. Cardiac and vascular function curves

l. Determinants and control of mean arterial pressure
m. Capillary fluid exchange
n. Blood flow control
o. Shock
p. Fetal circulation

3. Respiratory Physiology

a. Surface tension and surfactant
b. Gas pressures and partial pressures.
c. Pressure flow and pressure volume relationships
d. Lung volumes and pulmonary function analysis
e. Dynamic airway compression
f. Work of breathing
g. Alveolar ventilation
h. Dead space
i. Oxygen and carbon dioxide transport
j. A-V O_2 difference
k. Pulmonary gas exchange
l. Pulmonary shunts, and V/Q inequalities
m. Sleep apnea and SIDS
n. Central nervous system control of breathing

4. Renal Physiology

a. Fluid compartments
b. Balance
c. Glomerular filtration
d. Tubuloglomerular feedback
e. Renal hemodynamics
f. Renal oxygen consumption
g. Counter current multiplication in the loop of Henle
h. Sodium transport
i. Renin-angiotensin-aldosterone system (RAAS)
j. Potassium transport
k. Bicarbonate and hydrogen ion transport
l. Water transport (ADH)
m. Atrial natriuretic peptide (or factor)
n. Diuretics
o. Calcium and phosphate transport
p. Tubular secretion
q. Renal clearance (inulin, PAH, glucose, free water)
r. Dialysis
s. Micturition

5. Acid-Base Physiology

a. Acids and bases
b. Respiratory disturbances
c. Metabolic disturbances
d. Compensation for acid-base disturbances
e. Anion gap

6. **Gastro Intestinal Physiology**
    a. Gastro intestinal function
    b. Enteric nervous system
    c. Salivary secretion
    d. Swallowing (deglutition)
    e. Acid secretion in the stomach
    f. Gastrointestinal motility and hormones
    g. Pancreatic secretion
    h. Protein breakdown
    i. Chloride channels and cystic fibrosis
    j. Function of the gall bladder and bile
    k. Absorption of fats
    l. Carbohydrate and amino acid absorption
    m. Large intestine
    n. Defecation
    o. Problems associated with the GI tract

VI. Suggested Texts

Boron, W.F. and Boulpaep, E.L. *Medical Physiology, 2nd Edition*. Philadelphia, PA: Elsevier; 2012.

VII. Bibliography (American Medical Association style)

Costanzo, L. *Physiology, 5th Edition*. Philadelphia, PA: Elsevier; 2013.

Hall, J.E. *Guyton & Hall's Textbook of Medical Physiology, 13th Edition.* Philadelphia, PA: Elsevier; 2015.

Koeppen, B.M. and Stanton, B.A. *Berne & Levy's Physiology, 6th Edition*. Philadelphia, PA: Elsevier; 2010.

I. The Music Department is seeking to change the prerequisites for MUS A221 Music History I (3 credits)

The music department faculty have decided that the prerequisites for this course should be changed in order to ensure that students entering the music history sequence required of music majors will have adequate score-reading and writing skills to successfully complete the course. To that end, we have decided that the prerequisites should be changed to require successful completion of both MUS A131 (Theory I) and ENGL A111 (Introduction to Composition), with exceptions to be allowed for well-prepared students with permission of the instructor.

II. The Music Department is seeking to change the prerequisites for MUS A222 Music History II (3 credits)

The music faculty have decided that the CCG and course description for MUS A221 should not include coverage of World Music, since the music department is now providing much more comprehensive attention to World Music in separate new course offerings (MUS A215 and MUS A216). The music faculty have also decided that MUS A221 should serve as a pre-requisite to MUS A222, in lieu of the current prerequisites: (MUS A121 or MUS A131), since the score-analysis skills needed to successfully complete MUS A222 are introduced in MUS A221, and since the chronological organization of these two courses fosters a better grasp of important historical developments in music.

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

1a. School or College	1b. Division	1c. Department
AS CAS	AFAR Division of Fine Arts	MUSIC

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
MUS	A221		3	(3+0)

6. Complete Course Title
History of Western Art Music I

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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ 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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. B.A. Music	2/20/15	Dr. Christopher Sweeney
2. B.M. Music Performance	2/20/15	Dr. Christopher Sweeney
3. B.M. Music Education	2/20/15	Dr. Christopher Sweeney

Initiator Name (typed): John Lutterman Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/23/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/20/15

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

15. Course Description *(suggested length 20 to 50 words)*
Music before 1800. Examines stylistic developments and structures of important musical genres from Antiquity to 1800 within their historical and cultural contexts. Special Note: BA music majors may not use this course towards their GER-Fine Arts or CAS Humanities sequence requirements.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
MUS A131 and ENGL A111 - Students must earn a grade of "C" or better to quatlify for admittance to MUS A221

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 music department faculty have decided that the prerequisites for this course should be changed in order to ensure that students entering the music history sequence required of music majors will have adequate score-reading and writing skills to successfully complete the course. To that end, we have decided that the prerequisites should be changed to require successful completion of both MUS A131 and ENGL A111, with a minumum grade of "C" in both courses.

Initiator (faculty only) Date John Lutterman 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	College/School Curriculum Committee Chair Date	☐ Approved ☐ Disapproved	Provost or Designee Date

COURSE CONTENT GUIDE
UNIVERSITY OF ALASKA ANCHORAGE
Department of Music

I. Date Initiated Fall Semester, 2015

II. Course Information

College/School: College of Arts and Sciences
Department: Music
Program: Music
Course Title: History of Western Art Music I
Course Number: MUS A221
Credits: 3
Contact Hours: 3 + 0
Grading Basis: A-F
Course Description: Music before 1800. Examines stylistic developments and structures of important musical genres from Antiquity to 1800 within their historical and cultural contexts.
Cross Listed No
Course Prerequisites: MUS A131 and ENGL A111, with a minimum grade of "C" in each course.
Registration Restrictions: None
Fees: No
Special Note: BA music majors may not use this course towards their GER-Fine Arts or CAS Humanities sequence requirements.

III. Course Activities

Class activities include guided discussion of assigned readings as well as close examination and analysis of music scores. The student will be required to listen to examples of important works of music and submit written assignments as required. The written assignments will involve a substantial research paper.

IV. Course Level Justification: This course prepares the music student for all upper division Music History Seminars that are required for graduation.

V. Course Outline:

A. Development of analytical skills, including the formal and stylistic analysis of musical compositions and performances, close reading of specific works, and critically examining the nature of historical documents and artifacts.

B. Learning to recognize different styles and periods in the history of Western art music, from Antiquity to the Medieval, Renaissance, Baroque and Classical eras, with particular focus on the ability to identify significant composers, forms and genres.

C. Cultivating a broader cultural/historical perspective on musical developments, with attention to developments in the other arts, and to the effects of social and political history on the social status of composers, performers and audiences.

VI. Instructional Goals and Student Learning Outcomes:

A. Instructional Goals.
The instructor will:
1. Explain the significance and evolving roles that music played in Western culture from Antiquity through the Medieval, Renaissance, Baroque and Classical eras.
2. Organize and place selected music examples into their respective periods of social, artistic, and political history.
3. Demonstrate the characteristics of significant styles and genres with scores, recordings, and video demonstrations.

B. Student Learning Outcomes	**Assessment Method**
Identify and describe music from Antiquity, Medieval, Renaissance, Baroque and Classical eras	Written assignments Research paper
Place works of music in their historical contexts	Objective examinations
Analyze musical styles and present a reasoned assessment of their significance	Special project
Develop awareness of historically informed performing practices.	Special project
Recognize the impact of music respective to periods of social, artistic and political history	Special project

VI. Suggested Text: Seaton, Douglass (2009). *Ideas and Styles in the Western Musical Tradition* (3rd Edition). New York: Oxford University Press.

VII. Bibliography:

Atlas, Allan (1998). *Renaissance Music: Music in Western Europe, 1400-1600.* New York: W. W. Norton.

Buelow, George, editor (1994). *The Late Baroque Era: From the 1680s to 1740.* Englewood Cliffs, New Jersey: Prentice Hall.

Burkholder, J. Peter (2014). *A History of Western Music* (9th edition). New York: W. W. Norton.

Burkholder, J. Peter (2014). *The Norton Anthology of Western Music* (7th edition). New York: W. W. Norton.

Carter, Tim, editor (2006). *The Cambridge History of Seventeenth-Century Music*. New York: Cambridge University Press.

Clayton, Martin, editor (2011). *The Cultural Study of Music: A Critical Introduction* (2nd edition). London: Routledge.

Everist, Mark, editor (2011). *The Cambridge Companion to Medieval Music.* New York: Cambridge University Press.

Heller, Wendy (2013). *Music in the Baroque.* New York: W. W. Norton.

Keefe, Simon, editor (2014). *The Cambridge History of Eighteenth-Century Music.* New York: Cambridge University Press.

Knighton, Tess (1998). *Companion to Medieval and Renaissance Music*. Berkeley, CA: University of California Press.

Price, Curtis, editor (1994). *The Early Baroque Era: From the late 16th century to the 1660s.* Englwood Cliffs, New Jersey: Prentice-Hall.

Rice, John (2012). *Music in the Eighteenth Century.* New York: W. W. Norton.

Taruskin, Richard (2010). *The Oxford History of Western Music*. New York: Oxford University Press.

Treitler, Leo, editor (1998). *Source Readings in Music History*. New York: W. W. Norton.

Weiss, Piero, editor (2007). *Music in the Western World: A History in Documents*. Boston: Cenage Learning.

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

1a. School or College	1b. Division	1c. Department
AS CAS	AFAR Division of Fine Arts	MUSIC

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
MUS	A222		3	(3+0)

6. Complete Course Title
History of Western Art Music II

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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ 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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. B.A. Music	2/20/15	Dr. Christopher Sweeney
2. B.M. Music - Music Performance	2/20/15	Dr. Christopher Sweeney
3. B.M. Music - Music Education	2/20/15	Dr. Christopher Sweeney

Initiator Name (typed): John Lutterman Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/23/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/20/15

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)*
Western Art music since 1800. Examines stylistic developments and structures of important musical genres from 1800 to the present within their historical and cultural contexts. Special Note: BA music majors may not use this course towards their GER -Fine Arts or CAS Humanities sequence requirements. Attributes: UAA Fine Arts GER, UAA Humanities GER.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
MUS A221, with a minimum grade of a "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 music faculty have decided that the CCG and course description for MUS A221 should not include coverage of World Music, since the music department is now providing much more comprehensive attention to World Music in separate new course offerings (MUS A215 and MUS A216). The music faculty have also decided that MUS A221 should serve as a pre-requisite to MUS A222, in lieu of the current prerequisites: (MUS A121 or MUS A131), since the score-analysis skills needed to successfully complete MUS A222 are introduced in MUS A221, and since the chronological organization of these two courses fosters a better grasp of important historical developments in music.

Initiator (faculty only) Date John Lutterman 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	College/School Curriculum Committee Chair Date	☐ Approved ☐ Disapproved	Provost or Designee Date

COURSE CONTENT GUIDE
UNIVERSITY OF ALASKA ANCHORAGE
Department of Music

I. Date Initiated Fall Semester, 2015

II. Course Information

College/School: College of Arts and Sciences
Department: Music
Program: Music
Course Title: History of Western Art Music II
Course Number: MUS A222
Credits: 3
Contact Hours: 3 + 0
Grading Basis: A-F
Course Description: Western Art music since 1800. Examines stylistic developments and structures of important musical genres from 1800 to the present within their historical and cultural contexts. Special Note: BA music majors may not use this course towards their GER-Fine Arts or CAS Humanities sequence requirements.

Cross Listed No
Course Prerequisites: MUS A221
Registration Restrictions: None
Fees: No
Special Note: BA music majors may not use this course towards their GER-Fine Arts or CAS Humanities sequence requirements.

III. Course Activities

Class activities include guided discussion of assigned readings as well as close examination and analysis of music scores. The student will be required to listen to examples of important works of music and submit written assignments as required. The written assignments will involve a substantial research paper.

IV. Course Level Justification: This course prepares the music student for all upper division Music History Seminars that are required for graduation.

V. Course Outline:

A. Development of analytical skills, including the formal and stylistic analysis of musical compositions and performances, close reading of specific works, and critically examining the nature of historical documents and artifacts.

B. Learning to recognize different styles and periods in the history of Western art music, from 1800 to the present, with particular focus on the ability to identify significant composers, forms and genres.

C. Cultivating a broader cultural/historical perspective on musical developments, with attention to developments in the other arts, and to the effects of social and political history on the social status of composers, performers and audiences.

VI. Instructional Goals and Student Learning Outcomes:

A. Instructional Goals.
The instructor will:
1. Explain the significance and evolving roles that music has played in Western culture from 1800 to the present.
2. Organize and place selected music examples into their respective periods of social, artistic, and political history.
3. Demonstrate the characteristics of significant styles and genres with scores, recordings, and video demonstrations.

B. Student Learning Outcomes	**Assessment Method**
Identify and describe Western art music of the Romantic, Modernist, and Post-Modern eras.	Written assignments Research paper
Place works of music in their historical contexts	Objective examinations
Analyze musical styles and present a reasoned assessment of their significance	Special project
Develop awareness of historically informed performing practices.	Special project
Recognize the impact of music respective to periods of social, artistic and political history	Special project

VI. Suggested Text: Seaton, Douglass (2009). *Ideas and Styles in the Western Musical Tradition* (3rd Edition). New York: Oxford University Press.

VII. Bibliography:

Burkholder, J. Peter (2014). *A History of Western Music* (9th edition). New York: W. W. Norton.

Burkholder, J. Peter (2014). *The Norton Anthology of Western Music* (7th edition). New York: W. W. Norton.

Clayton, Martin, editor (2011). *The Cultural Study of Music: A Critical Introduction* (2nd edition). London: Routledge.

Cook, Nicolas, editor (2014). *The Cambridge History of Twentieth-Century Music*. New York: Cambridge University Press.

Dahlhaus, Carl, English translation by J. Bradford Robinson (1989). *Nineteenth-Century Music*. Berkeley, CA: University of California Press.

Gloag, Kenneth (2012). *Postmodernism in Music*. New York: Cambridge University Press.

Samson, Jim, editor (1991). *The Late Romantic Era*. Englewood Cliffs, New Jersey: Prentice-Hall.

Samson, Jim, editor (2001). *The Cambridge History of Nineteenth-Century Music*. New York: Cambridge University Press.

Taruskin, Richard (2010). *The Oxford History of Western Music*. New York: Oxford University Press.

Treitler, Leo, editor (1998). *Source Readings in Music History*. New York: W. W. Norton.

Weiss, Piero, editor (2007). *Music in the Western World: A History in Documents*. Boston: Cenage Learning.

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

1a. School or College	1b. Division	1c. Department
AS CAS	AHUM Division of Humanities	AKNS

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AKNS	A461	n/a	3	(3+0)

6. Complete Course Title
Decolonizing Methodologies
Decolonizing Methodologies
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
- ☐ Automatic Restrictions
  - ☐ 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

9. Repeat Status No # of Repeats 0 Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

12. ☒ Cross Listed with ANTH
☐ 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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. AKNS minor	11/11/14	11/11/14
2.		
3.		

Initiator Name (typed): MW Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 1/20/2015
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)*
Introduces research methods that are informed by Indigenous ways of producing and sharing knowledge, ethical considerations, collaborative research design with Indigenous communities and peoples, the sharing of research materials and outcomes, multivocal authorship, learning to integrate responsibilities as a researcher, and the respect for cultural property rights and ownership.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
AKNS A201 OR ANTH 200 OR ANTH 335 (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)*

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Decolonizing Methodologies courses are now an expected course in Anthropology, Indigenous, and ethnic studies programs.

Initiator (faculty only) Date
Maria Williams
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

COURSE CONTENT GUIDE
UNIVERSITY OF ALASKA ANCHORAGE
Alaska Native Studies Program

I. Date Initiated March 23, 2015

II. Course Information

College/School: College of Arts and Sciences
Department:
Program: Alaska Native Studies
Course Title: Decolonizing Methodologies
Course Number: AKNS A461
Credits: 3
Contact Hours: 3 + 0
Grading Basis: A-F
Course Description: Introduces research methods that are informed by Indigenous ways of producing and sharing knowledge, ethical considerations, collaborative research design with Indigenous communities and peoples, the sharing of research materials and outcomes, multivocal authorship, learning to integrate responsibilities as a researcher, and the respect for cultural property rights and ownership.
Cross Listing Yes – with ANTH A461
Course Prerequisites: AKNS A201 OR ANTH A200 OR ANTH 335 (with minimum grade of C)
Registration Restrictions: None
Fees: Yes

III. Course Activities

In general, the course will involve a combination of:

A. Lectures
B. Discussions
C. Guest speakers
D. Student research design

IV. Course Level Justification

This 400-level class provides an in-depth examination of decolonizing research methods. Students will be required to analyze collaborative research design with Indigenous communities and peoples, to apply ethical considerations in their own work, to develop ways of sharing research materials and outcomes, to integrate responsibilities as a researchers with respect for cultural property rights and ownership, and to elaborate on these methods within their own fields of study.

V. Course Outline

This upper division course will introduce students to the history of scientific research and Indigenous knowledge systems through lectures, reading, class discussions and

guest lecturers. Students will be required to create a final research project. The course materials include significant reading and discussion.

1. Overview of history of scientific research. What are Indigenous methodologies?
2. Decolonizing Research Methods
3. Community-Based research Paradigms
4. Virtual Representations of Indigenous peoples
5. History/Ethnohistory
6. Anthropology and Archaeology
7. Museums and Institutional Collections
8. Natural Sciences
9. Ecology
10. Health
11. Education
12. Psychology
13. Business/Economy

VI. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. **The instructor will:**
1. Engage students through lecture and discussion on the history of scientific research and Indigenous knowledge systems.
2. Assist students in analyzing, processing, and applying course material related to Indigenous paradigms of research methods through providing feedback on reflection papers, and moderating online and in-class discussions.
3. Advise students on selecting a research topic and guide them in locating research sources pertaining to their class projects.
4. Empower students to use the understanding of Indigenous research methodologies gained in this course to design ethically sound and socially engaged collaborative projects.

B. Student Learning Outcomes. **Students will be able to:**	**Assessment Method**
1. Demonstrate an understanding of the history of scientific research, its origins, including its roots in colonialism and post-colonialism, methodologies, development into disciplines, and relevance for interdisciplinary collaboration.	Class discussions, student presentations, papers and exams.

2. Describe, analyze, compare, and critically evaluate Euro-American and Indigenous paradigms of research methods, producing knowledge, and sharing research outcomes.	Exams, in-class exercises, and class discussions.
3. Articulate and apply Indigenous and non-Indigenous research methods to interpret and present traditional Indigenous knowledge and scientific research results as complementary and not competing bodies of understanding of the world.	Exams, discussions, individual student research project.
4. Recognize and acknowledge personal bias and use the skills and concepts learned in this course to apply critical self-reflection regarding professional roles in collaboration with Indigenous communities.	Class discussions, presentations, papers.

VIII. Suggested Text

Kovach, Margaret. *Indigenous Methodologies: Characteristics, Conversation, and Contexts*. Toronto, University of Toronto Press, 2009.

Lassiter, Luke Eric. *The Chicago Guide to Collaborative Ethnography (Chicago Guides to Writing, Editing, and Publishing).* Chicago: University of Chicago Press, 2005.

Smith, Linda Tuhiwai. *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd ed. NY: Zed Books, 2012.

IX. Bibliography

Chilisa, Bagele. *Indigenous Research Methodologies***.** Thousand Oaks, California: Sage Publishers, 2012.

Colonial Genocide in Indigenous North America. Andrew Wollford, Jeff Benvenuto and Alexander Laban Hinton, editors. Durham, North Carolina. Duke University Press, 2014.

Handbook of Critical and Indigenous Methodologies. Norman K. Denzin, Yvonne S. Lincoln and Linda Tuhiwai Smith, editors. Thousand Oaks, California: Sage Publishers, 2008.

Indigenous Pathways into Social Research: Voices of a New Generation. Donna M. Mertens, Fiona Cram, Bagele Chilisa, editors. Walnut Creek, California: Left Coast Press, 2013.

Wilson, Shawn. *Research is Ceremony: Indigenous Research Methods.* Halifax, NS, Canada: Fernwood, 2008.

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College AS CAS	1b. Department Alaska Native Studies

2. Complete Program Title/Prefix
AKNS Minor

3. Type of Program

Choose one from the appropriate drop down menu: Undergraduate: Minor or Graduate: CHOOSE ONE

This program is a Gainful Employment Program: ☐ Yes or ☒ No

4. Type of Action:

PROGRAM	**PREFIX**
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

5. Implementation Date (semester/year)
From: 08/2015 To: /

6a. Coordination with Affected Units Department, School, or College: Anthropology

Initiator Name (typed): Maria Williams Initiator Signed Initials: _____
Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 1/20/2015

6c. Coordination with Library Liaison Date: 11/14/2014

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function. *
*Copy the text directly from the program website of the online catalog and paste into a Word document.

8. Justification for Action
Adding this course to the Alaska Native Studies minor as an elective.

Initiator (faculty only) Date Maria Williams 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 College/School Curriculum Committee Chair Date	☐ Approved ☐ Disapproved Provost or Designee Date

Minor in Alaska Native Studies

Core Courses		
AKNS A201	Alaska Native Perspectives	3
AKNS A492	Cultural Knowledge of Native Elders	3
Complete 7 to 9 credits in one of the following focus areas:		7-9
Policy Focus		
AKNS A290	Topics in Alaska Native Studies	
AKNS/PS A346	Alaska Native Politics	
AKNS/PS A411	Tribes, Nations, and Peoples	
AKNS/ANTH A461	Decolonizing Methodologies	
AKNS A490	Advanced Topics in Alaska Native Studies	
Language Focus		
AKNS A101A	Elementary Central Yup'ik Language I	
or AKNS A101B	Elementary Tlingit Language I	
or AKNS A101C	Elementary Alaska Native Language I	
or AKNS A101E	Elementary Alutiiq Language I	
AKNS A102A	Elementary Central Yup'ik Language II	
or AKNS A102B	Elementary Tlingit Language II	
or AKNS A102C	Elementary Alaska Native Language II	
or AKNS A102E	Elementary Alutiiq Language II	
Complete 6 credits from the following (must be courses other than those taken for above focus areas):		6
AKNS A101A	Elementary Central Yup'ik Language I	
AKNS A101B	Elementary Tlingit Language I	
AKNS A101C	Elementary Alaska Native Language I	
AKNS A101E	Elementary Alutiiq Language I	
AKNS A102A	Elementary Central Yup'ik Language II	
AKNS A102B	Elementary Tlingit Language II	
AKNS A102C	Elementary Alaska Native Language II	
AKNS A102E	Elementary Alutiiq Language II	
AKNS A109A	Central Yup'ik Orthography	
AKNS A109B	Tlingit Orthography	
AKNS A109C	Alaska Native Language Orthography	
AKNS A109D	Alutiiq Orthography	
AKNS/MUS A215	Music of Alaska Natives and Indigenous Peoples of Northern Regions	
AKNS/MUS A216	World Indigenous Music	
AKNS A290	Topics in Alaska Native Studies	
AKNS/PS A346	Alaska Native Politics	
AKNS/PS A411	Tribes, Nations, and Peoples	
AKNS A490	Advanced Topics in Alaska Native Studies	
AKNS A495	Alaska Native Studies Internship	
ANTH A200	Natives of Alaska	
ANTH A427	Ethnohistory of Alaska Natives	
ANTH A435	Northwest Coast Cultures	

ANTH A436	Aleut Adaptations	
ENGL A445	Alaska Native Literatures	
HIST A341	History of Alaska	
JUST A355	Rural Justice	
Total Credits		19-21

A minimum of 19 credits is required for the minor, of which 6 credits must be upper division.

