I. Roll

( ) Hilary Davies  ( ) Susan Wilson  ( ) Deborah Fox  ( ) Adjunct vacancy
( ) Paola Banchero  ( ) Hilary Seitz  ( ) Wayne Edwards  ( ) USUAA vacancy
( ) David Meyers  ( ) Cheryl Smith  ( ) FS at large vacancy  Ex-Officio Members:
( ) Suzanne Forster  ( ) Utpal Dutta  ( ) Advis./Couns. vacancy  ( ) Bart Quimby
( ) Susan Fallon  ( ) Kevin Keating  ( ) David Edgecombe  ( ) Lora Volden
( ) Dave Fitzgerald  ( ) Marion Yapuncich  ( ) Kathrynn Hollis Buchanan  ( ) Shirlee Willis-Haslip

II. Approval of the Agenda (pg. 1-5)

III. Approval of Meeting Summary (pg. 6-9)

IV. Administrative Report

A. Associate Vice Provost Bart Quimby

B. Interim University Registrar Shirlee Willis-Haslip and Associate Registrar Lora Volden

V. Chair’s Report

A. UAB Chair- Hilary Davies

B. GERC- Sue Fallon

C. Assessment Committee Report- Bart Quimby

VI. Program/Course Action Request- First Readings from April 15th UAB meeting

Chg Bachelor of Science in Engineering (Computer Systems Engineering, Electrical Engineering, Mechanical Engineering) (pg. 10-28)

Chg Computer Systems Engineering Minor (pg. 29-32)

Chg Electrical Engineering Minor (pg. 33-36)

Chg Mechanical Engineering Minor (pg. 37-40)

Chg EDSE A474 Special Children from Birth through Five (3 cr) (3+0) (pg. 41-45)

Chg JUST A352 Substantive Criminal Law (3 cr) (3+0) (cross listed w/PARL A352) (pg. 46-53)

Chg PARL A352 Substantive Criminal Law (3 cr) (3+0) (cross listed w/JUST A352) (pg. 54-61)

Chg JUST A355 Rural Justice (3 cr) (3+0) (pg. 62-67)

Chg JUST A371 Cinematic Images of Justice (3 cr) (3+0) (pg. 68-71)

Chg PARL A362 Commercial Law Chg (3 cr) (3+0) (pg. 72-77)

Chg HS A433 Health Education: Theory and Practice (3 cr) (3+0) (cross listed w/NS A433) (pg. 78-81)

Chg NS A433 Health Education: Theory and Practice (3 cr) (3+0) (cross listed w/HS A433) (pg. 82-85)
Chg Bachelor of Arts, Art (pg. 86-87)
Chg Bachelor of Fine Arts, Art (pg. 88-102)
Chg JPC A413 Communications Law (3 cr) (3+0) (cross listed with JUST A413) (pg. 103-107)
Chg JUST A413 Communications Law (3 cr) (3+0) (cross listed with JPC A413) (pg. 108-112)
Chg Bachelor of Science, Biological Sciences (pg. 113-120)

Provided revised catalog merging Mammalogy and Marine Biology

VII. Program/Course Action Request- Second Readings

Chg Bachelor of Science Civil Engineering- Undergraduate Certificate (pg. 121-133)
Chg Minor Computer Information Systems (pg. 134-135)
Chg Bachelor of Business Administration: Management Information Systems (pg. 136-147)
Add CHIN A201 Second Year Chinese I (4 cr) (4+0) (GERC) (pg. 148-153)
Add CHIN A202 Second Year Chinese II (4 cr) (4+0) (GERC) (pg. 154-159)
Add SPAN A320 Studies in Contemporary Cultures (4 cr) (4+0) (pg. 160-165)
Chg Bachelor of Arts, Languages (pg. 166-173)
Chg PS A312 Comparative Northern Politics (3 cr) (3+0) (pg. 174-177)
Chg Bachelor of Arts, Political Science (pg. 178-185)
Add PHIL A321 Philosophy of Religion (3 cr) (3+0) (pg. 186-192)
Add PHIL A350 Contemporary Social and Political Philosophy (3 cr) (3+0) (pg. 193-198)
Chg Bachelor of Arts, Philosophy (pg. 199)
Chg Minor, Philosophy (pg. 200-210)
Chg ANTH A210 Introduction to Linguistic Anthropology (3 cr) (3+0) (pg. 211-214)
Chg ANTH A211 Fundamentals of the Archaeology (3 cr) (3+0) (pg. 215-219)
Chg ANTH A225 Cook Inlet Anthropology (3 cr) (3+0) (pg. 220-223)
Chg ANTH A270 Women in Cross-cultural Perspective (3 cr) (3+0) (pg. 224-227)
Chg ANTH A312 North American Archaeology (3 cr) (3+0) (pg. 228-231)
Del ANTH A333 Peoples and cultures of Southeast Asia (3 cr) (3+0) (pg. 232)
Chg ANTH A335 Native North Americans (3 cr) (3+0) (pg. 233-236)
Chg ANTH A336 Peoples and Cultures of South America (3 cr) (3+0) (pg. 237-240)
Chg ANTH A338 Peoples and Cultures of Scandinavia (3 cr) (3+0) (pg. 241-244)
Chg ANTH A361 Languages and Culture (3 cr) (3+0) (pg. 245-248)
Chg ANTH A365 Modern Human Biological Diversity (3 cr) (3+0) (pg. 249-253)
Chg ANTH A400 Anthropology of Religion (3 cr) (3+0) (pg. 254-257)
Chg ANTH A413 Peopling of the Americas (3 cr) (3+0) (pg. 258-262)
Chg ANTH A415 Applied Anthropology (3 cr) (3+0) (stacked with ANTH A615) (pg. 263-272)

Need updated bibliography

Chg ANTH A416 Arctic Archaeology (3 cr) (3+0) (pg. 273-278)
Chg ANTH A427 Ethnohistory (3 cr) (3+0) (stacked with ANTH A627) (pg. 279-287)

Need updated bibliography

Chg ANTH A431 Field Methods in Archeology (1-8 cr) (0+3-24) (stacked with ANTH A631) (pg. 288-297)
Chg ANTH A432 Hunting and Gathering Societies (3 cr) (3+0) (pg. 298-302)
Chg ANTH A435 Northwest Coast Cultures (3 cr) (3+0) (pg. 303-308)
Chg ANTH A436 Aleut Adaptations (3 cr) (3+0) (pg. 309-313)
Chg ANTH A437 Eskimo Adaptations (3 cr) (3 cr) (pg. 314-317)
Chg ANTH A438 Tlingit and Haida Adaptations (3 cr) (3+0) (pg. 318-322)
Chg ANTH A439 Athabascan Adaptations (3 cr) (3+0) (pg. 323-327)
Chg ANTH A445 Evolution of Humans and Disease (3 cr) (3+0) (stacked with ANTH A645) (pg. 328-341)
Chg ANTH A457 Food and Nutrition: An Anthropological Perspective (3 cr) (3+0) (stacked with ANTH A657) (pg. 342-351)
Chg ANTH A480 Analytical Techniques in Archeology (3 cr) (3+0) (stacked with ANTH A680) (pg. 352-361)
Chg ANTH A481 Museum Studies in Anthropology (3 cr) (3+0) (stacked with ANTH A681) (pg. 362-377)

Chg Bachelor of Science, Natural Sciences (pg. 378-406)
Chg GEO A158 Geomatics Computer Fundamentals (1 cr) (0+2) (pg. 407-410)
Add GEO A181 Construction Surveying (1 cr) (0+3) (pg. 411-415)
Chg GEO A256 Municipal and Civil Geomatics (3 cr) (2+3) (pg. 416-420)
Chg GEO A266 Advanced Surveying (3 cr) (2+3) (pg. 421-425)
Chg GEO A301 Professional Development I (1 cr) (0+2) (pg. 426-429)
Add GEO A302 Professional Development II (1 cr) (0+2) (pg. 430-433)
Add GEO A303 Professional Development III (1 cr) (0+2) (pg. 434-438)
Add GEO A354 City and Regional Planning (3 cr) (3+0) (pg. 439-443)

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<td>Geomatics Design Project (3 cr) (1+6) <strong>(GERC)</strong> (pg. 449-452)</td>
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<td>Geopositioning (3 cr) (3+0) (pg. 453-457)</td>
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<td>Elements of Geographic Information Systems (GIS) (4 cr) (2+3) (pg. 458-464)</td>
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<td>Spatial Information Analysis and Modeling (3 cr) (2+2) (pg. 465-471)</td>
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<td>GIS Applications I (3 cr) (1+4) (pg. 472-475)</td>
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<td>GIS Applications II (4 cr) (1+6) (pg. 493-496)</td>
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<td>General School of Engineering Introduction Section (pg. 497-505)</td>
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<td>Associate of Applied Science, Geomatics (pg. 506)</td>
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<td>GIS Minor (pg. 526-528)</td>
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Chg EE A441 Integrated Circuit Design (3 cr) (3+0) (pg. 576-579)
Chg EE A462 Communication Systems (3 cr) (3+0) (pg. 580-582)
Chg EE A465 Telecommunications (3 cr) (3+0) (pg. 583-586)
Chg EE A471 Automatic Control (3 cr) (3+0) (cross listed with ME A471) (pg. 587-590)
Chg ME A471 Automatic Control (3 cr) (3+0) (cross listed with EE A471) (pg. 591-595)
Add ME A280 Solid Modeling for Engineers (3 cr) (2+2) (pg. 596-599)
Chg ME A334 Materials Science (3 cr) (2+3) (pg. 600-603)
Chg ME A414 Thermal System Design (3 cr) (2+2) (pg. 604-608)
Chg ME A441 Heat & Mass Transfer (3 cr) (2+2) (pg. 609-613)
Chg ME A450 Manufacturing Design (3 cr) (2+2) (pg. 614-618)
Chg ME A453 Renewable Energy Systems Engineering (3 cr) (3+0) (pg. 619-624)
Chg ME A455 HVAC Systems Optimization (3 cr) (2+2) (pg. 625-628)
Add ME A459 Fracture Mechanics (3 cr) (3+0) (stacked with ME A659) (pg. 629-632)

Tabled at 2nd reading:
Chg PSY A490 Advanced Topics in Psychology (1 cr) (1-3+0)
Chg PSY A492 Senior Seminar: Contemporary Issues in Psychology (3 cr) (3+0)

Tabled PSY A490 and PSY A492 until GAB can review PSY A690 and PSY 6492

VIII. Old Business
A. Electronic signatures on curriculum- Lora Volden and Christine Lidren are researching options

IX. New Business
A. UAB topics (pg. 633)

X. Informational Items and Adjournment
A. Curriculum Log
B. Curriculum Handbook
C. Catalog Copy
D. Accreditation website
Undergraduate Academic Board

Summary

April 15, 2011
2:00-5:00
ADM 204

I. Roll

(x) Hilary Davies  (x) Susan Wilson  (x) Deborah Fox  ( ) Adjunct vacancy
(x) Paola Banchero  (x) Hilary Seitz- Carolyn Coe (x) Wayne Edwards  ( ) USUAA vacancy
(x) David Meyers  (x) Cheryl Smith  ( ) FS at large vacancy  Ex-Officio Members:
(x) Suzanne Forster  (x) Utpal Dutta  ( ) Advis./Couns. vacancy  (e) Bart Quimby
(x) Susan Fallon  (x) Kevin Keating  (x) David Edgecombe ( ) Lora Volden
(x) Dave Fitzgerald  (x) Marion Yapuncich (e) Kathryn Hollis Buchanan (x) Shirlee Willis-Haslip

II. Approval of the Agenda (pg. 1-5)
Approved

III. Approval of Meeting Summary (pg. 6-10)
Approved

IV. Administrative Report

A. Associate Vice Provost Bart Quimby
Unable to attend

B. Interim University Registrar Shirlee Willis-Haslip and Associate Registrar Lora Volden
Students can still totally withdrawal (drop all of your classes) until the 22nd

V. Chair’s Report

A. UAB Chair- Hilary Davies

B. GERC- Sue Fallon
Approved CHIN A201 and A202
New catalog language regarding equivalency and GER credit regarding GEOG/ENVI

C. Assessment Committee Report- Bart Quimby

VI. Program/Course Action Request- First Readings from April 8th UAB meeting

Chg GEO A158 Geomatics Computer Fundamentals (1 cr) (0+2) (pg. 11-14)
Add GEO A181 Construction Surveying (1 cr) (0+3) (pg. 15-19)
Chg GEO A256 Municipal and Civil Geomatics (3 cr) (2+3) (pg. 20-24)
Chg GEO A266 Advanced Surveying (3 cr) (2+3) (pg. 25-29)
Chg GEO A301 Professional Development I (1 cr) (0+2) (pg. 30-33)
Add GEO A302 Professional Development II (1 cr) (0+2) (pg. 34-37)
Add GEO A303 Professional Development III (1 cr) (0+2) (pg. 38-42)
Add GEO A354 City and Regional Planning (3 cr) (3+0) (pg. 43-47)
Chg GEO A365 Geomatics Adjustment and Analysis ( 4cr) (4+0) (pg. 48-52)
Chg GEO A466 Geopositioning (3 cr) (3+0) (pg. 58-62)

Accepted all GEO courses

Del GEO A456 Geomatics and Civil Design (3 cr) (pg. 53)
Withdrawn as this course is being deleted on this year's purge list

Chg GEO A460 Geomatics Design Project (3 cr) (1+6) (GERC) (pg. 54-57)

Remanded to GERC

Chg GIS A268 Elements of Geographic Information Systems (GIS) (4 cr) (2+3) (pg. 63-69)
Chg GIS A366 Spatial Information Analysis and Modeling (3 cr) (2+2) (pg. 70-75)
Chg GIS A375 GIS Applications I (3 cr) (1+4) (pg. 76-79)
Chg GIS A433 Coastal Mapping (3 cr) (2+2) (pg. 80-84)
Chg GIS A458 Design and Management of Spatial Information (3 cr) (2+2) (pg. 85-88)
Chg GIS A468 Integration of Geomatics Technologies (3 cr) (2+2) (pg. 89-93)
April 15, 2011
Undergraduate Academic Board
Page 2

Summary

Chg GIS A470 GIS Applications II (4 cr) (1+6) (pg. 94-97)

Accepted all GIS courses

Chg School of Engineering Introduction Section (not including the minors)
Chg Associate of Applied Science, Geomatics (pg. 98)
Chg Bachelor of Science, Geomatics (pg. 99-127)

Accepted all programs for first reading

Need PAR for Undergraduate Certificate

Add CSE A102 Introduction to Computer Systems (1 cr) (1+0) (pg. 128-132)
Chg CSE A335 Operating Systems Engineering (3 cr) (3+0) (pg. 133-136)
Chg CSE A465 Network Security (3 cr) (3+0) (pg. 137-140)
Add CSE A480 Engineering Software/ Hardware Systems (3 cr) (3+0) (pg. 141-144)
Chg ENGR A470 Engineering Internship (1 cr) (0+3) (pg. 145-147)

Accepted all CSE and ENGR courses

Chg EE A203 Fundamentals of Electrical Engineering I (4 cr) (3+3) (pg. 148-153)
Add EE A306 Dynamics of Systems (3 cr) (3+0) (pg. 154-157)
Add EE A353L Circuit Theory Lab (1 cr) (0+3) (pg. 158-161)
Chg EE A407 Power Distribution (3 cr) (3+0) (pg. 162-165)
Chg EE A441 Integrated Circuit Design (3 cr) (3+0) (pg. 166-169)
Chg EE A462 Communication Systems (3 cr) (3+0) (pg. 170-172)
Chg EE A465 Telecommunications (3 cr) (3+0) (pg. 173-176)
Chg EE A471 Automatic Control (3 cr) (3+0) (pg. 177-180)

Accepted all EE courses

Add ME A280 Solid Modeling for Engineers (3 cr) (2+2) (pg. 181-184)
Add ME A306 Dynamics of Systems (3 cr) (3+0) (pg. 185-188)
Chg ME A334 Materials Science (3 cr) (2+3) (pg. 189-191)
Chg ME A408 Mechanical Vibrations (3 cr) (3+0) (pg. 192-195)

Will be bringing cross listed EE A408 course as it will be deleted

Chg ME A414 Thermal System Design (3 cr) (2+2) (pg. 196-200)
Chg ME A441 Heat & Mass Transfer (3 cr) (2+2) (pg. 201-205)
Chg ME A450 Manufacturing Design (3 cr) (2+2) (pg. 206-210)
Chg ME A453 Renewable Energy Systems Engineering (3 cr) (3+0) (pg. 211-216)
Chg ME A455 HVAC Systems Optimization (3 cr) (2+2) (pg. 217-220)
Add ME A459 Fracture Mechanics (3 cr) (3+0) (stacked with ME A659) (pg. 221-224)
Chg ME A471 Automatic Control (3 cr) (3+0) (pg. 225-228)

Accepted all ME courses

Will start next week’s agenda at this point

Chg Bachelor of Science in Engineering (Computer Systems Engineering, Electrical Engineering, Mechanical Engineering) (pg. 229-253)
Chg EDSE A474 Special Children from Birth through Five (3 cr) (3+0) (pg. 254-258)
Chg JUST A352 Substantive Criminal Law (3 cr) (3+0) (cross listed w/PARL A352) (pg. 259-266)
hg PARL A352 Substantive Criminal Law (3 cr) (3+0) (cross listed w/JUST A352) (pg. 267-274)
Chg JUST A355 Rural Justice (3 cr) (3+0) (pg. 275-280)
Chg JUST A371 Cinematic Images of Justice (3 cr) (3+0) (pg. 281-284)
Chg PARL A362 Commercial Law Chg (3 cr) (3+0) (pg. 285-290)
Chg HS A433 Health Education: Theory and Practice (3 cr) (3+0) (cross listed w/NS A433) (pg. 291-294)
Chg NS A433 Health Education: Theory and Practice (3 cr) (3+0) (cross listed w/HS A433)
### Program/Course Action Request - Second Readings

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<td>Bachelor of Fine Arts, Art</td>
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<td><strong>Tabled:</strong></td>
<td>Need revised catalog copy merging mammalogy and marine biology</td>
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#### VII.

### Program/Course Action Request - Second Readings

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**All Philosophy will be postponed until the next meeting**

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<td>ANTH A338 Peoples and Cultures of Scandinavia (3 cr) (3+0)</td>
<td></td>
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<tr>
<td>Chg</td>
<td>ANTH A361 Languages and Culture (3 cr) (3+0)</td>
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<td>Chg</td>
<td>ANTH A365 Modern Human Biological Diversity (3 cr ) (3+0)</td>
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<tr>
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<td>ANTH A400 Anthropology of Religion (3 cr) (3+0)</td>
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<td>Chg</td>
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<tr>
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<td>ANTH A415 Applied Anthropology (3 cr) (3+0) (stacked with ANTH A615) (452-461)</td>
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**Need updated bibliography**

<table>
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<th>Prerequisites</th>
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<td>Chg</td>
<td>ANTH A427 Ethnohistory (3 cr) (3+0) (stacked with ANTH A627)</td>
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**Need updated bibliography**

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<th>Course/Title</th>
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<th>Prerequisites</th>
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<td>Chg</td>
<td>ANTH A431 Field Methods in Archeology (1-8 cr) (0+3-24) (stacked with ANTH A631)</td>
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<td>Chg</td>
<td>ANTH A432 Hunting and Gathering Societies (3 cr) (3+0)</td>
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<tr>
<td>Chg</td>
<td>ANTH A435 Northwest Coast Cultures (3 cr) (3+0)</td>
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<td></td>
</tr>
<tr>
<td>Chg</td>
<td>ANTH A436 Aleut Adaptations (3 cr) (3+0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chg</td>
<td>ANTH A437 Eskimo Adaptations (3 cr) (3 cr)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chg</td>
<td>ANTH A438 Tlingit and Haida Adaptations (3 cr) (3+0) (506-510)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chg</td>
<td>ANTH A439 Athabascan Adaptations (3 cr) (3+0) (511-515)</td>
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</table>
Chg ANTH A445 Evolution of Humans and Disease (3 cr) (3+0) (stacked with ANTH A645) (pg. 516-529)
Chg ANTH A457 Food and Nutrition: An Anthropological Perspective (3 cr) (3+0) (stacked with ANTH A657) (pg. 530-539)
Chg ANTH A480 Analytical Techniques in Archeology (3 cr) (3+0) (stacked with ANTH A680) (pg. 540-549)
Chg ANTH A481 Museum Studies in Anthropology (3 cr) (3+0) (stacked with ANTH A681) (pg. 550-565)

ANTH courses still had revisions that need to be made. Initiator has been contacted.

No revisions received:
Chg Bachelor of Science, Natural Sciences (pg. 286-320)

Tabled at 2nd reading:
Chg PSY A490 Advanced Topics in Psychology (1 cr) (1-3+0)
Chg PSY A492 Senior Seminar: Contemporary Issues in Psychology (3 cr) (3+0)
Tabled PSY A490 and PSY A492 until GAB can review PSY A690 and PSY 6492

VIII. Old Business
A. Electronic signatures on curriculum- Lora Volden and Christine Lidren are researching options

IX. New Business
A. UAB topics (pg. 566)

X. Informational Items and Adjournment
A. Curriculum Log
B. Curriculum Handbook
C. Catalog Copy
D. Accreditation website
The BSE department is in the process of revising the Bachelor of Science in Engineering degree, with specializations in Computer Systems Engineering, Electrical Engineering, and Mechanical Engineering. The modifications are coming as a result of the ABET accreditation visit that occurred in fall 2010. As part of our continuous curriculum improvement process, we have determined there are revisions necessary to the required and elective courses that are part of the three separate curricula. The changes requested and the existing catalog text is appended in hard copy. Both have been provided electronically as well for consideration by the UAB.
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: EN SOENGR  
1b. Division: No Division Code  
1c. Department: BSE

2. Complete Program Title/Prefix  
   Bachelor of Science in Engineering (Computer Systems Engineering, Electrical Engineering, Mechanical Engineering)

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

4. Type of Action:  
   PROGRAM
   - Add
   - Change
   - Delete  
   PREFIX
   - Add
   - Change
   - Inactivate

5. Implementation Date (semester/year)  
   From: Fall/2011  
   To: 

6a. Coordination with Affected Units: Department, School, or College: BSE, SOE  
   Initiator Name (typed): Jeffrey Miller  
   Date: 
   Initiator Signed Initials: 

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)  
   Date: 3/20/2011

6c. Coordination with Library Liaison  
   Date: 3/28/2011

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

8. Justification for Action  
   Based on our ABET accreditation visit and continuous curriculum improvement, we have modified the curricula in Computer Systems, Electrical, and Mechanical Engineering within the BSE department.

Initiator (faculty only)  
Date

Initiator (TYPE NAME)  
Date

Approved
Disapproved
Dean/Director of School/College  
Date

Approved
Disapproved
Undergraduate/Graduate Academic  
Date

Approved
Disapproved
Board Chairperson  
Date

Approved
Disapproved
Provost or Designee  
Date

Approved
Disapproved
Department Chairperson  
Date

Approved
Disapproved
Curriculum Committee Chairperson  
Date
Bachelor of Science, Engineering

The Bachelor of Science in Engineering (BSE) program is a design-oriented curriculum that incorporates topics that span the foundations of engineering disciplines. BSE students select courses for a specialization track that best suits their needs. Thus, the BSE curriculum can custom fit a student’s education with the needs of the community and industry. The three tracks of specialization are: 1) Computer Systems Engineering, 2) Electrical Engineering, and 3) Mechanical Engineering.

The Computer Systems Engineering (CSE, also known as Computer Engineering) specialty track focuses on applied computer theory, the design and implementation of computer hardware and software, and specialized areas of computing such as network architecture, security, and distributed systems. Students take courses such as computer programming, computer hardware design, networking, operating/software systems engineering, signals, and electronic device and circuit design.

The Electrical Engineering (EE) specialty track focuses on fundamental electrical concepts including circuit theory, electrical devices, electromagnetism, and signals and systems. Students take courses in computer design, antenna theory, communication theory, and control systems.

The Mechanical Engineering (ME) specialty track focuses on the design of systems related to transfer of thermal and mechanical energies where topics such as HVAC (heating, ventilation, and air conditioning) and design of mechanisms are covered in detail. Students take courses in heat transfer, HVAC, manufacturing, and machine design, including hands-on exposure in a state of the art manufacturing lab with rapid prototyping through three dimensional printers and CNC machining.

Accreditation

All BSE programs are separately accredited by the Engineering Accreditation Commission of ABET, which is the only accreditor of engineering programs and related fields of study in the US. The accredited BSE programs include: 1) Computer Systems Engineering, 2) Electrical Engineering, and 3) Mechanical Engineering.

Program Objectives and Expected Outcomes

The curriculum of the BSE program has also been carefully designed to prepare students for the profession of engineering through study, experience, and practice. Each of the three specializations in the BSE program has objectives that are consistent with the needs of the respective program’s constituents, as follows:

Computer Systems Engineering
1. Graduates are successful practitioners of computer engineering in a variety of industries, government agencies, and research/academic institutions, serving the State of Alaska as well as national/international needs.
2. Graduates exhibit high standards regarding ethical behavior and social responsibility.
3. Graduates successfully engage in life-long learning experiences such as graduate education, short courses, technical talks, conferences, training program, community groups, and writing and/or publishing papers.

Electrical Engineering
1. To produce electrical engineering graduates with the training and skills to enter the job market or to continue their education by attending graduate school.
2. To produce graduates who will become business and community leaders in Alaska and throughout the world.
3. To produce graduates who will, through their training in electrical engineering and their commitment to their continuing education, become the entrepreneurs driving Alaska’s growth in the future.
4. To produce graduates in electrical engineering who conduct themselves and practice their profession with the highest of professional standards.

Mechanical Engineering
1. To produce graduates who are able to practice mechanical engineering through design and analysis of mechanical systems in industry, government, and academic settings.
2. To produce graduates who are prepared for graduate-level education, research and development, and other creative endeavors in science and technology.
3. To produce graduates who are able to conduct themselves in a professional and ethical manner.
4. To produce graduates who are able to become contributors and leaders in the economic development and improving the quality of life in the State of Alaska, the nation, and the world.

Knowing that all engineering programs must demonstrate that their students attain a level of proficiency in a number of important areas, the BSE program has chosen the following set of program outcomes for all three specializations. Students will have:

(a) an ability to apply knowledge of mathematics, science, and engineering
(b) an ability to design and conduct experiments, as well as analyze and interpret data
(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health, and safety manufacturability, and sustainability
(d) an ability to function on multidisciplinary teams
(e) an ability to identify, formulate, and solve engineering problems
(f) an understanding of professional and ethical responsibility
(g) an ability to communicate effectively
(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
(i) a recognition of the need for, and the ability to engage in, lifelong learning
(j) a knowledge of contemporary issues
(k) and an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

**Honors in Engineering**

Undergraduate BSE students may be recognized for exceptional performance by earning Departmental Honors in each of the three specialty tracks: Computer Systems Engineering, Electrical Engineering, or Mechanical Engineering. The award will be noted on their permanent university transcript. In order to receive Honors in the BSE program, a student must meet each of the following requirements.

1. Complete all requirements for a BSE. A minimum of 30 credits applicable to the BSE must be completed at UAA.
2. Be an active member for at least one year of both a national and an on-campus student chapter of a professional engineering society that addresses issues relevant to the engineering profession.
3. Have a GPA of 3.30 or higher in courses applicable to the BSE.
4. Gain approval for and complete a design/research project prior to applying for graduation. An oral presentation of the project results to an appropriate audience will be required. The project proposal and final written report must be approved by the student’s academic advisor and the chair of BSE program.
5. For Mechanical and Electrical Engineering specializations, take and pass the Fundamentals of Engineering examination in the senior year. For Computer Systems Engineering specialization, take and pass the CSE Exit Examination in the senior year.
6. Document a minimum of eight weeks work experience in an engineering or engineering-related position.

**Preparation**

While in high school, students can prepare for entering and succeeding in the university engineering program. In order to be the best prepared, students should complete the following high school courses with grades of C or better:

- Algebra 2 years
- Chemistry 1 year
- English 3 years
- Physics 1 year
- Trigonometry 1/2 year

Students successfully completing the above courses will be prepared to enroll in the first year of courses that count towards the engineering degree. Students without the above preparatory courses will need to take equivalent university courses before taking some of the first year of courses that count towards the engineering degree. Students are encouraged to work with their faculty advisors for developing a course plan.

**Admission Requirements**
Admission to the Bachelor of Science in Engineering program is to one of two levels: Pre-Engineering or Engineering. Students admitted to either of the two levels are considered to be degree-seeking engineering students majoring in engineering.

**Pre-Engineering Level**

Applicants for admission who have completed only the general Baccalaureate Degree Program Admission Requirements in Chapter 7 of this catalog are admitted to the Engineering program at the Pre-Engineering level.

**Engineering Level**

Applicants for admission who, in addition to the general Baccalaureate Degree Program Admission Requirements, have completed at least the level of high school courses listed above under Preparation (or their university equivalents) with grades of C or better will be admitted to the Engineering program at the Engineering level.

**Advancement**

**Pre-Engineering to Engineering**

Pre-Engineering students must work with their assigned advisor to develop a course plan to make up the high school course requirements for advancement to the Engineering level. Once the Pre-Engineering course work outlined in the student’s course plan is completed, students must meet with their advisor to apply for advancement to the Engineering level or may also be advanced to the Engineering level by the department chair upon review of the student’s academic progress.

**Curriculum**

The BSE degree requires a total of 130 credits for the Computer Systems Engineering specialization and 132 credits for the Electrical Engineering and Mechanical Engineering specializations. There are five main categories of required credits.

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Requirements (GER)</td>
<td>15</td>
</tr>
<tr>
<td>Core Curriculum</td>
<td>49</td>
</tr>
<tr>
<td>Engineering Emphasis Track Courses</td>
<td></td>
</tr>
<tr>
<td>Computer Systems Engineering</td>
<td>51</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>53</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>53</td>
</tr>
<tr>
<td>Advanced Math Elective</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Engineering/Science Electives</td>
<td>12</td>
</tr>
<tr>
<td>Total Credits for CSE Specialization</td>
<td>130</td>
</tr>
<tr>
<td>Total Credits for EE or ME Specialization</td>
<td>132</td>
</tr>
</tbody>
</table>

*Note: For rules and information about selecting courses to meet General Education Requirements, see the link on the main School of Engineering website at: [www.uaa.alaska.edu/schoolofengineering](http://www.uaa.alaska.edu/schoolofengineering).

During the first two years (freshman and sophomore) of the BSE program, the student completes a set of core courses that cover basic sciences, mathematics, oral and written communications, and other General Education Requirement courses. This provides the student with a broad and solid background in the topics necessary to build a specialization in a field of engineering.

The engineering emphasis track courses are taken mostly in the third and fourth (junior and senior) years. Each track has a series of required courses totaling 51 credits for the CSE specialization and 53 credits for the EE and ME specializations. In addition, the student selects an additional 12 credits of advanced engineering or science electives, where at least 6 of those credits must be from a class with the prefix of the student’s specialization, and a 3 credit advanced mathematics elective.

Engineering design is introduced early in the curriculum and is emphasized throughout the program. In addition to a seminar course, a two-course introductory Engineering Practices series is a required part of the curriculum. This is an outstanding customized coordination of courses that specifically teaches engineering students what they most need to know early in the curriculum. These courses help students become more successful in all of their subsequent courses and to be more effective as practicing engineers. Topics include applied mathematics, computer applications, experimental data gathering and analysis, collaborative teamwork, and report preparation and presentation. Also, a senior capstone design course is required.
Since the BSE program allows for the selection of more electives than the traditional BS engineering programs, students can custom design their curriculum to specialize in the areas of engineering most applicable for their plans. So, students can prepare themselves to specifically meet the needs of specific companies, and state and federal agencies.

Professional registration is emphasized throughout the program. Students attend a professional seminar course that exposes them to multiple experts from education and industry speaking about their fields of expertise. All students are encouraged to take the Fundamentals of Engineering examination before graduation.

Advising
All undergraduate students are encouraged to meet with their faculty advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise.

Mathematics Minor
Upon completion of the BSE with the Mechanical or Electrical Engineering specialization, or upon completion of the BSE with the computer systems engineering specialization with a 300- or 400-level mathematics class taken from the MATH advanced electives, the requirements for obtaining a minor in Mathematics are also satisfied. Students are encouraged to apply for the Mathematics minor with the BSE when applying for graduation.

Academic Progress
All prerequisites for engineering courses must be completed with a grade of C or higher. A student who has a cumulative semester GPA in engineering courses below 2.00 will be placed on academic warning by the School of Engineering. If a student on academic warning status receives a semester GPA for engineering courses of at least 2.00, that student will be removed from academic warning status by the School of Engineering. Otherwise, if a student on academic warning status receives a cumulative semester GPA in engineering courses below 2.00, the student will be dropped from the BSE program and must reapply in order to continue in the BSE program. Re-admittance requires a letter from the student requesting re-admittance with an explanation of the reasons why. Re-admittance is subject to approval by the department chair.

Graduation Requirements
A. General University Requirements
   Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements
   Every UAA baccalaureate degree requires a minimum of 37 credits of General Education Requirements in eight different categories. The specifically identified courses required for the BSE satisfies five of these categories. However, there are 15 GER credits in the remaining three categories (Social Sciences, Humanities, and Fine Arts) that the student selects:

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>6</td>
</tr>
</tbody>
</table>

   One of the following criteria must be met:

   1. Six credits are from courses that are at the 200 level or above.
   2. Three credits are from courses that are at the 200 level or above and 6 credits are from a sequence of courses at the 100-level. For example, HIST 101 and HIST 102 is considered to be a 6-credit course sequence.

   In addition, the courses selected for Social Science must be from two different disciplines. It is very important that students see their faculty advisors and review the rules for selecting these 15 GER credits. A website with the rules is linked on the main School of Engineering website.

C. Major Requirements
   1. Complete the following core courses (49 Credits):
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<td>CHEM A105</td>
<td>General Chemistry I</td>
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<tr>
<td>CHEM A105L</td>
<td>General Chemistry I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>COMM A111</td>
<td>Fundamentals of Oral Communications (3)</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>COMM A235</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>Small Group Communication (3)</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>COMM A237</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>Interpersonal Communication (3)</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>COMM A241</td>
<td></td>
</tr>
<tr>
<td>ENGL A111</td>
<td>Methods of Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL A212</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A151</td>
<td>Engineering Practices I</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A161</td>
<td>Engineering Practices II</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A192</td>
<td>Engineering Seminar I</td>
<td>1</td>
</tr>
<tr>
<td>ES A302</td>
<td>Engineering Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ESM A450</td>
<td>Economic Analysis and Operations</td>
<td>3</td>
</tr>
<tr>
<td>MATH A200</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH A201</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH A202</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH A302</td>
<td>Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A211</td>
<td>General Physics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A211L</td>
<td>General Physics I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS A212</td>
<td>General Physics II</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A212L</td>
<td>General Physics II Laboratory</td>
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</table>

2. Choose one of the following specializations:

**Computer Systems Engineering (51 credits)**

Complete the following required courses:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CS A330</td>
<td>Algorithms and Data Structures</td>
<td>3</td>
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<tr>
<td>CSE A205</td>
<td>Introduction to C Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSE A215</td>
<td>Object-Oriented Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSE A225</td>
<td>Assembly Language Programming for Engineers using Xilinx</td>
<td>3</td>
</tr>
<tr>
<td>CSE A335</td>
<td>Operating Systems Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CSE A342</td>
<td>Digital Circuits Design</td>
<td>3</td>
</tr>
<tr>
<td>CSE A355</td>
<td>Computer Networking for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSE A465</td>
<td>Network Security</td>
<td>3</td>
</tr>
<tr>
<td>CSE A480</td>
<td>Engineering Software/Hardware Systems</td>
<td>3</td>
</tr>
<tr>
<td>CSE A438</td>
<td>Design of Computer Engineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>EE A203</td>
<td>Fundamentals of Electrical Engineering I</td>
<td>4</td>
</tr>
<tr>
<td>EE A204</td>
<td>Fundamentals of Electrical Engineering II</td>
<td>4</td>
</tr>
<tr>
<td>EE/CS A241</td>
<td>Computer Hardware Concepts</td>
<td>4</td>
</tr>
<tr>
<td>EE/PHY A314</td>
<td>Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>EE A353</td>
<td>Circuit Theory</td>
<td>3</td>
</tr>
<tr>
<td>MATH A231</td>
<td>Introduction to Discrete Mathematics</td>
<td>3</td>
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</table>

**Electrical Engineering (53 credits)**

Complete the following required courses:

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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE A205</td>
<td>Introduction to C Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSE A215</td>
<td>Object-Oriented Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSE A225</td>
<td>Assembly Language Programming for Engineers using Xilinx</td>
<td>3</td>
</tr>
<tr>
<td>EE A203</td>
<td>Fundamentals of Electrical Engineering I</td>
<td>4</td>
</tr>
<tr>
<td>EE A204</td>
<td>Fundamentals of Electrical Engineering II</td>
<td>4</td>
</tr>
<tr>
<td>EE/CS A241</td>
<td>Computer Hardware Concepts</td>
<td>4</td>
</tr>
<tr>
<td>EE/ME A308</td>
<td>Instrumentation and Measurement</td>
<td>3</td>
</tr>
<tr>
<td>EE/PHY A314</td>
<td>Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>EE/PHY A324</td>
<td>Electromagnetics II</td>
<td>3</td>
</tr>
<tr>
<td>EE A324L</td>
<td>Electromagnetics Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>EE A353L</td>
<td>Circuit Theory</td>
<td>3</td>
</tr>
</tbody>
</table>
Mechanical Engineering (53 credits)
Complete the following required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM A106</td>
<td>General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM A106L</td>
<td>General Chemistry II Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>ENGR A105A</td>
<td>Engineering Computer-Aided Design I</td>
<td>1</td>
</tr>
<tr>
<td>ENGR A105B</td>
<td>Engineering Computer-Aided Design II</td>
<td>1</td>
</tr>
<tr>
<td>ENGR A105C</td>
<td>Engineering Computer-Aided Design III</td>
<td>1</td>
</tr>
<tr>
<td>ES A209</td>
<td>Engineering Statics</td>
<td>3</td>
</tr>
<tr>
<td>ES A210</td>
<td>Engineering Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ES A309</td>
<td>Elements of Electrical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ES A331</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>ES A341</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>ES A341L</td>
<td>Fluid Mechanics Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>ES A346</td>
<td>Basic Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>ME A280</td>
<td>Solid Modeling for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>ME/EE A306</td>
<td>Dynamics of Systems</td>
<td>3</td>
</tr>
<tr>
<td>ME/EE A308</td>
<td>Instrumentation and Measurement</td>
<td>3</td>
</tr>
<tr>
<td>ME A313</td>
<td>Mechanical Engineering Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>ME A334</td>
<td>Elements of Material Science</td>
<td>3</td>
</tr>
<tr>
<td>ME A403</td>
<td>Mechanical Design II</td>
<td>3</td>
</tr>
<tr>
<td>ME A414</td>
<td>Thermal Systems Design</td>
<td>3</td>
</tr>
<tr>
<td>ME A438</td>
<td>Design of Mechanical Engineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>ME A441</td>
<td>Heat and Mass Transfer</td>
<td>3</td>
</tr>
</tbody>
</table>

3. Advanced Electives
BSE students are required to take 12 credits of advanced engineering/science electives from an approved list of electives for the particular emphasis area. Of the 12 elective credits, at least 6 of them must be from the prefix of the student’s specialization. Also, a 3-credit advanced mathematics elective is required that is selected from a single list common for the Electrical and Mechanical Engineering specializations. The Computer Systems Engineering specialization requires 3 or 4 credits to be selected from a separate list. Many elective courses require prerequisite courses that are also elective courses. Thus, in selecting elective courses students are strongly advised to work with their advisor to develop a cohesive set of elective courses. Choice of engineering electives is subject to approval by the student’s advisor and the department head.

Engineering Science, Statistics, and Advanced Mathematics Electives (3-4 credits)
BSE Computer Systems Engineering students are required to take one course from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES A208</td>
<td>Engineering Mechanics (4)</td>
<td></td>
</tr>
<tr>
<td>MATH A314</td>
<td>Linear Algebra (3)</td>
<td></td>
</tr>
<tr>
<td>MATH A410</td>
<td>Introduction to Complex Analysis (3)</td>
<td></td>
</tr>
<tr>
<td>MATH A422</td>
<td>Partial Differential Equations (3)</td>
<td></td>
</tr>
<tr>
<td>MATH A423</td>
<td>Advanced Engineering Mathematics (3)</td>
<td></td>
</tr>
<tr>
<td>STAT A307</td>
<td>Probability and Statistics in Science (4)</td>
<td></td>
</tr>
</tbody>
</table>

BSE Electrical Engineering and BSE Mechanical Engineering students are required to take one course from the following list of advanced mathematical elective courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH A426</td>
<td>Numerical Methods (3)</td>
<td></td>
</tr>
<tr>
<td>MATH A314</td>
<td>Linear Algebra (3)</td>
<td></td>
</tr>
<tr>
<td>MATH A321</td>
<td>Analysis of Several Variables (3)</td>
<td></td>
</tr>
<tr>
<td>MATH A371</td>
<td>Stochastic Processes (3)</td>
<td></td>
</tr>
</tbody>
</table>
MATH A407  Mathematical Statistics I (3)
MATH A410  Introduction to Complex Analysis (3)
MATH A422  Partial Differential Equations (3)
MATH A423  Advanced Engineering Mathematics (3)

Advanced Engineering & Science Electives (12 credits)
BSE students are required to take 12 credits from one of the following lists of approved advanced engineering and science elective courses based on their specialty. Of the 12 credits, at least 6 of them must be from the prefix of the student’s specialty. Students should meet with their faculty advisor for selection of courses.

A. Computer Systems Engineering Specialty Electives
   CS A385  Computer Graphics (3)
   CS A401  Software Engineering (3)
   CS A405  Artificial Intelligence (3)
   CSE A442  VLSI Circuit Design (3)
   CSE A445  Computer Design and Interfacing (4)
   CSE A451  Digital Signal Processing (3)
   EE/PHYS A324  Electromagnetics II (3)
   EE A324L  Electromagnetics Laboratory II (1)
   EE A354  Engineering Signal Analysis (3)
   EE A441  Integrated Circuit Design (3)
   EE A462  Communication Systems (3)
   EE A465  Telecommunications (3)

B. Electrical Engineering Specialty Electives
   CE A403/603  Arctic Engineering (3)
   or
   ES A411  Northern Design (3)
   Note: Either CE A403 or CE A603 or ES A411 can be taken but not both for the degree.
   CSE A355  Computer Networking for Engineers (3)
   CSE A445  Computer Design and Interfacing (4)
   CSE A451  Digital Signal Processing (3)
   CSE A465  Network Security (3)
   EE/ME A306  Dynamics of Systems (3)
   EE A407  Power Distribution (3)
   EE A458  Antenna Theory (3)
   EE A462  Communication Systems (3)
   EE/ME A471  Automatic Control (3)

C. Mechanical Engineering Specialty Electives
   AEST A608  Fundamentals of Air Pollution (3)
   CE A403/603  Arctic Engineering (3)
   or
   ES A411  Northern Design (3)
   Note: Either CE A403 or CE A603 or ES A411 can be taken for the degree.
   CE A441  Introduction to Environmental Engineering (3)
   CE A442  Environmental Systems Design (3)
   CE A600  Fundamentals of Environmental Science and Engineering (3)
   ME A408  Mechanical Vibrations (3)
   ME A450  Manufacturing Design (3)
   ME A453  Renewable Energy Systems Engineering (3)
   ME A455  HVAC Systems Optimization (3)
   ME A459/659  Fracture Mechanics (3)
   Note: Only one of ME A459 or ME A659 can apply to the degree.
   ME/EE A471  Automatic Control (3)
   ME A664  Corrosion Processes and Engineering (3)
   ME A685  Arctic Heat and Mass Transfer (3)
4. A total of 130 credits is required for the BSE degree with a specialization in Computer Systems Engineering. A total of 132 credits is required for the BSE degree with a specialization in Electrical or Mechanical Engineering, of which 42 credits must be upper division.

FACULTY

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Bachelor of Science, Engineering

The Bachelor of Science in Engineering (BSE) program is a design-oriented curriculum that incorporates topics that span the foundations of engineering disciplines. BSE students select courses for a specialization track that best suits their needs. Thus, the BSE curriculum can custom fit a student’s education with the needs of the community and industry. The three tracks of specialization are: 1) Computer Systems Engineering, 2) Electrical Engineering, and 3) Mechanical Engineering.

The Computer Systems Engineering (CSE, also known as Computer Engineering) specialty track focuses on applied computer theory, the design and implementation of computer hardware and software, and networking specialized areas of computing such as network architecture, security, and distributed systems. Students take courses such as computer programming, signals, systems, computer hardware design, assembly programming, networking, operating/software systems engineering, signals, and electronic device and circuit design.

The Electrical Engineering (EE) specialty track focuses on fundamental electrical concepts including applied circuit design and theory, circuit theory, electrical devices, electromagnetism, and signals and systems. Students take courses in computer design, antenna theory, communication theory, and control systems, electrical signals and systems, circuit design, and communication systems.

The Mechanical Engineering (ME) specialty track focuses on the design of systems related to transfer of thermal and mechanical energies where topics such as HVAC (heating, ventilation, and air conditioning) and design of mechanisms are covered in detail. Students take courses in heat transfer, HVAC (heating, ventilation, and air conditioning), manufacturing, and machine design, including hands-on exposure in a state of the art manufacturing lab with rapid prototyping through three dimensional printers and CNC machining.

Accreditation

All BSE programs are separately accredited by the Engineering Accreditation Commission of ABET, which is the only accreditor of engineering programs and related fields of study in the US. The accredited BSE programs include: 1) Computer Systems Engineering, 2) Electrical Engineering, and 3) Mechanical Engineering.

Program Objectives and Expected Outcomes

The curriculum of the BSE program has also been carefully designed to prepare students for the profession of engineering through study, experience, and practice, with these objectives. Each of the three specializations in the BSE program has objectives that are consistent with the needs of the respective program’s constituents, as follows:

**Computer Systems Engineering**
1. Graduates are successful practitioners of computer engineering in a variety of industries, government agencies, and research/academic institutions, serving the State of Alaska as well as national/international needs.
2. Graduates exhibit high standards regarding ethical behavior and social responsibility.
3. Graduates successfully engage in life-long learning experiences such as graduate education, short courses, technical talks, conferences, training program, community groups, and writing and/or publishing papers.

**Electrical Engineering**
1. To produce electrical engineering graduates with the training and skills to enter the job market or to continue their education by attending graduate school.
2. To produce graduates who will become business and community leaders in Alaska and throughout the world.
3. To produce graduates who will, through their training in electrical engineering and their commitment to their continuing education, become the entrepreneurs driving Alaska’s growth in the future.
4. To produce graduates in electrical engineering who conduct themselves and practice their profession with the highest of professional standards.

**Mechanical Engineering**
1. To produce graduates who are able to practice mechanical engineering through design and analysis of mechanical systems in industry, government, and academic settings.

2. To produce graduates who are prepared for graduate-level education, research and development, and other creative endeavors in science and technology.

3. To produce graduates who are able to conduct themselves in a professional and ethical manner.

4. To produce graduates who are able to become contributors and leaders in the economic development and improving the quality of life in the State of Alaska, the nation, and the world.

Knowing that all engineering programs must demonstrate that their students attain a level of proficiency in a number of important areas, the BSE program has chosen the following set of program outcomes for all three specialties. Students will have:

(a) an ability to apply knowledge of mathematics, science, and engineering
(b) an ability to design and conduct experiments, as well as analyze and interpret data
(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health, and safety manufacturability, and sustainability
(d) an ability to function on multidisciplinary teams
(e) an ability to identify, formulate, and solve engineering problems
(f) an understanding of professional and ethical responsibility
(g) an ability to communicate effectively
(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
(i) a recognition of the need for, and the ability to engage in, lifelong learning
(j) a knowledge of contemporary issues
(k) and an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Honors in Engineering
Undergraduate BSE students may be recognized for exceptional performance by earning Departmental Honors in each of the three specialty tracks: Computer Systems Engineering, Electrical Engineering, or Mechanical Engineering, Electrical Engineering, or Computer Systems Engineering. The award will be noted on their permanent university transcript. In order to receive Honors in the BSE program, a student must meet each of the following requirements.

1. Complete all requirements for a BSE. A minimum of 30 credits applicable to the BSE must be completed at UAA.
2. Be an active member for at least one year of both a national and an on-campus student chapter of a professional engineering society that addresses issues relevant to the engineering profession.
3. Have a GPA of 3.30 or higher in courses applicable to the BSE.
4. Gain approval for and complete a design/research project prior to applying for graduation. An oral presentation of the project results to an appropriate audience will be required. The project proposal and final written report must be approved by the student's academic advisor and the chair of BSE Engineering program.
5. For Mechanical and Electrical Engineering specialties, take and pass the Fundamentals of Engineering Examination in the senior year. For Computer Systems Engineering specialization, take and pass the CSE Exit Examination in the senior year.
6. Document a minimum of eight weeks work experience in an engineering or engineering-related position.

Preparation
While in high school, students can prepare for entering and succeeding in the university engineering program. In order to be the best prepared, students should complete the following high school courses with grades of C or better:

   Algebra _______ 2 years
   Chemistry _______ 1 year
Students successfully completing the above courses will be prepared to enroll in the first year of courses that count towards the engineering degree. Students without the above preparatory courses will need to take equivalent university courses before taking some of the first year of courses that count towards the engineering degree. Students are encouraged to work with their faculty advisors for developing a course plan.

Admission Requirements
Admission to the Bachelor of Science in Engineering program is to one of two levels: Pre-Engineering or Engineering. Students admitted to either of the two levels are considered to be degree-seeking engineering students majoring in engineering.

Pre-Engineering Level
Applicants for admission who have completed only the general Baccalaureate Degree Program Admission Requirements in Chapter 7 of this catalog are admitted to the Engineering program at the Pre-Engineering level.

Engineering Level
Applicants for admission who, in addition to the general Baccalaureate Degree Program Admission Requirements, have completed at least the level of high school courses listed above under Preparation (or their university equivalents) with grades of C or better will be admitted to the Engineering program at the Engineering level.

Advancement
Pre-Engineering to Engineering
Pre-Engineering students must work with their assigned advisor to develop a course plan to make up the high school course requirements for advancement to the Engineering level. Once the Pre-Engineering course work outlined in the student's course plan is completed, students must meet with their advisor to apply for advancement to the Engineering level or may also be advanced to the Engineering level by the department chair upon review of the student’s academic progress.

Admission Requirements
Complete the Baccalaureate Degree Programs Admission Requirements described in Chapter 7 of this catalog. In addition, in order to be prepared for first-year courses in the BSE program, students should have completed the following high school courses with grades of C or better:

- Algebra 2 years
- Chemistry 1 year
- English 3 years
- Physics 1 year
- Trigonometry 1/2 year

Students successfully completing the above courses qualify to be accepted into the BSE program with major status. If an applicant to the School of Engineering BSE program does not satisfy one or more of the above requirements, the student may be accepted into the BSE with major or pre-major status depending upon the courses that were successfully completed. Students with either pre-major or major status are considered enrolled in the BSE program. Acceptance into the pre-major or major status is determined by the department chair.

Advancement from Pre-Major to Major Status
Pre-major BSE students must work with their assigned faculty advisor to develop a course plan to make up the high school course requirements for advancement to major status in the BSE program. Once the coursework outlined in the student's course plan for advancement is completed, the student meets with their faculty advisor to request advancement to major status, or may also be advanced to major status by the department chair upon review of the student’s academic progress. Advancement to major status is subject to approval by the department chair.

Curriculum
The BSE degree requires a total of 130 credits for the Computer Systems Engineering specialization and 132 credits for the Electrical Engineering and Mechanical Engineering specializations. The total required credits for the BSE is 132 credits. There are five main categories of required credits.
### Category Credits

* General Education Requirements (GER) 15
* Core Curriculum 59-49
* Engineering Emphasis Track Courses 43
  - Computer Systems Engineering 51
  - Electrical Engineering 53
  - Mechanical Engineering 53
* Advanced Math Elective 3
* Advanced Engineering/Science Electives 12

**Total Credits for CSE Specialization** 130
**Total Credits for EE or ME Specialization** 132

*Note: For rules and information about selecting courses to meet General Education Requirements, see the link on the main School of Engineering website at: www.uaa.alaska.edu/schoolofengineering.*

**Note: MATH A231 Discrete Mathematics is required for Computer Systems Engineering students.**

During the first two years (freshman and sophomore) of the BSE program, the student completes a set of core courses of 74 credits (59 Core Curriculum credits and 15 General Education Requirements). These courses cover basic sciences, mathematics, oral and written communications, and other General Education Requirement courses. This provides the student with a broad and solid background in the topics necessary to build a specialization in a field of engineering.

The engineering emphasis track courses are taken mostly in the third and fourth (junior and senior) years. Each track has a series of required courses totaling 43-51 credits for the CSE specialization and 53 credits for the EE and ME specializations. In addition, the student selects an additional 12 credits of advanced engineering or science electives, where at least 6 of those credits must be from a class with the prefix of the student’s specialization, and a 3 credit advanced mathematics elective.

Engineering design is introduced early in the curriculum and is emphasized throughout the program. In addition to the seminar course series, a three-two-course introductory Engineering Practices series is a required part of the curriculum. This is an outstanding customized coordination of courses that specifically teaches engineering students what they most need to know early in the curriculum. These courses help students become more successful in all of their subsequent courses and to be more effective as practicing engineers. Topics include applied mathematics, computer applications, experimental data gathering and analysis, collaborative teamwork, and report preparation and presentation. Also, a senior capstone design course is required.

Since the BSE program allows for the selection of more electives than the traditional BS engineering programs, students can custom design their curriculum to specialize in the areas of engineering most applicable for their plans. So, students can prepare themselves to specifically meet the needs of specific companies, and state and federal agencies.

Professional registration is emphasized throughout the program. Students attend three professional seminar courses that expose them to multiple experts from education and industry speaking about their fields of expertise. All students are encouraged to take the Fundamentals of Engineering examination before graduation.

### Advising

All undergraduate students are encouraged to meet with their faculty advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise.

### Mathematics Minor

Upon completion of the BSE with the mechanical or electrical specialization, or upon completion of the BSE with the computer systems engineering specialization with a 300- or 400-level mathematics class taken from the MATH advanced electives, the requirements for obtaining a minor in Mathematics are also satisfied. Students are encouraged to apply for the Mathematics minor with the BSE when applying for graduation.

### Academic Progress

All prerequisites for engineering courses must be completed with a grade of C or higher. A student who has a cumulative semester GPA in engineering courses below 2.00 will be placed on academic warning by the School of Engineering. If a student on academic
warning status receives a semester GPA for engineering courses of at least 2.00, that student will be removed from academic warning status by the School of Engineering. Otherwise, if a student on academic warning status receives a cumulative semester GPA in engineering courses below 2.00, the student will be dropped from the BSE program and must reapply in order to continue in the BSE program. Re-admittance requires a letter from the student requesting re-admittance with an explanation of the reasons why. Re-admittance is subject to approval by the department chair.

Graduation Requirements

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Every UAA baccalaureate degree requires a minimum of 37 credits of General Education Requirements in eight different categories. The specifically identified courses required for the BSE satisfies five of these categories. However, there are 15 GER credits in the remaining three categories (Social Sciences, Humanities, and Fine Arts) that the student selects:

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>6</td>
</tr>
</tbody>
</table>

One of the following criteria must be met:

1. Six credits are from courses that are at the 200 level or above.
2. Three credits are from courses that are at the 200 level or above and 6 credits are from a sequence of courses at the 100-level. For example, HIST 101 and HIST 102 is considered to be a 6-credit course sequence.

In addition, the courses selected for Social Science must be from two different disciplines. It is very important that students see their faculty advisors and review the rules for selecting these 15 GER credits. A website with the rules is linked on the main School of Engineering website.