See more at:
http://catalog.uaa.alaska.edu/undergraduateprograms/cas/alaskanativestudies/minor-alaskanativestudies/#sthash.igbAEKgx.dpuf

From: Medeia Csoba DeHass – Anthropology and Alaska Native Studies

To: Undergraduate Academic Board

Cc: Diane Hanson – Anthropology, Maria Williams – Alaska Native Studies Program

Date: 3/04/2015

Re: New Course - AKNS/ANTH 461 – Decolonizing Methodologies

I am respectfully requesting the Undergraduate Academic Board to review the submitted Course Action Requests (CARs), Course Content Guides (CCGs), Resource Implication Forms, Lab Fee Request Forms, Catalog Copies, and Program Action Request Forms pertaining to a new course, Decolonizing Methodologies. I am proposing to offer this 400 level course cross listed between Alaska Native Studies and Anthropology.

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

1a. School or College	1b. Division	1c. Department
AS CAS	ASSC Division of Social Science	ANTH

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
ANTH	A461	n/a	3	(3+0)

6. Complete Course Title
Decolonizing Methodologies
Decolonizing Methodologies
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
- ☐ Automatic Restrictions
  - ☐ 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

9. Repeat Status No # of Repeats 0 Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

12. ☒ Cross Listed with AKNS
☐ 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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. AKNS	11/14/14	Maria Williams on 11/1/14
2.		
3.		

Initiator Name (typed): Medeia Csoba DeHass Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 1/20/2015
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 11/14/14

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)*
Introduces research methods that are informed by Indigenous ways of producing and sharing knowledge, ethical considerations, collaborative research design with Indigenous communities and peoples, the sharing of research materials and outcomes, multivocal authorship, learning to integrate responsibilities as a researcher, and the respect for cultural property rights and ownership. .

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
AKNS A201 OR ANTH 200 OR ANTH 335 (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)*

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Decolonizing Methodologies courses are now an expected course in Anthropology, Indigenous, and ethnic studies programs.

Initiator (faculty only) Date
Medeia Csoba DeHass
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

COURSE CONTENT GUIDE
UNIVERSITY OF ALASKA ANCHORAGE
Alaska Native Studies Program

I. Date Initiated March 23, 2015

II. Course Information

College/School: College of Arts and Sciences
Department:
Program: Anthropology
Course Title: Decolonizing Methodologies
Course Number: ANTH A461
Credits: 3
Contact Hours: 3 + 0
Grading Basis: A-F
Course Description: Introduces research methods that are informed by Indigenous ways of producing and sharing knowledge, ethical considerations, collaborative research design with Indigenous communities and peoples, the sharing of research materials and outcomes, multivocal authorship, learning to integrate responsibilities as a researcher, and the respect for cultural property rights and ownership.
Cross Listing Yes, with AKNS A461
Course Prerequisites: AKNS A201 OR ANTH A200 OR ANTH 335 (with a minimum grade of C)
Registration Restrictions: None
Fees: Yes

III. Course Activities

In general, the course will involve a combination of:

A. Lectures
B. Discussions
C. Guest speakers
D. Student research design

IV. Course Level Justification

This 400-level class provides an in-depth examination of decolonizing research methods. Students will be required to analyze collaborative research design with Indigenous communities and peoples, to apply ethical considerations in their own work, to develop ways of sharing research materials and outcomes, to integrate responsibilities as a researchers with respect for cultural property rights and ownership, and to elaborate on these methods within their own fields of study.

V. Course Outline

This upper division course will introduce students to the history of scientific research and Indigenous knowledge systems through lectures, reading, class discussions and

guest lecturers. Students will be required to create a final research project. The course materials include significant reading and discussion.

1. Overview of history of scientific research. What are Indigenous methodologies?
2. Decolonizing Research Methods
3. Community-Based research Paradigms
4. Virtual Representations of Indigenous peoples
5. History/Ethnohistory
6. Anthropology and Archaeology
7. Museums and Institutional Collections
8. Natural Sciences
9. Ecology
10. Health
11. Education
12. Psychology
13. Business/Economy

VI. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. **The instructor will:**
1. Engage students through lecture and discussion on the history of scientific research and Indigenous knowledge systems.
2. Assist students in analyzing, processing, and applying course material related to Indigenous paradigms of research methods through providing feedback on reflection papers, and moderating online and in-class discussions.
3. Advise students on selecting a research topic and guide them in locating research sources pertaining to their class projects.
4. Empower students to use the understanding of Indigenous research methodologies gained in this course to design ethically sound and socially engaged collaborative projects.

B. Student Learning Outcomes. **Students will be able to:**	**Assessment Method**
1. Demonstrate an understanding of the history of scientific research, its origins, including its roots in colonialism and post-colonialism, methodologies, development into disciplines, and relevance for interdisciplinary collaboration.	Class discussions, student presentations, papers and exams

2. Describe, analyze, compare, and critically evaluate Euro-American and Indigenous paradigms of research methods, producing knowledge, and sharing research outcomes.	Exams, in-class exercises, and class discussions.
3. Articulate and apply Indigenous and non-Indigenous research methods to interpret and present traditional Indigenous knowledge and scientific research results as complementary and not competing bodies of understanding of the world.	Exams, discussions, individual student research project.
4. Recognize and acknowledge personal bias and use the skills and concepts learned in this course to apply critical self-reflection regarding professional roles in collaboration with Indigenous communities.	Class discussions, papers, presentations.

VIII. Suggested Text

Kovach, Margaret. *Indigenous Methodologies: Characteristics, Conversation, and Contexts*. Toronto, University of Toronto Press, 2009.

Lassiter, Luke Eric. *The Chicago Guide to Collaborative Ethnography (Chicago Guides to Writing, Editing, and Publishing).* Chicago: University of Chicago Press, 2005.

Smith, Linda Tuhiwai. *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd ed. NY: Zed Books, 2012.

IX. Bibliography

Chilisa, Bagele. *Indigenous Research Methodologies***.** Thousand Oaks, California: Sage Publishers, 2012.

Colonial Genocide in Indigenous North America. Andrew Wollford, Jeff Benvenuto and Alexander Laban Hinton, editors. Durham, North Carolina. Duke University Press, 2014.

*Handbook of Critical and Indigenous Methodologies.*Norman K. Denzin, Yvonne S. Lincoln and Linda Tuhiwai Smith, editors. Thousand Oaks, California: Sage Publishers, 2008.

Indigenous Pathways into Social Research: Voices of a New Generation. Donna M. Mertens, Fiona Cram, Bagele Chilisa, editors. Walnut Creek, California: Left Coast Press, 2013.

Wilson, Shawn. *Research is Ceremony: Indigenous Research Methods.* Halifax, NS, Canada: Fernwood, 2008.

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College AS CAS	1b. Department Anthropology

2. Complete Program Title/Prefix
ANTH B.A.

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	**PREFIX**
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

5. Implementation Date (semester/year)
From: 08/2015 To: /

6a. Coordination with Affected Units Department, School, or College: Alaska Native Studies

Initiator Name (typed): Medeia Csoba DeHass Initiator Signed Initials: _____
Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 1/20/2015

6c. Coordination with Library Liaison Date: 11/14/2014

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function. *
*Copy the text directly from the program website of the online catalog and paste into a Word document.

8. Justification for Action
Decolonizing Methodologies courses are now an expected course in Anthropology, Indigenous, and ethnic studies programs.

Initiator (faculty only) Date Medeia Csoba DeHass 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 College/School Curriculum Committee Chair Date	☐ Approved ☐ Disapproved Provost or Designee Date

Admission Requirements

Satisfy the Application and Admission Requirements for Baccalaureate Degrees.

Graduation Requirements

- Satisfy the General University Requirements for Baccalaureate Degrees.
- Complete the General Education Requirements for Baccalaureate Degrees.
- Complete the College of Arts and Sciences Requirements.
- Complete the Major Requirements below.

Major Requirements

Core Courses *		
Select three of the following:		9
ANTH A202	Cultural Anthropology	
ANTH A205	Biological Anthropology	
ANTH A210	Introduction to Linguistic Anthropology	
ANTH A211	Fundamentals of Archaeology	
Complete the following courses:		
ANTH A250	The Rise of Civilization	3
ANTH A410	History of Anthropology	3
Ethnographic Area Courses *		
Select three of the following:		9
ANTH A200	Natives of Alaska	
ANTH A325	Cook Inlet Anthropology	
ANTH A335	Native North Americans	
ANTH A336	Peoples and Cultures of South America	
ANTH A338	Peoples and Cultures of Scandinavia	
ANTH A427	Ethnohistory of Alaska Natives	
ANTH A429	Contemporary Alaska Native Society 1940 - Present	
ANTH A434	Peoples and Cultures of Northeast Asia	
ANTH A435	Northwest Coast Cultures	
ANTH A436	Aleut Adaptations	
ANTH A437	Eskimo Adaptations	
ANTH A438	Tlingit and Haida Adaptations	
ANTH A439	Athabascan Adaptations	

Of the following ethnographic area courses which emphasize archaeology, no more than 6 credits can be used to satisfy the ethnographic area requirement:

ANTH A312	North American Archaeology

ANTH A413	Peopling of the Americas	
ANTH A416	Arctic Archaeology	
Topical/Theoretical Courses *		
Select two of the following: **		6
ANTH A270	Women in Cross-Cultural Perspective	
ANTH A324	Psychological Anthropology	
ANTH A354	Culture and Ecology	
ANTH A360	Anthropology of Art	
ANTH A361	Language and Culture	
ANTH A365	Modern Human Biological Diversity	
ANTH A375	Introduction to Cultural Resource Management	
ANTH A400	Anthropology of Religion	
ANTH A415	Applied Anthropology	
ANTH A425	Archaeology of Identity	
ANTH A432	Hunting and Gathering Societies	
ANTH A445	Evolution of Humans and Disease	
ANTH A455	Medical Anthropology	
ANTH A457	Food and Nutrition: An Anthropological Perspective	
ANTH A460	Peace, War, and Violence: An Anthropological Perspective	
AKNS/ANTH A461	Decolonizing Methodologies	
ANTH A476	Ethical Issues in Archaeology	
ANTH A480	Analytical Techniques in Archaeology	
ANTH A481	Museum Studies in Anthropology	
ANTH A482	Historical Archaeology	
ANTH A484	Lithic Technology	
ANTH A485	Human Osteology	
ANTH A486	Applied Human Osteology	
Anthropology Electives *		
Any 6 credits in Anthropology		6
Statistics Courses		
Select one of the following:		3-4
STAT A252	Elementary Statistics	
STAT A253	Applied Statistics for the Sciences	
STAT A307	Probability and Statistics	

* *Complete 36 credits from these items, 18 of which must be upper division credits.*

The upper division special topics course (ANTH A490) or independent study courses (ANTH A397, ANTH A497) may be petitioned to satisfy ethnographic area or
***topical/theoretical course requirements, depending on course content.*

A minimum of 120 credits is required for the degree, of which 42 credits must be upper division.

Honors in Anthropology

The award of honors in Anthropology recognizes outstanding achievement by undergraduate majors in the study of anthropology. To be eligible for departmental honors, a student must satisfy the following requirements:

1. Be a declared Anthropology major.
2. Satisfy all of the requirements for a BA or BS degree in Anthropology.
3. Meet the requirements for Graduation with Honors.
4. Earn a grade point average of 3.50 or above in courses specific to the Anthropology major.
5. Complete a senior thesis project (taken as ANTH A499), based on library, laboratory or field research resulting in a substantial, thesis-quality paper defended before the Anthropology faculty. The course may be taken on a one-semester (3-credit) or two-semester (6-credit) basis.

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/cas/anthropology/ba-anthropology/#sthash.W1jKqvno.dpuf

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College AS CAS	1b. Department Anthropology

2. Complete Program Title/Prefix
ANTH B.S.

3. Type of Program

Choose one from the appropriate drop down menu: Undergraduate: Bachelor of Science or Graduate: CHOOSE ONE

This program is a Gainful Employment Program: ☐ Yes or ☒ No

4. Type of Action:

PROGRAM	**PREFIX**
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

5. Implementation Date (semester/year)
From: 08/2015 To: /

6a. Coordination with Affected Units Department, School, or College: Alaska Native Studies

Initiator Name (typed): Medeia Csoba DeHass Initiator Signed Initials: _____
Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 1/20/2015

6c. Coordination with Library Liaison Date: 11/14/2014

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function. *
*Copy the text directly from the program website of the online catalog and paste into a Word document.

8. Justification for Action
Decolonizing Methodologies courses are now an expected course in Anthropology, Indigenous, and ethnic studies programs.

Initiator (faculty only) Date Medeia Csoba DeHass 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 College/School Curriculum Committee Chair Date	☐ Approved ☐ Disapproved Provost or Designee Date

Bachelor of Science in Anthropology

- Overview
- Learning Outcomes

Admission Requirements

Satisfy the Application and Admission Requirements for Baccalaureate Degrees.

Graduation Requirements

- Satisfy the General University Requirements for Baccalaureate Degrees.
- Complete the General Education Requirements for Baccalaureate Degrees.
- Complete the College of Arts and Sciences Requirements.
- Complete the Major Requirements below.

Major Requirements

Core Courses *		
Select three of the following:		9
ANTH A202	Cultural Anthropology	
ANTH A205	Biological Anthropology	
ANTH A210	Introduction to Linguistic Anthropology	
ANTH A211	Fundamentals of Archaeology	
Complete the following courses:		
ANTH A250	The Rise of Civilization	3
ANTH A410	History of Anthropology	3
Ethnographic Area Courses *		
Complete three of the following:		9
ANTH A200	Natives of Alaska	
ANTH A325	Cook Inlet Anthropology	
ANTH A335	Native North Americans	
ANTH A336	Peoples and Cultures of South America	
ANTH A338	Peoples and Cultures of Scandinavia	
ANTH A427	Ethnohistory of Alaska Natives	
ANTH A429	Contemporary Alaska Native Society 1940 - Present	
ANTH A434	Peoples and Cultures of Northeast Asia	
ANTH A435	Northwest Coast Cultures	
ANTH A436	Aleut Adaptations	
ANTH A437	Eskimo Adaptations	
ANTH A438	Tlingit and Haida Adaptations	
ANTH A439	Athabascan Adaptations	
Of the following ethnographic area courses which emphasize archaeology, no more than 6 credits can be used to satisfy the ethnographic area requirement:		
ANTH A312	North American Archaeology	
ANTH A413	Peopling of the Americas	
ANTH A416	Arctic Archaeology	
Topical/Theoretical Courses *		
Select two of the following: **		6

ANTH A270	Women in Cross-Cultural Perspective	
ANTH A324	Psychological Anthropology	
ANTH A354	Culture and Ecology	
ANTH A360	Anthropology of Art	
ANTH A361	Language and Culture	
ANTH A365	Modern Human Biological Diversity	
ANTH A375	Introduction to Cultural Resource Management	
ANTH A400	Anthropology of Religion	
ANTH A415	Applied Anthropology	
ANTH A425	Archaeology of Identity	
ANTH A432	Hunting and Gathering Societies	
ANTH A445	Evolution of Humans and Disease	
ANTH A455	Medical Anthropology	
ANTH A457	Food and Nutrition: An Anthropological Perspective	
ANTH A460	Peace, War, and Violence: An Anthropological Perspective	
/AKNSANTH A461	Decolonizing Methodologies	
ANTH A476	Ethical Issues in Archaeology	
ANTH A480	Analytical Techniques in Archaeology	
ANTH A481	Museum Studies in Anthropology	
ANTH A482	Historical Archaeology	
ANTH A484	Lithic Technology	
ANTH A485	Human Osteology	
ANTH A486	Applied Human Osteology	
Anthropology Electives *		
Any 6 credits in Anthropology		6
Statistics Courses		
Select one of the following:		3-4
STAT A253	Applied Statistics for the Sciences	
or STAT A307	Probability and Statistics	

* *Complete 36 credits from these items, 18 of which must be upper division credits. The upper division special topics course (ANTH A490) or independent study courses (ANTH A397, ANTH A497) may be petitioned to satisfy ethnographic area or topical/theoretical*
***course requirements, depending on course content.*

A minimum of 120 credits is required for the degree, of which 42 credits must be upper division.

Honors in Anthropology

The award of honors in Anthropology recognizes outstanding achievement by undergraduate majors in the study of anthropology. To be eligible for departmental honors, a student must satisfy the following requirements:

1. Be a declared Anthropology major.
2. Satisfy all of the requirements for a BA or BS degree in Anthropology.
3. Meet the requirements for Graduation with Honors.
4. Earn a grade point average of 3.50 or above in courses specific to the Anthropology major.

5. Complete a senior thesis project (taken as ANTH A499), based on library, laboratory or field research resulting in a substantial, thesis-quality paper defended before the Anthropology faculty. The course may be taken on a one-semester (3-credit) or two-semester (6-credit) basis. - See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/cas/anthropology/bs-anthropology/#sthash.l1bzocQs.dpuf

Date: February 11, 2015

To: Members of the Undergraduate Academic Board

From: J. Ellen McKay, Professor
Architectural and Engineering Technology

Subject: Modifications to the Architectural & Engineering Technology Program

Background:
The Architectural and Engineering Technology (AET) program was developed 30 years ago with input from local architects and engineers. In 2000, the AET Department revised its curriculum to represent current professional practices, employer attitudes, and to reflect technological advances in the field of architectural and engineering technology. The new curriculum was implemented beginning in Fall/01. After the development of the Associate of Applied Science degree program in Construction Management (AAS-CM) which cross-lists several AET courses, there was another revision in 2003 to correct awkwardness in course content, correct errors and oversights, and to ensure compatibility between the AET and CM programs. Curriculum actions in 2005 and 2011 made some additional tweaks to the program regarding prerequisites and a math requirement. The Occupational Endorsement Certificate in CADD for Building Construction was also added in 2006 at the request of the college administration.

Summary of Actions:
The AET Department currently offers a total of 16 courses towards 4 undergraduate certificates, an occupational endorsement certificate, and an Associate of Applied Science degree. This curriculum action will, with few exceptions, affect the entire program. This revision proposes to:

- delete the OEC in CADD for Building Construction,
- delete AET A282 and AET A283,
- uncross-list AET A101 and CM A101, AET A102 and CM A102, AET A123 and CM A123, AET A142 and CM A142, and AET A231 and CM A231,
- rename AET A111, AET A121, AET A131, and AET A143,
- add AET A111 as a prerequisite to AET A213
- update most course bibliographies,
- rename the 4 undergraduate certificates,
- change the course description and student outcomes wording for the renamed courses,
- change the program outcomes wording for the 4 undergraduate certificates and the AAS.

Justification:
The occupational endorsement certificate is being deleted due to lack of student interest. AET A282 and A283 are only required for the OEC and, therefore, being deleted as well. The content of these two courses could be offered as 'selected topics' as required. The AET and CM courses are being uncross-listed to simplify course sections and coding. AET A111 is being restored as a prerequisite to AET A213 (it was dropped when it was cross-listed with CM A213). Renaming of courses and certificates, and wording changes are as a result of conversations with the AET Advisory Committee. They are being revised to reflect current industry terminology.

Please contact me with any questions. I can be reached at 786-6424 or jemckay@uaa.alaska.edu.

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A101	N/A	4 cr.	(2+4)

6. Complete Course Title
Fundamentals of CADD for Building Construction
Fund. of CADD for Bldg. Const.
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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG, Catalog Copy (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 N/A Max Credits N/A

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See attached spreadsheet.		
2.		
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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 basic CADD (computer-aided drafting and design) skills necessary in civil, architectural, structural, mechanical and electrical modeling within the construction industry. Defines the working relationship between design and construction professionals and technicians.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
MATH A105 with a minimum grade of C or concurrent enrollment.

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

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

16d. Registration Restriction(s) *(non-codable)*
Proof of eligibility for placement into ENGL A111. Appropriate SAT, ACT, or UAA-approved Math Placement Test sccores may be used in lieu of MATH A105.

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
This course and CM A101 are being uncross listed to simplify course sections and coding. Update course description,CCG, and Catalog Copy.

Initiator (faculty only) Date J. Ellen McKay 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	College/School Curriculum Committee Chair Date	☐ Approved ☐ Disapproved	Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: AET
C. Course Number: A101
D. Number of Credits & Contact Hours: 4 (2+4)
E. Course Title: Fundamentals of CADD for Building Construction
F. Grading Basis: A-F
G. Implementation Date: Fall 2015
H. Cross-listed N/A
I. Stacked: N/A
J. Course Description: Introduces basic CADD (computer-aided drafting and design) skills necessary in civil, architectural, structural, mechanical and electrical modeling within the construction industry. Defines the working relationship between design and construction professionals and technicians.
K. Course Attributes: N/A
L. Course Prerequisites: MATH A105 with a minimum grade of C or concurrent enrollment
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: Proof of eligibility for placement into ENGL A111. Appropriate SAT, ACT, or UAA approved Math Placement Test scores may be used in lieu of MATH A105.
M. Course Fees: Yes

III. Course Level Justification. This course introduces a field of knowledge and develops basic skills.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: Introduce basic computer-aided drafting and design (CADD) skills necessary in civil, architectural, structural, mechanical and electrical drafting in the design and construction industry.