C. Major Requirements

1. Complete the following core courses (59 Credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM A105</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM A105L</td>
<td>General Chemistry I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>COMM A111</td>
<td>Fundamentals of Oral Communications (3)</td>
<td>3</td>
</tr>
<tr>
<td>COMM A235</td>
<td>Small Group Communication (3)</td>
<td></td>
</tr>
<tr>
<td>COMM A237</td>
<td>Interpersonal Communication (3)</td>
<td></td>
</tr>
<tr>
<td>COMM A241</td>
<td>Public Speaking (3)</td>
<td></td>
</tr>
<tr>
<td>ENGL A111</td>
<td>Methods of Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL A212</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A105A</td>
<td>Engineering Computer-Aided Design I</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A105B</td>
<td>Engineering Computer-Aided Design II</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A151</td>
<td>Engineering Practices I</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A161</td>
<td>Engineering Practices II</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A192</td>
<td>Engineering Seminar I</td>
<td>1</td>
</tr>
<tr>
<td>ENGR A251</td>
<td>Engineering Practices III</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A292</td>
<td>Engineering Seminar II</td>
<td>1</td>
</tr>
<tr>
<td>ES A208</td>
<td>Engineering Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>ES A302</td>
<td>Engineering Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ESM A450</td>
<td>Economic Analysis and Operations</td>
<td>3</td>
</tr>
<tr>
<td>MATH A200</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH A201</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH A202</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH A302</td>
<td>Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A211</td>
<td>General Physics I</td>
<td>3</td>
</tr>
</tbody>
</table>
2. Choose one of the following specializations:

### Computer Systems Engineering (43-51 credits)
Complete the following required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS A330</td>
<td>Algorithms and Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>CSE A205</td>
<td>Introduction to C Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSE A215</td>
<td>Object-Oriented Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSE A225</td>
<td>Assembly Language Programming for Engineers Using Xilinx</td>
<td>3</td>
</tr>
<tr>
<td>CSE A335</td>
<td>Operating Systems Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CSE A342</td>
<td>Digital Circuits Design</td>
<td>3</td>
</tr>
<tr>
<td>CSE A355</td>
<td>Computer Networking for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSE A465</td>
<td>Network Security</td>
<td>3</td>
</tr>
<tr>
<td>CSE A480</td>
<td>Engineering Software/Hardware Systems</td>
<td>3</td>
</tr>
<tr>
<td>CSE A438</td>
<td>Design of Computer Engineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>EE A203</td>
<td>Fundamentals of Electrical Engineering I</td>
<td>4</td>
</tr>
<tr>
<td>EE A204</td>
<td>Fundamentals of Electrical Engineering II</td>
<td>4</td>
</tr>
<tr>
<td>EE/CS A241</td>
<td>Computer Hardware Concepts</td>
<td>4</td>
</tr>
<tr>
<td>EE/PHYS A314</td>
<td>Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>EE A353</td>
<td>Circuit Theory</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A105C</td>
<td>Engineering Computer-Aided Design III</td>
<td>1</td>
</tr>
<tr>
<td>MATH A231</td>
<td>Introduction to Discrete Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

### Electrical Engineering (43-53 credits)
Complete the following required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE A205</td>
<td>Introduction to C Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSE A215</td>
<td>Object-Oriented Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSE A225</td>
<td>Assembly Language Programming for Engineers Using Xilinx</td>
<td>3</td>
</tr>
<tr>
<td>EE A203</td>
<td>Fundamentals of Electrical Engineering I</td>
<td>4</td>
</tr>
<tr>
<td>EE A204</td>
<td>Fundamentals of Electrical Engineering II</td>
<td>4</td>
</tr>
<tr>
<td>EE/CS A241</td>
<td>Computer Hardware Concepts</td>
<td>4</td>
</tr>
<tr>
<td>EE/PHYS A314</td>
<td>Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>EE/PHYS A324</td>
<td>Electromagnetics II</td>
<td>3</td>
</tr>
<tr>
<td>EE A324L</td>
<td>Electromagnetics Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>EE A353</td>
<td>Circuit Theory</td>
<td>3</td>
</tr>
<tr>
<td>EE A353L</td>
<td>Circuit Theory Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>EE A354</td>
<td>Engineering Signal Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EE A438</td>
<td>Design of Electrical Engineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>EE A441</td>
<td>Integrated Circuit Design</td>
<td>3</td>
</tr>
<tr>
<td>EE A465</td>
<td>Telecommunications</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A105A</td>
<td>Engineering Computer-Aided Design I</td>
<td>1</td>
</tr>
<tr>
<td>ENGR A105B</td>
<td>Engineering Computer-Aided Design II</td>
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<tr>
<td>ES A208</td>
<td>Engineering Mechanics</td>
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### Mechanical Engineering (43-53 credits)
Complete the following required courses:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CHEM A106</td>
<td>General Chemistry II</td>
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</tr>
<tr>
<td>CHEM A106L</td>
<td>General Chemistry II Laboratory</td>
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</tr>
<tr>
<td>ENGR A105A</td>
<td>Engineering Computer-Aided Design I</td>
<td>1</td>
</tr>
<tr>
<td>ENGR A105B</td>
<td>Engineering Computer-Aided Design II</td>
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<tr>
<td>ENGR A105C</td>
<td>Engineering Computer-Aided Design III</td>
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<td>ES A209</td>
<td>Engineering Statics</td>
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<td>ES A210</td>
<td>Engineering Dynamics</td>
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6
3. Advanced Electives

BSE students are required to take 12 credits of advanced engineering/science electives from an approved list of electives for the particular emphasis area. Of the 12 elective credits, at least 6 of them must be from the prefix of the student's specialization. Also, a 3-credit advanced mathematics elective is required that is selected from a single list common for all emphasis areas, the Electrical and Mechanical Engineering specializations. The Computer Systems Engineering specialization requires 3 or 4 credits to be selected from a separate list. Many elective courses require prerequisite courses that are also elective courses. Thus, in selecting elective courses students are strongly advised to work with their advisor to develop a cohesive set of elective courses. Choice of engineering electives is subject to approval by the student’s advisor and the department head.

**Engineering Science, Statistics, and Advanced Mathematics Electives (3-4 credits)**

BSE Computer Systems Engineering students are required to take one course from the following:

- MATH A231 Introduction to Discrete Mathematics (3)
- ES A208 Engineering Mechanics (4)
- MATH A314 Linear Algebra (3)
- MATH A410 Introduction to Complex Analysis (3)
- MATH A422 Partial Differential Equations (3)
- MATH A423 Advanced Engineering Mathematics (3)
- STAT A307 Probability and Statistics in Science (4)

BSE Electrical Engineering and BSE Mechanical Engineering students are required to take one course from the following list of advanced mathematical elective courses:

- MATH A426 Numerical Methods (3)
- MATH A314 Linear Algebra (3)
- MATH A321 Analysis of Several Variables (3)
- MATH A371 Stochastic Processes (3)
- MATH A407 Mathematical Statistics I (3)
- MATH A410 Introduction to Complex Analysis (3)
- MATH A422 Partial Differential Equations (3)
- MATH A423 Advanced Engineering Mathematics (3)
- MATH A426 Numerical Methods (3)

**Advanced Engineering & Science Electives (12 credits)**

BSE students are required to take 12 credits from one of the following lists of approved advanced engineering and science elective courses based on their specialty. Of the 12 credits, at least 6 of them must be from the prefix of the student’s specialty. Students should meet with their faculty advisor for selection of courses.

**A. Computer Systems Engineering Specialty Electives (12 credits)**

- BIOC/CHEM/PHYS A456 Nonlinear Dynamics and Chaos (3)
- CE A403 Arctic Engineering (3)
- ES A411 Northern Design (3)

*Note: Either CE A403 or ES A411 can be taken but not both for the degree.*
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CS A304</td>
<td>Object-Oriented Analysis and Modeling</td>
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<tr>
<td>CS A331</td>
<td>Programming Language Concepts</td>
<td>(3)</td>
</tr>
<tr>
<td>CS A351</td>
<td>Automata, Algorithms, and Complexity</td>
<td>(3)</td>
</tr>
<tr>
<td>CS A360</td>
<td>Database Systems</td>
<td>(3)</td>
</tr>
<tr>
<td>CS A385</td>
<td>Computer Graphics</td>
<td>(3)</td>
</tr>
<tr>
<td>CS A401</td>
<td>Software Engineering</td>
<td>(3)</td>
</tr>
<tr>
<td>CS A405</td>
<td>Artificial Intelligence</td>
<td>(3)</td>
</tr>
<tr>
<td>CS A413</td>
<td>Computer and Data Security</td>
<td>(3)</td>
</tr>
<tr>
<td>CSE A442</td>
<td>VLSI Circuit Design</td>
<td>(3)</td>
</tr>
<tr>
<td>CSE A445</td>
<td>Computer Design and Interfacing</td>
<td>(4)</td>
</tr>
<tr>
<td>CSE A451</td>
<td>Digital Signal Processing</td>
<td>(3)</td>
</tr>
<tr>
<td>CSE A465</td>
<td>Network Security</td>
<td>(3)</td>
</tr>
<tr>
<td>EE/ME A308</td>
<td>Instrumentation and Measurement</td>
<td>(3)</td>
</tr>
<tr>
<td>EE/PHYS A324</td>
<td>Electromagnetics II</td>
<td>(3)</td>
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<td>(1)</td>
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<td>EE A354</td>
<td>Engineering Signal Analysis</td>
<td>(3)</td>
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<tr>
<td>EE A407</td>
<td>Power Distribution</td>
<td>(2)</td>
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<tr>
<td>EE A441</td>
<td>Integrated Circuit Design</td>
<td>(3)</td>
</tr>
<tr>
<td>EE/ME A471</td>
<td>Automatic Control</td>
<td>(2)</td>
</tr>
<tr>
<td>EE A453</td>
<td>Introduction to Wi-Fi</td>
<td>(1)</td>
</tr>
<tr>
<td>EE A454</td>
<td>Systems Reliability Engineering</td>
<td>(1)</td>
</tr>
<tr>
<td>EE A456</td>
<td>Fiber Optic Communications</td>
<td>(1)</td>
</tr>
<tr>
<td>EE A458</td>
<td>Antenna Theory</td>
<td>(3)</td>
</tr>
<tr>
<td>EE A462</td>
<td>Communication Systems</td>
<td>(3)</td>
</tr>
<tr>
<td>EE A465</td>
<td>Telecommunications</td>
<td>(3)</td>
</tr>
<tr>
<td>PHYS A303</td>
<td>Modern Physics</td>
<td>(3)</td>
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**B. Electrical Engineering Specialty Electives 12**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CE A403/603</td>
<td>Arctic Engineering</td>
<td>(3)</td>
</tr>
<tr>
<td>ES A411</td>
<td>Northern Design</td>
<td>(3)</td>
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*Note: Either CE A403 or CE A603 or ES A411 can be taken but not both for the degree.*

<table>
<thead>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CS A330</td>
<td>Algorithms and Data Structures</td>
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<td>CS A401</td>
<td>Software Engineering</td>
<td>(3)</td>
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<tr>
<td>CS A413</td>
<td>Computer and Data Security</td>
<td>(3)</td>
</tr>
<tr>
<td>CSE A355</td>
<td>Computer Networking for Engineers</td>
<td>(3)</td>
</tr>
<tr>
<td>CSE A445</td>
<td>Computer Design and Interfacing</td>
<td>(4)</td>
</tr>
<tr>
<td>CSE A451</td>
<td>Digital Signal Processing</td>
<td>(3)</td>
</tr>
<tr>
<td>CSE A465</td>
<td>Network Security</td>
<td>(3)</td>
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<tr>
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<td>Dynamics of Systems</td>
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</tr>
<tr>
<td>EE/ME A308</td>
<td>Instrumentation and Measurement</td>
<td>(3)</td>
</tr>
<tr>
<td>EE A407</td>
<td>Power Distribution</td>
<td>(3)</td>
</tr>
<tr>
<td>EE A453</td>
<td>Introduction to Wi-Fi</td>
<td>(1)</td>
</tr>
<tr>
<td>EE A454</td>
<td>Systems Reliability Engineering</td>
<td>(1)</td>
</tr>
<tr>
<td>EE A456</td>
<td>Fiber Optic Communications</td>
<td>(1)</td>
</tr>
<tr>
<td>EE A458</td>
<td>Antenna Theory</td>
<td>(3)</td>
</tr>
<tr>
<td>EE A462</td>
<td>Communication Systems</td>
<td>(3)</td>
</tr>
<tr>
<td>EE/ME A471</td>
<td>Automatic Control</td>
<td>(3)</td>
</tr>
<tr>
<td>PHYS A303</td>
<td>Modern Physics</td>
<td>(3)</td>
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**C. Mechanical Engineering Specialty Electives 12**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEST A608</td>
<td>Fundamentals of Air Pollution</td>
<td>(3)</td>
</tr>
<tr>
<td>CE A403/603</td>
<td>Arctic Engineering</td>
<td>(3)</td>
</tr>
<tr>
<td>ES A411</td>
<td>Northern Design</td>
<td>(3)</td>
</tr>
</tbody>
</table>

*Note: Either CE A403 or CE A603 or ES A411 can be taken but not both for the degree.*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE A441</td>
<td>Introduction to Environmental Engineering</td>
<td>(3)</td>
</tr>
<tr>
<td>CE A442</td>
<td>Environmental Systems Design</td>
<td>(3)</td>
</tr>
<tr>
<td>CE A600</td>
<td>Fundamentals of Environmental Science and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Engineering</td>
<td>(3)</td>
</tr>
</tbody>
</table>
### EE/ME A408
- Dynamics of Systems (3)

### ME A408
- Mechanical Vibrations (3)

### ME A450
- Manufacturing Design (3)

### ME A453
- Renewable Energy Systems Engineering (3)

### ME A455
- HVAC Systems Optimization (3)

### ME A459/659
- Fracture Mechanics (3)

*Note: Only one of ME A459 or ME A659 can apply to the degree.*

### EE/ME A471
- Automatic Control (3)

### ME A664
- Corrosion Processes and Engineering (3)

### ME A685
- Arctic Heat and Mass Transfer (3)

4. A total of 130 credits is required for the BSE degree with a specialization in Computer Systems Engineering. A total of 132 credits is required for the BSE degree with a specialization in Electrical or Mechanical Engineering, of which 42 credits must be upper division.

### FACULTY

- Grant Baker, Professor/Chair, AFGCB@uaa.alaska.edu
- Muhammad Ali, Assistant Professor, AFMA1@uaa.alaska.edu
- Jennifer Brock, Assistant Professor, AFJM5@uaa.alaska.edu
- Matt Cullin, Assistant Professor, AFMC2@uaa.alaska.edu
- Jeff Hoffman, Associate Professor, AFJH5@uaa.alaska.edu
- Sun-il Kim, Assistant Professor, AFJSK1@uaa.alaska.edu
- Nicolae Lobontiu, Associate Professor, AFNL@uaa.alaska.edu
- John Lund, Assistant Professor, AFJL1@uaa.alaska.edu
- Jeff Miller, Assistant Professor/Chair, AFJAM5@uaa.alaska.edu
- Joe Mixsell, Associate Professor, AFJC1@uaa.alaska.edu
- Jens Munk, Associate Professor, AFJIM@uaa.alaska.edu
- Anthony Paris, Assistant Professor, AFJAP@uaa.alaska.edu
- Todd Petersen, Assistant Professor, AFTP@uaa.alaska.edu
- Steffen Peuker, Assistant Professor, SPEUKER@uaa.alaska.edu
Date: April 18, 2011

To: Dr. Judith K. Moore, Chair
   Undergraduate Academic Board

CC: Dr. Osama Abaza, Chair
    Curriculum Committee
    Department of Civil Engineering

Dr. Robert Lang, Dean
School of Engineering

From: Dr. Jeffrey Miller, Chair
   Bachelor of Science in Engineering Department
   Computer Systems, Electrical, Mechanical Engineering

Re: Catalog Copy Revisions
    Computer Systems Engineering Minor
    School of Engineering

The BSE department is in the process of revising the minor in Computer Systems Engineering. The modifications are coming as a result of the ABET accreditation visit that occurred in fall 2010. As part of our continuous curriculum improvement process, we have determined there are revisions necessary to the courses that are part of the curriculum. The changes requested and the existing catalog text is appended in hard copy. Both have been provided electronically as well for consideration by the UAB.
1a. School or College
   EN SOENGR
1b. Division
   No Division Code
1c. Department
   CSE

2. Complete Program Title/Prefix
   Computer Systems Engineering Minor

3. Type of Program
   Choose one from the appropriate drop down menu:
   Undergraduate: or Graduate:
   Other: specify type in box 2

4. Type of Action:
   PROGRAM
   Add
   Change
   Delete
   PREFIX
   Add
   Change
   Inactivate

5. Implementation Date (semester/year)
   From: Fall/2011 To: /

6a. Coordination with Affected Units
   Department, School, or College: BSE, SOE
   Initiator Name (typed): Jeffrey Miller
   Initiator Signed Initials: _________
   Date:________________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 3/20/2011

6c. Coordination with Library Liaison Date: 3/28/2011

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

8. Justification for Action
   Based on our ABET accreditation visit and continuous curriculum improvement, we have modified the curricula for the Computer Systems Engineering minor within the BSE department.

Initiator (faculty only) Date
Jeffrey Miller
Initiator (TYPE NAME)

Approved Disapproved
Dean/Director of School/College Date

Approved Disapproved
Department Chairperson Date

Approved Disapproved
Undergraduate/Graduate Academic Board Chairperson Date

Approved
Provost or Designee Date
**Minor, Computer Systems Engineering**

A minimum of 18 credits must be selected from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS A330</td>
<td>Algorithms and Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>CS A401</td>
<td>Software Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CS A405</td>
<td>Artificial Intelligence</td>
<td>3</td>
</tr>
<tr>
<td>CSE A335</td>
<td>Operating Systems Engineering</td>
<td>3</td>
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<td>CSE A342</td>
<td>Digital Circuits Design</td>
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<td>CSE A355</td>
<td>Computer Networking for Engineers</td>
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<tr>
<td>CSE A442</td>
<td>VLSI Circuit Design</td>
<td>3</td>
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<td>CSE A445</td>
<td>Computer Design and Interfacing</td>
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</tr>
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<td>CSE A451</td>
<td>Digital Signal Processing</td>
<td>3</td>
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<tr>
<td>CSE A465</td>
<td>Network Security</td>
<td>3</td>
</tr>
<tr>
<td>CSE A480</td>
<td>Engineering Software/Hardware Systems</td>
<td>3</td>
</tr>
</tbody>
</table>
Minor, Computer Systems Engineering

A minimum of 18 credits must be selected from:

- CS A330 Algorithms and Data Structures (3)
- CS A331 Programming Language Concepts (2)
- CS A401 Software Engineering (3)
- CS A405 Artificial Intelligence (3)
- CS A413 Computer and Data Security (2)
- CSE A335 Operating Systems Engineering (3)
- CSE A342 Digital Circuits Design (3)
- CSE A355 Computer Networking for Engineers (3)
- CSE A442 VLSI Circuit Design (3)
- CSE A442-A445 Computer Design and Interfacing (4)
- CSE A451 Digital Signal Processing (3)
- CSE A465 Network Security (3)
- CSE A480 Engineering Software/Hardware Systems (3)
The BSE department is in the process of revising the minor in Electrical Engineering. The modifications are coming as a result of the ABET accreditation visit that occurred in fall 2010. As part of our continuous curriculum improvement process, we have determined there are revisions necessary to the courses that are part of the curriculum. The changes requested and the existing catalog text is appended in hard copy. Both have been provided electronically as well for consideration by the UAB.
1a. School or College
EN SOENGR

1b. Division
No Division Code

1c. Department
EE

2. Complete Program Title/Prefix
Electrical Engineering Minor

3. Type of Program
Choose one from the appropriate drop down menu:
Undergraduate: or Graduate:
Other: specify type in box 2

4. Type of Action:
PROGRAM
☑ Add
☑ Change
☐ Delete

PREFIX
☐ Add
☐ Change
☐ Inactivate

5. Implementation Date (semester/year)
From: Fall/2011 To: /

6a. Coordination with Affected Units
Department, School, or College: BSE, SOE
Initiator Name (typed): Jeffrey Miller
Initiator Signed Initials: _________
Date: __________________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 3/20/2011

6c. Coordination with Library Liaison Date: 3/28/2011

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

8. Justification for Action
Based on our ABET accreditation visit and continuous curriculum improvement, we have modified the curricula for the Electrical Engineering minor within the BSE department.

<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
<th>Dean/Director of School/College</th>
<th>Date</th>
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<tbody>
<tr>
<td>Jeffrey Miller</td>
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<table>
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<th>Department Chairperson</th>
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<th>Undergraduate/Graduate Academic Board Chairperson</th>
<th>Date</th>
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**Minor, Electrical Engineering**

A minimum of 18 credits must be selected from:

- CSE A451 Digital Signal Processing (3)
- EE A203 Fundamentals of Electrical Engineering I (4)
- EE A204 Fundamentals of Electrical Engineering II (4)
- EE/CS A241 Computer Hardware Concepts (4)
- EE/ME A308 Instrumentation and Measurement (3)
- EE A314 Electromagnetics (3)
- EE A324 Electromagnetics II (3)
- EE A324L Electromagnetics Laboratory II (1)
- EE A353 Circuit Theory (3)
- EE A407 Power Distribution (3)
- EE A441 Integrated Circuit Design (3)
- EE A458 Antenna Theory (3)
- EE A462 Communication Systems (3)
- EE A465 Telecommunications (3)
- EE/ME A471 Automatic Control (3)
**Minor, Electrical Engineering**

A minimum of 18 credits must be selected from:

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<tr>
<th>Course Code</th>
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<th>Credits</th>
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<td>CSE A451</td>
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<tr>
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<td>Fundamentals of Electrical Engineering I (4)</td>
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<td>EE A204</td>
<td>Fundamentals of Electrical Engineering II (4)</td>
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<td>Instrumentation and Measurement (3)</td>
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<td>Electromagnetics (3)</td>
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<td>EE A458</td>
<td>Antenna Theory (3)</td>
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</tr>
<tr>
<td>EE A462</td>
<td>Communication Systems (3)</td>
<td></td>
</tr>
<tr>
<td>EE A465</td>
<td>Telecommunications (3)</td>
<td></td>
</tr>
<tr>
<td>EE/ME A471</td>
<td>Automatic Control (3)</td>
<td></td>
</tr>
</tbody>
</table>
The BSE department is in the process of revising the minor in Mechanical Engineering. The modifications are coming as a result of the ABET accreditation visit that occurred in fall 2010. As part of our continuous curriculum improvement process, we have determined there are revisions necessary to the courses that are part of the curriculum. The changes requested and the existing catalog text is appended in hard copy. Both have been provided electronically as well for consideration by the UAB.
**Program/PREFIX Action Request**  
**University of Alaska Anchorage**  
**Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix**

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
<tr>
<td>EN SOENGR</td>
<td>No Division Code</td>
<td>ME</td>
</tr>
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</table>

2. **Complete Program Title/PREFIX**  
**Mechanical Engineering Minor**

3. **Type of Program**  
Choose one from the appropriate drop down menu:  
- Undergraduate:  
- Graduated:  
- Other: specify type in box 2  

4. **Type of Action:**  
- PROGRAM:  
  - Add  
  - Change  
  - Delete  
- PREFIX:  
  - Add  
  - Change  
  - Inactivate

5. **Implementation Date (semester/year)**  
From: Fall/2011  
To: /  

6a. **Coordination with Affected Units**  
Department, School, or College: BSE, SOE  
Initiator Name (typed): Jeffrey Miller  
Initiator Signed Initials: _________  
Date:______________

6b. **Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)**  
Date: 3/20/2011

6c. **Coordination with Library Liaison**  
Date: 3/28/2011

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

8. **Justification for Action**  
Based on our ABET accreditation visit and continuous curriculum improvement, we have modified the curricula for the Mechanical Engineering minor within the BSE department.

<table>
<thead>
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<th>Date</th>
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<tbody>
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<td>Jeffrey Miller</td>
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Initiator Signed

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<td>Dean/Director of School/College</td>
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<td>Department Chairperson</td>
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### Minor, Mechanical Engineering

A minimum of 18 credits must be selected from:

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<th>Course Title</th>
<th>Credits</th>
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<td>ES A341L</td>
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<td>ES A346</td>
<td>Basic Thermodynamics</td>
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<td>ME A302</td>
<td>Mechanical Design I</td>
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<tr>
<td>ME A306</td>
<td>Dynamics of Systems</td>
<td>3</td>
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<tr>
<td>ME/EE A308</td>
<td>Instrumentation and Measurement</td>
<td>3</td>
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<tr>
<td>ME A313</td>
<td>Mechanical Engineering Thermodynamics</td>
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<tr>
<td>ME A334</td>
<td>Elements of Material Science</td>
<td>3</td>
</tr>
<tr>
<td>ME A403</td>
<td>Mechanical Design II</td>
<td>3</td>
</tr>
<tr>
<td>ME A408</td>
<td>Mechanical Vibrations</td>
<td>3</td>
</tr>
<tr>
<td>ME A414</td>
<td>Thermal System Design</td>
<td>3</td>
</tr>
<tr>
<td>ME A441</td>
<td>Heat and Mass Transfer</td>
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<tr>
<td>ME A450</td>
<td>Manufacturing Design</td>
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<tr>
<td>ME A455</td>
<td>HVAC Systems Optimization</td>
<td>3</td>
</tr>
<tr>
<td>ME A459/659</td>
<td>Fracture Mechanics</td>
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<tr>
<td>ME/EE A471</td>
<td>Automatic Control</td>
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<tr>
<td>ME A664</td>
<td>Corrosion Processes and Engineering</td>
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<tr>
<td>ME A685</td>
<td>Arctic Heat and Mass Transfer</td>
<td>3</td>
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*Note: Only one of ME A459 or ME A659 can apply to the minor.*
## Minor, Mechanical Engineering

A minimum of 18 credits must be selected from:

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*Note: Only one of ME A459 or ME A659 can apply to the minor.*
### Course Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
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<td>EA COE</td>
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<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours (Lecture + Lab)</th>
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<td>A474</td>
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#### 6. Complete Course Title

**Special Children from Birth through Five**

**Special Children Birth-5**

Abbreviated Title for Transcript (30 character)

<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>8. Type of Action:</th>
<th>9. Repeat Status No</th>
<th>10. Grading Basis</th>
<th>11. Implementation Date</th>
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<table>
<thead>
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<th>8b. Course Number</th>
<th>8c. Contact Hours</th>
<th>8d. Repeat Status</th>
<th>10a. A-F</th>
<th>10b. P/NP</th>
<th>10c. NG</th>
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<th>10b. Grading Basis</th>
<th>11. From: Spring/2012</th>
<th>To: /9999</th>
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#### 12. Cross Listed with

<table>
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<tr>
<th>13a. Impacted Courses or Programs</th>
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Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

<table>
<thead>
<tr>
<th>Impact Program/Course</th>
<th>Catalog Page(s)</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>1. BAEC</td>
<td>142</td>
<td>3/23/2011</td>
<td>Hilary Seitz, Associate Professor</td>
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<td></td>
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<tr>
<td>3.</td>
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</tbody>
</table>

**Initiator Name (typed):** Dean Konopasek  
**Initiator Signed Initials:** __________  
**Date:** __________

**13b. Coordination Email**  
[uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

**Date:** 03/28/2011

**13c. Coordination with Library Liaison**  
**Date:** 03/28/2011

**14. General Education Requirement**

Mark appropriate box:

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

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

Examines milestones and theories of child development. Emphasis on disabilities, individuals with Disabilities Act, and intervention methods. Special Note: Field experience required.

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

n/a

**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)**

Junior Standing

**17. Mark if course has fees**

- [ ]

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

- [ ]

**19. Justification for Action**

This CAR updates a previous version for EDSE A474.
Course Content Guide  
University of Alaska Anchorage  
College of Education  

I. Date Initiated: 11/2/10  

II. Information for the Course Action Request  

College/School: College of Education  
Department: CASE  
Subject: EDSE  
Course Number: A 474  
Title: Special Children from Birth through Five  
Credits: 3  
Grading Basis: A-F  
Implementation Date: Spring 2012  
Course Description: Examines milestones and theories of child development. Emphasis on disabilities, Individuals with Disabilities Act, and intervention methods. Special Note: Field experience required.  
Course Prerequisites(s): n/a  
Test Scores(s): n/a  
Corequisite(s) n/a  
Registration Restrictions: Junior Standing  
Course Fee: ☐ Yes ☒ No  

III. Instructional Goals, Student Outcomes, and Assessment Procedures  

A. Instructional Goals  

The instructor will:  

- Compare theories of child development.  
- Explain disabilities included in the IDEA (Individuals with Disabilities  


### B. Student Outcomes/Assessment Procedures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
<th>Standards</th>
<th>Core Values</th>
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</thead>
<tbody>
<tr>
<td>Integrate child observations with child development theories.</td>
<td>Observation report.</td>
<td>DEC 1 Foundations</td>
<td>Intellectual Vitality</td>
</tr>
<tr>
<td>Identify the characteristics of disabilities.</td>
<td>Presentation</td>
<td>DEC 1 Foundations</td>
<td>Intellectual Vitality</td>
</tr>
<tr>
<td>Articulate the basic tenets of the IDEA and compare requirements of Part B and Part C.</td>
<td>IDEA summary</td>
<td>DEC 1 Foundations</td>
<td>Intellectual Vitality</td>
</tr>
<tr>
<td>Review the framework of early intervention and early childhood special education services.</td>
<td>Report</td>
<td>DEC 1 Foundations</td>
<td>Intellectual Vitality</td>
</tr>
</tbody>
</table>

### IV. Course Level Justification

The course requires students to apply knowledge of child development to field observations and to analyze the laws, policies and procedures that form the framework for early intervention and early childhood special education.
V. **Course Outline**

1. Theories of Child Development
   1.1 Piaget
   1.2 Vygotsky
   1.3 Erikson

2. Descriptions of disabilities
   2.1 Autism
   2.2 Speech/language
   2.3 Visual impairments
   2.4 Deaf
   2.5 Learning disability
   2.6 Traumatic Brain Injury
   2.7 Orthopedic impairment
   2.8 Other health impaired
   2.9 Deaf/Blind
   2.10 Visual impairment
   2.11 Multiple disabilities
   2.12 Emotional disturbance
   2.13 Cognitive impairment
   2.14 Developmentally delayed

3. IDEA
   3.1 Part B
   3.2 Part C

4. Early Intervention / Early Childhood Framework
   4.1 Child find
   4.2 Delivery models
   4.3 Individual Family Service Plan (IFSP)
   4.4 Individualized Educational Plan (IEP)
   4.6 Related services

VI. **Suggested Text(s)**


VII. **Bibliography**

Saddle River, N.J: Pearson Prentice Hall.