B. Student Learning Outcomes and Assessment Measures:

Student Learning Outcomes:	Assessment Measures
Upon completion of this course, the student will be able to:	This outcome will be assessed by one or more of the following:
1. Explain the working relationships and primary roles of the participants in the construction process.	Written examination
2. Describe how construction drawings and their accompanying written specifications are coordinated for a single project.	Written examination
3. Explain construction drawing set organization including drawing subsets (civil/site, architectural, structural, mechanical, electrical, and others as required by the needs of the project), the information conveyed by each subset, and how the subsets are related.	Written examination and CADD projects
4. Define the basic commands and techniques used with CADD software, including file, draw, edit, modify, insert, format, dimension, and text commands	Written examination and CADD projects
5. Compute drawing scales for blocks, line type, hatch, and plotting in CADD	Written examination and CADD projects
6. Produce civil/site development drawings, architectural drawings, mechanical drawings, structural drawings, and electrical drawings using CADD software.	CADD projects
7. Apply drafting conventions, including: drawing sheet sizes, sheet numbering, drawing sheet layout, line types, drawing views, dimensions, coordinate systems, scales, symbols, hatching, notation, basic terminology, and abbreviations used in architectural, civil, mechanical, electrical, and structural drawings.	Written examination and CADD projects

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Course and lab procedures
- 1.3 Emergency egress review

2.0 Participants in Construction
- 2.1 Owners
- 2.2 Design team
- 2.3 Construction team
- 2.4 Regulatory agents

3.0 Construction Drawings
- 3.1 Use and role
- 3.2 National CADD Standard
- 3.3 Sheet sizes, layout and numbering
- 3.4 Coordination with written specifications
- 3.5 Drawing subsets
- 3.6 Drawing views and orthographic projection

4.0 CADD Command Structure
- 4.1 File commands
- 4.2 Draw and edit commands
- 4.3 Modify commands
- 4.4 Insert and format commands
- 4.5 Dimension and text commands
- 4.6 Blocks
- 4.7 Scaling
- 4.8 Plotting

5.0 Civil/Site Development Modeling
- 5.1 Use and role
- 5.2 Reading/interpretation and line types
- 5.3 Plats, plot plans, as-builts
- 5.4 Topography
- 5.5 Civil engineering dimensioning
- 5.6 Terminology, symbols and abbreviations

6.0 Architectural Modeling
- 6.1 Use and role
- 6.2 Reading/interpretation and line types
- 6.3 Schedules
- 6.4 Architectural dimensioning
- 6.5 Terminology, symbols and abbreviations

7.0 Structural Modeling
- 7.1 Use and role
- 7.2 Reading/interpretation and line types
- 7.3 Structural dimensioning
- 7.4 Terminology, symbols and abbreviations

8.0 Mechanical Modeling
- 8.1 Use and role
- 8.2 Reading/interpretation and line types
- 8.3 Plumbing

8.4 HVAC
8.5 Schedules
8.6 Terminology, symbols and abbreviations

9.0 Electrical Modeling
9.1 Use and role
9.2 Reading/interpretation and line types
9.3 Electrical system components
9.4 Schematic and plan layouts
9.5 Schedules
9.6 Terminology, symbols and abbreviations

10.0 Projection
10.1 Projection theory: observer, projection plane, and object
10.2 Projection types

11.0 Drawing sheet organization and schedules
11.1 Drawing area and title blocks
11.2 Production drawing area
11.3 Drawing coordinate systems
11.4 Cover sheets
11.5 Schedule formats, heading, and content

VI. Suggested Texts

Omura, G. (2014). *Mastering AutoCAD 2014 and AutoCAD LT 2014*. San Francisco, CA: Sybex.

VII. Bibliography

American Institute of Steel Construction. (2005). *Manual of steel construction* (13th ed.). Chicago, IL: Author.

Bassler B. (Ed.). (latest) Ramsey/Sleeper *Architectural graphic standard: Student edition*, (9th ed., Abdg). New York, NY: John Wiley and Sons.

Ching, F. D. K., & Winkel, S. R. (2008). *Building construction illustrated* (4th ed.). New York, NY: Van Nostrand Reinhold.

Dix, M., & Riley, P. (2013). *Discovering AutoCAD® 2014*. Upper Saddle River, NJ: Prentice-Hall.

Goetsch, D. L. (1994)*. *Structural drafting* (2nd ed.). Albany, NY: Delmar.

Hepler, D. E. (1998)*. *Architecture drafting and design* (7th ed.). New York, NY: Glencoe/ McGraw Hill.

Hoke, J. R. (Ed.). (2000)*. *Architectural graphics standards: An abridgement of the ninth edition*. New York, NY: John Wiley & Sons.

International Code Council. (2012). *2012 International building code*. Falls Church, VA: Author.

Koser, G., & Zirwas, D. (2011). *Workplace skills for success with AutoCAD 2012- Basics*. Upper Saddle River, NJ: Prentice-Hall.

Leach, J. A. (2012). *AutoCAD 2013 Instructor*. New York, NY: McGraw-Hill.

Leffers, R. (2010). *Sustainable construction and design*. Upper Saddle River, NJ: Pearson.

Liebling, R. W. (1999). *Architectural working drawings* (4th ed.). New York, NY: John Wiley & Sons.

Madsen, D. A., Schumaker T. M., & Madsen, D. P. (2010). *Civil drafting technology* (7th ed.). Upper Saddle River, NJ: Prentice-Hall.

National Institute of Building Sciences. (2014). *US national CAD standard*. (ver. 6). Washington, DC: Author.

Puerta, F. E. (2014). *AutoCAD 2014 in 3D: A modern perspective*. Upper Saddle, NJ: Prentice-Hall.

RS Means Co. (2011). *Means illustrated construction dictionary*. Kingston, MA: Author.

Schrock, C. R. (2010). *Beginning AutoCAD 2014 exercise workbook*. New York, NY: Industrial Press.

Schrock, C. R. (2010). *Advanced AutoCAD 2014 exercise workbook*. New York, NY: Industrial Press.

Stein, B., & Reynolds, J.S. (2000)*. *Mechanical and electrical equipment for buildings*. (9th ed.). New York, NY: John Wiley & Sons.

Wolhers, T. T. (2010). *Applying AutoCAD 2014*. New York, NY: McGraw-Hill.

*Denotes classic text.

Course Being Changed:	**AET A101**	**(Fundamentals of CADD for Building Construction)**
Impacted Program or Course	***Date of Notification***	***Chair/Coordinator Contacted*** (not listerve)
AAS in AET	2/9/15	Donald M. Ketner, Jr.
OEC in CAD	2/9/15	Donald M. Ketner, Jr.
Undergraduate Certificate, Architectural Technology	2/9/15	Donald M. Ketner, Jr.
Undergraduate Certificate, Civil Technology	2/9/15	Donald M. Ketner, Jr.
Undergraduate Certificate, Mechanical and Electrical Technology	2/9/15	Donald M. Ketner, Jr.
Undergraduate Certificate, Structural Technology	2/9/15	Donald M. Ketner, Jr.
AET A123	2/9/15	Donald M. Ketner, Jr.
AET A142	2/9/15	Donald M. Ketner, Jr.
AET A181	2/9/15	Donald M. Ketner, Jr.
AET A213	2/9/15	Donald M. Ketner, Jr.
AET A231	2/9/15	Donald M. Ketner, Jr.
AAS in Construction Management	2/9/15	Donald M. Ketner, Jr.
BS in Construction Management		
CM A 123	2/9/15	Donald M. Ketner, Jr.
CM A142	2/9/15	Donald M. Ketner, Jr.
CM A163	2/9/15	Donald M. Ketner, Jr.
CM A201	2/9/15	Donald M. Ketner, Jr.
CM A213	2/9/15	Donald M. Ketner, Jr.
CM A231	2/9/15	Donald M. Ketner, Jr.
Undergraduate Certificate, Welding	2/23/15	Lorraine Stewart
Undergraduate Certificate, Construction Technology	2/23/15	Lorraine Stewart
AAS in Technology	2/23/15	Lorraine Stewart

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A102	N/A	3 cr.	(3+0)

6. Complete Course Title
Methods of Building Construction
Methods of Bldg. Const.
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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG, Catalog Copy (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 N/A Max Credits N/A

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See attached spreadsheet.		
2.		
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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 basic knowledge of building materials, systems, and assemblies. Includes site work, structural systems, and construction document interpretation. Includes a field project involving student team research of a current building type.

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

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

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

16d. Registration Restriction(s) *(non-codable)*
Proof of eligibility for placement into ENGL A111 and MATH 105.

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
This course and CM A102 are being uncross listed to simplify course sections and coding. Update course description,CCG, and Catalog Copy.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: AET
C. Course Number: A102
D. Number of Credits & Contact Hours: 3 (3+0)
E. Course Title: Methods of Building Construction
F. Grading Basis: A-F
G. Implementation Date: Fall 2015
H. Cross-listed N/A
I. Stacked: N/A
J. Course Description: Introduces basic knowledge of building materials, systems, and assemblies. Includes site work, structural systems, and construction document interpretation. Includes a field project involving student team research of a current building type.
K. Course Attributes: N/A
L. Course Prerequisites: N/A
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: Proof of eligibility for placement into MATH 105 and ENGL A111.
M. Course Fees: Yes

III. Course Level Justification. This course introduces a field of knowledge and develops basic skills.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: Introduce basic knowledge of building materials, systems and assemblies to entry-level technicians and construction managers.

B. Student Learning Outcomes and Assessment Measures:

Student Learning Outcomes:	Assessment Measures
Upon completion of this course, the student will be able to:	This outcome will be assessed by one or more of the following:
1. Describe the roles and responsibilities of individuals in the selection of materials, techniques and methods used in the design and construction process.	Written examination, oral presentation, and written report
2. Interpret construction drawings and written technical specifications for construction materials and methods.	Written examination and class project
3. Identify soil types and subsurface investigation techniques for building site improvements and building foundation design.	Written examination
4. Describe concrete, steel, wood, reinforced masonry, and composite building structural systems, and methods and techniques of construction.	Written examination
5. Identify ferrous and non-ferrous metals used in construction materials.	Written examination
6. Describe materials and techniques for thermal and moisture protection of buildings including, roofing, insulation and exterior cladding/closure.	Written examination
7. Identify door and window materials, products and systems used for ingress, egress, day lighting and security.	Written examination
8. Describe the materials, products, and systems used for interior walls, ceilings and finish floor construction.	Written examination
10. Identify building interior features including architectural elements, conveyance systems (elevators, escalators), and the structural elements associated with them.	Written examination

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Emergency egress review

2.0 Construction Industry Overview
- 2.1 Design professionals
- 2.2 Construction contractors
- 2.3 Product manufactures
- 2.4 Manufacturing standards

3.0 Construction Documents
- 3.1 Construction drawing organization and interpretation
- 3.2 Written technical specifications
- 3.3 Coordination of drawings and specifications
- 3.4 Construction Specifications Institute MasterFormat

4.0 Building Structures and Material Properties
- 4.1 Building structural systems
- 4.2 Building equipment systems
- 4.3 Properties of materials
- 4.4 Forces

5.0 Sitework
- 5.1 Soils
- 5.2 Subsurface investigation
- 5.3 Site drainage
- 5.4 Earthwork
- 5.5 Foundations
- 5.6 Site improvements

6.0 Concrete
- 6.1 Composition and mix design
- 6.2 Formwork
- 6.3 Reinforced concrete structural systems
- 6.4 Testing and curing
- 6.5 Post-tensioning/pre-stressing

7.0 Masonry
- 7.1 Clay masonry
- 7.2 Brick
- 7.3 Stone
- 7.4 Reinforced masonry unit structural systems

8.0 Metals
- 8.1 Ferrous metals
- 8.2 Non-ferrous metals
- 8.3 Metal finishes
- 8.4 Structural steel systems
- 8.5 Lightweight metal systems
- 8.6 Open-web joists
- 8.7 Metal decking
- 8.8 Miscellaneous metal fabrications

9.0 Wood
- 9.1 Species, strength and grading
- 9.2 Light wood framing construction
- 9.3 Heavy timber construction
- 9.4 Manufactured wood products
- 9.5 Wood preservation
- 9.6 Finish wood work

10.0 Thermal and Moisture Protection
- 10.1 Damp proofing and weatherproofing
- 10.2 Exterior cladding systems
- 10.3 Roofing systems
- 10.4 Flashing and joints
- 10.5 Building insulation

11.0 Doors and Windows
- 11.1 Glazing materials
- 11.2 Doors and finish hardware
- 11.3 Window materials
- 11.4 Fire doors

12.0 Finishes
- 12.1 Interior walls, partitions, and ceilings
- 12.2 Gypsum wall board and plaster
- 12.3. Flooring and carpet

13.0 Building Specialties and Conveying Equipment
- 13.1 Architectural specialties
- 13.2 Elevators
- 13.3 Escalators

14.0 Field Team Project
- 14.1 Information gathering
- 14.2 Written report
- 14.3 Oral/visual presentations

VI. Suggested Texts

Spence, W. P. (2014). *Construction methods, materials, and techniques* (3rd ed.). Albany, NY: Delmar.

VII. Bibliography

Allen, E. (2004). *Fundamentals of building construction: Materials and methods* (4th ed.). New York, NY: John Wiley & Sons.

American Institute of Steel Construction. (2005). *Manual of steel construction* (13th ed.). Chicago, IL: Author.

Andres, C. K., & Smith, R. C. (2001)*. *Principles and practices of commercial construction*. Upper Saddle River, NJ: Prentice Hall.

Ching, F. D. K., & Winkel, S. R. (2008). *Building construction illustrated* (4th ed.). New York, NY: Van Nostrand Reinhold.

Construction Specifications Institute. (2005) *Project resource manual, CSI manual of practice*. New York, NY: McGraw-Hill.

Hoke, J. R. (Ed.). (2000)*. *Architectural graphics standards: An abridgement of the ninth edition*. New York, NY: John Wiley & Sons.

Hornbostel, C. (1997)*. *Materials and methods*. Los Angeles, CA: Architectural License Seminars.

International Code Council. (2012). *2012 International building code*. Falls Church, VA: Author.

Jefferis, A., & Smith, K. D. (1997)*. *Commercial drafting and detailing*. (2nd ed.). Albany, NY: Delmar.

Liebling, R. W. (1999)*. *Architectural working drawings* (4th ed.). New York, NY: John Wiley & Sons.

Marotta, T. (2002)*. *Basic construction materials*. (6th ed.). Upper Saddle River, NJ: Prentice-Hall.

Onouye, B. S., & Kane, K. (2012). *Statics and strengths of materials for architecture and building construction* (4th ed.). Upper Saddle, NJ: Prentice-Hall.

RS Means Co. (2011). *Assemblies cost data* (36th ed.). Kingston, MA: Author.

RS Means Co. (2011). *Means illustrated construction dictionary*. Kingston, MA: Author.

RS Means Co. (2011). *RS Means building construction cost data* (69th ed.). Kingston, MA: Author.

Rosen, H. J. (1999). *Construction specification writing*. New York, NY: John Wiley & Sons.

Schodek, D. L. (1998). *Structures* (3rd ed.). Upper Saddle, NJ: Prentice-Hall.

Watson, D. A. (1995). *Construction materials and processes*. Westerville, OH: Glencoe/McGraw-Hill.

*Denotes classic text.

Course Being Changed:	**AET A102**	**(Methods of Building Construction)**
Impacted Program or Course	***Date of Notification***	***Chair/Coordinator Contacted*** (not listerve)
AAS in AET	2/9/15	Donald M. Ketner, Jr.
OEC in CAD	2/9/15	Donald M. Ketner, Jr.
Undergraduate Certificate, Architectural Technology	2/9/15	Donald M. Ketner, Jr.
Undergraduate Certificate, Civil Technology	2/9/15	Donald M. Ketner, Jr.
Undergraduate Certificate, Mechanical and Electrical Technology	2/9/15	Donald M. Ketner, Jr.
Undergraduate Certificate, Structural Technology	2/9/15	Donald M. Ketner, Jr.
AET A111	2/9/15	Donald M. Ketner, Jr.
AET A121	2/9/15	Donald M. Ketner, Jr.
AET A123	2/9/15	Donald M. Ketner, Jr.
AET A131	2/9/15	Donald M. Ketner, Jr.
AET A142	2/9/15	Donald M. Ketner, Jr.
AET A143	2/9/15	Donald M. Ketner, Jr.
AET A213	2/9/15	Donald M. Ketner, Jr.
AET A231	2/9/15	Donald M. Ketner, Jr.
AAS in Construction Management	2/9/15	Donald M. Ketner, Jr.
BS in Construction Management	2/9/15	Donald M. Ketner, Jr.
CM A 123	2/9/15	Donald M. Ketner, Jr.
CM A142	2/9/15	Donald M. Ketner, Jr.
CM A163	2/9/15	Donald M. Ketner, Jr.
CM A201	2/9/15	Donald M. Ketner, Jr.
CM A213	2/9/15	Donald M. Ketner, Jr.
CM A231	2/9/15	Donald M. Ketner, Jr.

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A111	N/A	3 cr.	(2+3)

6. Complete Course Title
Civil Construction Drawings

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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG, Catalog Copy (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☐ Course Prerequisites
- ☐ Co-requisites
- ☐ Registration Restrictions
- ☐ General Education Requirement

9. Repeat Status choose one # of Repeats Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. AAS in AET	2/9/15	Donald M. Ketner, Jr.
2. Undergraduate Certificate in Civil Technology	2/9/15	Donald M. Ketner, Jr.
3. AET A213	2/9/15	Donald M. Ketner, Jr.

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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 technical skills needed by technicians to work with civil engineers and surveyors. Inculdes office practices, staff relationships, and civil drawing production. Develops skills in modeling and mapping used in site development.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
AET A102 and AET A181

16b. Co-requisite(s) *(concurrent enrollment required)*
NONE

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

16d. Registration Restriction(s) *(non-codable)*
NONE

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Updating terminology in course title and course description as per AET Advisory Committee and updating bibliography. Update Catalog Copy.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: AET
C. Course Number: A111
D. Number of Credits & Contact Hours: 3 (2+3)
E. Course Title: Civil Construction Drawings
F. Grading Basis: A-F
G. Implementation Date: Fall 2015
H. Cross-listed N/A
I. Stacked: N/A
J. Course Description: Introduces technical skills needed by technicians to work with civil engineers and surveyors. Inculdes office practices, staff relationships, and civil drawing production. Develops skills in modeling and mapping used in site development.
K. Course Attributes: N/A
L. Course Prerequisites: AET A102 and AET A181
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: N/A
M. Course Fees: Yes

III. Course Level Justification. This course introduces a field of knowledge and develops basic skills.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: Introduce students to the workings of a professional civil engineering/surveying office.

B. Student Learning Outcomes and Assessment Measures:

Student Learning Outcomes:	Assessment Measures
Upon completion of this course, the student will be able to:	This outcome will be assessed by one or more of the following:
1. Identify and explain the process of coordination that exists between the civil technician, civil engineer/surveyor, and other consultants.	Written examination and CADD (computer-aided design and drafting) projects
2. Define the use of time sheets, budgets, and cost accounting procedures.	Written examination and CADD projects
3. Exhibit a working vocabulary of civil terminology.	Written examination and CADD projects
4. Explain and identify acceptable standards, symbols and drawing conventions of mapping.	Written examination and CADD projects
5. Describe the use, preparation, and reproduction of civil drawings and civil specifications and their formats.	Written examination and CADD projects
6. Explain the basic concept of surveying as a process used to obtain information for making maps.	Written examination and CADD projects
7. Use various methods of contour interpolation to produce a topographic map.	Written examination and CADD projects
8. Describe the various methods of legally describing land in both written and graphic form.	Written examination and CADD projects
9. Differentiate between and produce plats, plot plans, preliminary and as-built plans using CADD.	Written examination and CADD projects

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Course and lab procedures
- 1.3 Emergency egress review

2.0 Civil/Survey Design Team
- 2.1 Role relationships
- 2.2 Consultants
- 2.3 Terminology

- 2.4 Timesheets and cost accounting
- 3.0 Map Concepts
  - 3.1 Line types
  - 3.2 Lettering
  - 3.3 Symbols
  - 3.4 Scale
  - 3.5 Source information
  - 3.6 Accuracy
  - 3.7 Units
- 4.0 Civil Drawing Set
  - 4.1 Vicinity map
  - 4.2 Existing conditions
  - 4.3 Site plan
  - 4.4 Grading plan
  - 4.5 Plan and profile
- 5.0 Surveying Fundamentals
  - 5.1 Location
  - 5.2 Direction
  - 5.3 Distance
  - 5.4 Coordinates
  - 5.5 Elevation
  - 5.6 Traversing
  - 5.7 Global positioning systems
- 6.0 Topography
  - 6.1 Contour lines
  - 6.2 Contour interval
  - 6.3 Interpolation
  - 6.4 Photogrammetry
- 7.0 Land Descriptions
  - 7.1 Lot & block
  - 7.2 Rectangular
  - 7.3 Metes and bounds
  - 7.4 Written
- 8.0 Plot Plans
  - 8.1 Preliminary
  - 8.2 As-built
  - 8.3 Plats

VI. Suggested Texts

Madsen, D. A., Shumaker, T. M., & Madsen, D. P. (2010). *Civil Drafting Technology* (7th ed.). Upper Saddle River, NJ: Prentice Hall.

VII. Bibliography

Chappell, E. (2014). *AutoCAD® Civil 3D® 2015 essentials*. Indianapolis, IN: John Wiley & Sons.

Dewberry Companies, The. (2002)*. *Land development handbook* (2nd ed.). New York, NY: McGraw-Hill.

Kavanagh, B. F. (2010). *Surveying with construction applications*, (7th ed.). Upper Saddle River, NJ: Prentice-Hall.

Kimmerling, A. J., & Buckley, A. R. (2011). *Map use: Reading, analysis, interpretation* (7th ed.) Redlands, CA: Esri Press.

McCormac, J. (1995)*. *Surveying* (4th ed). Upper Saddle River, NJ: Prentice-Hall.

Robillard, W. G., & Wilson, D. A. (2013). *Brown's boundary control and legal principles* (7th ed.). Indianapolis, IN: John Wiley & Sons.

R S Means Co. Inc. (latest). *Means illustrated construction dictionary*. Kingston, MA: Author.

Roberts, J. (1995)*. *Construction surveying, layout, and dimension control*. New York, NY: Delmar.

Robinson, A. H., Morrison, J. L., Muehrcke, P. C., Kimmerling, A. J., & Guptill, S.C. (1995)*. *Elements of cartography*, (6th ed.). New York, NY: John Wiley & Sons.

Thompson, M. M. (1988)*. *Maps for America* (3rd ed.). Reston, VA: U.S. Geological Survey.

Municipality of Anchorage, (December 3, 2013). *Title 21: Land use planning*. Retrieved from http://library.municode.com/index.aspx?clientID=12717&stateID=2&statename=Alaska

*Denotes classic text.

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A121	N/A	3 cr.	(2+3)

6. Complete Course Title
Architectural Construction Drawings
Architectural Const. Drawings
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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG, Catalog Copy (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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. AAS in AET	2/9/15	Donald M. Ketner, Jr.
2. Undergraduate Certificate in Architectural Technology	2/9/15	Donald M. Ketner, Jr.
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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 technical skills needed by architectural technicians to work with architects. Includes office practices, staff relationships and architectural construction drawing production. Develops skills in architectural modeling, symbols, conventions, dimensioning systems, reference systems, sheet organization, code requirements, and research methods for detailing light commercial buildings.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
AET A102 and AET A181 with a minimum grade of C

16b. Co-requisite(s) *(concurrent enrollment required)*
NONE

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

16d. Registration Restriction(s) *(non-codable)*
NONE

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Updating terminology in course title and course description as per AET Advisory Committee. Update CCG and Catalog Copy.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: AET
C. Course Number: A121
D. Number of Credits & Contact Hours: 3 (2+3)
E. Course Title: Architectural Construction Drawings
F. Grading Basis: A-F
G. Implementation Date: Fall 2015
H. Cross-listed N/A
I. Stacked: N/A
J. Course Description: Introduces technical skills needed by architectural technicians to work with architects. Includes office practices, staff relationships and architectural construction drawing production. Develops skills in architectural modeling, symbols, conventions, dimensioning systems, reference systems, sheet organization, code requirements, and research methods for detailing light commercial buildings.
K. Course Attributes: N/A
L. Course Prerequisites: AET A102 and AET A181 with a minimum grade of C
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: N/A
M. Course Fees: Yes

III. Course Level Justification. This course introduces a field of knowledge and develops basic skills.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: To introduce students to the professional practices of an architectural office including the elements of contract documentation.

B. Student Learning Outcomes and Assessment Measures:

Student Learning Outcomes:	Assessment Measures
Upon completion of this course, the student will be able to:	This outcome will be assessed by one or more of the following:
1. Demonstrate an understanding of class lab and safety procedures	Class participation
2. Describe the role relationship between architectural technician and architect.	Written examination
3. Identify and explain the process of coordination that exists between the architect and other consultants.	Written examination
4. Demonstrate a working vocabulary of architectural terminology.	Written examination and CADD (computer-aided design and drafting) projects
5. Demonstrate a familiarity with building codes, association standards, drawing conventions, and manufacturing information effecting architectural design.	Written examination and CADD projects
6. Recognize and differentiate plans, elevations, sections, details, schedules, general architectural notes, acceptable industrial standards, symbols, architectural specifications and their format, and change orders in both construction drawings and specifications.	Written examination and CADD projects
7. Produce architectural floor plans, exterior elevations, building sections, wall sections, and architectural details using CADD and 3-D modeling techniques.	Written examination and CADD projects

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Course and lab procedures
- 1.3 Emergency egress review

2.0 Architectural Design Team
- 2.1 Role relationships
- 2.2 Consultants
- 2.3 Terminology
- 2.4 Timesheets and cost accounting

3.0 Architectural Contract Documents
- 3.1 Construction drawings
  - 3.1.1 Line types
  - 3.1.2 Lettering
  - 3.1.3 Symbols
  - 3.1.4 Reference systems
- 3.2 Specifications

4.0 Floor Plans
- 4.1 Methods of delineation
- 4.2 Dimensioning
- 4.3 Scale
- 4.4 Schedule

5.0 Exterior Elevations
- 5.1 Methods of delineation
- 5.2 Dimensioning techniques
- 5.3 Scale
- 5.4 Doors and windows

6.0 Building Sections
- 6.1 Methods of delineation
- 6.2 Dimensioning techniques
- 6.3 Scale

7.0 Wall Sections
- 7.1 Methods of delineation
- 7.2 Dimensioning techniques
- 7.3 Scale

8.0 Details
- 8.1 Methods of delineation
- 8.2 Dimensioning techniques
- 8.3 Scale

VI. Suggested Texts

Goldberg, H. E. (2015). *Revit architecture 2015: A comprehensive guide*. Upper Saddle River, NJ: Pearson.

VII. Bibliography

Allen, E. (1999). *Fundamentals of building construction: Materials and methods* (3rd ed.). New York, NY: John Wiley & Sons.

Ching, F. D. K. (1996)*. *Architectural graphics* (3rd ed.). New York, NY: Van Nostrand Reinhold.

Ching, F. D. K., & Adams, C. (2001)*. *Building construction illustrated* (3rd ed.). New York, NY: John Wiley & Sons.

Construction Specifications Institute. (latest). *Manual of practice*. Alexandria, VA: Author

Construction Specifications Institute. (1999)*. *Uniform drawing system*. Alexandria, VA: Author.

Goldberg, H. E. (2012). *Revit architecture 2012: A comprehensive guide*. Upper Saddle River, NJ: Pearson.

Goldman, G. (1997)*. *Architectural graphics: Traditional and digital communication*. Upper Saddle River, NJ: Prentice Hall.

Hepler, D. E., Wallach, P. R., & Hepler, D. J. (1998)*. *Architecture drafting and design* (7th ed.). New York, NY: Glencoe/McGraw-Hill.

Hoke, J. R. (Ed.). (2000)*. *Ramsey/Sleeper, Architectural graphics standards: An abridgement of the ninth edition*. New York, NY: John Wiley & Sons.

International Code Council. (latest). *2012 International building code*. Falls Church, VA: Author.

Jefferis, A., & Smith, K.D. (1997)*. *Commercial drafting and detailing*. Albany, NY: Delmar.

Kirkpatrick, J. M. (2005). *The AutoCAD book, drawing, modeling, and applications Using AutoCAD 2005*. Upper Saddle River, NJ: Prentice-Hall.

RS Means Co. Inc. (latest). *Means illustrated construction dictionary*. Kingston, MA: Author.

Muller, E. J., & Grau, P. A. (2000)*. *Reading architectural working drawings: Residential and light construction* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

Muller, E.J., Fausett, J. G., & Grau, P. A. (1999)*. *Architectural drawing and light construction* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

Spence, W. P. (1998)*. *Construction: Materials, methods, and techniques*. Albany, NY: Delmar.

Wakita, O. A., & Linde, R. M. (1994)*. *The professional practice of architectural working drawings* (2nd Ed.). New York, NY: John Wiley & Sons.

*Denotes classic text.

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A123	N/A	3 cr.	(3+0)

6. Complete Course Title
Codes and Standards

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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG, Catalog Copy (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 N/A Max Credits N/A

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See attached spreadsheet.		
2.		
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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)*
Provides an introduction and overview of the fundamental provisions of the building codes used for plan review, life-safety evaluation of buildings, and community development.

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

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
This course and CM A123 are being uncross listed to simplify course sections and coding. Update CCG and Catalog Copy.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: AET
C. Course Number: A123
D. Number of Credits & Contact Hours: 3 (3+0)
E. Course Title: Codes and Standards
F. Grading Basis: A-F
G. Implementation Date: Fall 2015
H. Cross-listed N/A
I. Stacked: N/A
J. Course Description: Provides an introduction and overview of the fundamental provisions of the building codes used for plan review, life-safety evaluation of buildings, and community development.
K. Course Attributes: N/A
L. Course Prerequisites: AET A101 and AET A102
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: N/A
M. Course Fees: Yes

III. Course Level Justification. This course introduces a field of knowledge and develops basic skills.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: Introduce the students to the life-safety requirements of model building codes. An emphasis will be placed on realistic assignments that interpret existing construction drawings and completed projects.

B. Student Learning Outcomes and Assessment Measures:

Student Learning Outcomes:	Assessment Measures
Upon completion of this course, the student will be able to:	This outcome will be assessed by one or more of the following:
1. Differentiate between life-safety requirements and structural requirements in model building codes.	Written examination, written exercises,
2. Describe how model codes are adopted and locally amended.	Written examination
3. Identify the local authority having jurisdiction.	Written examination
4. Identify the principal occupancy classifications used by model building codes.	Written examination and written exercises
5. Compare the occupancy classifications to familiar building codes.	Written examination and written exercises
6. Differentiate between special and mixed sure building occupancy classifications.	Written examination and written exercises
7. Differentiate between building structural systems and match those with types of construction as defined by standard building codes.	Written examination and written exercises
8. Describe code restrictions on building size, height and location on property depending on occupancy classification and type of construction.	Written examination and written exercises
9. Compute allowable area and allowable height of buildings dependent on occupancy classification and building type.	Written examination and written exercises
10. Interpret construction drawings and compart the information they contain to model building code requirements.	Written examination, written exercises, and class discussion
11. Identify the path of egress and the primary code previsions that apply to the path such as doors, stairways, corridors, aisles, and horizontal exits.	Written examination and written exercises
12. Compare fire resistive assemblies classifications to the building code previsions that govern each type of construction and building occupancy.	Written examination and written exercises

13. Identify the ratings classifications used for interior finishes and define code provisions governing the use of rated finish materials in buildings.	Written examination and written exercises
14. Identify different types of fire detection and suppression systems for buildings and when required.	Written examination and written exercises
15. Develop a basic understanding of the requirements for handicap accessibility in buildings as required by the codes and the standards adopted by the codes.	Written examination and written exercises
16. Outline the concepts of comprehensive community planning and zoning; i.e., Municipality of Anchorage, Title 21, "Land Use Planning."	Written examination and written exercises

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Course and lab procedures
- 1.3 Emergency egress review

2.0 Overview of Model Building Codes
- 2.1 Uniform Building Code (International Building Code)
- 2.2 Uniform Mechanical Code
- 2.3 Uniform Plumbing Code
- 2.4 Council of American Building Officials (residential)
- 2.5 Southern Building Code Congress
- 2.6 Building Officials and Code Administrators International
- 2.7 National Fire Protection Association
- 2.8 Local zoning law, i.e., Municipality of Anchorage, Title 21
- 2.9 Local building safety law; i.e., Municipality of Anchorage, Title 23

3.0 Building Use/Occupancy Classification
- 3.1 Determining use of occupancy
- 3.2 Key elements and requirements of occupancies
  - 3.2.1 Assembly (A)
  - 3.2.2 Business (B)
  - 3.2.3 Educational (E)
  - 3.2.4 Factory or industrial (F)
  - 3.2.5 Hazardous (H)
  - 3.2.6 Institutional (I)
  - 3.2.7 Medical (M)
  - 3.2.8 Hotels, apartments, dwellings (R)
  - 3.2.9 Storage (S)
  - 3.2.10 Garages, sheds (U)
- 3.3 Special use and occupancy
- 3.4 Mixed occupancy

4.0 Requirements for Types of Construction
- 4.1 Type I
- 4.2 Type II
- 4.3 Type III
- 4.4 Type IV
- 4.5 Type V

5.0 Building Size and Location
- 5.1 Location on property
- 5.2 Allowable floor area
- 5.3 Allowable height

6.0 Means of Egress
- 6.1 Path of egress
- 6.2 Principles of exiting
- 6.3 Occupant load
- 6.4 Doors
- 6.5 Stairways
- 6.6 Corridors
- 6.7 Horizontal exits
- 6.8 Aisles
- 6.9 Special requirements for A, E, H, and I occupancies

7.0 Fire Resistant Materials and Construction
- 7.1 Fire resistive systems
- 7.2 Protection of structure

8.0 Interior Finishes
- 8.1 Classification of materials
- 8.2 Use of finishes by occupancy classification

9.0 Automatic Fire Detection and Suppression Systems

10.0 Accessibility

11.0 Local Building Safety Law

12.0 Local Land Use Planning
- 12.1 Municipality of Anchorage, Title 21
- 12.2 Comprehensive Plan
- 12.3 Zoning districts
- 12.4 Supplementary district regulations
- 12.5 Conditional use standards

VI. Suggested Texts

Ching, F. D. K., & Winkel, S. R. (latest). *Building construction illustrated* (4th ed.). New York, NY: Van Nostrand Reinhold.

International Code Council. (latest). *2012 International building code*. Falls Church, VA: Author.

VII. Bibliography

American Society for Testing and Materials. (2000)*. *ASTM Standards in building codes*. Philadelphia, PA: Author.

Construction Specifications Institute. (1999)*. *Manual of practice*. Alexandria, VA: Author.

International Code Council. (1998). *Guidelines for accessible and useable buildings and facilities.* Falls Church, VA: Author.

International Conference of Building Officials, (2009). *Handbook to the uniform building codes*. Philadelphia, PA: Author.

Mahoney, W. D. (1994). *Construction inspection manual*. New York, NY: McGraw-Hill.

Municipality of Anchorage. (2014). *of the Anchorage municipal charter: Code and regulations: Title 21 Land use regulations.* Anchorage, AK: Author. Retrieved from https://library.municode.com/index.aspx?clientId=12717

Municipality of Anchorage. (2014). *Anchorage municipal charter, Code and regulations: Title 23 - Building safety.* Anchorage, AK: Author. Retrieved from https://library.municode.com/index.aspx?clientId=12717

Municipality of Anchorage. (2010). *Municipality of Anchorage municipal code: Municipality of Anchorage standard specifications.* Anchorage, AK: Author. Retrieved from http://library1.municode.com/defaultnow/home.htm?infobase=12717&doc_action =whatsnew

National Fire Protection Association. (2011). *NFPA 70: The national electrical code*. Quincy, MA: Author.

National Fire Protection Association. (2011). *NFPA 101: Life safety code*. Quincy, MA: Author.

Packard, R. T. (Ed). (2007). Ramsey/Sleeper, *Architectural graphics standards* (11th ed.). New York, NY: John Wiley & Sons.

Paterson, T. L. (2012). *Illustrated 2012 building code handbook*. New York, NY: McGraw-Hill.

Thomas, P. I. (1999). *Contractor's field guide* (2nd ed.). London, England: Building News.

*****Denotes classic text.

Course Being Changed:	**AET A123**	**(Codes and Standards)**
Impacted Program or Course	***Date of Notification***	***Chair/Coordinator Contacted*** (not listerve)
AAS/AET	2/9/15	Donald M. Ketner Jr.
AAS/CM	2/9/15	Donald M. Ketner Jr.
BS/CM	2/9/15	Donald M. Ketner Jr.
Undergraduate Certificate, Architectural Technology	2/9/15	Donald M. Ketner Jr.

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A131	N/A	3 cr.	(2+3)

6. Complete Course Title
Structural Construction Drawings
Structural Const. Drawings
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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG, Catalog Copy (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☐ Course Prerequisites
- ☐ Co-requisites
- ☐ Registration Restrictions
- ☐ General Education Requirement

9. Repeat Status choose one # of Repeats Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. AAS in AET	2/9/15	Donald M. Ketner, Jr.
2. Undergraduate Certificate in Structural Technology	2/9/15	Donald M. Ketner, Jr.
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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 technical skills needed by structural technicians to work with structural engineers. Includes office practices, staff relationships and structural drawing production. Develops skills in modeling, symbols, conventions, dimensioning systems, sheet organization, code analysis, and research methods for steel, masonry, wood, and reinforced concrete buildings.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
AET A102 and AET A181

16b. Co-requisite(s) *(concurrent enrollment required)*
NONE

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

16d. Registration Restriction(s) *(non-codable)*
NONE

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Updating terminology in course title and course description as per AET Advisory Committee. Update CCG and Catalog Copy.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: AET
C. Course Number: A131
D. Number of Credits & Contact Hours: 3 (2+3)
E. Course Title: Structural Construction Drawings
F. Grading Basis: A-F
G. Implementation Date: Fall 2015
H. Cross-listed N/A
I. Stacked: N/A
J. Course Description: Introduces technical skills needed by structural technicians to work with structural engineers. Includes office practices, staff relationships and structural drawing production. Develops skills in modeling, symbols, conventions, dimensioning systems, sheet organization, code analysis, and research methods for steel, masonry, wood, and reinforced concrete buildings.
K. Course Attributes: N/A
L. Course Prerequisites: AET A102 and AET A181 with a minimum grade of C
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: N/A
M. Course Fees: Yes

III. Course Level Justification. This course introduces a field of knowledge and develops basic skills.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: To introduce students to the professional practices of a structural engineering office in the creation of contract documents for steel structural systems, masonry structural systems, wood structural systems, and reinforced concrete systems.

B. Student Learning Outcomes and Assessment Measures:

Student Learning Outcomes:	Assessment Measures
Upon completion of this course, the student will be able to:	This outcome will be assessed by one or more of the following:
1. Describe the role relationships among structural technician, structural engineer, and other consultants.	Written examination
2. Define the use of time sheets, budgets, and cost accounting procedures.	Written examination
3. Demonstrate a working vocabulary of structural engineering terminology.	Written examination and CADD (computer-aided design and drafting) projects
4. Demonstrate a familiarity with building codes, association standards, drawing conventions, and manufacturing information effecting structural design.	Written examination and CADD projects
5. Recognize and differentiate the use, preparation, and production of structural construction drawings including plans, sections, elevations, details, schedules, and general notes in acceptable industrial standards, using symbols and drawing conventions as they apply to concrete, masonry, steel, and wood structural systems using CADD and 3-D modeling techniques.	Written examination and CADD projects
6. Construct and correlate structural engineering specifications based on their format and acceptable industrial standards.	Written examination and CADD projects
7. Explain the involvement of the technician in relation to changes in both construction drawings and specifications	Written examination and CADD projects
8. Explain elementary structural statics principles, including loads, forces, and the properties of areas.	Written examination and CADD projects

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Course and lab procedures
- 1.3 Emergency egress review

2.0 Structural Design Team
- 2.1 Role relationships
- 2.2 Consultants
- 2.3 Terminology
- 2.4 Timesheets and cost accounting

3.0 Structural Contract Documents
- 3.1 Design/engineering drawings
- 3.2 Shop drawings
- 3.3 Specifications

4.0 Structural Statics
- 4.1 Types of loads
- 4.2 Forces
- 4.3 Properties of areas

5.0 Steel Structural Members
- 5.1 Shapes
- 5.2 Composites
- 5.3 Sizes and uses
- 5.4 Connection methods
  - 5.4.1 Bolt sizing (AISC)
  - 5.4.2 Angle sizing (AISC)
  - 5.4.3 Welding

6.0 Masonry Construction
- 6.1 Types of masonry
- 6.2 Grout
- 6.3 Mortar
- 6.3 Steel reinforcement

7.0 Wood Construction
- 7.1 Dimensional lumber
- 7.2 Timber
- 7.3 Glue laminated structural units
- 7.4 Wood joists
- 7.5 Connection methods

8.0 Reinforced Concrete Construction
- 8.1 Types and uses
- 8.2 Admixtures
- 8.3 Concrete formwork
- 8.4 Columns
- 8.5 Beams
- 8.6 Steel reinforcement
- 8.7 Concrete placing drawings
- 8.8 Cast-in-place
- 8.9 Pre-cast

8.9.1 Pre-stressed
8.9.2 Post-tensioned

VI. Suggested Texts

Goetsch, D. L. (2014). *Structural, civil, and pipe drafting* (2nd ed.) . Clifton Park, NY: Delmar.

VII. Bibliography

Allen, E. (1999)*. *Fundamentals of building construction: Materials and methods* (3rd ed.). New York, NY: John Wiley & Sons.

American Concrete Institute. (2004). *ACI detailing manual*. Publication SP-66(04). Farming Hills, MI: Author.

American Institute of Timber Construction. (1994)*. *Timber construction manual* (4th ed.). New York, NY: John Wiley & Sons.

American Institute of Steel Construction. (2009). *Detailing for steel construction* (3rd ed.). Chicago, IL: Author.

American Institute of Steel Construction. (2002)*. *Designing with steel: A guide for architects* (2nd ed.). Chicago, IL: Author.

American Institute of Steel Construction. (2011). *Manual steel construction* (14th ed.). Chicago, IL: Author.

Ching, F. D. K., & Adams, C. (2001)*. *Building construction illustrated* (3rd ed.). New York, NY: John Wiley & Sons.

Construction Specifications Institute. (latest). *Manual of practice*. Alexandria, VA: Author.

Construction Specifications Institute. (1999)*. *Uniform drawing system*. Alexandria, VA: Author.

Hoke, J. R. (Ed.). (2000)*. *Ramsey/Sleeper, Architectural graphics standards: An abridgement of the ninth edition*. New York, NY: John Wiley & Sons.

International Code Council. (2009). *2009 International building code*. Falls Church, VA: Author.

Jefferis, A., & Smith, K.D. (1997)*. *Commercial drafting and detailing*. Albany, NY: Delmar.

Kaufman, H. F. (2010)*. *A structures primer*. Upper Saddle River, NJ: Pearson.

Onouye, B., & Kane, K. (2012). *Statics and strength of materials for architecture and building construction* (4th ed.). Upper Saddle River, NJ: Prentice Hall.

RS Means Co. Inc. (latest). *Means illustrated construction dictionary*. Kingston, MA: Author.

Spence, W. P. (1998)*. *Construction: Materials, methods, and techniques*. Albany, NY: Delmar.

*****Denotes classic text.

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A142	N/A	4 cr.	(3+2)

6. Complete Course Title
Mechanical and Electrical Technology
Mechanical & Electrical 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
- ☐ Credits
- ☐ Title
- ☐ Grading Basis
- ☐ Course Description
- ☐ Test Score Prerequisites
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG, Catalog Copy (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 N/A Max Credits N/A

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See attached spreadsheet.		
2.		
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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 basic mechanical and electrical systems required in all buildings for the safety, health, comfort, and convenience of the occupants. Emphasizes design criteria, code requirments, interpretation of construction drawings and building energy usage.

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

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
This course and CM A142 are being uncross listed to simplify course sections and coding. Update CCG and Catalog Copy.