### Course Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<td>AJUS Division of Justice</td>
<td>Justice Center</td>
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<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours</th>
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<td>(Lecture + Lab)</td>
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<th>6. Complete Course Title</th>
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<td>Substantive Criminal Law</td>
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**Abbreviated Title for Transcript (30 character)**

<table>
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<th>7. Type of Course</th>
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<tr>
<td>☐ Preparatory/Development</td>
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<tr>
<td>☐ Non-credit</td>
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<tr>
<td>☐ CEU</td>
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<td>☐ Professional Development</td>
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<th>☑ Change</th>
<th>☐ Delete</th>
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If a change, mark appropriate boxes:
- ☐ Prefix
- ☐ Credits
- ☐ Title
- ☐ Grading Basis
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Course Description
- ☐ Cross-Listed/Stacked
- ☐ Course Prerequisites
- ☐ Co-requisites
- ☐ Test Score Prerequisites
- ☐ Registration Restrictions
- ☐ Other Restrictions
- ☐ Class
- ☐ Level
- ☐ College
- ☐ Major
- ☑ Other Update CCG (please specify)

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</thead>
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<tr>
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**Initiator Name (typed):** Deborah Periman

**Initiator Signed Initials:** __________

**Date:** __________

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<th>13b. Coordination Email</th>
<th>Date: 8/30/10</th>
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<td>submitted to Faculty Listserv: <a href="mailto:uaa-faculty@lists.uaa.alaska.edu">uaa-faculty@lists.uaa.alaska.edu</a></td>
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<th>13c. Coordination with Library Liaison</th>
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**General Education Requirement**

Mark appropriate box:
- ☐ Oral Communication
- ☐ Written Communication
- ☐ Quantitative Skills
- ☐ Humanities
- ☐ Social Sciences
- ☐ Natural Sciences
- ☐ Integrative Capstone

<table>
<thead>
<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
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<tbody>
<tr>
<td>Study of elements, purposes, and functions of substantive criminal law. Includes casebook study of general law of crimes and defenses with concentration on Alaska cases and statutes in Alaska Criminal Code. Historical and philosophical concepts are covered.</td>
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<table>
<thead>
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<td>Deborah Periman</td>
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Initiator (TYPE NAME)

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I. Date of Initiation: April 2011

II. Curriculum Action Request
A. School: College of Health and Social Welfare
B. Course Subject: JUST
C. Course Number: A352
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Program: Undergraduate Certificate, Paralegal Studies
G. Course Title: Substantive Criminal Law
H. Grading Basis: A-F
I. Implementation Date: Fall/2011
J. Cross-listed: PARL A352
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L. Course Prerequisites: (JUST A110 or PARL A101) with a minimum grade of C
M. Course Co-requisites: N/A
N. Other Restrictions: N/A
O. Registration Restrictions: N/A
P. Course Fees: No
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A. The instructor will:
   1. Provide historical overview of substantive criminal law in the United States, with emphasis on ethics and the impact of gender, class and ethnicity on development and administration of criminal law.
   2. Review key concepts related to statutory and judicial analysis and analysis of the elements of crimes and affirmative defenses.
   3. Explain the relationship between constitutional mandates, judicial opinions, legislation, and procedural rules in the development of substantive criminal law.
   4. Present key judicial opinions from the federal and state courts, with particular attention to Alaska courts, establishing the elements of specific crimes and affirmative defenses and the public policy behind excuses to criminal behavior.
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This course builds upon the concepts and vocabulary acquired by students in the alternative prerequisite courses, JUST A110 (Introduction to Justice) and PARL 101 (Introduction to Law). Course readings, lectures, and assignments presuppose that students understand fundamental principles of the American legal system, federalism, and historic eras of constitutional development. This course provides an in-depth analysis of complex judicial opinions and statutory codes, and requires students to integrate a variety of models of lawmaking. It is best suited to students in their junior and senior years.

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11.4. Sentencing Guidelines
11.5. Recent Sentencing Reform Measures
11.6. Capital Punishment
11.7. Constitutional Issues in Sentencing
11.8. Megan's Laws
11.9. Civil Commitment Procedures

VI. Suggested Texts


VII. Bibliography


## Course Action Request

**University of Alaska Anchorage**

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

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<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours (Lecture + Lab)</th>
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### 6. Complete Course Title

**Substantive Criminal Law**

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

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

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

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

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

### 11. Implementation Date
- Semester/Year:
  - From: Fall/2011
  - To: 9999

### 12. Cross Listed with
- JUST A352

### 13a. Impacted Courses or Programs:

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<td>Paralegal Studies Undergraduate Certificate</td>
<td>152-153</td>
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Initiator Name (typed): Deborah Periman

Initiator Signed Initials: ___________

Date: ___________

### 13b. Coordination Email

Date: 8/30/10

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

### 13c. Coordination with Library Liaison

Date: 8/28/10

### 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)

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### 16b. Test Score(s)

N/A

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

N/A

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N/A

### 17. Mark if course has fees
- ☐

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

### 19. Justification for Action

Updating course content guide

Initiator (faculty only)

Deborah Periman

Initiator (TYPE NAME)

Approved

Disapproved

Dean/Director of School/College

Date

Approved

Disapproved

Undergraduate/Graduate Academic Board Chairperson

Date

Approved

Disapproved

Provost or Designee

Date
I. Date of Initiation: April 2011

II. Curriculum Action Request

A. School: College of Health and Social Welfare
B. Course Subject: PARL
C. Course Number: A352
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Program: Undergraduate Certificate, Paralegal Studies
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J. Cross-listed: JUST A352
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<th>8. Type of Action:</th>
<th>X Change</th>
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</table>

**If a change, mark appropriate boxes:**

- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Other Restrictions
- Class
- Level
- College
- Major
- Other Update CCG (please specify)

<table>
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<tr>
<th>9. Repeat Status No</th>
<th># of Repeats</th>
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</table>

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A-F</td>
<td>X</td>
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<table>
<thead>
<tr>
<th>11. Implementation Date</th>
<th>semester/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>From: Fall/2011</td>
<td>To: 9999</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Impact Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alaska Native Studies Minor</td>
<td>87</td>
<td>3-31-2011</td>
<td>Penny Golden</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Initiator Name (typed): Bradley Myrstol**

**Initiator Signed Initials:** _________

**Date:** __________________

**13b. Coordination Email**

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

**13c. Coordination with Library Liaison**

**Date:** 3/18/11

**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)**

Investigates rural crime and criminal justice. Examines the specific geographic, social, and cultural characteristics of rural communities and how these factors influence the prevalence and nature of crime and criminal justice. Reviews and assesses competing theories of justice. Comparative analysis of rural crime and criminal justice in other countries, with emphasis given to other Circumpolar nations.

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

JUST A110 with a minimum grade of D

**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)**

Junior or Senior standing

**17. **Mark if course has fees No

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

**19. Justification for Action**

The change in course level is being changed in order to encourage non-majors to enroll in the course. Whereas a 400-level course requires students to have completed a substantial body of coursework in the discipline, a 300-level offering requires only a familiarity with the concepts, methods, and vocabulary of the discipline. The pre-requisite for this course is JUST A110, which provides the foundational knowledge necessary for the successful completion of the course.
<table>
<thead>
<tr>
<th>Approval Status</th>
<th>Name and Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td>Bradley Myrstol</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved</td>
<td>Dean/Director of School/College</td>
<td></td>
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<tr>
<td>Disapproved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved</td>
<td>Department Chairperson</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved</td>
<td>Undergraduate/Graduate Academic Board Chairperson</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved</td>
<td>Curriculum Committee Chairperson</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved</td>
<td>Provost or Designee</td>
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</tr>
<tr>
<td>Disapproved</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I. Date of Initiation: April 2011

II. Curriculum Action Request
A. School: College of Health and Social Welfare
B. Course Subject: JUST
C. Course Number: A355
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Program: Bachelor of Arts, Justice
G. Course Title: Rural Justice
H. Grading Basis: A-F
I. Implementation Date: Fall/2011
J. Cross-listed: N/A
K. Course Description: Investigates rural crime and criminal justice. Examines the specific geographic, social, and cultural characteristics of rural communities and how these factors influence the prevalence and nature of crime and criminal justice. Reviews and assesses competing theories of justice. Comparative analysis of rural crime and criminal justice in other countries, with emphasis given to other Circumpolar nations.

L. Course Prerequisites: JUST A110 with a minimum grade of D
M. Course Co-requisites: N/A
N. Other Restrictions: Class
O. Registration Restrictions: Junior or Senior standing
P. Course Fees: No
Q. Course Attribute: N/A

III. Instructional Goals and Student Outcomes
A. The instructor will:
   1. Provide overview of the criteria used to denote “rural” from other social geographies, with emphasis on identifying the distinguishing features of rural contexts.
   2. Present empirical data pertaining to the prevalence and nature of crime and public health problems in rural communities, and discuss how these problems may be related to the unique social, cultural, and geographic characteristics of rural communities.
   3. Outline and discuss competing conceptual/theoretical models of justice, describe the ways justice is practiced in rural settings, and challenge students to identify potential sources of conflict and contradiction with respect to the administration of justice in rural contexts.
   4. Highlight key features of rural crime and justice in other countries, particularly those in the Circumpolar North.
B. Upon completion of this course, the student will be able to:

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Delineate similarities and differences between “rural” contexts and other categories of social geography.</td>
<td>Class discussion, analytic memos, examinations</td>
</tr>
<tr>
<td>2. Describe the crime and public health problems prevalent in rural communities.</td>
<td>Class discussion, research briefs, examinations</td>
</tr>
<tr>
<td>3. Assess competing conceptual/theoretical models of justice.</td>
<td>Class discussion, analytic memos, examinations</td>
</tr>
<tr>
<td>4. Discuss the provision of criminal justice in rural communities.</td>
<td>Class discussion, essays, examinations</td>
</tr>
<tr>
<td>5. Critically evaluate criminal justice practices and policies as they pertain to rural Alaska.</td>
<td>Class discussion, analytic memos, examinations, term paper</td>
</tr>
<tr>
<td>6. Compare and contrast rural crime and criminal justice in the United States with other nations.</td>
<td>Essays, examinations</td>
</tr>
</tbody>
</table>

IV. Course Level Justification
As an upper division course, JUST A355 (Rural Justice) demands that students enter the course with well-honed writing abilities and research methods/analytic skills developed in the university’s general education curriculum and other substantive coursework, as well as core disciplinary knowledge obtained from prior completion of the course pre-requisite, JUST A110 (Introduction to Justice).

V. Topical Course Outline
1. The rural context
   a. Defining “rural”
   b. Routines of everyday life in rural communities
   c. The prevalence of crime and other social problems in rural communities
   d. The nature of crime in rural communities
2. Social control in rural contexts
   a. Concepts and theories of “justice”
   b. Informal social control systems in rural communities
   c. Formal social control systems in rural communities
3. Criminal justice in rural contexts
   a. Policing rural communities
   b. Courts in rural communities
   c. Corrections in rural communities
4. Rural crime and justice in Alaska
   a. Policing in rural Alaska communities
b. Courts in rural Alaska communities  
c. Corrections in rural Alaska communities  

5. Rural crime and criminal justice in comparative perspective  
a. Native Americans and the criminal justice system  
b. Crime and justice in the Circumpolar North  
c. Rural crime and justice in Australia and New Zealand  

VI. Suggested Texts  

VII. Bibliography  


1a. School or College
   HW CHSW

1b. Division
   AJUS Division of Justice

1c. Department
   Justice Center

2. Course Prefix
   JUST

3. Course Number
   A371

4. Previous Course Prefix & Number
   JUST A410

5a. Credits/CEUs
   3

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

6. Complete Course Title
   Cinematic Images of Justice

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

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

If a change, mark appropriate boxes:
   ☐ Prefix
   ☑ Course Number
   ☑ Credits
   ☐ Title
   ☐ Repeat Status
   ☑ Grading Basis
   ☐ Cross-Listed/Stacked
   ☐ Course Description
   ☑ Course Prerequisites
   ☑ Other Restrictions
   ☐ Class
   ☐ Level
   ☐ College
   ☐ Major
   ☐ Other Update CCG (please specify)

9. Repeat Status No
   # of Repeats
   Max Credits

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

11. Implementation Date
    semester/year
    From: Fall/2011
    To: 9999

12. ☐ Cross Listed with
    ☐ Stacked with
    N/A

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

<table>
<thead>
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<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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</tbody>
</table>

Initiator Name (typed): Sharon Chamard
Initiator Signed Initials: _________
Date: __________

13b. Coordination Email
Date: 3/18/11
Submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 3/18/11

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

15. Course Description (suggested length 20 to 50 words)
   Visual survey of how the cinema has portrayed the criminal justice system. Special attention devoted to discrepancies between scientific research findings and popular stereotypes portrayed by the media. Attention given to each component of the criminal justice system. Impact of fictionalized events and justice system action/reaction will be juxtaposed with the reality of the justice system.

16a. Course Prerequisite(s) (list prefix and number)
   JUST A110 with a minimum grade of D

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)
   Junior or senior standing

17. ☐ Mark if course has fees
   ☐ No

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

19. Justification for Action
   Updating course content guide and changing level from 400 to 300 to more accurately reflect expectations in the course and prerequisites.

Initiator (faculty only)
Name: Sharon Chamard
Initiator Signed Initials: _________
Date: __________

☑ Approved
☐ Disapproved

Dean/Director of School/College
Date: __________

Undergraduate/Graduate Academic
Board Chairperson
Date: __________

Provost or Designee
Date: __________

Department Chairperson
Date: __________

Curriculum Committee Chairperson
Date: __________

Approved
Disapproved

68
I. Date of Initiation: April 2011

II. Curriculum Action Request
A. School: College of Health and Social Welfare
B. Course Subject: JUST
C. Course Number: A371
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Program: Bachelor of Arts, Justice
G. Course Title: Cinematic Images of Justice
H. Grading Basis: A-F
I. Implementation Date: Fall/2011
J. Cross-listed: N/A
K. Course Description: Visual survey of how the cinema has portrayed the criminal justice system. Special attention devoted to discrepancies between scientific research findings and popular stereotypes portrayed by the media. Attention given to each component of the criminal justice system. Impact of fictionalized events and justice system action/reaction will be juxtaposed with the reality of the justice system.
L. Course Prerequisites: JUST A110 with a minimum grade of D
M. Course Co-requisites: N/A
N. Other Restrictions: Class
O. Registration Restrictions: Junior or senior standing
P. Course Fees: No
Q. Course Attribute: N/A

III. Instructional Goals and Student Outcomes
A. The instructor will:
   1. Provide an overview of social constructionism.
   2. Review fundamental differences in cinematic depictions of crime and the actual nature of crime.
   3. Explain policing behavior and activities and discuss their depiction in the cinema.
   4. Present information about courtroom activities and judicial processing and demonstrate how these are depicted in the cinema.
   5. Discuss correctional policies and characteristics of prisoners and prisons, and compare these to how prison life is depicted in the cinema.
B. Upon completion of this course, the student will be able to:

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe the key concepts of social constructionism.</td>
<td>Examination, writing assignments, structured discussion</td>
</tr>
<tr>
<td>2. Contrast cinematic depictions of crime with scientific knowledge about crime patterns and distributions.</td>
<td>Examination, writing assignments, structured and group discussion</td>
</tr>
<tr>
<td>3. Identify and evaluate differences between cinematic depictions of policing and law enforcement and scientific knowledge about police practices.</td>
<td>Examination, writing assignments, structured and group discussion</td>
</tr>
<tr>
<td>4. Analyze cinematic depictions of courtrooms for accuracy in comparison to scientific knowledge about judicial processing.</td>
<td>Examination, writing assignments, structured and group discussion</td>
</tr>
<tr>
<td>5. Compare cinematic depictions of correctional settings with scientific knowledge about prisoner characteristics and practices of correctional agencies.</td>
<td>Examinations, writing assignments, structured and group discussion</td>
</tr>
</tbody>
</table>

IV. Course Level Justification
This course builds upon the concepts and vocabulary acquired by students in JUST A110 (Introduction to Justice). This course has a heavy writing component, and requires detection and appraisal of the contradictions between cinematic depictions of crime and criminal justice and the realities of the justice system. It is best suited to students in their junior and senior years.

V. Topical Course Outline
1. Introduction To Social Constructionism
2. Depiction of Crime and Criminality in Cinema
3. Police and Crime Fighters in Cinema
4. Courts in the Cinema
5. Corrections in the Cinema
6. Depictions of Crime Control in the Cinema
7. The Media and Crime Control Policy
8. Media and Crime and Justice in the Twenty-First Century
VI. **Suggested Texts**


VII. **Bibliography**


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

**Course Action Request**

University of Alaska Anchorage

### 1. School or College
- HW CHSW

### 2. Course Prefix
- PARL

### 3. Course Number
- A362

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

### 5. Credits/CEUs
- 3

### 6. Type of Action:
- Add

### 7. Course Title
- Commercial Law

### 8. Type of Course
- Academic

### 9. Repeat Status No

### 10. Grading Basis
- A-F

### 11. Implementation Date
- From: Fall/2011 To: 9999

### 12. Cross Listed with
- N/A

### 13. Impacted Courses or Programs
- Paralegal Studies Undergraduate Certificate
- 152-153

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

### 15. Course Description
- Commercial law constitutes a study of the paralegal’s role in a commercial practice with emphasis on such topics as contracts, remedies, bankruptcy, business formation and organization.

### 16. Other Restrictions
- Mark if course has fees

### 17. Justification for Action
- Updating course content guide

---

**Initiator Name**: Deborah Periman

**Initiator Signed Initials**: [Signature]

**Date**: [Date]

---

**Dean/Director of School/College**

**Approved**

**Date**: [Date]

---

**Department Chairperson**

**Approved**

**Date**: [Date]

---

**Provost or Designee**

**Approved**

**Date**: [Date]
I. **Date of Initiation:** April 2011

II. **Curriculum Action Request**

A. **School:** College of Health and Social Welfare  
B. **Course Subject:** PARL  
C. **Course Number:** A362  
D. **Number of Credits:** 3  
E. **Contact Hours:** 3+0  
F. **Course Program:** Undergraduate Certificate, Paralegal Studies  
G. **Course Title:** Commercial Law  
H. **Grading Basis:** A-F  
I. **Implementation Date:** Fall/2011  
J. **Cross-listed:** N/A  
K. **Course Description:** Commercial law constitutes a study of the paralegal’s role in a commercial practice with emphasis on such topics as contracts, remedies, bankruptcy, business formation and organization.

L. **Course Prerequisites:** PARL A101 with a minimum grade of C  
M. **Course Co-requisites:** N/A  
N. **Other Restrictions:** N/A  
O. **Registration Restrictions:** N/A  
P. **Course Fees:** No  
Q. **Course Attribute:** N/A

III. **Instructional Goals and Student Outcomes**

A. **The instructor will:**
   1. Provide a historical overview of commercial, debtor-creditor, and bankruptcy law in the United States, with emphasis on shifts in public policy over time.  
   2. Highlight key concepts of agency law and business organizations and their relationship to contract formation, liability, and enforcement.  
   3. Explain the impact of principles of federalism, separation of powers, and delegation of lawmaking authority on the creation and enforcement of commercial rights and duties in the United States.  
   4. Present important state and federal legislative acts and judicial opinions establishing the rules of commercial practice, debtor-creditor relations, and bankruptcy in the United States.  
   5. Outline the critical rules of ethics and professional conduct in the representation of debtors and creditors.
B. Upon completion of this course, the student will be able to:

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Appraise the effect of history and the role of shifting public policy</td>
<td>Examination, writing assignments, structured</td>
</tr>
<tr>
<td>in the development of commercial, debtor-creditor, and bankruptcy law</td>
<td>discussion</td>
</tr>
<tr>
<td>in the United States.</td>
<td></td>
</tr>
<tr>
<td>2. Identify key concepts of agency law and business organizations and</td>
<td>Examination, writing assignments</td>
</tr>
<tr>
<td>relate them to contract formation, liability, and enforcement.</td>
<td></td>
</tr>
<tr>
<td>3. Integrate principles of federalism, separation of powers, and</td>
<td>Examination, writing assignments</td>
</tr>
<tr>
<td>delegation of lawmakers to the analysis of contract problems, actions</td>
<td></td>
</tr>
<tr>
<td>for debt enforcement and bankruptcy proceedings.</td>
<td></td>
</tr>
<tr>
<td>4. Synthesize and apply the relevant rules established in important</td>
<td>Examination, writing assignments, structured</td>
</tr>
<tr>
<td>state and federal legislative acts and judicial opinions in analyzing</td>
<td>discussion</td>
</tr>
<tr>
<td>issues related to commercial problems, debtor and creditor rights and</td>
<td></td>
</tr>
<tr>
<td>duties, and bankruptcy issues.</td>
<td></td>
</tr>
<tr>
<td>5. Translate critical rules of legal ethics and professional conduct</td>
<td>Examination, writing assignments, structured</td>
</tr>
<tr>
<td>into strategies for resolving commercial law questions, and legal</td>
<td>discussion</td>
</tr>
<tr>
<td>problems related to the representation of debtors and creditors.</td>
<td></td>
</tr>
</tbody>
</table>

IV. Course Level Justification
This course builds on the conceptual foundation and vocabulary students acquire in the prerequisite, PARL 101 -- Introduction to Law. Commercial Law is designed to advance the critical thinking and writing skills of students by expanding the abilities students have already developed in their previous paralegal and general education.
coursework. It involves a rigorous reading and writing workload, and the synthesis of legal vocabulary, government theory, and public policy. Students are expected to enter the class with a working knowledge of legal research methods and the technical rules of legal writing, concepts of precedent and the hierarchy of legal authority, and the rules of professional conduct governing lawyers and paralegals.

V. Topical Course Outline

1. Business Organizations
   1.1. Sole proprietorships
   1.2. Principles of Partnerships
   1.3. Limited Partnerships
   1.4. Limited Liability Partnerships
   1.5. Principles of Corporations
   1.6. S Corporations
   1.7. Professional Corporations
   1.8. Limited Liability Companies

2. Law of Agency
   2.1. Formation
   2.2. Parties
   2.3. Duties of Parties
   2.4. Contract Liability
   2.5. Tort Liability

3. Introduction to Debt and Security for Debt
   3.1. How Debt Is Created
   3.2. Principles of Contract Formation
   3.3. Promissory Notes and Negotiable Instruments
   3.4. Loans and Credit Arrangements
   3.5. Consumer Protection Legislation
   3.6. Sales versus Leases
   3.7. Credit Reporting Practices
   3.8. Sureties
   3.9. Guarantors
   3.10. Mortgages and Deeds of Trust
   3.11. Security Interests in Personal Property
   3.12. Article 9 of the UCC
   3.13. Fixtures
   3.14. Financing Statements
   3.15. Filing and Recording Security Interests
   3.16. State Recording Statutes
   3.17. Lien Priorities
   3.18. Nonconsensual Liens (Statutory and Equitable Liens)

4. The Collection of Debt
   4.1. Principles of Contract Enforcement
   4.2. Remedies for Breach of Contract
   4.3. Prelitigation Efforts to Collect Delinquent Debt
4.4. Demand Letters
4.5. Debt Modification and Loan Workouts
4.6. Revival of Debt
4.7. Mortgage Foreclosure Procedures
4.8. Non-judicial Foreclosures and Trustees Sales
4.9. Reducing a Debt or Claim to Final Judgment
4.10. Executing on a Final Judgment
4.11. Stays of Judgment
4.12. Fair Debt Collection Legislation
4.13. Exemptions
4.14. Legal Ethics and Debt Collection

5. The Discharge or Reorganization of Debt in Bankruptcy
   5.1. Introduction to Bankruptcy
   5.2. The Automatic Stay and Motions for Relief
   5.3. Exemptions in Bankruptcy
   5.4. Discharges
   5.5. Bankruptcy and Legal Ethics
   5.6. Bankruptcy Reform and Public Policy
   5.7. The Chapter 7 Case: Liquidation
       5.7.1. The Means Test and Other Qualifications to File
       5.7.2. The Petition, Supporting Schedules, and Statements
       5.7.3. From the Order for Relief to the First Meeting of Creditors
       5.7.4. Creditor Claims and Property of the Estate
       5.7.5. Liquidation, Distribution, Reaffirmation or Redemption, and Final Discharge
   5.8. The Chapter 13 Case: Reorganization for an Individual with Regular Income
       5.8.1. Filing the Case
       5.8.2. Determining the Applicable Commitment Period and Debtor’s Disposable Income
       5.8.3. Treatment of Secured and Unsecured Claims in the Plan
       5.8.4. Plan Confirmation, Modification, Discharge, and Comparisons with Chapter 12
   5.9. The Chapter 11 Business Reorganization
       5.9.1. Filing the Case
       5.9.2. Operating the Business Prior to Plan Approval
       5.9.3. The Plan of Reorganization

VI. Suggested Texts


VII. Bibliography


# Course Action Request

## University of Alaska Anchorage

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>HW CHSW</td>
<td>ADHS Div of Human Svs Health Sci</td>
<td>HS</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
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<tr>
<td>HS</td>
<td>A433</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>(3+0)</td>
</tr>
</tbody>
</table>

## 6. Complete Course Title

**Health Education: Theory and Practice**

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

Health Ed: Theory and Practice

## 7. Type of Course

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

## 8. Type of Action:  

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

*If a change, mark appropriate boxes:*

- [ ] Prefix
- [ ] Credits
- [ ] Title
- [x] Grading Basis
- [ ] Cross-Listed/Stacked
- [ ] Test Score Prerequisites
- [ ] Co-requisites
- [ ] Registration Restrictions
- [ ] Other CCG (please specify)

## 9. Repeat Status No  

- [ ] # of Repeats
- [ ] Max Credits

## 10. Grading Basis

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

## 11. Implementation Date  

- [ ] semester/year
- [ ] From: Fall/2011
- [ ] To: 9999

## 12. Cross Listed with

- [ ] NS A433

## 13a. Impacted Courses or Programs:

List any programs or college requirements that require this course.

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s)</th>
<th>Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BS, Physical Education</td>
<td>197-199</td>
<td></td>
<td>February 2011</td>
<td>Sandra Carroll-Cobb</td>
</tr>
<tr>
<td>2.</td>
<td></td>
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<tr>
<td>3.</td>
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</tr>
</tbody>
</table>

Initiator Name (typed): Janet M. Johnston  
Initiator Signed Initials: __________  
Date: __________

## 13b. Coordination Email  

Date: March 3, 2011  
submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

## 13c. Coordination with Library Liaison  

Date: March 3, 2011

## 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  

*Provided the theoretical foundation for health education and health promotion. Develops students' abilities to design and deliver health education programs.*

## 16a. Course Prerequisite(s)  

(HS A220 or NS A300) with a minimum grade of C

## 16b. Test Score(s)  

N/A

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

N/A

## 16d. Other Restriction(s)  

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

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

N/A

## 16f. Mark if course has fees

- [ ]

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

- [ ]

## 18. Justification for Action

*Updating Course Content Guide (CCG) to reflect current approach to the class. This CCG for HS A433 was last updated in 1993 and the CCG for NS A433 was last updated in 1998.*

**Initiator (faculty only):**  
Janet M. Johnston, PhD, MPH, MS  
Initiator (TYPE NAME): __________  
Date: __________

**Approved**  
Dean/Director of School/College  
Date: __________

**Approved**  
Undergraduate/Graduate Academic  
Date: __________

**Approved**  
Board Chairperson  
Date: __________

**Approved**  
Provost or Designee  
Date: __________

---

78
I. Date of Initiation  
March 2011

II. Curriculum Action Request  
A. School  
College of Health and Social Welfare  
B. Course Subject  
Health Sciences  
C. Course Number  
HS A433  
D. Number of Credits  
3.0  
E. Contact Hours  
3 + 0  
F. Course title  
Health Education: Theory and Practice  
G. Grading Basis  
A-F  
H. Implementation Date  
Fall 2011  
I. Cross-listed/Stacked  
NS A433  
J. Course Description  
Provides the theoretical foundation for health education and health promotion. Develops students’ abilities to design and deliver health education programs.