Initiator (faculty only) Date
J. Ellen McKay
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 College/School Curriculum Committee Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: AET
C. Course Number: A142
D. Number of Credits & Contact Hours: 4 (3+2)
E. Course Title: Mechanical and Electrical Technology
F. Grading Basis: A-F
G. Implementation Date: Fall 2015
H. Cross-listed N/A
I. Stacked: N/A
J. Course Description: Introduces basic mechanical and electrical systems required in all buildings for the safety, health, comfort, and convenience of the occupants. Emphasizes design criteria, code requirements, interpretation of construction drawings and building energy usage.
K. Course Attributes: N/A
L. Course Prerequisites: MATH A105 with a minimum grade of C or concurrent enrollment
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: Proof of eligibility for placement into ENGL A111. Appropriate SAT, ACT, or UAA approved Math Placement Test scores may be used in lieu of MATH A105.
M. Course Fees: Yes

III. Course Level Justification. This course introduces a field of knowledge and develops basic skills.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: Introduce basic knowledge of building mechanical and electrical systems to entry-level technicians and construction managers.

B. Student Learning Outcomes and Assessment Measures:

Student Learning Outcomes:	Assessment Measures
Upon completion of this course, the student will be able to:	This outcome will be assessed by one or more of the following:
1. Identify potable water systems, the regulatory codes for water system design and installation and calculate piping size based on demand.	Written examination and graded project
2. Identify elements of drainage piping systems for buildings, the regulatory codes for drainage system design and installation, the purpose of system venting, and the installation methods and materials for drain, waste and vent systems for buildings.	Written examination and graded project
3. Summarize the effects of heat transfer, temperature and humidity, building solar design/orientation, and fresh air ventilation on human comfort and energy usage.	Written examination and graded project
4. Describe the effects that climate and building construction systems have on the building's heat loss/gain and energy usage.	Written examination and graded project
5. Identify the equipment and components of HVAC systems.	Written examination and graded drawing interpretation
6. Describe the methods of electrical power generation and distribution grids.	Written examination and written exercise
7. Describe the properties of conductors and insulators.	Written examination
8. Describe the different types of electrical services and the electrical equipment used for power distribution in buildings.	Written examination and graded project
9. Examine branch circuitry for residential and commercial buildings, identify the materials and methods used, estimate branch circuit loads for lighting, appliances, and motors, and compute conductor and conduit sizes.	Written examination and graded project
10. Identify the requirements for low-voltage power systems such as building controls, communication, fire alarm, and TV.	Written examination
11. Define various types of interior lighting, lighting levels, energy use by lighting type and calculate the lumens required using software of the zonal cavity method.	Written examination and graded project

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Course and lab procedures
- 1.3 Emergency egress review

2.0 Water Supply and Design
- 2.1 Water source and distribution
- 2.2 Water systems
- 2.3 Water demand
- 2.4 Plumbing codes
- 2.5 Pipe materials, fittings, valves
- 2.6 Upfeed/downfeed systems
- 2.7 Design calculations

3.0 Plumbing Drain, Waste, and Vent Systems
- 3.1 Drainage and venting principles
- 3.2 Water supply systems
- 3.3 Terminology
- 3.4 Piping materials and fittings
- 3.5 Plumbing fixtures
- 3.6 Drainage design

4.0 Basic Thermal Process and Human Comfort
- 4.1 Heat transfer
- 4.2 Temperature and humidity
- 4.3 Ventilation
- 4.4 Solar orientation and design

5.0 Building Heat Loss
- 5.1 Calculation factors
- 5.2 “R” and “U” values
- 5.3 Infiltration losses
- 5.4 Heating degree days
- 5.5 Energy use and fuel costs

6.0 Heating, Ventilating, and Air Conditioning
- 6.1 Hot water heating
- 6.2 Heat plants and chillers
- 6.3 Forced air systems
- 6.4 Ducts, duct fittings, duct design
- 6.5 Supply/return locations
- 6.6 Interpret HVAC drawings

7.0 Fundamentals of Electricity
- 7.1 AC/DC generation and circuits
- 7.2 Ohm’s Law
- 7.3 Watt’s Law
- 7.4 Conductors and insulators
- 7.5 Transformers
- 7.6 Electrical distribution grids

8.0 Building Electrical Systems
- 8.1 Overhead and lateral services
- 8.2 Meters

8.3 Building disconnect switches
8.4 Panels
8.5 Main distribution panels
8.6 Branch panels
8.7 Interpret electrical drawings

9.0 Branch Circuits
9.1 Circuit breakers
9.2 Conductors
9.3 Devices
9.4 Loading

10.0 Lighting
10.1 Lighting levels and lighting efficiency
10.2 Light fixture types
10.3 Switching
10.4 Interpret lighting drawings

VI. Suggested Texts

Wujek, J. B., & Dagostino, F. R. (2010). *Mechanical and electrical systems in architecture, engineering, and construction* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

VII. Bibliography

Bethune, J. D., & Svatik, P. T. (1997)*. *Electrical-mechanical drafting with CAD*. Upper Saddle River, NJ: Prentice Hall.

Burton, J. L. (2000)*. *Domestic plumbing design*. Upper Saddle River, NJ: Prentice Hall.

Construction Specifications Institute. (1999)*. *Uniform drawing system*. Alexandria, VA: Author.

Cooper, W. B. (2000)*. *Warm air heating for climate control*. (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Havrella, R. A. (1995)*. *Heating, ventilation, and air conditioning fundamentals*. Upper Saddle River, NJ: Prentice Hall.

Holzman, H. N. (1999)*. *Modern commercial wiring*. Tinley Park, IL: Goodheart-Wilcox.

Holzman, H. N. (1999)*. *Modern residential wiring*. Tinley Park, IL: Goodheart – Wilcox.

International Association of Plumbing and Mechanical Officials. (latest). *Uniform mechanical code*. Walnut Creek, CA: Author.

International Association of Plumbing and Mechanical Officials. (latest). *Uniform plumbing code*. Walnut Creek, CA: Author.

International Code Council. (latest). *International mechanical code.* Falls Church, VA: Author.

Matthews, J. H. (1993)*. *Introduction to the design and analysis of building electrical systems*. New York, NY: Van Nostrand Reinhold.

National Fire Protection Association. (latest). *NFPA 70, the national electrical code.* Quincy, MA: Author.

National Institute of Building Sciences. (2000)*. *US national CAD standards.* (ver.2.0). Washington, DC: Author.

Ramsey/Sleeper (2000)*. *Architectural graphic standards*. (10th ed.) New York, NY: American Institute of Architects.

Schiler, M. (1991)*. *Mechanical, plumbing, and electrical systems*. Los Angeles, CA: Architectural License Seminars.

Tao, W. K., & Janis, R. R. (1997)*. *Mechanical and electrical systems in buildings* Upper Saddle River, NJ: Prentice Hall.

Trost, J. (1999)*. *Electrical and lighting*. Upper Saddle River, NJ: Prentice Hall

Wentz, T. (1997)*. *Plumbing systems, analysis, design, and construction*. Upper Saddle River, NJ: Prentice Hall.

*Denotes classic text.

Course Being Changed:	**AET A142**	**(Mechanical & Electrical Technology)**
Impacted Program or Course	***Date of Notification***	***Chair/Coordinator Contacted*** (not listerve)
AAS/AET	2/9/15	Donald M. Ketner Jr.
AAS/CM	2/9/15	Donald M. Ketner Jr.
BS/CM	2/9/15	Donald M. Ketner Jr.
Undergraduate Certificate, Mechanical and Electrical Technology	2/9/15	Donald M. Ketner Jr.

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A143	N/A	3 cr.	(2+3)

6. Complete Course Title
Mechanical & Electrical Construction Drawings
Mech. & Elec. Const. Drawings
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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG, Catalog Copy (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☐ Course Prerequisites
- ☐ Co-requisites
- ☐ Registration Restrictions
- ☐ General Education Requirement

9. Repeat Status choose one # of Repeats Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. AAS in AET	2/9/15	Donald M. Ketner, Jr.
2. Undergraduate Certificate in Mechanical & Electrical Technology	2/9/15	Donald M. Ketner, Jr.
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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 technical analysis, theory, code requirements, modeling techniques, and construction drawing methodology to produce construction drawings for mechanical and electrical building systems. Includes drawing conventions, symbols, terminology and research methods for residential and commercial building mechanical and electrical systems and equipment.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
AET A102 and AET A181

16b. Co-requisite(s) *(concurrent enrollment required)*
NONE

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

16d. Registration Restriction(s) *(non-codable)*
NONE

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Updating terminology in course title and course description as per AET Advisory Committee and updating bibliography. Update Catalog Copy.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: AET
C. Course Number: A143
D. Number of Credits & Contact Hours: 4 (2+4)
E. Course Title: Mechanical & Electrical Construction Drawings
F. Grading Basis: A-F
G. Implementation Date: Fall 2015
H. Cross-listed N/A
I. Stacked: N/A
J. Course Description: Introduces technical analysis, theory, code requirements, modeling techniques, and construction drawing methodology to produce construction drawings for mechanical and electrical building systems. Includes drawing conventions, symbols, terminology and research methods for residential and commercial building mechanical and electrical systems and equipment.
K. Course Attributes: N/A
L. Course Prerequisites: AET A102 and AET A181
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: N/A
M. Course Fees: Yes

III. Course Level Justification. This course introduces a field of knowledge and develops basic skills.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: Introduce students to the basic concepts, drawing presentation techniques, and construction drawing standards for mechanical and electrical systems in buildings using modeling software.

B. Student Learning Outcomes and Assessment Measures:

Student Learning Outcomes:	Assessment Measures
Upon completion of this course, the student will be able to:	This outcome will be assessed by one or more of the following:
1. Produce project site drawings to layout and draw building utility services, site utilities, and site improvements related to the mechanical and electrical systems.	Written examination
2. Identify and draw the elements of a typical plumbing system including the piping and fixtures.	Written examination and CADD (computer-aided design and drafting) projects
3. Differentiate between the drawing line types used for domestic water, drain, waste, and vent systems.	Written examination and CADD projects
4. Identify areas within a building where plumbing system components may be placed or routed.	Written examination and CADD projects
5. Produce electrical power system drawings for buildings, including electrical power plans, panel riser diagrams, circuit breaker panel schedules, and electrical equipment schedules.	Written examination and CADD projects
6. Produce HVAC drawings including ductwork plans, mechanical/utility room plans, and details and elevations of heating and ventilation specialties.	Written examination and CADD projects
7. Identify locations within the building where HVAC components may be placed or routed and how HVAC components must be coordinated with other building systems.	Written examination and CADD projects
8. Produce lighting plans that show the location and types of light fixtures and light switches for typical projects.	Written examination and CADD projects
9. Draw a light fixture schedule and total light fixture circuit loads.	Written examination and CADD projects
10. Produce drawings and drawing schedules that convey the engineer's design for sound, signal, and communications drawings for typical building projects.	Written examination and CADD projects

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Course and lab procedures
- 1.3 Emergency egress review

2.0 Site Mechanical and Electrical Drawings
- 2.1 Storm sewerage
- 2.2 Sanitary sewerage
- 2.3 Water distribution
- 2.4 Fuel distribution systems
- 2.5 Septic systems
- 2.6 Electric service
- 2.7 Site electrical
- 2.8 Outdoor area lighting
- 2.9 Communication systems
- 2.10 Irrigation systems

3.0 Plumbing Drawings
- 3.1 Domestic water supply
- 3.2 Drain, waste, and vent
- 3.3 Pipe riser isometric diagrams
- 3.4 Piping and fitting symbols
- 3.5 Plumbing fixture symbols
- 3.6 Plumbing fixture schedules
- 3.7 Roof drainage systems

4.0 Electrical Drawings
- 4.1 Power distribution
- 4.2 Branch circuitry
- 4.3 Power riser diagrams
- 4.4 Electrical symbols
- 4.5 Electrical equipment schedules
- 4.6 Panelboard diagrams

5.0 Heating, Ventilating, and Air Conditioning
- 5.1 Water heating drawings
- 5.2 Heating/cooling plant equipment drawings
- 5.3 Duct system drawings
- 5.4 Supply/return grille locations
- 5.5 Elevations and details of HVAC specialties

6.0 Lighting Drawings
- 6.1 Fixture schedules
- 6.2 Lighting plans
- 6.3 Lighting symbols
- 6.4 Switch locations

7.0 Sound, Signal, and Communication Drawings
- 7.1 Building controls
- 7.2 Clock and intercom systems
- 7.3 Fire and hazard detection systems
- 7.4 TV and sound systems

7.5 Telephone systems
7.6 Computer network systems

VI. Suggested Texts

Wujek, J. B., & Dagostino, F. R. (2010). *Mechanical and electrical systems in architecture, engineering, and construction* (5th ed.). Upper Saddle River, NJ: Prentice-Hall.

VII. Bibliography

Bassler B. (Ed.). (latest) Ramsey/Sleeper *Architectural graphic standard: Student edition*, (9th ed., Abdg). New York, NY: John Wiley and Sons.

Ching, F. D. K., & Winkel, S. R. (2008). *Building construction illustrated* (4th ed.). New York, NY: Van Nostrand Reinhold.

Hoke, J. R. (Ed.). (2000)*. *Architectural graphics standards: An abridgement of the ninth edition*. New York, NY: John Wiley & Sons.

International Code Council. (2012). *2012 International building code*. Falls Church, VA: Author.

Janis, R. R., & Tao, W. K. Y. (2014). *Mechanical and electrical systems in buildings* (5th ed.). Upper Saddle River, NJ: Pearson.

National Institute of Building Sciences. (2014). *US national CAD standard*. (ver.6). Washington, DC: Author.

RS Means Co. (2011). *Means illustrated construction dictionary*. Kingston, MA: Author.

Stein, B., & Reynolds, J.S. (2000)*. *Mechanical and electrical equipment for buildings*. (9th ed.). New York, NY: John Wiley & Sons.

*Denotes classic text.

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A181	N/A	4	(2+4)

6. Complete Course Title
Intermediate CADD for Building Construction
Interm. CADD for Bldg. Const.
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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG, Catalog Copy (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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See attached spreadsheet.		
2.		
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/12/15

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)*
Develops intermediate level CADD (computer-aided design and drafting) skills for architectural, civil, structural, mechanical and electrical construction drawings used in building construction. Includes 3-D modeling.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
AET A101

16b. Co-requisite(s) *(concurrent enrollment required)*
NONE

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

16d. Registration Restriction(s) *(non-codable)*
NONE

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
CM A101 was previously listed as a prerequisite. CM A101 is being deleted. Update course description, CCG and Catalog Copy.

Initiator (faculty only) Date
J. Ellen McKay
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
College/School Curriculum Committee Chair Date

☐ Approved
☐ Disapproved
Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: AET
C. Course Number: A181
D. Number of Credits & Contact Hours: 4 (2+4)
E. Course Title: Intermediate CADD for Building Construction
F. Grading Basis: A-F
G. Implementation Date: Fall 2015
H. Cross-listed N/A
I. Stacked: N/A
J. Course Description: Develops intermediate level CADD (computer-aided design and drafting) skills for architectural, civil, structural, mechanical and electrical construction drawings used in building construction. Includes 3-D modeling.
K. Course Attributes: N/A
L. Course Prerequisites: AET A101 with a minimum grade of C
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: N/A
M. Course Fees: Yes

III. Course Level Justification. This course introduces a field of knowledge and develops basic skills.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: To further the student's knowledge of CADD and to introduce 3-D modeling concepts.

B. Student Learning Outcomes and Assessment Measures:

Student Learning Outcomes:	Assessment Measures
Upon completion of this course, the student will be able to:	This outcome will be assessed by one or more of the following:
1. Select drawing sheet sizes and compute the drawing area and title block areas.	Written examination
2. Describe the use of the sheet production data area.	Written examination
3. Describe the drawing coordinate system according to the Uniform Drawing System.	Written examination and CADD projects
4. Describe drawing schedule content and produce drawing schedules.	Written examination and CADD projects
5. Describe the purpose of the information found on cover sheets.	Written examination and CADD projects
6. Differentiate among the types and know the placement of notations used on construction drawings.	Written examination and CADD projects
7. Illustrate the basics of 3-D modeling.	Written examination and CADD projects
8. Demonstrate the basics of 3-D modeling concepts in the preparation of construction drawings.	Written examination and CADD projects
9. Produce 3-D models of building construction projects.	CADD projects

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Course and lab procedures
- 1.3 Emergency egress review

2.0 Drawing Sheet Organization
- 2.1 Drawing areas and title blocks
- 2.2 Production data areas
- 2.3 Drawing coordinate system
- 2.4 Cover sheets

3.0 Schedules
- 3.1 Schedule formats
- 3.2 Headings
- 3.3 Content

4.0 Notations
- 4.1 Purpose
- 4.2 Types

4.2.1 General notes
4.2.2 General discipline notes
4.2.3 General sheet notes
4.2.4 Reference keynotes
4.2.5 Sheet keynotes
4.3 Note hierarchy
4.3 Scale
4.4 Schedule
5.0 Third Dimension
5.1 Basic 3-D model
5.2 Views
5.3 Orbit
5.4 Lines in 3-D space
5.5 User coordinate system
6.0 3-D Modeling
6.1 Primatives
6.2 Solids
6.3 Extrusions
6.4 Lofting
6.5 Surfaces
7.0 Solid Editing
7.1 Boolean operations
7.2 3-D move
7.3 3-D rotate
7.4 3-D scale
8.0 Building Information Modeling
8.1 Grids and levels
8.2 Model elements
8.2 Families
8.3 Sheets
8.4 Views

VI. Suggested Texts

Omura, G., & Benton, B. C. (2013). *Mastering AutoCAD 2014 and AutoCAD LT 2014*. Indianapolis, IN: Sybex.

VII. Bibliography

Allen, E. (1999). *Fundamentals of building construction: Materials and methods* (3rd ed.). New York, NY: John Wiley & Sons.

Ching, F. D. K., & Adams, C. (2001)*. *Building construction illustrated* (3rd ed.). New York, NY: John Wiley & Sons.

Construction Specifications Institute. (latest). *Manual of practice*. Alexandria, VA: Author.

Construction Specifications Institute. (1999)*. *Uniform drawing system*. Alexandria, VA: Author.

Duell, R., Hathorn, T., & Hathorn, T. R. (2014). *Autodesk revit architecture 2015 essentials*. Indianapolis, IN: Sybex.

Hoke, J. R. (Ed.). (2000)*. *Ramsey/Sleeper, Architectural graphics standards: An abridgement of the ninth edition*. New York, NY: John Wiley & Sons.

RS Means Co. Inc. (latest). *Means illustrated construction dictionary*. Kingston, MA: Author.

Spence, W. P. (1998)*. *Construction: Materials, methods, and techniques*. Albany, NY: Delmar.

Stine, D. J. (2014). *Design integration using Autodesk Revit 2015: Architecture, Structure and MEP*. Mission, KS: SDC.

*Denotes classic text.

Course Being Changed:	**AET A181**	**(Intermediate CADD for Building Construction)**
Impacted Program or Course	***Date of Notification***	***Chair/Coordinator Contacted*** (not listerve)
AAS/AET	2/9/15	Donald M. Ketner Jr.
Undergraduate Certificate, Architectural Technology	2/9/15	Donald M. Ketner Jr.
Undergraduate Certificate, Civil Technology	2/9/15	Donald M. Ketner Jr.
Undergraduate Certificate, Mechanical and Electrical Technology	2/9/15	Donald M. Ketner Jr.
Undergraduate Certificate, Structural Technology	2/9/15	Donald M. Ketner Jr.
AET A111	2/9/15	Donald M. Ketner Jr.
AET A121	2/9/15	Donald M. Ketner Jr.
AET A131	2/9/15	Donald M. Ketner Jr.
AET A143	2/9/15	Donald M. Ketner Jr.
AET A286	2/9/15	Donald M. Ketner Jr.

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

1a. School or College	1b. Division	1c. Department
CT CTC	AAPT Division of Applied Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A213	N/A	4 cr.	(2+4)

6. Complete Course Title
Civil Technology

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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG, Catalog Copy (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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See attached spreadsheet.		
2.		
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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)*
Outlines elements of civil design, including soils and soil mechanics, foundations, roads, and utilities using local, state and federal regulations. Introduces elements of construction surveying.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
AET A111 and MATH A105 with a minimum grade of C

16b. Co-requisite(s) *(concurrent enrollment required)*
NONE

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

16d. Registration Restriction(s) *(non-codable)*
NONE

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Add AET A111 as a prerequisite to increase student success in the course. Update CCG and Catalog Copy.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: AET
C. Course Number: A213
D. Number of Credits & Contact Hours: 4 (2+4)
E. Course Title: Civil Technology
F. Grading Basis: A-F
G. Implementation Date: Fall 2015
H. Cross-listed N/A
I. Stacked: N/A
J. Course Description: Outlines elements of civil design, including soils and soil mechanics, foundations, roads, and utilities using local, state, and federal regulations. Introduces elements of construction surveying.
K. Course Attributes: N/A
L. Course Prerequisites: AET A111 and MATH A105 with a minimum grade of C
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: N/A
M. Course Fees: Yes

III. Course Level Justification. This course builds upon a foundation of knowledge established in AET A101, AET A102, and AET A111.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: Present elements of civil design, including soils and soil mechanics, foundations, roads, utilities and construction surveying.

B. Student Learning Outcomes and Assessment Measures:

Student Learning Outcomes:	Assessment Measures
Upon completion of this course, the student will be able to:	This outcome will be assessed by one or more of the following:
1. Relate the various codes and specifications to the design of specific civil projects, including subdivision design, road design and the design of utilities.	Written examination and class project
2. Describe the importance of soils testing in the civil design process.	Written examination and project
3. Define the properties and characteristics of soil types and how they relate to the construction process.	Written examination and project
4. Describe how various street design code provisions apply to the actual design of streets and roads.	Written examination and project
5. Utilize existing plan and profile construction drawings.	Written examination and project
6. Apply the various utility design code provisions to the design of utilities.	Written examination and project
7. Solve earthwork problems related to the design of construction projects.	Written examination and project
8. Solve construction surveying problems related to the design of construction projects.	Written examination and project

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Course and lab procedures
- 1.3 Emergency egress review

2.0 Codes and Specifications
- 2.1 Local codes
- 2.2 Design criteria
- 2.3 Standard specifications
- 2.4 State and federal regulations

3.0 Soils
- 3.1 Sampling
- 3.2 Testing
- 3.3 Properties and characteristics

- 3.4 Compaction
- 3.5 Stabilization

4.0 Foundations
- 4.1 Shallow foundations
- 4.2 Pile foundations
- 4.3 Caissons

5.0 Road Design
- 5.1 Horizontal curves
- 5.2 Vertical curves
- 5.3 Cul-de-sacs

6.0 Utility Design
- 6.1 Electric, telephone, cable
- 6.2 Water
- 6.3 Sewer
- 6.4 Gas

7.0 Earthwork
- 7.1 Grading
- 7.2 Cut & fill
- 7.3 Quantities

8.0 Construction Surveying
- 8.1 Building location and stakeout
- 8.2 Dimension control
- 8.3 Road layout
- 8.4 Utility layout

VI. Suggested Texts

Chappell, E. (2014). *AutoCAD® Civil 3D® 2015 essentials*. Indianapolis, IN: John Wiley & Sons.

VII. Bibliography

Alaska Department of Transportation and Public Facilities, (November 15, 2013). *Alaska preconstruction manual*, (ch. 11. highway design). Retrieved from http://www.dot.alaska.gov/stwddes/dcsprecon/assets/pdf/preconhwy/preconstruction_all.pdf

American Society of State Highway and Transportation Officials. (2011). *Geometric design of highways and streets* (6th ed.). Washington, DC: Author.

Anchorage Water and Wastewater Utility, (2012). *Design and construction practices manual*. Retrieved from http://www.awwu.biz/website/awwu_projects/AwwuProjects Frame.htm

Chugach Electric Service Co. (2011). *Electric service standards & requirements: residential and business*. Retrieved from http://www.chugachelectric.com/system/files/customer_service/esr.pdf

Kavanagh, B. F., & Slattery, D. K. (2015). *Surveying with construction applications* (8th ed.). Upper Saddle River, NJ: Pearson.

Liu, D., & Evett, J.B. (2004). *Soils and foundations* (6th ed.). Upper Saddle River, NJ: Pearson.

Municipality of Anchorage. (2009). *Municipality of Anchorage standard specifications*. Retrieved from http://www.muni.org/Departments/works/project_management/Pages/MASS.aspx

Municipality of Anchorage. (January, 2007). *Design criteria manual*. Retrieved from http://www.muni.org/Departments/works/project_management/Pages/DesignCriteriaManual.aspx

Municipality of Anchorage. (October, 2005). *Official streets and highways plan*. Retrieved from http://www.muni.org/Departments/OCPD/Planning/AMATS/Documents/2005OSHP.pdf

Municipality of Anchorage, (2001). *Anchorage 2020: Anchorage bowl comprehensive plan*. Retrieved from http://www.muni.org/Departments/OCPD/Planning/Publications/Pages/Anchorage2020.aspx

Course Being Changed:	**AET A213**	**(Civil Technology)**
Impacted Program or Course	***Date of Notification***	***Chair/Coordinator Contacted*** (not listerve)
AAS/AET	2/9/15	Donald M. Ketner Jr.
AAS/CM	2/9/15	Donald M. Ketner Jr.
BS/CM	2/9/15	Donald M. Ketner Jr.
Undergraduate Certificate, Civil Technology	2/9/15	Donald M. Ketner Jr.

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A231	N/A	4 cr.	(2+4)

6. Complete Course Title
Structural Technology

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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG, Catalog Copy (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 N/A Max Credits N/A

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See attached spreadsheet.		
2.		
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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)*
Examines structural theory and the physical principles that underlie structural behavior. Includes the use of materials in a manner to maintain structural stability against such natural forces as gravity, wind, snow, and earthquakes. Covers connection details and code requirements for wood, steel, and reinforced concrete.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
AET A101, AET A102, and MATH 105 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
This course and CM A231 are being uncross-listed to simplify course sections and coding. Update CCG and Catalog Copy.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: AET
C. Course Number: A231
D. Number of Credits & Contact Hours: 4 (2+4)
E. Course Title: Structural Technology
F. Grading Basis: A-F
G. Implementation Date: Fall 2015
H. Cross-listed N/A
I. Stacked: N/A
J. Course Description: Examines structural theory and the physical principles that underlie structural behavior. Includes the use of materials in a manner to maintain structural stability against such natural forces as gravity, wind, snow, and earthquakes. Covers connection details and code requirements for wood, steel, and reinforced concrete.
K. Course Attributes: N/A
L. Course Prerequisites: AET A101, AET A102, and MATH A105 with a minimum grade of C
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: N/A
M. Course Fees: Yes

III. Course Level Justification. This course builds upon a foundation of knowledge established in AET A101 and AET A102. Connects completed course work or industry experience with advanced skill development.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: Present elements of structural design, including structural theory, material behavior, detailing, and codes.

B. Student Learning Outcomes and Assessment Measures:

Student Learning Outcomes:	Assessment Measures
Upon completion of this course, the student will be able to:	This outcome will be assessed by one or more of the following:
1. Illustrate the nature of forces on a structural framework.	Written examination and Solutions Manual
2. Apply the fundamentals of statics to solve simple problems of structural design.	Written examination and Solutions Manual
3. Calculate bending, shear, and deflection for various beam types.	Written examination and Solutions Manual
4. Identify the properties of columns.	Written examination and Solutions Manual
5. Describe how wood beams and columns are designed for given loading situations.	Written examination and Solutions Manual
6. Describe how steel beams and columns are designed for given loading situations.	Written examination and Solutions Manual
7. Describe how reinforced concrete beams and columns are designed for given loading situations.	Written examination and Solutions Manual
8. Classify the various types of walls.	Written examination and Solutions Manual
9. Describe the advantages and disadvantages of each wall type.	Written examination and Solutions Manual
10. Identify the design issues involved with each wall type.	Written examination and Solutions Manual
11. Relate the forces placed on connections to the design of fastening systems for wood-to-wood connections, wood-to-steel connections and steel-to-steel connections.	Written examination and Solutions Manual
12. Explain the role of soils and concrete reinforcement in the design of foundations.	Written examination and Solutions Manual

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Course and lab procedures
- 1.3 Emergency egress review

2.0 Statics
- 2.1 Nature of forces
- 2.2 Moment
- 2.3 Equilibrium
- 2.4 Free body diagrams

- 2.5 Properties of areas
- 2.6 Stress and strain

3.0 Beams and Columns

- 3.1 Types of beams
- 3.2 Loads
- 3.3 Shear and moment
- 3.4 Beam stress
- 3.5 Columns

4.0 Wood Construction

- 4.1 Load and resistance factor design for wood
- 4.2 Lumber and timber sizes
- 4.3 Design of wood beams
- 4.4 Glue laminated beams
- 4.5 Wood columns

5.0 Steel Construction

- 5.1 Properties of steel
- 5.2 Load and resistance factor design for steel
- 5.3 Steel beam design for flexure
- 5.4 Lateral support
- 5.5 Shear
- 5.6 Deflection
- 5.7Composite design
- 5.8 Steel columns

6.0 Reinforced Concrete Construction

- 6.1 Properties of concrete
- 6.2 Reinforced concrete theory
- 6.3 Load and resistance factor design for reinforced concrete
- 6.4 Design of concrete beams
- 6.5 Continuity of reinforced concrete
- 6.6 Pre-stressed concrete
- 6.7 Reinforced concrete columns

7.0 Walls

- 7.1 Stud walls
- 7.2 Masonry walls
- 7.3 Reinforced concrete walls
- 7.4 Tilt-up walls
- 7.5 Retaining walls

8.0 Connections

- 8.1 Wood-to-wood connections
- 8.2 Wood to steel connections
- 8.3 Steel-to-steel connections

VI. Suggested Texts

Onouye, B., & Kane K. (2012). *Statics and strength of materials for architecture and building construction* (4th ed.). Upper Saddle River, NJ: Pearson.

Gupta, R.S. (2011). *Principles of structural design: wood, steel, and concrete.* Boca Raton, FL: CRC Press.

VII. Bibliography

Aghayere, A., & Viril, J. (2009). *Structural steel design: a practice-oriented approach*.

American Concrete Institute (2004). *ACI detailing manual – 2004*. Publication SP-66 (04). Farmington Hills, MI: Author.

American Institute of Timber Construction (1999)*. *Manual of timber construction* (4th ed.) Vancouver, WA: Author.

American Institute of Steel Construction. (latest). *Manual of steel construction* (14th ed.). Chicago, IL: Author.

Burns, T. (2010). *Applied statics and strength of materials* (2nd ed.). Clifton Park, NY: Delmar Cengage Learning.

International Code Council. (2009). *International building code*. Falls Church, VA: Author.

Limbrunner, G.F., & Spiegel, L. (2009). *Applied statics and strength of materials* (5th ed.). Upper Saddle River, NJ: Pearson Prentice-Hall.

Mott, R.L. (2008). *Applied strength of materials* (5th ed.). Upper Saddle River, NJ: Pearson Prentice-Hall.

R.S. Means Co. Inc. (latest). *Means illustrated construction dictionary*. Kingston, MA: Author.

Schodek, D.L., & Bechthold, M. (2008). *Structures* (6th ed.). Upper Saddle River, NJ: Pearson Prentice-Hall.

Setareh, M., & Darvas, R. (2007). *Concrete structures*. Upper Saddle River, NJ: Pearson.

Shaeffer, R.E. (2007). *Elementary structures for architects and builders* (5th ed.). Upper Saddle River, NJ: Pearson Prentice-Hall.

Spence, W.P. (2006). *Construction: materials, methods, and techniques* (2nd ed.). Clifton Park, NY: Thompson Delmar Learning.

Wight, J.K., & MacGregor, J.G. (2012). *Reinforced concrete: mechanics & design* (6th ed.). Upper Saddle River, NJ: Pearson.

Wujek, J.B. (1999). *Applied statics, strength of materials, and building structure design*. Upper Saddle River, NJ: Prentice-Hall.

*Denotes classic text.

Course Being Changed:	**AET A231**	**(Structural Technology)**
Impacted Program or Course	***Date of Notification***	***Chair/Coordinator Contacted*** (not listerve)
AAS/AET	2/9/15	Donald M. Ketner Jr.
AAS/CM	2/9/15	Donald M. Ketner Jr.
BS/CM	2/9/15	Donald M. Ketner Jr.
Undergraduate Certificate, Structural Technology	2/9/15	Donald M. Ketner Jr.

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A282	N/A	4 cr.	(2+4)

6. Complete Course Title
Advanced CADD Techniques

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
- ☐ Automatic Restrictions
  - ☐ 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

9. Repeat Status No # of Repeats N/A Max Credits N/A

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. OEC in CADD for Building Construction	2/9/15	Donald M. Ketner, Jr.
2.		
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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)*
Continues skill development in CADD (conputer-aided design and drafting) at an advanced level for the production of architectural, civil, structural, mechanical, and electrical drawings used in construction. Includes 3-D space, shading, rendering, and animation techniques.

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

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
The Occupational Endorsement Certificate (OEC) in CADD is being deleted. This course was only required for the OEC and will no longer be necessary.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	AET

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
AET	A283	N/A	3 cr.	(2+3)

6. Complete Course Title
CADD Software Customization

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
- ☐ Automatic Restrictions
  - ☐ 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

9. Repeat Status choose one # of Repeats N/A Max Credits N/A

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

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

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. OEC in CADD for Building Construction	2/9/15	Donald M. Ketner, Jr.
2.		
3.		

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/11/15
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/15

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)*
Presents the skills and knowledge necessary to modify and customize the CADD user interface, create customized CADD features for diverse domains, and manage CADD standards and projects in professional environments.

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

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
The Occupational Endorsement Certificate (OEC) in CADD is being deleted. This course was only required for the OEC and will no longer be necessary.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College	1b. Department
CT CTC	AET

2. Complete Program Title/Prefix
Occupational Endorsement Certificate in CADD for Building Construction

3. Type of Program

Choose one from the appropriate drop down menu: Undergraduate: Occupational Endorsement Certificate or Graduate: CHOOSE ONE

This program is a Gainful Employment Program: ☒ Yes or ☐ No

4. Type of Action:

PROGRAM	**PREFIX**
☐ Add	☐ Add
☐ Change	☐ Change
☒ Delete	☐ Inactivate

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

6a. Coordination with Affected Units Department, School, or College: AET

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____
Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 2/11/15

6c. Coordination with Library Liaison Date: 2/10/15

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function

8. Justification for Action
Delete as a result of prioritization review and lack of enrollment.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College CT CTC	1b. Department AET

2. Complete Program Title/Prefix
Structural Technology Certificate

3. Type of Program

Choose one from the appropriate drop down menu: Undergraduate: Undergraduate Certificate or Graduate: CHOOSE ONE

This program is a Gainful Employment Program: ☒ Yes or ☐ No

4. Type of Action:

PROGRAM	**PREFIX**
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

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

6a. Coordination with Affected Units Department, School, or College: AET

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____
Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 2/11/15

6c. Coordination with Library Liaison Date: 2/10/15

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function

8. Justification for Action
Updating terminology in certificate title, changes in required course titles as per AET Advisory Committee.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

Undergraduate Certificate in Structural Technology

- Overview
- Learning Outcomes

Admission to this program at Matanuska-Susitna College is currently suspended. Contact the college for more information.

Admission Requirements

Satisfy the Application and Admission Requirements for Undergraduate Certificate Programs.

Advising

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Graduation Requirements

- Satisfy the General University Requirements for Undergraduate Certificates.
- Complete the Program Requirements below.
- Achieve a grade of C or better in all courses required for the certificate.

Program Requirements

AET A101	Fundamentals of CADD for Building Construction	4
AET A102	Methods of Building Construction	3
AET A131	Structural Construction Drawings	3
AET A181	Intermediate CADD for Building Construction	4
AET A231	Structural Technology	4
AET A286	Design Project	4
ENGL A111	Introduction to Composition	3
MATH A105	Intermediate Algebra	3
Select one of the following:		3
COMM A111	Fundamentals of Oral Communication	
COMM A235	Small Group Communication	
COMM A237	Interpersonal Communication	
COMM A241	Public Speaking	
Total Credits		31

A total of 31 credits is required for the certificate.
- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-structuraldrafting/#sthash.j3Jtf6Q3.dpuf

Undergraduate Certificate in Structural Technology

- Overview
- Learning Outcomes

Program Student Learning Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design (CADD) and 3-D modeling.
- Demonstrate knowledge of drawing conventions including symbols, line types, line weights, and dimension styles as applicable to structural construction drawings.
- Visualize and translate drawing information to actual physical objects and completed structural construction projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health, and safety of the public.
- Understand the role, duties, and responsibilities of the members of the design team, including the working relationship between technicians and structural engineers.
- Understand the structural elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed structural project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-structuraldrafting/#learningoutcomestext

Undergraduate Certificate in Structural ~~Drafting~~Technology

- Overview
- Learning Outcomes

Admission to this program at Matanuska-Susitna College is currently suspended. Contact the college for more information.

Admission Requirements

Satisfy the Application and Admission Requirements for Undergraduate Certificate Programs.

Advising

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Graduation Requirements

- Satisfy the General University Requirements for Undergraduate Certificates.
- Complete the Program Requirements below.
- Achieve a grade of C or better in all courses required for the certificate.

Program Requirements

AET~~/CM~~ A101	Fundamentals of CADD for Building Construction	4
AET~~/CM~~ A102	Methods of Building Construction	3
AET A131	Structural ~~Drafting~~Construction Drawings	3
AET A181	Intermediate CADD for Building Construction	4
AET~~/CM~~ A231	Structural Technology	4
AET A286	Design Project	4
ENGL A111	Introduction to Composition	3
MATH A105	Intermediate Algebra	3
Select one of the following:		3
COMM A111	Fundamentals of Oral Communication	
COMM A235	Small Group Communication	
COMM A237	Interpersonal Communication	
COMM A241	Public Speaking	
Total Credits		31

A total of 31 credits is required for the certificate.
- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-structuraldrafting/#sthash.j3Jtf6Q3.dpuf

Undergraduate Certificate in Structural ~~Drafting~~Technology

- Overview
- Learning Outcomes

Program Student Learning Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design (CADD) and 3-D modeling.
- Demonstrate knowledge of ~~drafting~~ drawing conventions including symbols, line types, line weights, and dimension styles as applicable to structural ~~drafting~~construction drawings.
- Visualize and translate drawing information to actual physical objects and completed structural construction projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health, and safety of the public.
- Understand the role, duties, and responsibilities of the members of the design team, including the working relationship between technicians and structural engineers.
- Understand the structural elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed structural project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-structuraldrafting/#learningoutcomestext

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College	1b. Department
CT CTC	AET

2. Complete Program Title/Prefix
Mechanical & Electrical Technology Certificate

3. Type of Program

Choose one from the appropriate drop down menu: Undergraduate: Undergraduate Certificate or Graduate: CHOOSE ONE

This program is a Gainful Employment Program: ☒ Yes or ☐ No

4. Type of Action:

PROGRAM	PREFIX
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

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

6a. Coordination with Affected Units Department, School, or College: AET

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____
Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 2/11/15

6c. Coordination with Library Liaison Date: 2/10/15

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function

8. Justification for Action
Updating terminology in certificate title, changes in required course titles as per AET Advisory Committee.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

Undergraduate Certificate in Mechanical and Electrical Technology

- Overview
- Learning Outcomes

Program Student Learning Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design (CADD) and 3-D modeling.
- Demonstrate knowledge of drawing conventions including symbols, line types, line weights, and dimension styles as applicable to the mechanical/electrical construction drawings.
- Visualize and translate drawing information to actual physical objects and completed mechanical/electrical construction projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health and safety of the public.
- Understand the role, duties and responsibilities of the members of the design team, including the working relationship between technicians and mechanical and electrical engineers.
- Understand the mechanical/electrical elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed mechanical/electrical project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-mechanicalelectricaldrafting/#learningoutcomestext

Undergraduate Certificate in Mechanical and Electrical ~~Drafting~~Technology

- Overview
- Learning Outcomes

Admission to this program at Matanuska-Susitna College is currently suspended. Contact the college for more information.

Admission Requirements

Satisfy the Application and Admission Requirements for Undergraduate Certificate Programs.

Advising

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Graduation Requirements

- Satisfy the General University Requirements for Undergraduate Certificates.
- Complete the Program Requirements below.
- Achieve a grade of C or better in all courses required for the certificate.

Program Requirements

AET~~/CM~~ A101	Fundamentals of CADD for Building Construction	4
AET~~/CM~~ A102	Methods of Building Construction	3
AET~~/CM~~ A142	Mechanical and Electrical Technology	4
AET A143	Mechanical and Electrical ~~Drafting~~Construction Drawings	3
AET A181	Intermediate CADD for Building Construction	4
AET A286	Design Project	4
ENGL A111	Introduction to Composition	3
MATH A105	Intermediate Algebra	3
Select one of the following:		3
COMM A111	Fundamentals of Oral Communication	
COMM A235	Small Group Communication	
COMM A237	Interpersonal Communication	
COMM A241	Public Speaking	
Total Credits		31

A total of 31 credits is required for the certificate.
- See more
at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-mechanicalelectricaldrafting/#sthash.Wi5kJmqJ.dpuf

Undergraduate Certificate in Mechanical and Electrical ~~Drafting~~Technology

- Overview
- Learning Outcomes

Program Student Learning Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design (CADD) and 3-D modeling.
- Demonstrate knowledge of ~~drafting~~ drawing conventions including symbols, line types, line weights, and dimension styles as applicable to the mechanical/electrical ~~drafting~~construction drawings.
- Visualize and translate drawing information to actual physical objects and completed mechanical/electrical construction projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health and safety of the public.
- Understand the role, duties and responsibilities of the members of the design team, including the working relationship between technicians and mechanical and electrical engineers.
- Understand the mechanical/electrical elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed mechanical/electrical project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

- See more
at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-mechanicalelectricaldrafting/#learningoutcomestext

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College	1b. Department
CT CTC	AET

2. Complete Program Title/Prefix
Civil Technology Certificate

3. Type of Program

Choose one from the appropriate drop down menu: Undergraduate: Undergraduate Certificate or Graduate: CHOOSE ONE

This program is a Gainful Employment Program: ☒ Yes or ☐ No

4. Type of Action:

PROGRAM	**PREFIX**
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

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

6a. Coordination with Affected Units Department, School, or College: AET

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____
Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 2/11/15

6c. Coordination with Library Liaison Date: 2/10/15

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function

8. Justification for Action
Updating terminology in certificate title and changes in required course titles as per AET Advisory Committee.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

Undergraduate Certificate in Civil Technology

- Overview
- Learning Outcomes

Admission to this program at Matanuska-Susitna College is currently suspended. Contact the college for more information.

Admission Requirements

Satisfy the Application and Admission Requirements for Undergraduate Certificate Programs.

Advising

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Graduation Requirements

- Satisfy the General University Requirements for Undergraduate Certificates.
- Complete the Program Requirements below.
- Achieve a grade of C or better in all courses required for the certificate.

Program Requirements

AET A101	Fundamentals of CADD for Building Construction	4
AET A102	Methods of Building Construction	3
AET A111	Civil Construction Drawings	3
AET A181	Intermediate CADD for Building Construction	4
AET A213	Civil Technology	4
AET A286	Design Project	4
ENGL A111	Introduction to Composition	3
MATH A105	Intermediate Algebra	3
Select one of the following:		3
COMM A111	Fundamentals of Oral Communication	
COMM A235	Small Group Communication	
COMM A237	Interpersonal Communication	
COMM A241	Public Speaking	
Total Credits		31

A total of 31 credits is required for the certificate.

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-civildrafting/#sthash.zhUWlozz.dpuf

Undergraduate Certificate in Civil Technology

- Overview
- Learning Outcomes

Program Student Learning Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design (CADD) and 3-D modeling.
- Demonstrate knowledge of drawing conventions including symbols, line types, line weights and dimension styles as applicable to civil construction drawings.
- Visualize and translate drawing information to actual physical objects and completed civil construction projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health and safety of the public.
- Understand the role, duties and responsibilities of the members of the design team, including the working relationship between technicians and civil engineers.
- Understand the civil elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed civil project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-civildrafting/#learningoutcomestext

Undergraduate Certificate in Civil ~~Drafting~~Technology

- Overview
- Learning Outcomes

Admission to this program at Matanuska-Susitna College is currently suspended. Contact the college for more information.

Admission Requirements

Satisfy the Application and Admission Requirements for Undergraduate Certificate Programs.