K. Course Prerequisites  
(HS A220 or NS A300) with a minimum grade of C  
L. Co-requisites  
N/A  
M. Other restrictions  
N/A  
N. Registration restrictions  
N/A  
O. Course Fees  
N/A

III. Instructional Goals and Student Outcomes  
A. The instructor will:  
1. Review the Certified Health Educator Specialist (CHES) responsibilities and competencies and the Health Education Code of Ethics.  
2. Provide lectures and readings that explain how health behavior theories and program planning models are used in the practice of health education and health promotion.  
3. Review commonly used theories of health behavior. Provide resources and assignments that allow students to locate published examples of health education programs based on these theories.  
4. Provide in-class exercises and assignments that allow students to practice designing theory-based health education.  
5. Present health education techniques and provide assignments that allow students to practice developing and delivering health education sessions.
B. Upon completion of this course, the student will be able to:

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Measures</th>
</tr>
</thead>
</table>
| 1. Describe the Certified Health Educator Specialist (CHES) responsibilities and competencies and apply the Health Education Code of Ethics | Class discussion  
Case studies  
Test |
| 2. Explain how health behavior theories and program planning models improve the practice of health education | Class discussion  
Test |
| 3. Describe theories and models that are commonly used in health education and analyze examples of health education programs based on these theories | Small group discussions and presentations  
Written assignments  
Test |
| 4. Design theory-based health education programs to address particular health issues | Small group discussions and presentations  
Written assignments  
Test |
| 5. Develop and deliver effective health education sessions | Class presentations |

IV. Course Level Justification
This course requires HS A220 or NS A300 as a prerequisite in order to ensure familiarity with the core concepts related to promoting health and preventing disease. The course requirements including mastery of theories of health behavior and design and delivery of health education sessions as demonstrated through class discussion, written assignments and class presentations are suitable to a 400 level course.

V. Topical Course Outline
1. Introduction to health education and theory  
   a. Responsibilities and competencies for health educators  
   b. Role of theory in health education  
   c. Code of Ethics for health education profession
2. Planning models in health education  
   a. Differences between a theory and a model  
   b. PRECEDE-PROCEED model  
   c. Resources for needs assessments
3. Commonly used theories of health behavior  
   a. Health belief model  
   b. Transtheoretical model  
   c. Theory of reasoned action and theory of planned behavior  
   d. Theories of stress and coping  
   e. Social cognitive theory
4. Social marketing  
   a. Comparison with commercial marketing  
   b. Approach and constructs  
   c. Applications of social marketing
5. Health education techniques: Group process skills  
   a. Developing trust
b. Developing listening skills
c. Understanding roles of group members
d. Incorporating cultural competence into health education and communication

6. Instructional strategies
   a. Exploring the relationship between values and health
   b. Providing age-appropriate and developmentally-appropriate information, learning strategies and teaching methods
   c. Managing stress related to health behavior change
   d. Building self-efficacy

7. Freire’s model of adult education
   a. Three phases of Freire’s model
   b. Approach and construct
   c. Applications of Freire’s model

VI. Suggested Texts

VII. Bibliography


1a. School or College
HW CHSW

1b. Division
ADSN Division of Nursing

1c. Department
NS

2. Course Prefix
NS

3. Course Number
A433

4. Previous Course Prefix & Number
N/A

5a. Credits/CEUs
3.0

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

6. Complete Course Title
Health Education: Theory and Practice
Health Ed: Theory and Practice

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

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

If a change, mark appropriate boxes:
☐ Prefix
☐ Credits
☐ Title
☐ Grading Basis
☐ Course Description
☐ Test Score Prerequisites
☐ Other Restrictions
☐ Cross-Listed/Stacked
☐ Co-requisites
☐ Registration Restrictions
☐ Class
☐ Level
☐ College
☐ Major
☐ Other CCG (please specify)

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

10. Grading Basis
☐ A-F
☐ P/NP
☐ NG

11. Implementation Date
semester/year
From: Fall/2011
To: /9999

12. Cross Listed with
☐ HS A433

Stacked with
☐ N/A

Cross-Listed Coordination Signature

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

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<td>197-199</td>
<td>February 2011</td>
<td>Sandra Carroll-Cobb</td>
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</tbody>
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13b. Coordination Email
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: March 17, 2011

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 the theoretical foundation for health education and health promotion. Develops students' abilities to design and deliver health education programs.

16a. Course Prerequisite(s) (list prefix and number)
(HS A220 or NS A300) with a minimum grade of C

16b. Test Score(s)
N/A

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

16d. Other Restriction(s)
☐ College
☐ Major
☐ Class
☐ Level

N/A

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Updating Course Content Guide (CCG) to reflect current approach to the class. This CCG for HS A433 was last updated in 1993 and the CCG for NS A433 was last updated in 1998.

Initiator Name (typed): Bernice Carmon
Initiator Signed Initials: _________

Initiator (faculty only) Date
Bernice Carmon
Initiator (TYPE NAME)

Disapproved
Dean/Director of School/College Date

Approved
Disapproved
Undergraduate/Graduate Academic Date

Approved
Disapproved
Board Chairperson Date

Approved
Disapproved
Provost or Designee Date
I. Date of Initiation
March 2011

II. Curriculum Action Request
A. School College of Health and Social Welfare
B. Course Subject Nursing
C. Course Number NS A433
D. Number of Credits 3.0
E. Contact Hours 3 + 0
F. Course title Health Education: Theory and Practice
G. Grading Basis A-F
H. Implementation Date Fall 2011
I. Cross-listed/Stacked HS A433
J. Course Description Provides the theoretical foundation for health education and health promotion. Develops students’ abilities to design and deliver health education programs.

K. Course Prerequisites (HS A220 or NS A300) with a minimum grade of C
L. Co-requisites N/A
M. Other restrictions N/A
N. Registration restrictions N/A
O. Course Fees N/A

III. Instructional Goals and Student Outcomes
A. The instructor will:
1. Review the Certified Health Educator Specialist (CHES) responsibilities and competencies and the Health Education Code of Ethics.
2. Provide lectures and readings that explain how health behavior theories and program planning models are used in the practice of health education and health promotion.
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<td>Case studies</td>
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<tr>
<td></td>
<td>Test</td>
</tr>
<tr>
<td>2. Explain how health behavior theories and program planning models improve the practice of health education</td>
<td>Class discussion</td>
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<tr>
<td></td>
<td>Test</td>
</tr>
<tr>
<td>3. Describe theories and models that are commonly used in health education and analyze examples of health education programs based on these theories</td>
<td>Small group discussions and presentations</td>
</tr>
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<td></td>
<td>Written assignments</td>
</tr>
<tr>
<td></td>
<td>Test</td>
</tr>
<tr>
<td>4. Design theory-based health education programs to address particular health issues</td>
<td>Small group discussions and presentations</td>
</tr>
<tr>
<td></td>
<td>Written assignments</td>
</tr>
<tr>
<td></td>
<td>Test</td>
</tr>
<tr>
<td>5. Develop and deliver effective health education sessions</td>
<td>Class presentations</td>
</tr>
</tbody>
</table>

IV. Course Level Justification

This course requires HS A220 or NS A300 as a prerequisite in order to ensure familiarity with the core concepts related to promoting health and preventing disease. The course requirements including mastery of theories of health behavior and design and delivery of health education sessions as demonstrated through class discussion, written assignments and class presentations are suitable to a 400 level course.

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   a. Differences between a theory and a model
   b. PRECEDE-PROCEED model
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3. Commonly used theories of health behavior
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   d. Theories of stress and coping
   e. Social cognitive theory
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   a. Exploring the relationship between values and health
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   d. Building self-efficacy

7. Freire’s model of adult education
   a. Three phases of Freire’s model
   b. Approach and construct
   c. Applications of Freire’s model

VI. Suggested Texts

VII. Bibliography


March 25, 2011

To:    Toby Widdicombe, Chair, CAS Course and Curriculum Committee
       Hillary Davies, Chair Undergraduate Academic Board

From: Deborah Tharp, Associate Professor
       Department of Art Curriculum Committee

RE:    Department of Art BA & BFA Degree Catalog Copy Changes

The Department of Art proposes the catalog copy changes for the 2011-2012 academic year. These changes are to clean up and clarify language problems in the catalog copy and inclusion of additional existing courses to program menus for the BA & BFA degrees.

Please feel free to contact me if you have any questions about these proposed changes.
## Program/Prefix Action Request
### University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS CAS</td>
<td>AFAR Division of Fine Arts</td>
<td>ART</td>
</tr>
</tbody>
</table>

2. Complete Program Title/Prefix
Bachelor of Arts, ART

3. Type of Program

<table>
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<tr>
<th>Option</th>
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</thead>
<tbody>
<tr>
<td>OEC</td>
</tr>
<tr>
<td>Undergrad Certificate</td>
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<td>AA/AAS</td>
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<td>Baccalaureate</td>
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<td>Minor</td>
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<td>Post Baccalaureate</td>
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<td>Graduate</td>
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<td>Graduate Certificate</td>
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<td>Doctoral</td>
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<td>Specialty</td>
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4. Type of Action:

**PROGRAM**

- Add
- Change
- Delete

**PREFIX**

- Add
- Change
- Inactivate

5. Implementation Date (semester/year)
From: Fall/2011            To: 9999/9999

6a. Coordination with Affected Units
Department, School, or College: CASAO
Initiator Name (typed): Deborah Tharp
Initiator Signed Initials: Date:

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 3/4/2011

6c. Coordination with Library Liaison Date: 3/4/2011

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

8. Justification for Action
Catalog copy corrections and inclusion of additional existing courses to program menus for the BA degree.

Initiator (faculty only)
Deborah Tharp
Initiator (TYPE NAME)

- [ ] Approved
- [ ] Disapproved

Dean/Director of School/College

- [ ] Approved
- [ ] Disapproved

Undergraduate/Graduate Academic Board Chairperson

- [ ] Approved
- [ ] Disapproved

Provost or Designee

- [ ] Approved
- [ ] Disapproved

Department Chairperson

- [ ] Approved
- [ ] Disapproved

Curriculum Committee Chairperson

- [ ] Approved
- [ ] Disapproved

- [ ] Approved
- [ ] Disapproved
Program/Prefix Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

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<tbody>
<tr>
<td>AS CAS</td>
<td>AFAR Division of Fine Arts</td>
<td>ART</td>
</tr>
</tbody>
</table>

2. Complete Program Title/Prefix  
Bachelor of Fine Arts, ART

3. Type of Program
- [x] Baccalaureate
- [ ] OEC
- [ ] Undergrad Certificate
- [ ] AA/AAS
- [ ] Minor
- [ ] Graduation Certificate
- [ ] Graduate
- [ ] Post Baccalaureate Certificate
- [ ] Doctoral
- [ ] Specialty

4. Type of Action:  
- PROGRAM
  - Add
  - Change
  - Delete  
- PREFIX
  - Add
  - Change
  - Inactivate

5. Implementation Date (semester/year)  
From:  Fall/2011   To:  9999/9999

6a. Coordination with Affected Units  
Department, School, or College: CASAO  
Initiator Name (typed): Deborah Tharp  
Initiator Signed Initials: __________ Date: __________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)  
Date: 3/4/2011

6c. Coordination with Library Liaison  
Date: 3/4/2011

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

8. Justification for Action  
Catalog copy corrections and inclusion of additional existing courses to program menus for the BFA degree.

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<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
<th>Dean/Director of School/College</th>
<th>Date</th>
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<tbody>
<tr>
<td>Deborah Tharp</td>
<td></td>
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<th>Undergraduate/Graduate Academic</th>
<th>Date</th>
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<tr>
<td>Department Chairperson</td>
<td></td>
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</tr>
<tr>
<td>Curriculum Committee Chairperson</td>
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<th>Provost or Designee</th>
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</tbody>
</table>
The aim of the Department of Art is to prepare and empower students to use their artistic abilities to make a difference in society. A comprehensive multi-studio approach encourages independent thinking, strengthens creativity, and develops a knowledge of the critical and historical aspects of art.

Students acquire technical skills and gain confidence to work with a variety of materials while exploring and evaluating a broad heritage of past and contemporary art and design.

Program Outcomes
Students graduating with a Bachelor of Arts or Bachelor of Fine Arts will be able to demonstrate:
1. Effective communication and fiscal skills to be a practicing artist as applied to art proposals, exhibitions and business matters.
2. The expression of ideas in a cohesive body of work.
3. Critical thinking, writing and research skills allowing the discovery of original approaches to creative problem solving.

Students choose from several areas of study:
- **BA in Art** — Creative problem solving in a liberal arts context.
- **BFA in Art** — The Department of Art offers the Bachelor of Fine Arts Degree in Art with a Studio Emphasis in Ceramics, Drawing, Digital Art & Graphic Design, Fibers, Jewelry/Metalsmithing, Painting, Photography, Printmaking, or Sculpture. Refer to the Bachelor of Fine Arts section following for degree requirements.
- **Art Education** — The Department of Art offers a minor in Art Education for students interested in working in educational settings. The minor does not lead to initial teacher certification. UAA does not currently offer a teacher certification program in art.
- **Minor in Art** — Students majoring in another subject may minor in Art.
- **Minor in Art Education** — Students majoring in Art or other subjects may minor in Art Education.
- **Continuing Education** — Either as a pre- or post-baccalaureate student. The Department of Art offers courses for teacher professional development and for the general community.

The Bachelor of Arts and the Bachelor of Fine Arts are accredited by the National Association of Schools of Art and Design.

Students must note the following:
1. Some courses do not apply to degree programs.
2. Some courses may be taken only twice for credit.
3. Many Art courses require completion of certain prerequisite Art courses. Non-Art majors who wish to enroll in an Art class without first having completed the recommended prerequisites are free to do so with appropriate instructor permission, but may find the classroom experience difficult or unrewarding.
4. Art majors must obtain pre-registration approval from Art faculty for upper division Art coursework undertaken each semester.

**Bachelor of Arts, Art**

**Admission Requirements**
Complete the Baccalaureate Degree Program Admission Requirements in the front of this chapter.

**Graduation Requirements**
Students must complete the following:
A. **General University Requirements**

Complete the General University Requirements for Baccalaureate Degrees in the front of this chapter. A maximum of 60 credits in Art may be applied toward the degree. Transfer students who are candidates for the BA degree with a major in Art must complete a minimum of 18 Art credits in residence.

B. **General Education Requirements**

Complete the General Education Requirements for Baccalaureate Degrees in the front of this chapter.

C. **College of Arts and Sciences Requirements**

Complete the College of Arts and Sciences requirements in the front of this chapter.

D. **Major Requirements**

**Lower Division Art** (27 credits)

1. Complete the following core courses:
   - ART A105 Beginning Drawing (3)
   - ART A111 Two-Dimensional Design (3)
   - ART A113 Three-Dimensional Design (3)
   - ART A205 Intermediate Drawing (3)
   - ART A261 History of Western Art I (3)
   - ART A262 History of Western Art II (3)

2. Choose one two-dimensional course, one three-dimensional course, and one course from either list to total 9 credits:
   - **Two-Dimensional Area:**
     - ART A112 Color Design (3)
     - ART A212 Beginning Watercolor (3)
     - ART A213 Beginning Painting (3)
     - ART A215 Beginning Printmaking (3)
     - ART A224 Beginning Photography (3)
     - ART A252 Beginning Graphic Design & Illustration (3)
     - ART A257 Digital Art and Design I (3)
     - ART A271 Beginning Surface Design (3)
     - ART A273 Beginning Woven Forms (3)
   - **Three-Dimensional Area:**
     - ART A201 Beginning Handbuilt Ceramics (3)
     - ART A202 Beginning Wheelthrown Ceramics (3)
     - ART A209 Beginning Metalsmithing and Jewelry (3)
     - ART A211 Beginning Sculpture (3)
     - ART A270 Beginning Alaska Native Art (3)
     - ART A272 Beginning Fiber Structures (3)

**Upper Division Studio Art** (15 credits)

3. Complete a total of 15 credits from the studio areas listed below, with a minimum of 9 credits from any one area:
   - Ceramics
   - Digital Art & Graphic Design
   - Jewelry/Metalsmithing
   - Photography
   - Sculpture
   - Drawing
   - Fibers
   - Painting
   - Printmaking
   - Alaska Native Art

**Upper Division Art History** (6 credits)

4. Select 6 credits from the following:
   - ART A360A History of Non-Western Art I (3)
   - ART A360B History of Non-Western Art II (3)
   - ART A361 History of Graphic Design (3)
   - ART A362 History of Modern Art (3)
   - ART A363 History of Contemporary Art (3)
ART A364  Italian Renaissance Art (3)
ART A366  Asian Art (3)
ART A367  History of Photography (3)
ART A492  Art History Seminar (3)

Additional Requirements (21 credits)
5. Complete the following:
   ART A203  Introduction to Art Education  3
   ART A491  Senior Seminar (Capstone) (fall semesters only)  3
   PHIL A401  Aesthetics  3
   Upper division general electives 12 credits  12
   At least 6 of the 12 elective credits must have a prefix other than Art.

A total of 120 credits is required for the degree, of which 42 credits must be upper division.
A total of 60 credits in Art may be applied to the degree.

Bachelor of Fine Arts, Art

The Bachelor of Fine Arts degree is a professionally oriented program designed to prepare students for careers in art. Enrollment in the BFA program is recommended only for those students willing to make a considerable commitment of time and energy necessary to achieve professional competence in their primary area of studio emphasis. Students desiring to enter the BFA program should request a copy of the current program policy from the department.

Admission Requirements

Complete the Baccalaureate Degree Programs Admission Requirements at the beginning of this chapter. Admission into the BFA program, withdrawal from it, and granting of the degree are done at the discretion of the BFA Committee.

Students admitted into the BFA program must complete a minimum of 24 Art credits (upper or lower division courses) in residence at UAA after acceptance into the BFA program.

Transfer Students - need a minimum of 12 resident Art credits that must be completed in the primary area of studio emphasis, and a minimum of 3 resident Art credits completed in the secondary area of studio emphasis.

Applicants for admission into the BFA program must meet the following minimum requirements:
1. Applicants must have been officially admitted to UAA as a declared pre-major in the BFA program.
2. Applicants must have completed all lower division art major courses in the Foundation Core and the Beginning Studio categories required for the BFA degree.
3. Applicants must have been enrolled at UAA for at least one semester prior to application to the full major status in the BFA program.
4. Applicants must meet minimum academic GPA requirements of: 2.50 overall coursework and 3.00 overall Art coursework.

BFA Requirements

All materials must be submitted to the Department of Art at least two weeks prior to the BFA Committee’s scheduled application review:
1. Application for admission into the BFA program.
2. Letter of intent stating objectives and qualifications in relation to either the BA in Art or BFA in Art degree programs.
3. Copies of all college transcripts.
4. A “Projected Plan of Study” signed by the College of Arts & Sciences Academic Advisor for the Fine Arts area.
5. A list of all college Art courses taken with grades received.
6. A portfolio of 15-20 pieces of studio work in primary and secondary concentrations showing technical skills, design abilities, and a potential for developing a conceptual vision. Applicants must submit work for consideration in digital formats (preferred) or slides. Applications will be reviewed only in the fall semester. Admission decisions are determined by a consensus of BFA Committee members in October.
Academic Progress
To graduate with a BFA in Art students must have met the following GPA requirements:

1. A minimum cumulative GPA of 3.00 in the major.
2. A minimum cumulative GPA of 3.50 in the primary area of studio emphasis.
3. A minimum cumulative GPA of 2.50 in all university coursework.

Semester Reviews
The progress of all BFA candidates will be reviewed a minimum of once a semester by the BFA Committee.

Thesis Project and Capstone Course
With approval, upon completion of all studio courses in the student’s primary and secondary areas of emphasis, BFA candidates will enroll in ART A491 Senior Seminar offered fall semesters only, and ART A499 Thesis offered spring semesters only. ART A491 meets the capstone requirement for the GER. Students enrolled in the BFA program must submit their thesis proposal for approval during the fall semester of the academic year. Once the BFA Committee has reviewed and accepted the thesis proposals, candidates will be granted permission to register for ART A499 Thesis. During ART A499 Thesis students will complete a body of work that will culminate in a formal exhibition. BFA students enrolled in ART A499 Thesis will meet with the BFA Committee a minimum of twice a semester.

The BFA Committee’s evaluation of the student’s thesis project will be based on content, presentation, and the degree of success in visual realization of the written proposal. At least 10 slides or digital images of the student’s thesis will be furnished to the Department of Art. These images must be acceptable to the BFA Committee and will become the property of the Department of Art. The slides or digital images must be received by the department before a grade for ART A499 Thesis is awarded.

Exhibitions and Presentations
BFA candidates will generally participate in the BFA Group Show to be held in the Kimura Gallery. All aspects of the thesis exhibition must be approved by the BFA Committee. The BFA Group Show will be held during the spring semester each year. Graduating BFA students are invited, but not required, to donate one work of art to UAA’s permanent collection. Acceptance of donated student work is left to the discretion of the BFA Committee. Prior to completing all BFA requirements, the student is responsible for submitting an Application for Graduation to obtain the degree.

Graduation Requirements
Students must complete the following graduation requirements:

A. General University Requirements
Complete the General University Requirements for Baccalaureate Degrees in the front of this chapter.

B. General Education Requirements
Complete the General Education Requirements for Baccalaureate Degrees in the front of this chapter.

C. College of Arts and Sciences Requirements
There are no additional college requirements for the BFA degree.

D. Major Requirements
Complete the following required Art courses with a minimum cumulative GPA of 3.00 in the major and a minimum cumulative GPA of 3.50 in the primary area of studio emphasis. A minimum cumulative GPA of 2.50 in all university coursework is required to graduate. A maximum of 84 credits in Art may be applied toward the degree.

Foundation Core Courses (24 credits)

1. Complete the following core courses:
   - ART A105 Beginning Drawing 3
   - ART A111 Two-Dimensional Design 3
   - ART A112 Color Design 3
   - ART A113 Three-Dimensional Design 3
ART A205  Intermediate Drawing    3
ART A261  History of Western Art I    3
ART A262  History of Western Art II    3
ART A307  Life Drawing and Composition I    3

Beginning Studio Electives (9 credits)
2. Choose one course from the two-dimensional list and one course from the three-dimensional list, and one course from either list to total 9 credits:
   Two-Dimensional Area: 3-6
   ART A212  Beginning Watercolor (3)
   ART A213  Beginning Painting (3)
   ART A215  Beginning Printmaking (3)
   ART A224  Beginning Photography (3)
   ART A252  Beginning Graphic Design and Illustration (3)
   ART A257  Digital Art and Design I (3)
   ART A271  Beginning Surface Design (3)
   ART A273  Beginning Woven Forms (3)
   Three-Dimensional Area: 3-6
   ART A201  Beginning Handbuilt Ceramics (3)
   ART A202  Beginning Wheelthrown Ceramics (3)
   ART A209  Beginning Metalsmithing and Jewelry (3)
   ART A211  Beginning Sculpture (3)
   ART A272  Beginning Fiber Structures (3)

Art History (9 credits)
3. Select three courses from the following: 9
   ART A360A  History of Non-Western Art I (3)
   ART A360B  History of Non-Western Art II (3)
   ART A361  History of Graphic Design (3)
   ART A362  History of Modern Art (3)
   ART A363  History of Contemporary Art (3)
   ART A364  Italian Renaissance Art (3)
   ART A366  Asian Art (3)
   ART A367  History of Photography (3)
   ART A492  Art History Seminar (3)

Primary Studio Concentration (18 credits)
Select Primary and Secondary Studio Concentrations from the following:
Ceramics  Drawing
Digital Art & Graphic Design  Fibers
Jewelry/Metalsmithing  Painting
Photography  Printmaking
Sculpture

4. Select a primary studio concentration from the list above and complete the following studio courses in the same concentration:
   200 level  Beginning studio course 3
   Note: Students must choose a beginning course in their emphasis. Exception: students with a drawing concentration may choose from any 200 level two-dimensional class listed under Beginning Studio Electives.
   300 level  Intermediate studio course 6
   400 level  Advanced studio course 6

5. Select a support course from following (3 credits): 3
   ART A390  Selected Topics in Studio Art (3)
   ART A490  Selected Topics in Studio Art (3)
   ART A498  Individual Research (1-3)
   or other by permission of advisor

Secondary Studio Concentration (9 credits)
6. Select a secondary studio concentration from the list above and complete the following studio courses in the same concentration:
   - 200 level Beginning studio course 3
   **Note:** Must be other than a course selected to fill the beginning studio electives listed above.
   - 300 level Intermediate studio course 3

7. Select a support course from following (3 credits):
   - 300 level Intermediate studio course (3)
   - 400 level Advanced studio course (3)
   - ART A390 Selected Topics in Studio Art (3)
   - ART A490 Selected Topics in Studio Art (3)
   - ART A498 Individual Research (1-3)

**Thesis Requirements (6 credits)**
8. Complete the following courses:
   - ART A491 Senior Seminar (Capstone) (fall semesters only) 3
   - ART A499 Thesis (spring semesters only) 3

**Additional Requirements (12 credits)**
9. ART A203 Introduction to Art Education 3
10. Complete PHIL A401 Aesthetics 3
11. Art electives (6 credits)
    - Complete 6 credits of electives selected from art history, art education or art studio courses.

**Thesis Requirements (6 credits)**
8. Complete the following courses:
   - ART A491 Senior Seminar (Capstone) (fall semesters only) 3
   - ART A499 Thesis (spring semesters only) 3

**Additional Requirements (12 credits)**
9. ART A203 Introduction to Art Education 3
10. Complete PHIL A401 Aesthetics 3
11. Art electives (6 credits)
    - Complete 6 credits of electives selected from art history, art education or art studio courses.

A total of 121 credits is required for the degree, of which 42 credits must be upper division.

A total of 84 credits in Art may be applied to the degree.

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**Minor, Art**

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

**Art History (6 credits)**
- ART A261 History of Western Art I (3)
- ART A262 History of Western Art II (3)

**Design (3 credits)**
- ART A111 Two-Dimensional Design (3)
- ART A113 Three-Dimensional Design (3)

**Drawing (3 credits)**
- ART A105 Beginning Drawing (3)
- ART A205 Intermediate Drawing (3)
- ART A305 Advanced Drawing (3)
- ART A307 Life Drawing and Composition I (3)
- ART A405 Experimental Drawing (3)
- ART A407 Life Drawing and Composition II (3)

**Studio (6 credits)**
- Studio emphasis courses

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**Minor, Art Education**

Students majoring in Art or in another subject must complete the following sequence of six courses for a minor in Art Education. A total of 18 credits is required for the minor of which 6 credits must be upper division.

**Art History**
- ART A203 Introduction to Art Education 3
- ART A204 History and Philosophy of Art Education 3
- ART A303 Curriculum Planning and Interpretation in Art 3
- ART A304 Art Experience: Social, Cultural, and
FACULTY

Alvin Amason, Associate Term Professor of Alaska Native Art, alvinamason@hotmail.com
Herminia Din, Associate Professor of Art Education, HDIN@uaa.alaska.edu
Steven Godfrey, Associate Professor of Ceramics, AFSMG@uaa.alaska.edu
Mariano Gonzales, Professor of Digital Art & Graphic Design/Chair, mariano@gci.net
Garry Kaulitz, Professor of Printmaking, AFGCK@uaa.alaska.edu
Charles “Sean” Licka, Professor of Art History, kanchiku@gci.net
Garry Mealor, Assistant Professor/Head of Foundations, AFGRM@uaa.alaska.edu
B. Hugh McPeck, Associate Professor of Sculpture, AFBHM@uaa.alaska.edu
Deborah Tharp, Associate Professor of Photography, AFDKT@uaa.alaska.edu
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ART
Fine Arts Building (ARTS), Room 302A, (907) 786-1783
http://art.uaa.alaska.edu

The aim of the Department of Art is to prepare and empower students to use their artistic abilities to make a difference in society. A comprehensive multi-studio approach encourages independent thinking, strengthens creativity, and develops a knowledge of the critical and historical aspects of art.

Students acquire technical skills and gain confidence to work with a variety of materials while exploring and evaluating a broad heritage of past and contemporary art and design.

Program Outcomes
Students graduating with a Bachelor of Arts or Bachelor of Fine Arts will be able to demonstrate:
1. Effective communication and fiscal skills to be a practicing artist as applied to art proposals, exhibitions and business matters.
2. The expression of ideas in a cohesive body of work.
3. Critical thinking, writing and research skills allowing the discovery of original approaches to creative problem solving.

Students choose from several areas of study:
- BA in Art — Creative problem solving in a liberal arts context.
- BFA in Art — The Department of Art offers the Bachelor of Fine Arts Degree in Art with a Studio Emphasis in Ceramics, Drawing, Digital Art & Graphic Design, Fibers, Jewelry/Metalsmithing, Painting, Photography, Printmaking, or Sculpture. Refer to the Bachelor of Fine Arts section following for degree requirements.
- Art Education — The Department of Art offers a minor in Art Education for students interested in working in educational settings. The minor does not lead to initial teacher certification. UAA does not currently offer a teacher certification program in art.
- Minor in Art — Students majoring in another subject may minor in Art.
- Minor in Art Education — Students majoring in Art or other subjects may minor in Art Education. Students interested in becoming K-12 art teachers may complete the BA or BFA in Art at UAA and pursue teacher certification through the UAF School of Education post-baccalaureate licensure program.
- Continuing Education — Either as a pre- or post-baccalaureate student. The Department of Art offers courses for teacher professional development and for the general community.