Advising

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Graduation Requirements

- Satisfy the General University Requirements for Undergraduate Certificates.
- Complete the Program Requirements below.
- Achieve a grade of C or better in all courses required for the certificate.

Program Requirements

AET/~~CM~~ A101	Fundamentals of CADD for Building Construction	4
AET/~~CM~~ A102	Methods of Building Construction	3
AET A111	Civil ~~Drafting~~Construction Drawings	3
AET A181	Intermediate CADD for Building Construction	4
AET A213	Civil Technology	4
AET A286	Design Project	4
ENGL A111	Introduction to Composition	3
MATH A105	Intermediate Algebra	3
Select one of the following:		3
COMM A111	Fundamentals of Oral Communication	
COMM A235	Small Group Communication	
COMM A237	Interpersonal Communication	
COMM A241	Public Speaking	
Total Credits		31

A total of 31 credits is required for the certificate.
- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-civildrafting/#sthash.zhUWlozz.dpuf

Undergraduate Certificate in Civil ~~Drafting~~Technology

- Overview
- Learning Outcomes

Program Student Learning Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design (CADD) and 3-D modeling.
- Demonstrate knowledge of ~~drafting~~ drawing conventions including symbols, line types, line weights and dimension styles as applicable to civil ~~drafting~~construction drawings.
- Visualize and translate drawing information to actual physical objects and completed civil construction projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health and safety of the public.
- Understand the role, duties and responsibilities of the members of the design team, including the working relationship between technicians and civil engineers.
- Understand the civil elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed civil project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-civildrafting/#learningoutcomestext

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College	1b. Department
CT CTC	AET

2. Complete Program Title/Prefix
Architectural Technology Certificate

3. Type of Program

Choose one from the appropriate drop down menu: Undergraduate: Undergraduate Certificate or Graduate: CHOOSE ONE

This program is a Gainful Employment Program: ☒ Yes or ☐ No

4. Type of Action:

PROGRAM	**PREFIX**
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

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

6a. Coordination with Affected Units Department, School, or College: AET

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____
Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 2/11/15

6c. Coordination with Library Liaison Date: 2/10/15

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function

8. Justification for Action
Updating terminology in certificate title, changes in required course titles as per AET Advisory Committee.

Initiator (faculty only) Date
J. Ellen McKay
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

Undergraduate Certificate in Architectural Technology

- Overview
- Learning Outcomes

Admission to this program at Matanuska-Susitna College is currently suspended. Contact the college for more information.

Admission Requirements

Satisfy the Application and Admission Requirements for Undergraduate Certificate Programs.

Advising

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Graduation Requirements

- Satisfy the General University Requirements for Undergraduate Certificates.
- Complete the Program Requirements below.
- Achieve a grade of C or better in all courses required for the certificate.

Program Requirements

Core Courses

AET A101	Fundamentals of CADD for Building Construction	4
AET A102	Methods of Building Construction	3
AET A121	Architectural Construction Drawings	3
AET A123	Codes and Standards	3
AET A181	Intermediate CADD for Building Construction	4
AET A286	Design Project	4
ENGL A111	Introduction to Composition	3
MATH A105	Intermediate Algebra	3

Oral Communication Course

Select one of the following:		3
COMM A111	Fundamentals of Oral Communication	
COMM A235	Small Group Communication	
COMM A237	Interpersonal Communication	
COMM A241	Public Speaking	

Total Credits	30

A total of 30 credits is required for the certificate.
- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-architecturaldrafting/#sthash.TtAI3PfJ.dpuf

Undergraduate Certificate in Architectural Technology

- Overview
- Learning Outcomes

Program Student Learning Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design (CADD) and 3-D modeling.
- Demonstrate knowledge of drawing conventions including symbols, line types, line weights and dimension styles as applicable to architectural construction drawings.
- Visualize and translate drawing information to actual physical objects and completed architectural projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health and safety of the public.
- Understand the role, duties and responsibilities of the members of the design team, including the working relationship between technicians and architects.
- Understand the architectural elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed architectural project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-architecturaldrafting/#learningoutcomestext

Undergraduate Certificate in Architectural ~~Drafting~~Technology

- Overview
- Learning Outcomes

Admission to this program at Matanuska-Susitna College is currently suspended. Contact the college for more information.

Admission Requirements

Satisfy the Application and Admission Requirements for Undergraduate Certificate Programs.

Advising

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Graduation Requirements

- Satisfy the General University Requirements for Undergraduate Certificates.
- Complete the Program Requirements below.
- Achieve a grade of C or better in all courses required for the certificate.

Program Requirements

Core Courses

AET/~~CM~~ A101	Fundamentals of CADD for Building Construction	4
AET/~~CM~~ A102	Methods of Building Construction	3
AET A121	Architectural ~~Drafting~~Construction Drawings	3
AET/~~CM~~ A123	Codes and Standards	3
AET A181	Intermediate CADD for Building Construction	4
AET A286	Design Project	4
ENGL A111	Introduction to Composition	3
MATH A105	Intermediate Algebra	3

Oral Communication Course

Select one of the following:		3
COMM A111	Fundamentals of Oral Communication	
COMM A235	Small Group Communication	
COMM A237	Interpersonal Communication	
COMM A241	Public Speaking	
Total Credits		30

A total of 30 credits is required for the certificate.
- See more
at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-architecturaldrafting/#sthash.TtAI3PfJ.dpuf

Undergraduate Certificate in Architectural ~~Drafting~~Technology

- Overview
- Learning Outcomes

Program Student Learning Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design (CADD) and 3-D modeling.
- Demonstrate knowledge of ~~drafting~~ drawing conventions including symbols, line types, line weights and dimension styles as applicable to architectural ~~drafting~~construction drawings.
- Visualize and translate drawing information to actual physical objects and completed architectural projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health and safety of the public.
- Understand the role, duties and responsibilities of the members of the design team, including the working relationship between technicians and architects.
- Understand the architectural elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed architectural project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

- See more
at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/certificate-architecturaldrafting/#learningoutcomestext

Program/Prefix Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

1a. School or College	1b. Department
CT CTC	AET

2. Complete Program Title/Prefix
Architectural and Engineering Technology/AET

3. Type of Program

Choose one from the appropriate drop down menu: Undergraduate: Associate of Applied Science or Graduate: CHOOSE ONE

This program is a Gainful Employment Program: ☒ Yes or ☐ No

4. Type of Action:

PROGRAM	**PREFIX**
☐ Add	☐ Add
☒ Change	☐ Change
☐ Delete	☐ Inactivate

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

6a. Coordination with Affected Units Department, School, or College: AET, CM

Initiator Name (typed): J. Ellen McKay Initiator Signed Initials: _____
Date:_____

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 2/11/15

6c. Coordination with Library Liaison Date: 2/10/15

7. Title and Program Description - Please attach the following:

☒ Cover Memo ☒ Catalog Copy in Word using the track changes function

8. Justification for Action
Revise catalog copy to reflect curriculum actions.

Initiator (faculty only) Date
J. Ellen McKay
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 College/School Curriculum Committee Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

Associate of Applied Science in Architectural and Engineering Technology

- Overview
- Learning Outcomes

Admission to this program at Matanuska-Susitna College is currently suspended. Contact the college for more information.

Admission Requirements

Satisfy the Application and Admission Requirements for Associate Degree Programs.

Advising

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Graduation Requirements

- Satisfy the General University Requirements for Associate of Applied Science Degrees.
- Complete the General Course Requirements for Associate of Applied Science Degrees (15 credits). As part of the General Course Requirements, GEOL A111 is recommended.
- Complete the Program Requirements below.
- Achieve a grade of C or better in all courses required for the AAS degree.

Program Requirements

AET A101	Fundamentals of CADD for Building Construction	4
AET A102	Methods of Building Construction	3
AET A111	Civil Construction Drawings	3
AET A121	Architectural Construction Drawings	3
AET A123	Codes and Standards	3
AET A131	Structural Construction Drawings	3
AET A142	Mechanical and Electrical Technology	4
AET A143	Mechanical and Electrical Construction Drawings	3
AET A181	Intermediate CADD for Building Construction	4
AET A213	Civil Technology	4

AET A231	Structural Technology	4
AET A286	Design Project	4
MATH A105	Intermediate Algebra *	3
Electives		3
AET A295	Architectural and Engineering Technology Internship (strongly recommended)	

*
This course satisfies the General Course Requirements.

A total of 60 credits is required for the degree.
- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/aas-architecturalengineeringtechnology/#text

Associate of Applied Science in Architectural and Engineering Technology

- Overview
- Learning Outcomes

Program Student Learning Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design (CADD) and 3-D modeling.
- Demonstrate knowledge of drawing conventions including symbols, line types, line weights, and dimension styles as applicable to the design discipline.
- Visualize and translate drawing information to actual physical objects and completed construction components.
- Understand the role and purpose of building codes and standards as they pertain to the life, health, and safety of the public.
- Understand the role, duties, and responsibilities of the members of the design team, including the working relationship between technicians and professionals.
- Understand the elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/aas-architecturalengineeringtechnology/#learningoutcomestext

Associate of Applied Science in Architectural and Engineering Technology

- Overview
- Learning Outcomes

Admission to this program at Matanuska-Susitna College is currently suspended. Contact the college for more information.

Admission Requirements

Satisfy the Application and Admission Requirements for Associate Degree Programs.

Advising

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Graduation Requirements

- Satisfy the General University Requirements for Associate of Applied Science Degrees.
- Complete the General Course Requirements for Associate of Applied Science Degrees (15 credits). As part of the General Course Requirements, GEOL A111 is recommended.
- Complete the Program Requirements below.
- Achieve a grade of C or better in all courses required for the AAS degree.

Program Requirements

AET~~/CM~~ A101	Fundamentals of CADD for Building Construction	4
AET~~/CM~~ A102	Methods of Building Construction	3
AET A111	Civil ~~Drafting~~Construction Drawings	3
AET A121	Architectural ~~Drafting~~Construction Drawings	3
AET~~/CM~~ A123	Codes and Standards	3
AET A131	Structural ~~Drafting~~Construction Drawings	3
AET~~/CM~~ A142	Mechanical and Electrical Technology	4
AET A143	Mechanical and Electrical ~~Drafting~~Construction Drawings	3
AET A181	Intermediate CADD for Building Construction	4
AET A213	Civil Technology	4
AET~~/CM~~ A231	Structural Technology	4
AET A286	Design Project	4

MATH A105	Intermediate Algebra *	3
Electives		3
AET A295	Architectural and Engineering Technology Internship (strongly recommended)	

* *This course satisfies the General Course Requirements.*

A total of 60 credits is required for the degree.

- See more at: http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/architecturalandengineeringtechnology/aas-architecturalengineeringtechnology/#text

Explanation of Changes

The Construction Management program was originally designed to incorporate existing Architectural and Engineering courses into both the AASCM and the BSCM degrees by cross listing the courses as AET/CM courses.

This resulted in confusion about cross-listed sections and student capacity limits for each class. This was especially problematic when these courses were a part of a Department of Labor grant to support distance delivery of the subject courses. The cross listing and both distance and face-to-face deliveries resulted in four sections in each class.

To remedy this problem, CM is proposing to uncross list these courses and to simply require the AET courses as a part of the CM degrees.

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	CM

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
CM	A101	NA	4 credits	(2+4)

6. Complete Course Title
Fundamentals of CADD for Building Construction
Fund. of CADD for Bldg. Const.
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
- ☐ Automatic Restrictions
  - ☐ 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

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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. Construction Management	2/16/2015	Donald M. Ketner Jr.
2. Architectural and Engineering Technology	2/16/2015	Donald M. Ketner Jr.
3. UAF	3/4/15	Galen Johnson

Initiator Name (typed): Don Tipton Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 3/4/2015
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/2015

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 basic CADD (computer-aided drafting and design) skills necessary in civil, architectural, structural, mechanical and electrical drafting within the construction industry. Defines the working relationship between design and construction professionals and drafters/technicians.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
MATH A105 with a minimum grade of C or concurrent enrollment.

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

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

16d. Registration Restriction(s) *(non-codable)*
Proof of eligibility for placement into ENGL A111. Appropriate SAT, ACT, or UAA-approved Math Placement Test scores may be used in lieu of MATH A105.

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Remove cross listed status for this course. Delete CM A101. AET A101 will be required for the AAS and BS Construction Management degrees.

		☐ Approved ☐ Disapproved	
Initiator (faculty only) Don Tipton Initiator (TYPE NAME)	Date		Dean/Director of School/College Date
☐ Approved ☐ Disapproved	Department Chair Date	☐ Approved ☐ Disapproved	Undergraduate/Graduate Academic Board Chair Date
☐ Approved ☐ Disapproved	College/School Curriculum Committee Chair Date	☐ Approved ☐ Disapproved	Provost or Designee Date

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	CM

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
CM	A102	NA	3 credits	(3+0)

6. Complete Course Title
Methods of Building Construction
Methods of Bldg. Const.
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
- ☐ Automatic Restrictions
  - ☐ 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

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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. Construction Management	2/16/2015	Donald M. Ketner Jr.
2. Architectural and Engineering Technology	2/16/2015	Donald M. Ketner Jr.
3. UAF	3/4/2015	Galen Johnson

Initiator Name (typed): Don Tipton Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 3/4/2015
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/2015

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 basic knowledge of building materials, technical specifications, techniques, and systems. Outlines structural systems, construction processes, and assemblies. Includes a field project involving student team research of current Alaskan building type.

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

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

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

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

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Remove cross listed status for this course. Delete CM A102. AET A102 will be required for the AAS and BS Construction Management degrees.

Initiator (faculty only) Date
Don Tipton
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	CMGT

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
CM	A123	NA	3 credits	(3+0)

6. Complete Course Title
Codes and Standards

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
- ☐ Automatic Restrictions
  - ☐ 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

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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. Construction Management	2/16/2015	Donald M. Ketner Jr.
2. Architectural and Engineering Technology	2/16/2015	Donald M. Ketner Jr.
3. UAF	3/4/2015	Galen Johnson

Initiator Name (typed): Don Tipton Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 3/4/2015
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/2015

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)*
Provides an introduction and overview of the fundamental provisions of the building codes used for plan review, life-safety evaluation of buildings, and community development.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
CM A101 and CM A102

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

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

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

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Remove cross listed status for this course. Delete CM A123. AET A123 will be required for the AAS and BS Construction Management degrees.

Initiator (faculty only) Date
Don Tipton
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	CMGT

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
CM	A142	NA	4 credits	(3+2)

6. Complete Course Title
Mechanical and Electrical Technology
Mechanical & Electrical 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
- ☐ Credits
- ☐ Title
- ☐ Grading Basis
- ☐ Course Description
- ☐ Test Score Prerequisites
- ☐ Automatic Restrictions
  - ☐ 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

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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. Construction Management	2/16/2015	Donald M. Ketner Jr.
2. Architectural and Engineering Technology	2/16/2015	Donald M. Ketner Jr.
3. UAF	3/4/2015	Galen Johnson

Initiator Name (typed): Don Tipton Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 3/4/2015
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/2015

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 basic mechanical and electrical systems required in all buildings for the safety, health, comfort, and convenience of the occupants. Emphasizes design criteria, code requirements, interpretation of construction drawings and building energy usage.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
(CM A101 and CM A102 and MATH A105) with minimum grade of C.

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

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

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

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Remove cross listed status for this course. Delete CM A142. AET A142 will be required for the AAS and BS Construction Management degrees.

Initiator (faculty only) Date
Don Tipton
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	CM

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
CM	A231	NA	4 credits	(2+4)

6. Complete Course Title
Structural Technology

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
- ☐ Automatic Restrictions
  - ☐ 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

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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. Construction Management	2/16/2015	Donald M. Ketner Jr.
2. Architectural and Engineering Technology	2/16/2015	Donald M. Ketner Jr.
3. UAF	3/4/2015	Galen Johnson

Initiator Name (typed): Don Tipton Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 3/4/2015
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/10/2015

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)*
Examines structural theory and the physical principles that underlie structural behavior. Includes the use of materials in a manner to maintain structural stability against such natural forces as gravity, wind, snow, and earthquakes. Covers connection details and code requirements for wood, steel and reinforced concrete.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
(CM A101 and CM A102 and MATH A105) with minimum grade of C.

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

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

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

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Remove cross listed status for this course. Delete CM A101. AET A101 will be required for the AAS and BS Construction Management degrees.

Initiator (faculty only) Date
Don Tipton
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	CMGT

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
CM	A331	NA	3 credits	(3+0)

6. Complete Course Title
Statics and Strengths of Materials
Statics & Strengths of Mat.
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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG & Catalog (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: /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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. Bachelor of Science in Construction Management	2/16/2015	Donald M. Ketner
2. Physics Department	2/23/2015	Dr. Katherine Rawlins, Chair
3.		

Initiator Name (typed): Don Tipton Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 3/4/2015
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: diagrams2/16/2015

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)*
Analyzes forces and the mechanics of materials for structural elements and structural assemblies. Includes the fundamentals of statics; stress, strain, and deformation; shear and bending moment stresses in beams; and column analysis.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
CM A231 and MATH A108 or MATH 109

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

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

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

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
PHYS A123 and A123L are selectives for this degree. Therefore, to require these courses as prerequisites would make these courses required for the degree since CM A331 is required for the BSCM degree. This prerequisite was not deleted when PHYS A123 and A123L were changed to selectives as was intended at the time of the change. These courses are not required to be successful in CM A331. Both the CCG and catalog have been updated to reflect this change.

Initiator (faculty only) Date
Don Tipton
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chair Date

☐ Approved
☐ Disapproved College/School Curriculum Committee Chair Date

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

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
Course
B. Prefix: CM
Course
C. Number: A331
Number of Credits & Contact
D. Hours: 3 (3+0)
E. Course Title: Statics and Strengths of Materials
Grading
F. Basis: A-F
Implementation
G. Date: Fall 2014
H. Cross-listed: N/A
I. Stacked: N/A
Course
J. Description: Analyzes forces and the mechanics of materials for structural elements and structural assemblies. Includes the fundamentals of statics; stress, strain, and deformation; shear and bending moment stresses in beams; and column analysis.
Course
K. Attributes: N/A
Course
L. Prerequisistes: CM A231 and [MATH A108 or MATH A109]
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: N/A
M. Course Fees: None

III. Course Level Justification. This course builds upon a foundation of knowledge established in CM A231.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: To prepare Construction Management students with the fundamental concepts used in the design of building structures and civil works.

Student Outcomes	**Assessment Procedures**
After successful completion of this course, the student will be able to do the following:	This outcome will be assessed by one or more of the following:
Relate structural building codes to the criteria for selection of structural systems.	Team project Written exam
Analyze forces through the use of free body and force vectors.	Written exam
Discriminate between statically determinate and statically indeterminate bodies.	Written exam

V. Topical Course Outline

1.0 Safety Procedures
- 1.1 University policies
- 1.2 Course and lab procedures
- 1.3 Emergency egress review

2.0 Building Structural Design and Engineering
- 2.1 History of structural design
- 2.2 Criteria for selection of structural systems
- 2.3 Building codes regulating structures
- 2.4 Units for engineering data

3.0 Forces
- 3.1 Newton's laws of motion
- 3.2 Vectors
- 3.3 Force systems

4.0 Static Equilibrium
- 4.1 Moments

4.2 Couples
4.3 Free body diagrams
4.4 Equilibrium of a particle
4.5 Equilibrium of a rigid body

5.0 Statically Determinate and Indeterminate Bodies

6.0 Analysis of Determinate Bodies

6.1 Trusses
6.2 Frames
6.3 Cables
6.4 Retaining walls

7.0 Stress

7.1 Axial shear and bearing
7.2 Stress concentration

8.0 Strain

8.1 Hooke's law
8.2 Stress-strain diagrams
8.3 Mechanical properties of materials

9.0 Properties of Section Profiles

9.1 Center of gravity and centroids of shapes
9.2 Moments of inertia
9.3 Section modulus
9.4 Radius of gyration

10.0 Bending and Shear Stresses in Beams

10.1 Flexural strain and stress
10.2 Shear
10.3 Deflection
10.4 Bearing

stresses

11.0 Column Analysis

11.1 Modes of failure

11.2 End support conditions

11.3 Axially loaded columns

11.4 Combined loading and eccentricity

12.0 Building Loads

12.1 Load tracing

12.2 Load paths

12.3 Tributary areas

VI. Suggested Text:

Onouye, Barry. (2005). *Statics and strengths of materials for structural design*. Upper Saddle River, NJ: Pearson Education

VIII. Bibliography

Burns, T. (1996)*. *Applied statics and strength of materials*. Albany, NY: Delmar.

Dishongh, B.E. (2001)*. *Essential structural technology for construction and architecture*. Upper Saddle River, NJ: Prentice Hall.

Morrow, R.P., & Kokernak, R.P. (2004)*. *Statics and strength of materials (5th ed)*. Upper Saddle River, NJ: Pearson Prentice Hall.

Onouye, B. (2005)*. *Statics and strength of materials, foundations for structural design*. Upper Saddle River, NJ: Pearson Prentice Hall.

Onouye, B., & Kane, K. (2002)*. *Statics and strength of materials for architecture and building construction (2nd ed.)*. Upper Saddle River, NJ: Prentice Hall.

Salter, G.R. (2000)*. *Computer-aided statics and strength of materials.* Upper Saddle River, NJ: Prentice Hall.

* *Denotes classic text.*

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

1a. School or College	1b. Division	1c. Department
CT CTC	ACDT Division of Construction Design Technology	CMGT

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
CM	A495	NA	3 credits	(1+15)

6. Complete Course Title
Advanced Construction Management Internship
Adv. Const. Mgmt. Internship
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
- ☐ Automatic Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG & Catalog (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: /9999

12. ☐ Cross Listed with NA
☐ Stacked with NA
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.

Impacted Program/Course	*Date of Coordination*	*Chair/Coordinator Contacted*
1. Bachelor of Science, Construction Management	2/16/2015	Donald M. Ketner Jr.
2. Career Services Center	2/23/2015	Courtney Petrosky
3.		

Initiator Name (typed): Don Tipton Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 3/4/2015
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/23/2015

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)*
Provides career development and exploration through work experience in the field by placement in a construciton management home or field office. Intern will perform duties directly related to construction management functions.

16a. Course Prerequisite(s) *(list prefix and number or test code and score)*
NONE

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

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

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

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
CM A295 is the internship required for the AASCM two-year degree. CM A495 is an advanced level internship required for the BSCM four-year degree. Students are obtaining more than adequate career experience in the CM A495 course and do not need 3 more internship credits that are not required for the four-year degree. Department approval of each internship is required to ensure that the career experience provided to each student is consistent with program and course learning outcomes. Both the CCG and catalog have been updated to reflect this change.

Initiator (faculty only) Date Don Tipton 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	College/School Curriculum Committee Chair Date	☐ Approved ☐ Disapproved	Provost or Designee Date

University of Alaska Anchorage
Community and Technical College
Course Content Guide

I. Date of Initiation: Fall 2014

II. Curriculum Action Request

A. College: Community and Technical College
B. Course Prefix: CM
C. Course Number: A495
D. Number of Credits & Contact Hours: 3 (1+15)
E. Course Title: Advanced Construction Management Internship
F. Grading Basis: A-F
G. Implementation Date: Fall 2014
H. Cross-listed: N/A
I. Stacked: N/A
J. Course Description: Provides career development and exploration through work

experience in the field by placement in a construction management home or field office. Inte
perform duties directly related to construction management functions.

K. Course Attributes: N/A
L. Course Prerequisistes: none
Test Scores: N/A
Course Co-requisite: N/A
Registration Restriction: N/A
M. Course Fees: Yes

III. Course Level Justification. Develops advanced construction management skills by directly exposing students to construction mangement processes, techniques, and settings.

IV. Instructional Goals, Student Learning Outcomes and Assessment Measures.

A. Instructional Goal: To prepare Construction Management students with the fundamental concepts used in the design of building structures and civil works.

B. Student Learning Outcomes and Assessment Measures:

Student Outcomes	Assessment Procedures

After successful completion of this course, the student will be able to do the following:	This outcome will be assessed by one or more of the following:
Demonstrate workplace safety procedures and be able to recall workplace rules and regulations.	Employer evaluations Graded discussion board Graded daily journal
Demonstrate proficient use of construction management skills and concepts to successfully perform duties as assigned by your supervisor.	Employer evaluations Graded discussion board Graded daily journal
Demonstrate professional conduct in the workplace.	Employer evaluations
Compare and contrast classroom knowledge with real world field experience.	Graded discussion board Graded daily journal Final summary paper
Describe how workplace learning has improved the student's prospects for post-graduation employment.	Final summary paper
Define specific learning objectives as developed with your employer and self assess your performance in meeting these objectives.	Employer evaluations Final summary paper
Describe how the relationship between college major and full-time permanent employment have been enhanced by the internship employment experience.	Graded discussion board Final summary paper

V. Topical Course Outline

1.0 Safety and Procedures

- 1.1 University policies
- 1.2 General work site rules and safety policies
- 1.3 Professional conduct

2.0 Internship Description and Goals

- 2.1 Student internship description
- 2.2 Learning objectives

3.0 Learning Contract

- 3.1 Create learning objectives
- 3.2 Describe work activities that will be used to meet learning objectives

3.3 Develop on-the-job performance evaluation criteria

4.0 Writing Activities

4.1 Student introduction and career goals

4.2 Daily journal of work activities and hours

4.3 Company description and background

4.4 Weekly discussion board entries

VI. Suggested Text:

Onouye, Barry. (2005). *Statics and strengths of materials for structural design*. Upper Saddle River, NJ: Pearson Education

VIII. Bibliography

American Institute of Architects. (latest). *Standard forms of contract agreements.* Washington, DC: Author

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Andres, C. K., & Smith, R.C. (2008). *Principles and practices of commercial Construction* (8th ed.). Upper Saddle River, NJ: Prentice Hall.

Coleman, J. (2004)*. *Construction documents and contracting*. Upper Saddle River, NJ: Prentice Hall.

Construction Specifications Institute. (2005) *Project resource manual, CSI manual of practice*. New York, NY: McGraw-Hill.

Engineers Joint Contract Document Committee: (Latest). *Standard forms of contract agreements.* Alexandria, VA: National Society of Professional Engineers.

Fisk, E. (2009). *Construction project administration* (9th ed.). Upper Saddle River, NJ: Prentice Hall.

Gould, F.E. (2004)*. *Managing the construction process* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.

Gould, F. E. (2008). *Construction project management* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.

Halpin, D.W. (2011). *Construction management* (4th ed.). New York, NY: John Wiley & Sons.

International Code Council. (latest). *International building code*. Falls Church, VA: Author.

Jackson, B. (2010). *Construction management jump start* (2nd ed.). Indianapolis, IN: John Wiley & Sons.

Liebing, R. (2001)*. *The construction industry*. Upper Saddle River, NJ: Prentice

Hall.
Mahoney, W. D. (1998)*. *Construction inspection manual*. New York, NY: McGraw-Hill.
National Commission for Cooperative Education. (Latest). *Co-op education.* Boston, MA: Author.
National Commission for Cooperative Education. (n.d.). *Developing comprehensive cooperative education programs*. Boston, MA: Author.
National Commission for Cooperative Education. (n.d.). *An employer's guide to cooperative education*. Boston, MA: Author.
National Society for Internships and Experiential Education. (Latest). *Various documents*. Raleigh, NC: Author.
Nunnally, S. W. (2006). *Construction methods and management* (7th ed.). Upper Saddle River, NJ: Prentice Hall.
Poage, W. S. (2000)*. *The building professional's guide to contract documents*. Kingston, MA: RS Means.
Thomas, P. I. (1999)*. *Contractor's field guide* (2nd ed.). London, England: Building News.

* *Denotes classic text.*

Purge List for the 2015-16 UAA Catalog, 2nd Read

SUBJECT PREFIX	COURSE NUMBER	COURSE TITLE	COLLEGE CODE	COURSE EFFECTIVE	LAST TERM OFFERED	Carried over by request from the 2014-15 purge list?	COURSE IMPACTS	PROGRAM IMPACTS	NOTES
Scbcrse Subj Code	Scbcrse Crse Number	Scbcrse Title	Scbcrse College Code	Scbcrky Term Code Start	Ssbsect Term Code				
AGRI	A141	Home Greenhouse Gardening	KP	201001	201001				
AKNS	A102C	*Elem Alaska Native Lang II	AS	200903	N/A		Stacked with AKNS A109C	CAS BA Requirements; Minor, Alaska Native Studies; BA, Computer Science	**Retain** per Maria Williams; GER humanities, selected topics course
AKNS	A109B	Tlingit Orthography	AS	200903	N/A		Stacked with AKNS A102B	Minor, Alaska Native Studies	**Retain** per Maria Williams
AKNS	A109C	Alaska Native Lang Orthography	AS	200903	N/A		Stacked with AKNS A102C	Minor, Alaska Native Studies	**Retain** per Maria Williams; selected topics course
ANTH	A365	Modern Human Biol Diversity	AS	199702	200903			BA, Anthropology; BS, Anthropology; Minor, Anthropology; BS, Natural Sciences	**Retain** per Diane Hanson
ANTH	A499	Senior Thesis in Anthropology	AS	200701	N/A	yes		BA, Anthropology; BS, Anthropology	**Retain** per Diane Hanson
ANTH	A690	Special Topics in Anthropology	AS	200703	N/A	yes			Selected topics course
ART	A361	History of Graphic Design	AS	199702	N/A	yes		BA, Art; BFA, Art	**Retain** per Deborah Tharp
ATP	A432	Turbine Airplane Transition	CT	200803	200903				
BA	A491A	Student Managed Portfolio	CB	200903	N/A		Prerequisite of BA A491B	BBA, Finance	
BA	A491B	Institutional Money Management	CB	200903	N/A				
BA	A653	Multinational Financial Mgmt	CB	199702	200702	yes			
BA	A685	Adv Investment Management	CB	200903	200903		Prerequisite of BA A691		
BA	A691	Student Managed Investment	CB	200903	N/A				
BIOL	A412	Behavioral Endocrinology	AS	199702	199703				**Retain** per Khrys Duddleston
BIOL	A471	Immunology	AS	199702	200903		Crosslisted with CHEM A471	BA, Biological Sciences; BS, Biological Sciences; BS, Chemistry; BS, Natural Sciences	**Retain** per Khrys Duddleston
BIOL	A662	Advanced Virology	AS	200101	200803	yes	Stacked with BIOL A462		**Retain** per Khrys Duddleston
CED	A125	Yoga: Study and Practice	KP	200301	201001				
CED	A231	Grant Proposal Writing	CT	199702	200903				
CHEM	A471	Immunology	AS	199702	200903		Crosslisted with BIOL A471	BA, Biological Sciences; BS, Biological Sciences; BS, Chemistry; BS, Natural Sciences	**Retain** per Khrys Duddleston
CHEM	A650	Adv Environmental Chemistry	AS	199702	N/A	yes	Stacked with CHEM A450		
CIS	A365	Object-Oriented Programming	CB	200303	201001		Prerequisite of CIS A489	BBA, Management Information Systems; Minor, Computer Information Systems	**Retain** per Dave Fitzgerald
CIS	A690	Selected Topics in MIS	CB	200803	N/A	yes			Selected topics course
COMM	A305	Intercultural Communication	AS	199803	200603	yes		Minor, Communication; BS, Health Sciences	**Retain** per Paola Banchero
DN	A490	Current Topics Diet & Nutri	CT	200803	N/A	yes		Minor, Nutrition	**Retain** per Tim Doebler; selected topics course
ECON	A640	Economics of Transportation	CB	199702	201001				**Retain** per Paul Johnson
ED	A180	Beginning Sign Language	EA	199702	201001		Prerequisite of ED A181		
ED	A181	Intermediate Sign Lang	EA	199702	201001				
EDAE	A698	Inquiry Project	EA	199702	201002				
EDAE	A699	Thesis	EA	199702	201001				

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Scbcrse Subj Code	Scbcrse Crse Number	Scbcrse Title	Scbcrse College Code	Scbcrky Term Code Start	Ssbsect Term Code				
EDEL	A429	Teach/Health Ed in Elem School	EA	200603	201001				
EDEL	A432	Phys Ed/Elem Classrm Teachers	EA	200603	200903				
EDET	A637	Design of e-Learning	EA	200902	201001		Prerequisite of EDET A640		**Retain** per Hilary Seitz
EDET	A640	e-Learning Project Development	EA	200902	201002				**Retain** per Hilary Seitz
EDFN	A631	Adv Educational Psych	EA	200601	200701	yes		MEd, Teaching & Learning	**Retain** per Hilary Seitz
EDRS	A668	Intro to Qualitative Research	EA	200902	N/A	yes			**Retain** per Hilary Seitz
EDSE	A676	Special Education Finance	EA	200803	200903		Prerequisite of EDSE A695D		
EE	A407	Power Distribution	EN	200503	N/A	yes		BS, Engineering; Minor, Electrical Engineering	
EE	A453	Introduction to Wi-Fi	EN	201001	N/A				
EE	A456	Fiber Optic Communications	EN	201001	N/A				
ENGL	A487	Standard Written English	AS	199702	200903		Prerequisite of LEGL A356 & PARL A456	BA, English; Minor, English; Undergrad Cert, Legal Nurse Consultant Paralegal; AAS, Paralegal Studies; BA, Legal Studies; Post-Bac Cert, Paralegal Studies	**Retain** per Dan Kline
ET	A160	DC Electrical Systems	CT	200103	201001		Corequisite of ET A161, prerequisite of ET A162 & ET A163		
ET	A161	DC Lab	CT	200103	201001		Corequisite of ET A160, prerequisite of ET A162 & ET A163		
ET	A162	AC Electrical Systems	CT	200103	201001		Corequisite of ET A163, prerequisite of ET A180		
ET	A163	AC Lab	CT	200103	201001		Corequisite of ET A162, prerequisite of ET A180		
ET	A166	Technical Calc & Applications	CT	200103	200903				
ET	A180	Semiconductor Devices	CT	200103	201002		Prerequisite of ET A182		
ET	A181	Digital Electronics	CT	200103	200903				
ET	A182	Applied Integrated Circuits	CT	200103	201002				
ET	A262	Transmit, Receive & Adv Comm	CT	200103	201002				
ET	A276	Independent Project	CT	200103	201001				
ET	A291	Selected Topics in ET	CT	200903	N/A				Selected topics course
FIRE	A216	Methods Instructn Fire & Emer	CH	200601	200903			AAS, Fire & Emergency Services Technology	**Retain** per Tim Benningfield
FREN	A310	Sel Top: Lit Trends & Tradtns	AS	199702	200903			BA, International Studies	**Retain** per Patricia Fagan; selected topics course
GUID	A101	Intro To Peer Advising	AS	199702	200601	yes			
HIST	A239	Black History II	AS	199702	200703	yes			**Retain** per Paul Dunscomb
HIST	A382	American Women's History	AS	199702	200701			Minor, Women's Studies	**Retain** per Paul Dunscomb
HIST	A690	Studies in History	AS	200502	200602	yes			**Retain** per Paul Dunscomb; selected topics course
HNRS	A209	Participatory Action Research	HC	200803	201001				**Retain** per Suzanne Forster
HNRS	A390	Special Topics Honors Seminar	HC	200903	201002				**Retain** per Suzanne Forster; selected topics course
HNRS	A490	*Senior Honors Seminar	HC	199703	200703	yes		University Honors Scholar Requirements; Natural & Complex Systems Program	**Retain** per Suzanne Forster; GER integrative capstone, selected topics course

SUBJECT PREFIX	COURSE NUMBER	COURSE TITLE	COLLEGE CODE	COURSE EFFECTIVE	LAST TERM OFFERED	Carried over by request from the 2014-15 purge list?	COURSE IMPACTS	PROGRAM IMPACTS	NOTES
Scbcrse Subj Code	Scbcrse Crse Number	Scbcrse Title	Scbcrse College Code	Scbcrky Term Code Start	Ssbsect Term Code				
HUMS	A680	Adv Topics Develop: Childhood	CH	200903	N/A			Grad Cert, Advanced Human Services	
HUMS	A681	Adv Topics Develop:Adolescence	CH	200903	N/A			Grad Cert, Advanced Human Services	
INTL	A495	INTL Studies Internship	AS	200603	200901	yes			**Retain** per Dorn Van Dommelen
JPC	A314	Documentary Filmmakers	AS	200603	200903		Prerequisite of JPC A484	BA, Journalism & Public Communications	**Retain** per Paola Banchero
JPC	A492	JPC Senior Seminar	AS	200603	N/A			BA, Journalism & Public Communications	**Retain** per Paola Banchero
JUST	A640	Corrections Theory Research	CH	199803	200603	yes		MPA	**Retain** per Andre Rosay & Deborah Periman
KOR	A101	First Year Korean I	AS	199702	200903				**Purge** per Patricia Fagan
LS	A211	Library Research 21st Century	AS	200601	200701	yes			**Retain** per Page Brannon
NS	A441	Nrsg Honors II: Project Implem	CH	200403	200903			BS, Nursing Science	
NS	A624	Qualitative Nursing Research	CH	199702	200801	yes			
NS	A631	Women's Health & Obstetrics I	CH	200401	200403	yes	Prerequisite of NS A635	Grad Cert, Family Nurse Practitioner	
NS	A632	Focus on Pediatrics I	CH	200401	N/A	yes	Prerequisite of NS A636	Grad Cert, Family Nurse Practitioner	
NS	A635	Women's Health & Obstetrics II	CH	200401	200501	yes		Grad Cert, Family Nurse Practitioner	
NS	A636	Focus on Pediatrics II	CH	200403	N/A	yes		Grad Cert, Family Nurse Practitioner	
NS	A681	Analysis of Health Services	CH	199702	200903				
PEP	A103	SCUBA	CT	200603	200801				**Purge** per Sandra Carroll-Cobb
PEP	A161	Wilderness First Responder	CT	200603	201002		Prerequisite of PEP A466 & PEP A467B		**Purge** per Sandra Carroll-Cobb
PEP	A235	Coaching Swimming & Diving	CT	200603	N/A	yes		Minor, Coaching	**Retain** per Sandra Carroll-Cobb
PEP	A236	Coaching Skiing	CT	200603	N/A	yes		Minor, Coaching	**Retain** per Sandra Carroll-Cobb
PEP	A237	Coaching Figure Skating	CT	200603	N/A	yes		Minor, Coaching	**Retain** per Sandra Carroll-Cobb
PEP	A239	Coaching Baseball/Softball	CT	200603	N/A	yes		Minor, Coaching	**Retain** per Sandra Carroll-Cobb
PEP	A240	Coaching Football	CT	200603	N/A	yes		Minor, Coaching	**Retain** per Sandra Carroll-Cobb
PEP	A243	Coaching Hockey	CT	200603	N/A	yes		Minor, Coaching	**Retain** per Sandra Carroll-Cobb
PEP	A244	Coaching Volleyball	CT	200603	N/A	yes		Minor, Coaching	**Retain** per Sandra Carroll-Cobb
PEP	A466	Org Safety & Risk Management	CT	200603	201001				**Purge** per Sandra Carroll-Cobb
PER	A111	Country Line Style Workout	CT	200603	201001				**Purge** per Sandra Carroll-Cobb
PER	A188	Wellness for Women	CT	200603	200803	yes			**Retain** per Sandra Carroll-Cobb
PER	A287	Expedition Backpacking	CT	200603	N/A	yes		OEC, Outdoor Leadership	**Purge** per Sandra Carroll-Cobb
PHYS	A403	Quantum Mechanics	AS	200703	201001		Stacked with PHYS A603, prerequisite of CHEM A333L	BS, Natural Sciences	**Retain** per Katherine Rawlins
PHYS	A413	Statistical & Thermal Physics	AS	200703	200801		Stacked with PHYS A613, prerequisite of CHEM A333L	BS, Natural Sciences	**Retain** per Katherine Rawlins
PS	A344	State and Local Politics	AS	199702	200603			BA, Political Science	
PSY	A601	Integration Seminar	AS	200603	200903				
PSY	A602	Native Ways of Knowing	AS	200603	N/A	yes		PhD, Clinical-Community Psychology	
PSY	A603	Alaskan and Rural Psychology	AS	200603	N/A	yes		PhD, Clinical-Community Psychology	

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Scbcrse Subj Code	Scbcrse Crse Number	Scbcrse Title	Scbcrse College Code	Scbcrky Term Code Start	Ssbsect Term Code				
PSY	A605	History and Systems	AS	200603	N/A	yes		PhD, Clinical-Community Psychology	
PSY	A606	Native Ways of Healing	AS	200603	N/A	yes			
PSY	A616	Program Evaluation I	AS	200603	N/A	yes	Prerequisite of PSY A617	PhD, Clinical-Community Psychology	
PSY	A617	Program Evaluation II	AS	200603	N/A	yes		PhD, Clinical-Community Psychology	
PSY	A658	Qualitative Analysis	AS	200603	201001			PhD, Clinical-Community Psychology	
PSY	A671	Grant Writing	AS	200603	N/A	yes			
RUSS	A390B	Focused Topics in Russian	AS	200603	200901	yes			**Retain** per Patricia Fagan; selected topics course
SOC	A342	*Sexual/Marital/Family Life	AS	199702	201001			Minor, Women's Studies	**Retain** per Nelta Edwards; GER social sciences
SOC	A405	Social Change	AS	199702	201001				**Purge** per Nelta Edwards
SWK	A667	Clinical Group Therapy	CH	200601	N/A	yes		Grad Cert, Clinical Social Work Practice	**Retain** per Elizabeth Sirles
THR	A480	Theatre Internship	AS	199702	200901	yes			

Department of Anthropology
UNIVERSITY of ALASKA ANCHORAGE

March 10, 2015

To: Undergraduate Academic Board
Through: Kimberly Swiantek, Governance Coordinator
From: Dr. Diane K. Hanson, Chair, Department of Anthropology

Re: Purge List for the 2015-2016 UAA Catalog

The Purge List for the 2015-2016 UAA Catalog includes two undergraduate Anthropology courses. These are ANTH A365, Modern Human Diversity (last offered in Fall 2009) and ANTH A499, Senior Thesis in Anthropology.

Since ANTH A365 was last taught, we hired Dr. Ryan Harrod, who is offering courses created by his predecessor, Dr. Christine Hanson. We have reduced his course obligations at the 200 level so he could teach an additional upper division course. ANTH A365 is on the Spring 2016 schedule. We respectfully request that this course be retained.

ANTH A499 is available for any student intending to enter the honors program and requiring a senior thesis in anthropology. We request that this course be retained for those students wishing to participate in the honors program.

Diane K. Hanson

Department of
Anthropology
UNIVERSITY of ALASKA ANCHORAGE

March 10, 2015

To: Graduate Academic Board
Through: Kimberly Swiantek, Governance Coordinator
From: Dr. Diane K. Hanson, Chair, Department of Anthropology

Re: Purge List for the 2015-2016 UAA Catalog

The Purge List for the 2015-2016 UAA Catalog includes one graduate Anthropology course: ANTH A690, Special Topics in Anthropology. This course is available should a specialist or an expert visiting UAA wish to teach a course of interest to our graduate students. We request that this course be retained to support our graduate program.

Diane K. Hanson

DATE: March 13, 2015

TO: Francisco Miranda, chair, Undergraduate Academic Board

FROM: Paola Banchero, associate professor and chair,
Department of Journalism and Communication

RE: Purge list for Journalism and Public Communications and Communication courses

The Department of Journalism and Communication has reviewed the purge list for the 2015-16 academic year.

We would like to retain the following courses in our curriculum:

COMM A305 Intercultural Communication

JPC A314 Documentary Film and Filmmakers

JPC A492 JPC Senior Seminar

COMM A305 is an important course for Communication minors and conceivably for others interested intercultural and international perspectives. Our Communication faculty is stretched thin at the moment, but it is a valuable course that we want to retain as part of our curriculum. We hope to offer in the near future.

JPC A314 has not been offered since it was developed in 2006, but we have the faculty on hand to teach it and have plans to offer this course in spring 2016.

We are teaching JPC A492 in fall 2015 and are pushing curriculum through the process to make this an integrative capstone course.

Thank you for the opportunity to consider these courses.

Dear UAA Undergraduate Review Board,

Sociology has two courses on the purge list:

SOC A342 Sexual/Marital/Family Life
SOC A405 Social Change

We would like to ask that SOC A342 not be purged. Although we have not been able to offer it since the faculty member who taught it retired some years ago, it is a course that we would like to teach in the future.

We are ok with SOC A405 being purged.

Please let me know if you need any more information.

Nelta Edwards, PhD
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