The Bachelor of Arts and the Bachelor of Fine Arts are accredited by the National Association of Schools of Art and Design.

Students must note the following:
1. Some courses do not apply to degree programs.
2. Some courses may be taken only once for credit for repeat credit.
3. Many Art courses require completion of certain prerequisite Art courses. Non-Art majors who wish to enroll in an Art class without first having completed the recommended prerequisites are free to do so with appropriate instructor permission, but may find the classroom experience difficult or unrewarding.
4. Art majors must obtain pre-registration approval from Art faculty for upper division Art coursework undertaken each semester.

Bachelor of Arts, Art
Admission Requirements
Complete the Baccalaureate Degree Program Admission Requirements in the front of this chapter.
Graduation Requirements
Students must complete the following:

A. General University Requirements
   Complete the General University Requirements for Baccalaureate Degrees in the front of this chapter. A maximum of 60 credits in Art may be applied toward the degree. Transfer students who are candidates for the BA degree with a major in Art must complete a minimum of 18 Art credits in residence.

B. General Education Requirements
   Complete the General Education Requirements for Baccalaureate Degrees in the front of this chapter.

C. College of Arts and Sciences Requirements
   Complete the College of Arts and Sciences requirements in the front of this chapter.

D. Major Requirements

Lower Division Art (27 credits)
1. Complete the following core courses:
   - ART A105 Beginning Drawing (3)
   - ART A111 Two-Dimensional Design (3)
   - ART A113 Three-Dimensional Design (3)
   - ART A205 Intermediate Drawing (3)
   - ART A261 History of Western Art I (3)
   - ART A262 History of Western Art II (3)

2. Choose one two-dimensional course, one three-dimensional course, and one course from either list to total 9 credits:
   - Two-Dimensional Area:
     - ART A112 Color Design (3)
     - ART A212 Beginning Watercolor (3)
     - ART A213 Beginning Painting (3)
     - ART A215 Beginning Printmaking (3)
     - ART A224 Beginning Photography (3)
     - ART A252 Beginning Graphic Design & Illustration (3)
   - Three-Dimensional Area:
     - ART A201 Beginning Handbuilt Ceramics (3)
     - ART A202 Beginning Wheelthrown Ceramics (3)
     - ART A209 Beginning Metalsmithing and Jewelry (3)
     - ART A211 Beginning Sculpture (3)
     - ART A270 Beginning Alaska Native Art (3)
     - ART A272 Beginning Fiber Structures (3)

Upper Division Studio Art (15 credits)
3. Complete a total of 15 credits from the following studio areas:
   - Ceramics
   - Digital Art & Graphic Design
   - Jewelry/Metalsmithing
   - Photography
   - Sculpture
   - Drawing
   - Fibers
   - Painting
   - Printmaking
   - Alaska Native Art

Upper Division Art History (6 credits)
4. Select 6 credits from the following:
   - ART A360A History of Non-Western Art I (3)
   - ART A360B History of Non-Western Art II (3)
ART A361  History of Graphic Design (3)
ART A362  History of Modern Art (3)
ART A363  History of Contemporary Art (3)
ART A364  Italian Renaissance Art (3)
ART A366  Asian Art (3)
ART A367  History of Photography (3)
ART A492  Art History Seminar (3)

Additional MIScellaneous Requirements (21 credits)

5. Complete the following:
   - ART A203  Introduction to Art Education   3
   - PHIL A401  Aesthetics   3
   - ART A491  Senior Seminar (Capstone) (fall semesters only)   3
   - PHIL A401  Aesthetics   3
   - BA A166  Small Business Management   3
   - Upper division general electives 12 credits   12
   - At least 6 of the 12 elective credits must have a prefix other than Art.

A total of 120 credits is required for the degree, of which
42 credits must be upper division.
A total of 60 credits in Art may be applied to the degree.

Bachelor of Fine Arts, Art

The Bachelor of Fine Arts degree is a professionally oriented program designed to prepare students for careers in art. Enrollment in the BFA program is recommended only for those students willing to make the considerable commitment of time and energy necessary to achieve professional competence in their primary area of studio emphasis. Students desiring to enter the BFA program should request a copy of the current program policy from the department.

Admission Requirements

Complete the Baccalaureate Degree Programs Admission Requirements at the beginning of this chapter. Admission into the BFA program, withdrawal from it, and granting of the degree are done at the discretion of the BFA Committee. Students admitted into the BFA program must complete a minimum of 24 Art credits (upper or lower division courses) in residence at UAA after acceptance into the BFA program.

For transfer students, a minimum of 12 resident Art credits must be completed in the primary area of studio emphasis, and a minimum of 3 resident Art credits completed in the secondary area of studio emphasis.

Applicants for admission into the BFA program must meet the following minimum requirements:
1. Applicants must have been officially admitted to UAA as a declared pre-major in the BFA program and declared an intention to pursue the BFA degree.
2. Applicants must have completed all lower division art major courses in the Foundation Core and the Beginning Studio categories required for the BFA degree.
3. Applicants must have been enrolled at UAA for at least one semester prior to application to the full major status in the BFA program.
4. Applicants must meet minimum academic GPA requirements of: 2.50 overall coursework and 3.00 overall Art coursework.

BFA Requirements

All materials must be submitted to the Department of Art at least two weeks prior to the BFA Committee’s scheduled application review:
1. Application for admission into the BFA program.
2. Letter of intent stating objectives and qualifications in relation to either the BA in Art or BFA in Art degree.
programs.

3. Copies of all college transcripts.

4. A “Projected Plan of Study” signed by the College of Arts & Sciences Academic Advisor for the Fine Arts area.

5. A list of all college Art courses taken with grades received.

6. A portfolio of 15-20 pieces of studio work in primary and secondary concentrations showing technical skills, design abilities, and a potential for developing a conceptual vision. Applicants must submit work for consideration in digital formats (preferred) or both slides or digital formats and original works of art. Applications will be reviewed only in the fall semester, winter semester, and spring semester. Admission decisions are determined in October and March.

Acceptance into the BFA program will be determined by a consensus of BFA Committee members in October at the meeting.

Academic Progress

To graduate with a BFA in Art students must have met the following GPA requirements:

1. A minimum cumulative overall major GPA of 3.00 in the major.

2. A minimum cumulative GPA of 3.50 in the primary area of studio emphasis.

3. A minimum cumulative GPA of 2.50 in all university coursework.

Semester Reviews

The progress of all BFA candidates will be reviewed a minimum of once a semester by the BFA Committee.

Thesis Project and Capstone Course

With approval, upon completion of all studio courses in the student’s primary and secondary areas of emphasis, BFA candidates will enroll in ART A491 Senior Seminar offered fall semesters only, and ART A499 Thesis offered spring semesters only. ART A491 meets the capstone requirement for the GER. Students enrolled in the BFA program must submit their thesis proposal for approval during the fall semester of the academic year. Once the BFA Committee has reviewed and accepted the thesis proposals, candidates will be granted permission to register for ART A499 Thesis. During ART A499 Thesis students will complete a body of work that will culminate in a formal exhibition. BFA students enrolled in ART A499 Thesis will meet with the BFA Committee a minimum of twice a semester.

The BFA Committee’s evaluation of the student’s thesis project will be based on content, presentation, and the degree of success in visual realization of the written proposal. At least 10 slides or digital images of the student’s thesis will be furnished to the Department of Art. These images must be acceptable to the BFA Committee and will become the property of the Department of Art. The slides or digital images must be received by the department before a grade for ART A499 Thesis is awarded.

Exhibitions and Presentations

BFA candidates will generally participate in the BFA Group Show to be held in the Kimura Gallery. All aspects of the thesis exhibition must be approved by the BFA Committee. Works will be selected by the BFA Committee. The BFA Group Show will be held during the spring semester each year. Graduating BFA students are invited, but not required, to donate one work of art to UAA’s permanent collection. Acceptance of donated student work is left to the discretion of the BFA Committee. Prior to completing all BFA requirements, the student is responsible for submitting an Application for Graduation to obtain the degree.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements
   Complete the General University Requirements for Baccalaureate Degrees in the front of this chapter.

B. General Education Requirements
   Complete the General Education Requirements for Baccalaureate Degrees in the front of this chapter.

C. College of Arts and Sciences Requirements
   There are no additional college requirements for the BFA degree.
D. **Major Requirements**

Complete the following required Art courses with a minimum overall cumulative GPA of 3.00 in the major and a minimum cumulative GPA of 3.50 in the primary area of studio emphasis. A minimum cumulative GPA of 2.50 in all university coursework is required to graduate. A maximum of 84 credits in Art may be applied toward the degree.

**Foundation Core Courses** (24 credits)

1. Complete the following core courses:
   - ART A105 Beginning Drawing 3
   - ART A111 Two-Dimensional Design 3
   - ART A112 Color Design 3
   - ART A113 Three-Dimensional Design 3
   - ART A205 Intermediate Drawing 3
   - ART A261 History of Western Art I 3
   - ART A262 History of Western Art II 3
   - ART A307 Life Drawing and Composition I 3

**Beginning Studio Electives** (9 credits)

2. Choose one course from the two-dimensional list and one course from the three-dimensional list, and one course from either list to total 9 credits:

   **Two-Dimensional Area:**
   - ART A212 Beginning Watercolor (3)
   - ART A213 Beginning Painting (3)
   - ART A215 Beginning Printmaking (3)
   - ART A224 Beginning Photography (3)
   - ART A252 Beginning Graphic Design and Illustration (3)

   **Three-Dimensional Area:**
   - ART A201 Beginning Handbuilt Ceramics (3)
   - ART A202 Beginning Wheelthrown Ceramics (3)
   - ART A209 Beginning Metalsmithing and Jewelry (3)
   - ART A211 Beginning Sculpture (3)
   - ART A272 Beginning Fiber Structures (3)

**Art History** (9 credits)

3. Select three courses from the following:
   - ART A360A History of Non-Western Art I (3)
   - ART A360B History of Non-Western Art II (3)
   - ART A361 History of Graphic Design (3)
   - ART A362 History of Modern Art (3)
   - ART A363 History of Contemporary Art (3)
   - ART A364 Italian Renaissance Art (3)
   - ART A366 Asian Art (3)
   - ART A367 History of Photography (3)
   - ART A492 Art History Seminar (3)

**Primary Studio Concentration** (18 credits)

Select Primary and Secondary Studio Concentrations from the following:

- Ceramics
- Drawing
- Digital Art & Graphic Design
- Fibers
- Jewelry/Metalsmithing
- Painting
- Photography
- Printmaking
- Sculpture

4. Select a primary studio concentration from the list above and complete the following studio courses in the same concentration discipline:
200 level Beginning studio course 3

Note: Students must choose a beginning course in their emphasis. Exception: students with a drawing concentration may choose from any 200 level two-dimensional class listed under Beginning Studio Electives, in lieu of a course selected to fill the beginning studio electives listed above.

300 level Intermediate studio course 6
400 level Advanced studio course 6

5. Select a support course from following (3 credits):
   ART A390 Selected Topics in Studio Art (3)
   ART A490 Selected Topics in Studio Art (3)
   ART A498 Individual Research (1-3)
   or other by permission of advisor

Secondary Studio Concentration (9 credits)

6. Select a secondary studio concentration from the list above and complete the following studio courses in the same discipline:
   200 level Beginning studio course 3
   Note: Must be other than a course selected to fill the beginning studio electives listed above.
   300 level Intermediate studio course 3

7. Select a support course from following (3 credits):
   300 level Intermediate studio course (3)
   400 level Advanced studio course (3)
   ART A390 Selected Topics in Studio Art (3)
   ART A490 Selected Topics in Studio Art (3)
   ART A498 Individual Research (1-3)

Thesis Requirements (6 credits)

8. Complete the following courses:
   ART A491 Senior Seminar (Capstone) (fall semesters only) 3
   ART A499 Thesis (spring semesters only) 3

Additional Miscellaneous Requirements (12 credits)

9. ART A203 Introduction to Art Education 3
10. Complete PHIL A401 Aesthetics 3
11. Art electives (9 credits) 6

A total of 121 credits is required for the degree, of which 42 credits must be upper division.

A total of 84 credits in Art may be applied to the degree.

Minor, Art

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

Art History (6 credits)
   ART A261 History of Western Art I (3)
   ART A262 History of Western Art II (3)

Design (3 credits)
   ART A111 Two-Dimensional Design (3)
   ART A113 Three-Dimensional Design (3)

Drawing (3 credits)
   ART A105 Beginning Drawing (3)
   ART A205 Intermediate Drawing (3)
   ART A305 Advanced Drawing (3)
ART A307  Life Drawing and Composition I (3)
ART A405  Experimental Drawing (3)
ART A407  Life Drawing and Composition II (3)

Studio (6 credits) 6
Studio emphasis courses 6

Minor, Art Education

Students majoring in Art or in another subject/discipline and Art students in the Art program must complete the following sequence of six courses for a minor in Art Education. A total of 18 credits is required for the minor.

Six courses are being added as a minor in the Art Department under the heading of Art Education. The minor constitutes 18 credits of which 6 credits must be upper division and is made up of the following courses:

ART A203 Introduction to Art Education 3
ART A204 History and Philosophy of Art Education 3
ART A303 Curriculum Planning and Interpretation in Art 3
ART A304 Art Experience: Social, Cultural, and Educational 3
ART A403 Arts and Technology 3
ART A404 Diversity and Visual Culture 3

FACULTY

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Herminia Din, Associate Professor of Art Education, HDIN@uaa.alaska.edu
Steven Godfrey, Associate Professor of Ceramics, AFSMG@uaa.alaska.edu
Mariano Gonzales, Associate Professor of Digital Art & Graphic Design/Chair, marianog@ualaska.edu
Garry Kaslitz, Professor of Printmaking, AFGCK@uaa.alaska.edu
Charles “Sean” Licka, Professor of Art History, kanchiku@gci.net
Garry Mealor, Assistant Professor/Head of Foundations, AFGRM@uaa.alaska.edu
B. Hugh McPeck, Associate Professor of Sculpture, AFBHM@uaa.alaska.edu
Garry Mealor, Assistant Professor/Foundation Coordinator, AFGRM@uaa.alaska.edu
Deborah Tharp, Associate Professor of Photography, AFDKT@uaa.alaska.edu
Kat Tomka, Professor of Painting, AFKAT@uaa.alaska.edu
### Course Action Request

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
<tr>
<td>AS CAS</td>
<td>AHUM Division of Humanities</td>
<td>Department of Journalism and Public Communications</td>
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<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
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<tbody>
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<td>JPC</td>
<td>A413</td>
<td>NA</td>
<td>3</td>
<td>(3+0)</td>
</tr>
</tbody>
</table>

6. Complete Course Title  
Communications Law

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

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

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

If a change, mark appropriate boxes:  
- ☐ Prefix  
- ☐ Course Number  
- ☐ Contact Hours  
- ☐ Repeat Status  
- ☒ Grading Basis  
- ☒ Cross-Listed/Stacked  
- ☐ Course Prerequisites  
- ☐ Co-requisites  
- ☐ Test Score Prerequisites  
- ☐ Registration Restrictions  
- ☐ Other Restrictions  
- ☐ Class  
- ☐ Level  
- ☐ College  
- ☐ Major  
- ☒ Other Update to CCG to changes in law/industry (please specify)

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

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

11. Implementation Date  
- semester/year
  - From: fall/2011  
  - To: 9/9999

12. ☒ Cross Listed with  
- JUST A413  
- Stacked with  
- Cross-Listed Coordination Signature

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

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<tr>
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<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>1. JPC, BA Catalog</td>
<td>410, 413</td>
<td>2/22/2011</td>
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</table>

Initiator Name (typed): Paola Banchero  
Initiator Signed Initials: _________  
Date: __________

13b. Coordination Email  
Date: 11/19/2010  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 11/18/2010

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

15. Course Description (suggested length 20 to 50 words)  
Legal rights, privileges, and regulations of press, radio, television, Internet and films; libel, contempt, copyright, rights of privacy; and decisions of regulatory bodies.

16a. Course Prerequisite(s) (list prefix and number)  
JPC A202 or JUST A110  
Special note: JPC A202 must be completed with a C or better.

16b. Test Score(s)  
NA

16c. Co-requisite(s) (concurrent enrollment required)  
NA

16d. Other Restriction(s)  
☐ College  
☐ Major  
☐ Class  
☐ Level  

16e. 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  
Update CCG to include changes to law/industry. Added prerequisite.

<table>
<thead>
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<th>Date</th>
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</table>

103
I. Initiation Date
   December 11, 2010

II. Course Information

   A. College: College of Arts and Sciences
   B. Course Subject/Number: JPC A413/JUST A413
   C. Credits: 3
   D. Contact Hours: 3+0
   E. Course Title: Communications Law
   F. Grading Information: A-F
   G. Cross Listed: JPC A413
   H. Course Description: Legal rights, privileges, and regulations of press, radio, television, internet and films; libel, contempt, copyright, rights of privacy; and decisions of regulatory bodies.
   I. Course Prerequisites: JPC A202 or JUST A110 Special note: JPC A202 must be completed with a C or better.
   J. Fees: No

III. Course Activities

   A. Lecture
   B. Discussion
   C. Analysis

IV. Guidelines for Evaluation

   A. Exams
   B. Research paper
   C. Structured discussion
   D. Writing assignments

V. Course Level Justification

   Course builds upon the analysis and research skills Justice and Journalism and Public Communications students receive in lower level courses. Students research and analyze legal processes, synthesize landmark and less significant court decisions, and relate rights and regulations to modern mass communication practices.

VI. Outline

   A. Introduction to legal system
      1. Sources of law
      2. Federal and state jurisdiction
      3. Judicial process

   B. First Amendment
      1. History and origins
      2. Expression versus conduct
      3. Prior restraints
4. Time, place, manner restrictions

C. Risk to public safety
   a. Clear and present danger
   b. National security

D. Libel/defamation
   1. Fault
   2. Negligence standards
   3. Libel tourism
   4. Damages
   5. Defenses and privileges
   6. Defamation in digital media

E. Privacy and emotional distress
   1. Origins
   2. Definitions
   3. Criminal statutes (trespassing, etc.)
   4. Privacy online

F. Access to information/reporter’s privilege
   1. Federal Freedom of Information Act
   2. State FOIA and privilege

G. Copyright/intellectual property
   1. Infringement
   2. Fair use
   3. Copyright online

H. Commercial speech
   1. Advertising
   2. Trademark laws

I. FCC and broadcasting
   1. Broadcast regulation
   2. Agency jurisdiction and powers

J. Electronic media/Internet
   a. Political speech/Fairness Doctrine history and end
   b. Cable TV regulation

K. Obscenity/indecency/hate speech
   1. Definitions
   2. Attacks on obscenity and hate speech

VII. Suggested Texts


**VIII. Bibliography and Resources**


**IX. Instructional Goals and Student Outcomes**

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<th>A. Instructional Goals</th>
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<td>3. Discuss the development of First Amendment media law, including prior restraints, libel, privacy, reporters’ privilege, access to courts and to government information, and government regulation of electronic free speech.</td>
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<td>4. Discuss federal and state agencies, such as the FCC and FTC, which have a role in regulating mass communications, and present information about constraints on enforcement power.</td>
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<th>B. Student Outcomes</th>
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<td><strong>Assessment methods</strong></td>
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<td>2.</td>
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<td>4.</td>
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</table>
## Course Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>HW CHSW</td>
<td>AJUS Division of Justice</td>
<td>Justice Center</td>
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<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
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<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<tbody>
<tr>
<td>JUST</td>
<td>A413</td>
<td>NA</td>
<td>3</td>
<td>(3+0)</td>
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</table>

### 6. Complete Course Title

**Communications Law**

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

### 7. Type of Course

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

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

If a change, mark appropriate boxes:

- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [x] Course Description
- [ ] Cross-Listed/Stacked
- [ ] Test Score Prerequisites
- [ ] Co-requisites
- [ ] Other Restrictions
- [ ] Class Level
- [ ] College Major
- [x] Other Update to CCG to include changes to law/industry (please specify)

### 9. Repeat Status

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

### 10. Grading Basis

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

### 11. Implementation Date

<table>
<thead>
<tr>
<th>semester/year</th>
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<tbody>
<tr>
<td>From: fall/2011</td>
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### 12. Cross Listed with

- JPC A413

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

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

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**Initiator Name (typed): Deborah Periman**

**Initiator Signed Initials:** __________

**Date:** __________

### 13b. Coordination Email

- Date: 11/29/2010
- submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

### 13c. Coordination with Library Liaison

- Date: 11/29/2010

### 14. General Education Requirement

Mark appropriate box:

- [ ] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
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### 15. Course Description

(suggested length 20 to 50 words)

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- JPC A202 or JUST A110 Special note: JPC A202 must be completed with a C or better.

### 16b. Test Score(s)

- NA

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

- NA

### 16d. Other Restriction(s)

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

### 16e. 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

Update CCG to include changes to law/industry. Add prerequisite

<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
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<tbody>
<tr>
<td>Deborah Periman</td>
<td></td>
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Initiator (TYPE NAME)

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<tr>
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<th>[ ] Disapproved</th>
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<tr>
<td>Provost or Designee</td>
<td>Date</td>
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</table>
I. Initiation Date

December 11, 2010

II. Course Information

A. College: College of Health and Social Welfare
B. Course Subject/Number: JUST A413/JPC A413
C. Credits: 3
D. Contact Hours: 3+0
E. Course Title: Communications Law
F. Grading Information: A-F
G. Cross Listed: JPC A413
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J. Fees: No

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B. Discussion
C. Analysis

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   3. Criminal statutes (trespassing, etc.)
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   1. Federal Freedom of Information Act
   2. State FOIA and privilege

G. Copyright/intellectual property
   1. Infringement
   2. Fair use
   3. Copyright online

H. Commercial speech
   1. Advertising
   2. Trademark laws

I. FCC and broadcasting
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VII. Suggested Texts


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## Program/PREFIX Action Request

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

<table>
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<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
<tr>
<td>AS CAS</td>
<td>AMSC Division of Math Science</td>
<td>Biological Sciences</td>
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<td>Bachelor of Science, Biological Science</td>
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<th>3. Type of Program</th>
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<td>Choose one from the appropriate drop down menu: Undergraduate: or Graduate:</td>
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<tr>
<td>Bachelor of Science</td>
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### Type of Action: PROGRAM / PREFIX

- **PROGRAM**
  - Add
  - ✗ Change
  - Delete

- **PREFIX**
  - Add
  - Change
  - Inactivate

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<th>5. Implementation Date (semester/year)</th>
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<th>6a. Coordination with Affected Units</th>
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<tr>
<td>Department, School, or College: Biological Sciences, CAS</td>
</tr>
<tr>
<td>Initiator Name (typed): Donald E. Spalinger</td>
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<tr>
<td>Initiator Signed Initials: __________</td>
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<table>
<thead>
<tr>
<th>6b. Coordination Email submitted to Faculty Listserv (<a href="mailto:uaa-faculty@lists.uaa.alaska.edu">uaa-faculty@lists.uaa.alaska.edu</a>)</th>
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<th>6c. Coordination with Library Liaison</th>
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<tr>
<th>7. Title and Program Description - Please attach the following:</th>
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<tbody>
<tr>
<td>✗ Cover Memo</td>
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<tr>
<th>8. Justification for Action</th>
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<tbody>
<tr>
<td>Change in Course Description and credit hours for Biol. A425 (Mammalogy)</td>
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BIOLOGICAL SCIENCES

ConocoPhillips Integrated Sciences Building (CPSB), Room 101P, (907) 786-4770
http://biology.uaa.alaska.edu

The WWAMI/Biomedical program may be found at http://biomed.uaa.alaska.edu.

Biology is the science concerned with the study of living organisms. It encompasses a vast range of biological disciplines, from the study of microbes and molecular biology to the study of plants, animals and the environment. The undergraduate program in the Biological Sciences includes courses that provide students with a broad understanding of both traditional and modern biological sciences. These courses are suitable as preparation for professional degrees, teaching, or careers in government or industry. Both the Bachelor of Arts and the Bachelor of Science degrees are available for undergraduates. A Master of Science degree program in Biological Sciences as well as a joint UAA-UAF Doctor of Science degree program is available for students already holding a baccalaureate degree.

A program of study in the biological sciences requires completion of a basic science core curriculum in the chemical, physical and mathematical sciences as well as required and elective courses in the biological sciences. Two general divisions are recognized in the biology program: the cell-molecular and the organismal-ecology-evolution areas. The cell-molecular area focuses on preprofessional sciences for students wishing to pursue careers in medicine, dentistry, and veterinary medicine, or who wish to attend graduate school. The organismal-ecology-evolution area is a more diversified curriculum emphasizing environmental, organismal, evolutionary, and general biological sciences preparatory for graduate school or for employment in the private or public sector. Students are strongly encouraged to consult with their academic advisors within the Department of Biological Sciences to determine which electives best suit their programmatic needs and career requirements.

The Bachelor of Arts and the Bachelor of Science degree programs require a total of 124-125 credits for graduation and can be completed in four years by students who have had adequate high school preparation in math and sciences. Refer to the beginning of this chapter for recommended high school courses.

Program Objectives and Expected Outcomes

Objectives
The curriculum of the UAA Biological Sciences program is designed to produce graduates who have:

1. A basic knowledge of the principles relating to the biological sciences with an emphasis in either molecular or organismal biology.
2. The ability to think critically, dissect problems, and offer solutions.
3. Developed written and oral communications skills consistent with a career in biological sciences.
4. Developed sufficient competency in knowledge and skills to obtain employment as an entry-level biologist and be able to progress professionally within the discipline.
5. Developed a mental attitude that learning is a lifetime occupation to maintain relevancy in the biological profession.

Outcomes
In keeping with the objectives, it is expected that graduates of the Biological Sciences program will have the ability to:

1. Apply their knowledge of general biology to the workplace or higher education pursuits.
2. Accept challenges and think through problems until solutions are derived and effectively communicate the solutions to supervisors.
3. Design and conduct projects that include fieldwork, laboratory analyses, and interpretation in the discipline.
4. Recognize that education does not stop at graduation, and anticipates continuing education as a professional responsibility.

Community Service Courses
The department offers a wide range of community service courses as a service to the people in the Anchorage area and extended campuses who wish to become more knowledgeable about the science of biology and how it relates to them. Unless noted otherwise
in the course description, community service courses do not satisfy either core requirements or elective credit towards any degree programs in the biological sciences. All are offered as demand warrants.

BIOL A074  Field Natural History
BIOL A075  Local Flora
BIOL A100  Human Biology
BIOL A124  Biota of Alaska: Selected Topics
BIOL A126  Birds in Field and Laboratory

Departmental Honors in Biology
Undergraduate Biological Science majors may be recognized for exceptional performance by earning Departmental Honors in Biology. In order to receive honors in biology, a student must meet each of the following requirements:

1. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations.
2. Meet the requirements for a BA/BS degree in Biological Sciences.
3. Earn a grade point average of 3.50 or above in the major requirements.
4. During the senior year of their academic program, the student must gain faculty approval for and complete, with a grade of B or better, a senior thesis research project, with enrollment in BIOL A499 Senior Thesis. Biological Science faculty members must approve the project proposal and final written report.

Bachelor of Arts, Biological Sciences

Admission Requirements
Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Academic Progress
To graduate with a BA in Biological Sciences, the student must complete all courses covered under Major Requirements for a BA in Biological Sciences with a grade of C or better. All prerequisites for biology courses must be completed with a grade of C or better. Students who audit a course in biology or who are unable to earn a grade of C or better in the course may repeat the course. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a lecture and laboratory component, both components must be repeated.

Graduation Requirements
Students must complete the following graduation requirements:

A. General University Requirements
Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements
Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements
Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements
1. Complete these required core courses:
   - BIOL A115/L Fundamentals of Biology I with Laboratory  4
   - BIOL A116/L Fundamentals of Biology II with Laboratory  4
   - BIOL A242/L Fundamentals of Cell Biology with Laboratory  4
   - BIOL A252/L Principles of Genetics with Laboratory  4
   - BIOL A310/L Principles of Physiology with Laboratory (4) or
   - BIOL A316 Introduction to Plant Physiology (3) or
2. It is recommended that students complete 8 credits from the following:
   - GEOL A111 Physical Geology (4)
   - GEOL A221 Historical Geology (4)
   - or
   - PHYS A123 Basic Physics I (3)
   - PHYS A124 Basic Physics II (3)
   - and
   - PHYS A123L Basic Physics I Laboratory (1)
   - PHYS A124L Basic Physics II Laboratory (1)
   - or
   - PHYS A211 General Physics I (3)
   - PHYS A212 General Physics II (3)
   - and
   - PHYS A211L General Physics I Laboratory (1)
   - PHYS A212L General Physics II Laboratory (1)

3. Complete 15-17 credits of upper division program electives

   from the following areas:
   - Ecology 3-4
   - Microbiology 4-5
   - Biology electives 8

4. A total of 124 credits is required for the degree, of which 42 credits must be upper division.

**Bachelor of Science, Biological Sciences**

The Bachelor of Science degree includes a single core program of coursework with two areas of study. Completing courses from the cellular and molecular biology area prepares students for professional careers in areas such as medicine, dentistry and veterinary science. Completing courses from the organismal, ecology, and evolutionary area prepares students for careers in environmental, organismal, and evolutionary biology. A wide selection of electives is available to all students, including courses offered under BIOL A394 and BIOL A490, which are selected topics courses. It is imperative that students consult their academic advisors within the Department of Biological Sciences to determine which electives are most appropriate to their career interests. Some of these elective courses are offered periodically, depending on demand. Refer to course descriptions to identify these courses.

**Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

**Academic Progress**

To graduate with a BS in Biological Sciences, the student must complete all courses covered under Major Requirements for a BS in Biological Sciences with a grade of C or better. All prerequisites for biology courses must be completed with a grade of C or better. Students who audit a course in biology or who are unable to earn a grade of C or better in the course may repeat the course. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a lecture and laboratory component, both components must be repeated.

**Graduation Requirements**

Students must complete the following graduation requirements:
A. **General University Requirements**
Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. **General Education Requirements**
Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. **College of Arts and Sciences Requirements**
Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. **Major Requirements**
1. Some major requirements may also be used to satisfy the College of Arts and Sciences BS requirements.
2. Complete these required support courses:
   - CHEM A105 General Chemistry I 3
   - CHEM A105L General Chemistry I Laboratory 1
   - CHEM A106 General Chemistry II 3
   - CHEM A106L General Chemistry II Laboratory 1
   - CHEM A321 Organic Chemistry I 3
   - CHEM A322 Organic Chemistry II 3
   - CHEM A323L Organic Chemistry Laboratory 2
   - MATH A200 Calculus I 4
   - MATH A201 Calculus II 4
   - PHYS A123 Basic Physics I (3) 8
   - PHYS A123L Basic Physics I Laboratory (1) 1
   - and
   - PHYS A124 Basic Physics II (3)
   - PHYS A124L Basic Physics II Laboratory (1) 1
   - or
   - PHYS A211 General Physics I (3)
   - PHYS A211L General Physics I Laboratory (1)
   - and
   - PHYS A212 General Physics II (3)
   - PHYS A212L General Physics II Laboratory (1)
   - STAT A253 Applied Statistics for the Sciences (4) 4
   - or
   - STAT A307 Probability and Statistics (4)
   - STAT A308 Intermediate Statistics for the Sciences * 3

   *It is recommended that STAT A308 be taken. Students may substitute STAT A308 with 3 upper division Biological Sciences credits. STAT A308 is an integrated capstone course*

3. Complete Biological Sciences core courses:
   - BIOL A115/L Fundamentals of Biology I with Laboratory 4
   - BIOL A116/L Fundamentals of Biology II with Laboratory 4
   - BIOL A242/L Fundamentals of Cell Biology with Laboratory 4
   - BIOL A252/L Principles of Genetics with Laboratory 4
   - BIOL A271/L Principles of Ecology with Laboratory 4
   - BIOL A308 Principles of Evolution 3
   - BIOL A310/L Principles of Physiology with Laboratory (4) 3-4
   - or
   - BIOL A316 Introduction to Plant Physiology (3)
   - or
   - BIOL A415 Comparative Animal Physiology (3)
   - BIOL A340 General Microbiology 5
   - BIOL A492 Undergraduate Seminar 1
4. Complete 11-12 credits of upper division program electives from the following list:

**Note:** Preprofessional students may substitute CHEM A441-A442 Principles of Biochemistry and CHEM A443 Biochemistry Laboratory for 8 upper division biology credits.

(a) Recommended electives in cellular and molecular biology:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIOL A451</td>
<td>Applied Microbiology (3)</td>
</tr>
<tr>
<td>BIOL A452</td>
<td>Human Genome* (3)</td>
</tr>
<tr>
<td>BIOL A461</td>
<td>Molecular Biology (3)</td>
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<tr>
<td>BIOL A461L</td>
<td>Molecular Biology Laboratory (1)</td>
</tr>
<tr>
<td>BIOL A462</td>
<td>Virology (3)</td>
</tr>
<tr>
<td>CHEM A471</td>
<td>Immunoochemistry (4)</td>
</tr>
<tr>
<td>BIOL A488</td>
<td>Developmental Biology (4)</td>
</tr>
<tr>
<td>BIOL A471</td>
<td>Immunochemistry (4)</td>
</tr>
<tr>
<td>BIOL A488</td>
<td>Developmental Biology (4)</td>
</tr>
<tr>
<td>BIOL A441-A442</td>
<td>Principles of Biochemistry</td>
</tr>
<tr>
<td>BIOL A443</td>
<td>Biochemistry Laboratory</td>
</tr>
</tbody>
</table>

(b) Recommended elective courses in organismal, ecology and evolutionary biology:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>BIOL A316</td>
<td>Introduction to Plant Physiology (3)</td>
</tr>
<tr>
<td>BIOL A331</td>
<td>Systematic Botany (4)</td>
</tr>
<tr>
<td>BIOL A333</td>
<td>Biology of Non-Vascular Plants (4)</td>
</tr>
<tr>
<td>BIOL A334</td>
<td>Biology of Vascular Plants (4)</td>
</tr>
<tr>
<td>BIOL A479</td>
<td>Physiological Plant Ecology (3)</td>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>BIOL A415</td>
<td>Comparative Animal Physiology (3)</td>
</tr>
<tr>
<td>BIOL A423</td>
<td>Ichthyology (4)</td>
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<tr>
<td>BIOL A425</td>
<td>Mammalogy (3)</td>
</tr>
<tr>
<td>BIOL A426</td>
<td>Ornithology (4)</td>
</tr>
<tr>
<td>BIOL A427</td>
<td>Invertebrate Zoology (4)</td>
</tr>
<tr>
<td>BIOL A487</td>
<td>Comparative Anatomy of Vertebrates (4)</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>BIOL A309</td>
<td>Biogeography (3)</td>
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<tr>
<td>BIOL A373</td>
<td>Conservation Biology (3)</td>
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<tr>
<td>BIOL A378</td>
<td>Marine Biology (3)</td>
</tr>
<tr>
<td>BIOL A430</td>
<td>Marine Mammal Biology (4)</td>
</tr>
<tr>
<td>BIOL A441</td>
<td>Animal Behavior (4)</td>
</tr>
<tr>
<td>BIOL A445</td>
<td>Plant-Herbivore Ecology (4)</td>
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<tr>
<td>BIOL A450</td>
<td>Microbial Ecology (3)</td>
</tr>
<tr>
<td>BIOL A477</td>
<td>Tundra and Taiga Ecosystems (3)</td>
</tr>
<tr>
<td>BIOL A478</td>
<td>Biological Oceanography (4)</td>
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<tr>
<td>BIOL A479</td>
<td>Physiological Plant Ecology (3)</td>
</tr>
<tr>
<td>BIOL A489</td>
<td>Population Genetics and Evolutionary Processes* (3)</td>
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</tbody>
</table>

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIOL A378</td>
<td>Marine Biology (3)</td>
</tr>
<tr>
<td>BIOL A423</td>
<td>Ichthyology (4)</td>
</tr>
<tr>
<td>BIOL A427</td>
<td>Invertebrate Zoology (4)</td>
</tr>
<tr>
<td>BIOL A430</td>
<td>Marine Mammal Biology (4)</td>
</tr>
<tr>
<td>BIOL A478</td>
<td>Biological Oceanography (4)</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>BIOL A403</td>
<td>Microtechnique (4)</td>
</tr>
</tbody>
</table>
BIOL A495 Instructional Practicum: Laboratory (1)
c. Special topics, independent study and individual research (credits vary):
   BIOL/CHEM/
   PHYS A456 Nonlinear Dynamics and Chaos (3)
   BIOL A490 Selected Lecture Topics in Biology (1-3)
   BIOL A490L Selected Laboratory Topics in Biology (1-3)
   BIOL A497 Independent Study in Biology
   BIOL A498 Individual Research
   BIOL A499 Senior Thesis (3)

*Integrative capstone courses

4. A total of 122-125 credits is required for the degree, of which 42 credits must be upper division.

Bachelor of Science, Natural Sciences

The Department of Biological Sciences also oversees the Bachelor of Science in Natural Sciences. This curriculum emphasizes the interrelationships among the sciences. A program of study in the Natural Sciences requires that students select an option within the degree, and complete all courses required within the option, as well as sufficient science elective courses to meet minimum unit requirements for graduation. Students accepted into this flexible degree program select one of three options: the General Sciences Option is designed for students who are interested in understanding the interrelationships among various scientific fields, or in teaching science at the secondary level. The Pre-Health Professions Option is designed to meet the admission requirements of specific professional schools in medicine, dentistry, and veterinary medicine. The Environmental Sciences Option is designed to prepare students for graduate school or for employment in the private or public sector.

For a complete program description see the Natural Sciences section of this chapter.

Minor, Biological Sciences

Students majoring in another subject who wish to minor in Biological Sciences must complete the following requirements. A total of 28 credits is required for the minor, 12 of which must be upper division.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL A115/L</td>
<td>Fundamentals of Biology I with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A116/L</td>
<td>Fundamentals of Biology II with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A242/L</td>
<td>Fundamentals of Cell Biology with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A252/L</td>
<td>Principles of Genetics with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>Upper division Biological Sciences electives</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

FACULTY

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Jocelyn Krebs, Professor, AFCEK@uaa.alaska.edu
Jerry Kudenov, Professor, AFJKD@uaa.alaska.edu
Date: April 11, 2011

To: Dr. Hilary Davies, Chair
   Undergraduate Academic Board

CC: Dr. Osama Abaza, Chair
    Curriculum Committee
    Department of Civil Engineering

          Dr. Robert Lang, Dean
          School of Engineering

From: Dr. Tom Ravens, Chair
      Department of Civil Engineering

Re: Catalog Copy Revisions
    Bachelor of Science in Civil Engineering Program
    Department of Civil Engineering
    School of Engineering

We are currently in the process of revising the Bachelor of Science in Civil Engineering Program to consistently address the needs of our stakeholders and to improve the effectiveness of program delivery. Part of this effort is to streamline program procedures and requirements beginning with admission through degree completion. This has necessitated certain revisions to the catalog description of the program. The changes requested are appended in hard copy. Both have been provided electronically as well for consideration by the UAB.
1a. School or College
   EN SOENGR

1b. Division
   No Division Code

1c. Department
   CE

2. Complete Program Title/Prefix
   Bachelor of Science, Civil Engineering/BSCE

3. Type of Program
   - OEC
   - Undergrad Certificate
   - AA/AAS
   - Baccalaureate
   - Minor
   - Post Baccalaureate Certificate
   - Graduate
   - Graduate Certificate
   - Doctoral
   - Specialty

4. Type of Action:
   - PROGRAM
     - Add
     - Change
     - Delete
   - PREFIX
     - Add
     - Change
     - Inactivate

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

6a. Coordination with Affected Units
   Department, School, or College: Civil Engineering
   Initiator Name (typed): Tom Ravens
   Initiator Signed Initials: _________ Date: __________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)
   Date: 3/18/2011

6c. Coordination with Library Liaison
   Date: 3/18/2011

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

8. Justification for Action
   CE is modifying its Program Objectives based on feedback from the ABET Accredidation Board.

   Initiator (faculty only)
   Tom Ravens
   Date
   Initiator (TYPE NAME)
   Date

   Approved
   Disapproved
   Dean/Director of School/College
   Date

   Approved
   Disapproved
   Undergraduate/Graduate Academic Board Chairperson
   Date

   Approved
   Disapproved
   Provost or Designee
   Date
Civil engineering is a professional discipline recognized by licensure in each of the 50 states and many other countries. Civil engineering is a broad branch of engineering dedicated to providing civilization with essential infrastructure and services including bridges, buildings, ports, water resource development, waste disposal, dams, water power, irrigation and drainage works, roads, airports, railways, construction and management services; surveying; and providing city management and developmental planning. Civil Engineering students are introduced to principles of mathematics, chemistry, and physics during their first two years of study. The third year of study is largely devoted to courses in applied extensions of the basic sciences to form the foundation for more advanced engineering analysis and design. Students draw upon previous learning in their senior year to focus their studies on sophisticated analyses and creative designs. Throughout the four-year engineering program students take courses in communication, humanities, social sciences, and fine arts to improve their communication skills and to become more aware of their roles and responsibilities in modern society. The UAA Civil Engineering program emphasizes northern region design considerations and provides specialized training appropriate for an engineering career in Alaska and other cold regions of the world.

Civil Engineering Department Mission

The mission of the Civil Engineering Department, through its undergraduate and graduate education programs, its professional development programs, its research, and its service is to advance the civil engineering profession in Alaska and elsewhere for building a sustainable civilization with utmost respect for the well-being of its peoples and the environment.

Bachelor of Science, Civil Engineering

The Department of Civil Engineering offers an undergraduate curriculum leading to a Bachelor of Science in Civil Engineering. The first two years of the program have application to most other branches of engineering.

Program Objectives and Expected Outcomes

The curriculum of the UAA CE program is designed to produce graduates who, within five years of graduation, will:

1. Practice with “responsible charge” in the civil engineering sub-disciplines of water resources, geotechnical, structural, transportation, and environmental engineering; with emphasis on cold region issues. “Responsible charge” is as defined by the Alaska Professional Engineering licensing regulations.
2. Make contributions in project planning, preparation, implementation, design, and presentation in a team environment in sub-discipline areas.
3. Demonstrate and update their competency via professional registration, continuing education, graduate study, and professional service to their communities.
4. Exemplify the ethical standards of the profession.

In keeping with the objectives, it is expected that graduates of the UAA Civil Engineering program will have:

1. An ability to apply knowledge of mathematics through differential equations, probability and statistics, calculus-based physics, and general chemistry;
2. An ability to apply knowledge in a minimum of four recognized major civil engineering areas;
3. An ability to design and conduct experiments, as well as to analyze and interpret data, in more than one of the recognized major civil engineering areas;
4. An ability to design a civil engineering system, component, or process to meet desired needs;
5. An ability to function on multidisciplinary teams;
6. An ability to identify, formulate, and solve engineering problems;
7. An understanding of professional and ethical responsibility;
8. An ability to communicate effectively;
9. The broad education necessary to understand the impact of engineering solutions in a global and societal context;
10. A recognition of the need for, and an ability to engage in, lifelong learning;
11. A knowledge of contemporary issues in professional practice; and
12. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
Honors in Civil Engineering
Undergraduate Civil Engineering students may be recognized for exceptional performance by earning Departmental Honors in Civil Engineering. In order to receive honors in Civil Engineering, a student must meet each of the following requirements:

1. Complete all requirements for a BS degree in Civil Engineering. A minimum of 30 credits applicable to the Civil Engineering degree must be completed at UAA.
2. Be an active member for at least one year of both a national and an on-campus student chapter of a professional engineering society that addresses issues relevant to the civil engineering profession.
3. Have a GPA of 3.30 or higher in courses applicable to the Bachelor of Science in Civil Engineering degree.
4. Gain approval for a departmental honors design or research project prior to applying for graduation. Present an oral presentation and written report of project results eight weeks prior to scheduled graduation. The project proposal and final written report must be approved by the student’s academic advisor and the chair of Civil Engineering Department.
5. Pass the Fundamentals of Engineering Examination in or prior to the fall semester of the senior year.
6. Document a minimum of eight weeks work experience in an engineering or engineering-related position.

Preparation
While in high school, students can prepare for entering and succeeding in the university engineering program. In order to be the best prepared, students should complete the following high school courses with grades of C or better:

- Algebra 2 years
- Chemistry 1 year
- English 3 years
- Physics 1 year
- Trigonometry 1/2 year

Students successfully completing the above courses will be prepared to enroll in the first year of courses that count towards the engineering degree. Students without the above preparatory courses will need to take equivalent university courses before taking some of the first year of courses that count towards the engineering degree. Students are encouraged to work with their faculty advisors for developing a course plan.

Admission Requirements
Complete the Baccalaureate Degree Programs Admission Requirements described in Chapter 7 of this catalog.

Admission to the Civil Engineering program is to one of two levels: Pre-Engineering or Civil Engineering. Students admitted to either of the two levels are considered to be degree-seeking civil engineering students.

Pre-Engineering Level
Applicants for admission who have completed only the general Baccalaureate Degree Program Admission Requirements in Chapter 7 of this catalog are admitted to the Civil Engineering program at the Pre-Engineering level.

Civil Engineering Level
Applicants for admission who, in addition to the general Baccalaureate Degree Program Admission Requirements, have completed the high school Preparation courses listed above (or their university equivalents) with grades of C or better will be admitted to the Civil Engineering program at the Civil Engineering level:

Advancement

**Pre-Engineering to Civil Engineering**
Pre-Engineering students must work with their assigned advisor to develop a course plan to make up the high school course requirements for advancement to the Civil Engineering level. Once the Pre-Engineering coursework outlined in the student’s course plan is completed, students must meet with their advisor to apply for advancement to the Civil Engineering level.

**Advising**
All undergraduate students are strongly encouraged to meet with their faculty advisor each semester for the purpose of reviewing their academic progress and planning future courses. All civil engineering students are required to meet with their faculty advisors to be advanced within the program and to apply for graduation. It is particularly important for students to meet with their faculty advisor whenever academic difficulties arise.
Academic Progress
Any given CE or ES course may only be taken when all prerequisites for the course are met with a grade of C or higher. A student who is unable to earn a grade of C or better in a CE or ES prerequisite course may attempt to earn a satisfactory grade one additional time, on a space-available basis. Failure to earn a grade of C or better on the second attempt may result in removal from the Civil Engineering program. A student who has a semester GPA in engineering courses below 2.00 will be placed on academic warning by the School of Engineering. A student on academic warning that receives a semester GPA in engineering courses of at least 2.00 will be removed from academic warning status by the school. Otherwise, he or she will be removed from the Civil Engineering program and will not be permitted to enroll in CE and ES courses.

Graduation Requirements
In order to receive the Bachelor of Science degree in Civil Engineering, students must complete the following graduation requirements:

A. General University Requirements
Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements
Complete the General Education Requirements for Baccalaureate Degrees (GER) listed at the beginning of this chapter with the additional requirement that one of the following criteria are met within the courses taken to meet the social sciences, humanities, and fine arts GER requirements:
1. Six credits are from courses that are at the 200 level or above.
2. Three credits are from courses that are at the 200 level or above and 6 credits are from a sequence of courses at the 100 level. For example, HIST A101 and HIST A102 is considered to be a 6-credit course sequence.

C. Civil Engineering Requirements
1. Satisfactorily complete these courses with a GPA of 2.00. Courses with an asterisk (*) must be completed with a grade of C or better (108 credits):
   - CE A334* Properties of Materials 3
   - CE A344 Water Resources Engineering 3
   - CE A402 Transportation Engineering 3
   - CE A403 Arctic Engineering 3
   - CE A422 Foundation Engineering 3
   - CE A431* Structural Analysis 4
   - CE A432 Steel Design (3) 3
   - or
   - CE A433 Reinforced Concrete Design (3)
   - CE A435* Soil Mechanics 3
   - CE A438 Design of Civil Engineering Systems 3
   - CE A441 Introduction to Environmental Engineering 3
   - CHEM A105* General Chemistry I 3
   - CHEM A105L* General Chemistry I Laboratory 1
   - CHEM A106* General Chemistry II 3
   - CHEM A106L* General Chemistry II Laboratory 1
   - COMM A111 Fundamentals of Oral Communications (3) 3
   - or
   - COMM A235 Small Group Communication (3)
   - or
   - COMM A237 Interpersonal Communication (3)
   - or
   - COMM A241 Public Speaking (3)
   - ENGL A111* Methods of Written Communications 3
   - ENGL A212 Technical Writing 3
   - ENGR A151* Engineering Practices I 3
   - ENGR A161* Engineering Practices II 3
   - ES A103 Engineering Graphics 3

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2. A natural science elective (minimum 3 credits) must be taken in addition to the 7-credit natural science General Education Requirement and may be selected from the following list:

- BIOL A115/L  Fundamentals of Biology I with Laboratory (4)
- BIOL A271/L  Principles of Ecology with Laboratory (4)
- CHEM A450  Environmental Chemistry (3)
- GEOL A111  Physical Geology (4)
- GEOL/ BIOL A178  Fundamentals of Oceanography (3)
- PHYS A303  Modern Physics (3)
- PHYS A314  Electromagnetics (3)
- PHYS A320  Simulation of Physical Systems (3)
- PHYS/BIOl/ CHEM A456 Nonlinear Dynamics and Chaos (3)

*Note: GEOL A111 is the recommended course.*

3. Six credits of technical elective courses are required that must be chosen from the following list of courses. These electives are intended to improve students’ knowledge and skills relating to site characterization, problem identification, criteria development, and project design in the civil engineering sub-disciplines of water resources, geotechnical, structural, transportation, and environmental engineering. Graduate courses may not be applied to both a baccalaureate and master’s degree.

**Water Resources Engineering**
- CE A662  Surface Water Dynamics (3)
- CE A663  Ground Water Dynamics (3)
- CE A674  Waves, Tides, and Ocean Process for Engineers (3)
- CE A682  Ice Engineering (3)
- CE A683  Arctic Hydrology and Hydraulic Engineering (3)
- CE A684  Arctic Utility Distribution (3)

**Geotechnical Engineering**
- CE A611  Geotechnical Earthquake Engineering (3)
- CE A612  Advanced Foundation Design (3)
- CE A676  Coastal Engineering (3)
- CE A681  Frozen Ground Engineering (3)

**Structural Engineering**
- CE A432  Steel Design (3)
  or
- CE A433  Reinforced Concrete Design (3)

*Either CE A432 or CE A433 may be chosen as a technical elective, if not applied to satisfy the Civil Engineering Professional requirements described above.*
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<td>CE A631</td>
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<td>CE A637</td>
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<td>AEST A601</td>
<td>Aquatic Process Chemistry</td>
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<td>CE A442</td>
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<td>CE A605</td>
<td>Chemical and Physical Water and Wastewater Treatment Processes</td>
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<td>CE A606</td>
<td>Biological Treatment Processes</td>
<td>(3)</td>
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</table>

4. A total of 132 credits is required for the degree, of which 42 credits must be upper division (300-, 400-, or 600-level).

5. All Civil Engineering students are strongly encouraged to take the Fundamentals of Engineering Examination in their senior year as an initial step toward professional registration. Civil Engineering students are also encouraged to consider minors in Mathematics or Physics and graduation with departmental honors.

**FACULTY**

Osama Abaza, Professor, AFOA@uaa.alaska.edu
Aaron Dotson, Assistant Professor, ADDOTSON@uaa.alaska.edu
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Hannele Zubeck, Professor, AFHKZ@uaa.alaska.edu
Civil engineering is a professional discipline recognized by licensure in each of the 50 states and many other countries. Civil engineering is a broad branch of engineering dedicated to providing civilization with essential infrastructure and services including bridges, buildings, ports, water resource development, waste disposal, dams, water power, irrigation and drainage works, roads, airports, railways, construction and management services; surveying; and providing city management and developmental planning. Civil Engineering students are introduced to principles of mathematics, chemistry, and physics during their first two years of study. The third year of study is largely devoted to courses in applied extensions of the basic sciences to form the foundation for more advanced engineering analysis and design. Students draw upon previous learning in their senior year to focus their studies on sophisticated analyses and creative designs. Throughout the four-year engineering program students take courses in communication, humanities, social sciences, and fine arts to improve their communication skills and to become more aware of their roles and responsibilities in modern society. The UAA Civil Engineering program emphasizes northern region design considerations and provides specialized training appropriate for an engineering career in Alaska and other cold regions of the world.

Civil Engineering Department Mission

The mission of the Civil Engineering Department, through its undergraduate and graduate education programs, its professional development programs, its research, and its service is to advance the civil engineering profession in Alaska and elsewhere for building a sustainable civilization with utmost respect for the well-being of its peoples and the environment.

Bachelor of Science, Civil Engineering

The Department of Civil Engineering offers an undergraduate curriculum leading to a Bachelor of Science in Civil Engineering. The first two years of the program have application to most other branches of engineering.

Accreditation

The Bachelor of Science program in Civil Engineering at UAA is accredited by the ABET which is the only accreditor of engineering programs and related fields of study in the US.

Program Objectives and Expected Outcomes

The curriculum of the UAA civil engineering program is designed to produce graduates who:

1. Have a basic knowledge of the principles and skills relating to the civil engineering sub-disciplines of water resources, geotechnical, structural, transportation, and environmental engineering;
2. Have an understanding of the principles related to project delivery;
3. Have sufficient technical competence to obtain employment as an entry-level engineer and to be able to progress professionally within the discipline, and are prepared for advanced study;
4. Have a fundamental understanding of the issues related to civil engineering practice in cold regions;
5. Have a basic knowledge of the principles and skills relating to the civil engineering sub-disciplines of water resources, geotechnical, structural, transportation, and environmental engineering; with emphasis on cold region issues. “Responsible charge” is as defined by the Alaska Professional Engineering licensing regulations.
6. Are able to communicate their ideas;
7. Are able to work within a team environment;
8. Are prepared for and understand the need for continued professional development throughout their careers.

The curriculum of the UAA CE program is designed to produce graduates who, within five years of graduation, will:

1. Practice with “responsible charge” in the civil engineering sub-disciplines of water resources, geotechnical, structural, transportation, and environmental engineering, with emphasis on cold region issues. “Responsible charge” is as defined by the Alaska Professional Engineering licensing regulations.
2. Make contributions in project planning, preparation, implementation, design, and presentation in a team environment in sub-discipline areas.
3. Demonstrate and update their competency via professional registration, continuing education, graduate study, and professional service to their communities.
4. Exemplify the ethical standards of the profession.
In keeping with the objectives, it is expected that graduates of the UAA Civil Engineering program will have:

1. An ability to apply knowledge of mathematics through differential equations, probability and statistics, calculus-based physics, and general chemistry;
2. An ability to apply knowledge in a minimum of four recognized major civil engineering areas;
3. An ability to design and conduct experiments, as well as to analyze and interpret data, in more than one of the recognized major civil engineering areas;
4. An ability to design a civil engineering system, component, or process to meet desired needs;
5. An ability to function on multidisciplinary teams;
6. An ability to identify, formulate, and solve engineering problems;
7. An understanding of professional and ethical responsibility;
8. An ability to communicate effectively;
9. The broad education necessary to understand the impact of engineering solutions in a global and societal context;
10. A recognition of the need for, and an ability to engage in, lifelong learning;
11. A knowledge of contemporary issues in professional practice; and
12. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

**Honors in Civil Engineering**

Undergraduate Civil Engineering students may be recognized for exceptional performance by earning Departmental Honors in Civil Engineering. In order to receive honors in Civil Engineering, a student must meet each of the following requirements:

1. Complete all requirements for a BS degree in Civil Engineering. A minimum of 30 credits applicable to the Civil Engineering degree must be completed at UAA.
2. Be an active member for at least one year of both a national and an on-campus student chapter of a professional engineering society that addresses issues relevant to the civil engineering profession.
3. Have a GPA of 3.30 or higher in courses applicable to the Bachelor of Science in Civil Engineering degree.
4. Gain approval for a departmental honors design or research project prior to applying for graduation. Present an oral presentation and written report of project results eight weeks prior to scheduled graduation. The project proposal and final written report must be approved by the student’s academic advisor and the chair of Civil Engineering Department.
5. Pass the Fundamentals of Engineering Examination in or prior to the fall semester of the senior year.
6. Document a minimum of eight weeks work experience in an engineering or engineering-related position.

**Preparation**

While in high school, students can prepare for entering and succeeding in the university engineering program. In order to be the best prepared, students should complete the following high school courses with grades of C or better:

- Algebra: 2 years
- Chemistry: 1 year
- English: 3 years
- Physics: 1 year
- Trigonometry: 1/2 year

Students successfully completing the above courses will be prepared to enroll in the first year of courses that count towards the engineering degree. Students without the above preparatory courses will need to take equivalent university courses before taking some of the first year of courses that count towards the engineering degree. Students are encouraged to work with their faculty advisors for developing a course plan.

**Admission Requirements**

Complete the Baccalaureate Degree Programs Admission Requirements described in Chapter 7 of this catalog.

Admission to the Civil Engineering program is to one of two levels: Pre-Engineering or Civil Engineering. Students admitted to either of the two levels are considered to be degree-seeking civil engineering students. Pre-engineering students are classified within the university system as pre-majors. Civil Engineering students are classified within the university system as full majors.

**Pre-Engineering Level**

Applicants for admission who have completed only the general Baccalaureate Degree Program Admission Requirements in Chapter 7 of this catalog are admitted as pre-majors to the Civil Engineering program at the Pre-Engineering level.
Civil Engineering Level

Applicants for admission who, in addition to the general Baccalaureate Degree Program Admission Requirements, have completed the following list of high school Preparation courses listed above (or their university equivalents) with grades of C or better will be admitted as full majors to the Civil Engineering program at the Civil Engineering level:

- Algebra: 2 years
- Chemistry: 1 year
- English: 3 years
- Physics: 1 year
- Trigonometry: 1/2 year

Advancement

Pre-Engineering to Civil Engineering

Pre-Engineering students must work with their assigned advisor to develop a course plan to make up the high school course requirements for advancement to the Civil Engineering level. Once the Pre-Engineering coursework outlined in the student's course plan is completed, students must meet with their advisor to apply for advancement to the Civil Engineering full major status. Students may also be advanced to Civil Engineering level by the department chair upon review of the students academic progress.

Advising

All undergraduate students are strongly encouraged to meet with their faculty advisor each semester for the purpose of reviewing their academic progress and planning future courses. All civil engineering students are required to meet with their faculty advisors to be advanced within the program and to apply for graduation. It is particularly important for students to meet with their faculty advisor whenever academic difficulties arise.

Academic Progress

Any given CE or ES course may only be taken when all prerequisites for the course are met with a grade of C or higher. A student who is unable to earn a grade of C or better in a CE or ES prerequisite course may attempt to earn a satisfactory grade one additional time, on a space-available basis. Failure to earn a grade of C or better on the second attempt may result in removal from the Civil Engineering program. A student who has a semester GPA in engineering courses below 2.00 will be placed on academic warning by the School of Engineering. A student on academic warning that receives a semester GPA in engineering courses of at least 2.00 will be removed from academic warning status by the school. Otherwise, he or she will be removed from the Civil Engineering program and will not be permitted to enroll in CE and ES courses.

Graduation Requirements

In order to receive the Bachelor of Science degree in Civil Engineering, students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees (GER) listed at the beginning of this chapter with the additional requirement that one of the following criteria are met within the courses taken to meet the social sciences, humanities, and fine arts GER requirements:

1. Six credits are from courses that are at the 200 level or above.
2. Three credits are from courses that are at the 200 level or above and 6 credits are from a sequence of courses at the 100 level. For example, HIST A101 and HIST A102 is considered to be a 6-credit course sequence.

C. Civil Engineering Requirements

1. Satisfactorily complete these courses with a GPA of 2.00. Courses with an asterisk (*) must be completed with a grade of C or better (108 credits):
CE A334*  Properties of Materials 3
CE A444  Water Resources Engineering 3
CE A402  Transportation Engineering 3
CE A403  Arctic Engineering 3
CE A422  Foundation Engineering 3
CE A431*  Structural Analysis 4
CE A432  Steel Design (3) 3
or
CE A433  Reinforced Concrete Design (3)
CE A435  Soil Mechanics 3
CE A438  Design of Civil Engineering Systems 3
CE A441  Introduction to Environmental Engineering 3
CHEM A105*  General Chemistry I 3
CHEM A105L*  General Chemistry I Laboratory 1
CHEM A106*  General Chemistry II 3
CHEM A106L*  General Chemistry II Laboratory 1
COMM A111  Fundamentals of Oral Communications (3) 3
or
COMM A235  Small Group Communication (3)
or
COMM A237  Interpersonal Communication (3)
or
COMM A241  Public Speaking (3)
ENGL A111*  Methods of Written Communications 3
ENGL A212  Technical Writing 3
ENGR A151*  Engineering Graphics 3
ENGR A209*  Engineering Statics 3
ENGR A210*  Engineering Dynamics 3
ES A103  Engineering Data Analysis 3
ES A309*  Elements of Electrical Engineering 3
ES A331*  Mechanics of Materials 3
ES A341*  Fluid Mechanics 3
ES A341L  Fluid Mechanics Laboratory 1
ES A346  Basic Thermodynamics 3
ESM A450  Economic Analysis and Operations 3
GEO A155*  Fundamentals of Surveying 3
MATH A200*  Calculus I 4
MATH A201*  Calculus II 4
MATH A202*  Calculus III 4
MATH A302*  Ordinary Differential Equations 3
PHYS A211*  General Physics I 3
PHYS A211L*  General Physics I Laboratory 1
PHYS A212*  General Physics II 3
PHYS A212L*  General Physics II Laboratory 1

2. A natural science elective (minimum 3 credits) must be taken in addition to the 7-credit natural science General Education Requirement and may be selected from the following list:

- BIOL A115/L  Fundamentals of Biology I with Laboratory (4)
- BIOL A271/L  Principles of Ecology with Laboratory (4)
- CHEM A450  Environmental Chemistry (3)
- GEO A111  Physical Geology (4)
- GEOL/BIOL A178  Fundamentals of Oceanography (3)
- PHYS A303  Modern Physics (3)
- PHYS A314  Electromagnetics (3)
- PHYS A320  Simulation of Physical Systems (3)
- PHYS/BIO/L CHEM A456 Nonlinear Dynamics and Chaos (3)
3. Six credits of technical elective courses are required that must be chosen from the following list of courses. These electives are intended to improve students' knowledge and skills relating to site characterization, problem identification, criteria development, and project design in the civil engineering sub-disciplines of water resources, geotechnical, structural, transportation, and environmental engineering. Graduate courses may not be applied to both a baccalaureate and master's degree.

**Water Resources Engineering**
- CE A662  Surface Water Dynamics (3)
- CE A663  Ground Water Dynamics (3)
- CE A674  Waves, Tides, and Ocean Process for Engineers (3)
- CE A677  Coastal Measurements and Analysis (3)
- CE A682  Ice Engineering (3)
- CE A683  Arctic Hydrology and Hydraulic Engineering (3)
- CE A684  Arctic Utility Distribution (3)

**Geotechnical Engineering**
- CE A611  Geotechnical Earthquake Engineering (3)
- CE A612  Advanced Foundation Design (3)
- CE A676  Coastal Engineering (3)
- CE A681  Frozen Ground Engineering (3)

**Structural Engineering**
- CE A432  Steel Design (3)
- CE A433  Reinforced Concrete Design (3)
- CE A434  Timber Design (3)
- CE A610  Engineering Seismology (3)
- CE A611  Geotechnical Earthquake Engineering (3)
- CE A612  Advanced Foundation Design (3)
- CE A631  Structural Finite Elements (3)
- CE A633  Structural Dynamics (3)
- CE A634  Structural Earthquake Engineering (3)
- CE A636  Multi-Story Building, Structural Design (3)
- CE A637  Earthquake Resistant Structural Design (3)
- CE A639  Loads on Structures (3)

**Transportation Engineering**
- CE A423  Traffic Engineering (3)
- CE A424  Pavement Design (3)
- CE A425  Highway Engineering (3)
- CE A675  Design of Ports and Harbors (3)
- GEO A436  Geomatics and Civil Design (3)

**Environmental Engineering**
- AEST A601  Aquatic Process Chemistry (3)
- AEST A602  Water Quality Management (3)
- AEST A603  Solid Waste Management (3)
- AEST A604  Environmental Law, Regulations and Permitting (3)
- AEST A605  National Environmental Policy Act (3)
- AEST A606  Clean Water Act (3)
- AEST A608  Fundamentals of Air Pollution (3)
- AEST A609  Remediation (3)
- CE A442  Environmental Systems Design (3)
- CE A600  Fundamentals of Environmental Science and Engineering (3)
- CE A605  Chemical and Physical Water and Wastewater Treatment Processes (3)
- CE A606  Biological Treatment Processes (3)

**Comment [A2]:** Grant, we discussed those courses thoroughly in the CE department meeting and recommended a different list based on a prescribed criteria. Please check with Tom Ravens to reflect those changes.

Osama
4. A total of 132 credits is required for the degree, of which 42 credits must be upper division (300-, 400-, or 600-level).

5. All Civil Engineering students are strongly encouraged to take the Fundamentals of Engineering Examination in their senior year as an initial step toward professional registration. Civil Engineering students are also encouraged to consider minors in Mathematics or Physics and graduation with departmental honors.

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Zhaohui (Joey) Yang, Associate Professor, AFZY@uaa.alaska.edu
Hannuk Zueck, Professor, AFHKZ@uaa.alaska.edu
Date: February 11, 2011

To: Chair, Undergraduate Academic Board, Faculty Senate

From: Dr. Minnie Yen, Chair, CBPP CIS Department

Subject: Bachelor of Business Administration Program, Management Information Systems

In 2009-2010, the CIS Department identified a need within the BBA MIS Program to include BA A241 Business Law as a major requirement. The catalog copy that was submitted added BA A241 to the CBPP upper division admission requirements instead of the BBA MIS core course requirement list. The attached PAR and catalog copy should correct the error.

In addition, the department is requesting to change the minor in Computer Information Systems to clarify and update the course requirements. Separate PAR is attached.
# Program/Prefix Action Request

**University of Alaska Anchorage**

**Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix**

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<th>1b. Division</th>
<th>1c. Department</th>
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Initiator Name (typed): Dr. Minnie Yen  
Initiator Signed Initials: _________  
Date: ________________

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**University of Alaska Anchorage**

Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

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<tr>
<td>Initiator Name (typed): Dr. Minnie Yen</td>
</tr>
<tr>
<td>Initiator Signed Initials: _______ Date:_______________</td>
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<td>The revision covered by this Program Action Request (PAR) is a minor change to the Bachelor of Business Administration, Management Information Systems Program. The Computer Information Systems Department determined that BA A241 Business Law should be integrated into the BBA program. The catalog copy that was previously submitted added BA A241 to the CBPP upper division admission requirements instead of in the BBA MIS core course requirement list. This request moves BA A241 from the CBPP upper division admission requirements to the BBA MIS core course requirement list.</td>
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<table>
<thead>
<tr>
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<th>Date</th>
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<tbody>
<tr>
<td>Dr. Minnie Yen</td>
<td>Date</td>
</tr>
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<table>
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<th>Initiator (TYPE NAME)</th>
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<th>Provost or Designee</th>
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<tr>
<td>Approved</td>
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<tr>
<td>Date</td>
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</table>
The Computer Information Systems Department provides educational opportunities in computer information systems through degree programs, courses for all students, and career-enrichment opportunities.

Courses involving computer instruction, as well as many other business school courses, are supported by seven computerized classrooms and state-of-the-art open laboratory facilities. These computer classrooms and labs provide students with hands-on learning experiences using the latest Intel workstations supported by state-of-the-art network servers. Our computer environment features several state-of-the-art software and tools for business information systems integration, development, and management.

College of Business and Public Policy students have the opportunity to use the computer facilities to help them with their coursework. Laboratories include special business presentation facilities, and an experimental multimedia and a decision-support room.

Computer courses are taught using both structured instructor-led and self-guided tutorial approaches in the traditional classroom as well as online discussions.

Computer Information Systems Degree Programs

The College of Business and Public Policy prepares students for computer careers in computer programming and systems design, network administration and database administration through our Associate of Applied Science in Business Computer Information Systems (BCIS). Students are prepared for computer careers in systems analysis and design, e-commerce, web design, end-user computing, managing information systems, databases and networks, and associated occupations through the Management Information Systems (MIS) major in the Bachelor of Business Administration. Both degrees are based on the Association of Information Technology Professionals (AITP) model curriculum and are linked so that the diligent student can move from the two-year to the four-year degree without losing credits.

Both degrees emphasize using computers within business and public sector settings through hands-on teaching methods. The student is prepared for the technical and security aspects of the computer environment as well as the techniques and issues of managing information resources through the introduction of the theories followed by hands-on experience with the associated application.

Computer career education in the College of Business and Public Policy is enhanced by work and internship opportunities both within our own laboratories and with business and government facilities.

Associate of Applied Science, Business Computer Information Systems

Admission Requirements

Satisfy the Admission to Certificate and Associate Degree Program Requirements in Chapter 7, Academic Standards and Regulations. English and math placement tests are given by the Advising and Testing Center. A faculty advisor can assist students by recommending the proper levels of entry and appropriate CIS course plan. Students who are not proficient in typing (a minimum of 30 words per minute) should enroll in CIOS A101A Keyboarding A: Basic Keyboarding. Students must be able to read and comprehend technical manuals and texts.

Academic Progress

A grade of C or better is required to continue in each higher CIS course. To take upper division Information Systems program courses, students must complete lower division degree requirements and apply for upper division standing.

General University Requirements

1. Complete the General University Requirements for Associate Degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Course Requirements (15 credits) located at the beginning of this
chapter. ENGL A212 is recommended. For the General Course Requirements, it is strongly recommended that students select 6 credits from humanities, math and natural sciences or social sciences that meet both the AAS and the baccalaureate General Education Requirements.

Major Requirements

1. Complete the breadth requirements:
   - ACCT A201* Principles of Financial Accounting 3
   - ACCT A202 Principles of Managerial Accounting 3
   - CIS A110 Computer Concepts in Business 3
   - ECON A201 Principles of Macroeconomics 3
   - ECON A202 Principles of Microeconomics 3
   - MATH A107 College Algebra (4) 3-4
     or
   - MATH A172 Applied Finite Mathematics (3)
   General Education Requirement elective** 3

   *The ACCT A101 Principles of Financial Accounting I and ACCT A102 Principles of Financial Accounting II sequence may be used to satisfy the ACCT A201 requirement for this degree.

   **Choose humanities or natural sciences course that meets both AAS and General Education Requirements for baccalaureate degrees.

2. Complete the Business core requirement:
   - BA A273 Introduction to Statistics for Business and Economics 3

3. Complete CIS required courses:
   - CIS A210 Contemporary Business Applications Development 3
   - CIS A310 Analysis of Business Systems 3
   - CIS A330 Database Management Systems 3
   - CIS A345 Managing Data Communications and Computer Networks 3

4. Complete elective credits approved by a CIS Department advisor. 9

   No more than 3 credits of internship can be used to fulfill program electives.

5. A minimum of 12 credits from Major Requirements, items 3 and 4 above, must be earned at the University of Alaska Anchorage.

6. A total of 60-61 credits is required for the degree.

Bachelor of Business Administration, Management Information Systems

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Admission Requirements to Upper Division Courses

1. Completion of at least 39-40 credits with a cumulative GPA of 2.25 or higher.

2. Completion of each of the following courses with a grade of C or better:
   - ACCT A201 Principles of Financial Accounting 3
   - ACCT A202 Principles of Managerial Accounting 3
   - BA A273 Introduction to Statistics for Business and Economics 3
   - CIS A110 Computer Concepts in Business 3
   - CIS A280 Managerial Communications 3
   - ECON A201 Principles of Macroeconomics 3
   - ECON A202 Principles of Microeconomics 3
   - ENGL A111 Methods of Written Communication 3
   - ENGL A212 Technical Writing 3
MATH A107  College Algebra (4)  3-4
or
MATH A172  Applied Finite Mathematics (3)
Oral Communication Skills GER  3
COMM A111  Fundamentals of Oral Communications (3)
or
COMM A241  Public Speaking (3)

3. Completion of any combination of at least 9 credits in the following General Education disciplinary areas:  9
   Fine Arts
   Humanities
   Natural Sciences

Admission to Upper Division Status

BBA students in Management Information Systems who do not meet the above standards may not take upper division courses in ACCT, BA, CIS, or LOG.

Other students who meet course prerequisites may take up to 15 upper division ACCT, BA, CIS, and LOG credits without being formally admitted to a BBA program. All students must apply for admission to a BBA program before accumulating more than 15 such credits. Please contact the Student Information Office for assistance in applying for admission to upper division standing within the College of Business and Public Policy.

Conditional Admission to Upper Division Status

A student classified as being conditionally admitted to upper division status may take upper division ACCT, BA, CIS and LOG courses for one semester only, while completing lower division deficiencies.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements
Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements
Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Business and Public Policy Requirements: Management Information Systems Major
Students earning a BBA degree must complete at least 50 percent of their required business credits at the University of Alaska Anchorage. All ACCT, BA, CIS, ECON, LGOP, and LOG courses are considered business credits for the purpose of this requirement.

1. Complete the Business core requirements with a grade of C or better:
   ACCT A201*  Principles of Financial Accounting  3
   ACCT A202  Principles of Managerial Accounting  3
   BA/JUST A241  Business Law I  3
   BA A273  Introduction to Statistics for Business and Economics  3
   CIS A110  Computer Concepts in Business  3
   CIS A280  Managerial Communications  3
   ECON A201  Principles of Macroeconomics  3
   ECON A202  Principles of Microeconomics  3
   ENGL A212  Technical Writing  3
   MATH A107  College Algebra (4)  3-4
   or
   MATH A172  Applied Finite Mathematics (3)
   MATH A200  Calculus I (4)  3-4
   or
   MATH A272  Applied Calculus (3)
*The ACCT A101 and ACCT A102 sequence may be used to satisfy the ACCT A201 requirement for this degree.

Note: Students who plan to attend graduate school are encouraged to take MATH A107 and MATH A200, MATH A201 Calculus II, MATH A202 Calculus III instead of MATH A172 and MATH A272. MATH A108 Trigonometry is a prerequisite for MATH A200.

2. Complete the following requirements. The following courses must be completed with a grade of C or better prior to graduating:
   - BA A300 Organizational Theory and Behavior 3
   - BA A325 Corporate Finance 3
   - BA A343 Principles of Marketing 3
   - BA A377 Operations Management 3
   - BA A462 Strategic Management 3
   - CIS A376 Management Information Systems (GER Integrative Capstone) 3

D. Major Requirements

1. Complete the following required courses with a grade of C or better:
   - CIS A210 Contemporary Business Applications Development 3
   - CIS A310 Analysis of Business Systems 3
   - CIS A330 Database Management Systems 3
   - CIS A345 Managing Data Communications and Computer Networks 3
   - CIS A410 Project Management 3
   - CIS A489 Systems Design, Development and Implementation 3

2. Complete 12 credits of upper division program electives approved by the department with a grade of C or better.
   These may include, but are not limited to:
   - CIS A360 Object-Oriented Programming in .Net (3)
   - CIS A361 Advanced Contemporary Business Applications Development (3)
   - CIS A365 Object-Oriented Programming (3)
   - CIS A390 Selected Topics in Management Information Systems (1-6)
   - CIS A395 Programmer/Analyst Internship (3)
   - CIS A375 E-Training Design and End-User Support (3)
   - CIS A385 Multimedia Authoring (3)
   - CIS A430 Client-Server Programming for Business Applications (3)
   - CIS A445 Advanced Network Management (3)
   - CIS A460 Web Development in the .Net Environment (3)
   - CIS A495 Systems Analyst/User Support Internship (3)
   - CIS A498 Individual Research Project (1-6)
   - ECON A312 Econometrics for Business and Economics (3)
   - ECON A429 Business Forecasting (3)

3. A minimum of CIS A489 Systems Design, Development, and Implementation and 9 credits from Major Requirements, items 1 and 2, must be earned at the University of Alaska Anchorage.

4. A total of 120 credits is required for the degree, of which a minimum of 45 credits must be upper division.

Minor, Computer Information Systems
Students majoring in another subject who wish to minor in Computer Information Systems (CIS) must complete the following requirements. A total of 18 credits is required for the minor, 12 of which must be upper division.

- **CIS A110**  Computer Concepts in Business  3
- **CIS A210**  Contemporary Business Applications Development  3
- **CIS A330**  Database Management Systems  3
- **CIS A376**  Management Information Systems (GER Integrative Capstone)  3
- **Upper division CIS electives**  6

* BBA Economics, Finance, Global Logistics, Management, and Marketing degree students must take **CIS A310 Analysis of Business Systems**, instead of **CIS A376 for the minor** and 6 credits of upper division CIS electives from the following list:

- **CIS A360**  Object-Oriented Programming in .Net  (3)
- **CIS A361**  Advanced Contemporary Business Applications Development  (3)
- **CIS A365**  Object-Oriented Programming  (3)
- **CIS A390**  Selected Topics in Management Information Systems  (1-6)
- **CIS A395**  Programmer/Analyst Internship  (3)
- **CIS A375**  E-Training Design and End-User Support  (3)
- **CIS A385**  Multimedia Authoring  (3)
- **CIS A430**  Client-Server Programming for Business Applications  (3)
- **CIS A445**  Advanced Network Management  (3)
- **CIS A460**  Web Development in the .Net Environment  (3)
- **CIS A495**  Systems Analyst/User Support Internship  (3)
- **CIS A498**  Individual Research Project  (1-6)
- **ECON A312**  Econometrics for Business and Economics  (3)
- **ECON A429**  Business Forecasting  (3)

All students pursuing a minor in CIS must apply to the College of Business and Public Policy for upper division standing prior to taking any upper division course in CIS. Students pursuing a baccalaureate degree outside the College of Business and Public Policy with a minor in CIS can establish upper division standing by going to the College of Business and Public Policy Student Information Office and certifying they have completed at least 54 credits in their degree program and have completed the General Education Requirements of 6 credits of written communications, 3 credits of oral communication, 3 credits of college algebra (MATH A107 College Algebra or MATH A172 Applied Finite Mathematics or equivalent), and 12 credits in GER courses in fine arts, humanities, social sciences, or natural sciences.

**FACULTY**

Alpana Desai, Associate Professor, AFAMD@uaa.alaska.edu
Dennis Drinka, Associate Professor, AFDED@uaa.alaska.edu
David Fitzgerald, Associate Professor, AFDAM@uaa.alaska.edu
Bogdan Hoanca, Associate Professor, AFBH@uaa.alaska.edu
Yoshito Kanamori, Assistant Professor, AFYK@uaa.alaska.edu
John Pauli, Associate Professor, AFJTP1@uaa.alaska.edu
Cherie Shrader, Professor, AFCLS1@uaa.alaska.edu
Kathleen L. Voge, Associate Professor, AFKLV@uaa.alaska.edu
Minnie Yen, Professor, AFMYY@uaa.alaska.edu
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Computer career education in the College of Business and Public Policy is enhanced by work and internship opportunities both within our own laboratories and with business and government facilities.

Associate of Applied Science, Business Computer Information Systems

Admission Requirements

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Academic Progress

A grade of C or better is required to continue in each higher CIS course. To take upper division Information Systems program courses, students must complete lower division degree requirements and apply for upper division standing.

General University Requirements

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

2. Complete the Associate of Applied Science General Course Requirements (15 credits) located at the beginning of this
chapter. ENGL A212 is recommended. For the General Course Requirements, it is strongly recommended that students select 6 credits from humanities, math and natural sciences or social sciences that meet both the AAS and the baccalaureate General Education Requirements.

**Major Requirements**

1. Complete the breadth requirements:
   - **ACCT A201** Principles of Financial Accounting 3
   - **ACCT A202** Principles of Managerial Accounting 3
   - **CIS A110** Computer Concepts in Business 3
   - **ECON A201** Principles of Macroeconomics 3
   - **ECON A202** Principles of Microeconomics 3
   - **MATH A107** College Algebra (4) 3-4
   - **MATH A172** Applied Finite Mathematics (3) 3

   General Education Requirement elective** 3

   *The ACCT A101 Principles of Financial Accounting I and ACCT A102 Principles of Financial Accounting II sequence may be used to satisfy the ACCT A201 requirement for this degree.

   **Choose humanities or natural sciences course that meets both AAS and General Education Requirements for baccalaureate degrees.

2. Complete the Business core requirement:
   - **BA A273** Introduction to Statistics for Business and Economics 3

3. Complete CIS required courses:
   - **CIS A210** Contemporary Business Applications Development 3
   - **CIS A310** Analysis of Business Systems 3
   - **CIS A330** Database Management Systems 3
   - **CIS A345** Managing Data Communications and Computer Networks 3

4. Complete elective credits approved by a CIS Department advisor. 9

   *No more than 3 credits of internship can be used to fulfill program electives.*

5. A minimum of 12 credits from Major Requirements, items 3 and 4 above, must be earned at the University of Alaska Anchorage.

6. A total of 60-61 credits is required for the degree.

**Bachelor of Business Administration, Management Information Systems**

**Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

**Admission Requirements to Upper Division Courses**

1. Completion of at least 39-40 credits with a cumulative GPA of 2.25 or higher.

2. Completion of each of the following courses with a grade of C or better:
   - **ACCT A201** Principles of Financial Accounting 3
   - **ACCT A202** Principles of Managerial Accounting 3
   - **BA/JUST A241** Business Law 3
   - **BA A273** Introduction to Statistics for Business and Economics 3
   - **CIS A110** Computer Concepts in Business 3
   - **CIS A280** Managerial Communications 3
   - **ECON A201** Principles of Macroeconomics 3
   - **ECON A202** Principles of Microeconomics 3
   - **ENGL A111** Methods of Written Communication 3
ENGL A212 Technical Writing 3
MATH A107 College Algebra (4) 3-4
or
MATH A172 Applied Finite Mathematics (3) 3
Oral Communication Skills GER
COMM A111 Fundamentals of Oral Communications (3) or
COMM A241 Public Speaking (3)

3. Completion of any combination of at least 9 credits in the following General Education disciplinary areas:
   Fine Arts
   Humanities
   Natural Sciences

Admission to Upper Division Status

BBA students in Management Information Systems who do not meet the above standards may not take upper division courses in ACCT, BA, CIS, or LOG.

Other students who meet course prerequisites may take up to 15 upper division ACCT, BA, CIS, and LOG credits without being formally admitted to a BBA program. All students must apply for admission to a BBA program before accumulating more than 15 such credits. Please contact the Student Information Office for assistance in applying for admission to upper division standing within the College of Business and Public Policy.

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A student classified as being conditionally admitted to upper division status may take upper division ACCT, BA, CIS and LOG courses for one semester only, while completing lower division deficiencies.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Business and Public Policy Requirements: Management Information Systems Major

Students earning a BBA degree must complete at least 50 percent of their required business credits at the University of Alaska Anchorage. All ACCT, BA, CIS, ECON, LGOP, and LOG courses are considered business credits for the purpose of this requirement.

1. Complete the Business core requirements with a grade of C or better:
   ACCT A201* Principles of Financial Accounting 3
   ACCT A202 Principles of Managerial Accounting 3
   BA/JUST A241 Business Law I 3
   or
   BA A273 Introduction to Statistics for Business and Economics 3
   CIS A110 Computer Concepts in Business 3
   CIS A280 Managerial Communications 3
   ECON A201 Principles of Macroeconomics 3
   ECON A202 Principles of Microeconomics 3
   ENGL A212 Technical Writing 3
   MATH A107 College Algebra (4) 3-4
   or
   or
   MATH A172 Applied Finite Mathematics (3) 3-4
   or
   MATH A200 Calculus I (4) 3-4
MATH A272  Applied Calculus (3)

*The ACCT A101 and ACCT A102 sequence may be used to satisfy the ACCT A201 requirement for this degree.

Note: Students who plan to attend graduate school are encouraged to take MATH A107 and MATH A200, MATH A201 Calculus II, MATH A202 Calculus III instead of MATH A172 and MATH A272. MATH A108 Trigonometry is a prerequisite for MATH A200.

2. Complete the following requirements. The following courses must be completed with a grade of C or better prior to graduating:
   - BA A300  Organizational Theory and Behavior 3
   - BA A325  Corporate Finance 3
   - BA A343  Principles of Marketing 3
   - BA A377  Operations Management 3
   - BA A462  Strategic Management 3
   - CIS A376  Management Information Systems 3
   (GER Integrative Capstone)

D. Major Requirements

1. Complete the following required courses with a grade of C or better:
   - CIS A210  Contemporary Business Applications Development 3
   - CIS A310  Analysis of Business Systems 3
   - CIS A330  Database Management Systems 3
   - CIS A345  Managing Data Communications and Computer Networks 3
   - CIS A410  Project Management 3
   - CIS A489  Systems Design, Development and Implementation 3

2. Complete 12 credits of upper division program electives approved by the department with a grade of C or better. These may include, but are not limited to:
   - CIS A360  Object-Oriented Programming in .Net (3)
   - CIS A361  Advanced Contemporary Business Applications Development Programming for Business (3)
   - CIS A365  Object-Oriented Programming (3)
   - CIS A390  Selected Topics in Management Information Systems (1-6)
   - CIS A395  Programmer/Analyst Internship (3)
   - CIS A4275  Consulting and Training End User E-Training Design and End-User Support (3)
   - CIS A4215  Multimedia Authoring (3)
   - CIS A430  Client-Server Programming for Business Applications (3)
   - CIS A445  Advanced Network Management (3)
   - CIS A460  Web Development in the .Net Environment (3)
   - CIS A495  Systems Analyst/User Support Internship (3)
   - CIS A498  Individual Research Project (1-6)
   - ECON A312  Econometrics for Business and Economics (3)
   - ECON A429  Business Forecasting (3)

3. A minimum of CIS A489 Systems Design, Development, and Implementation and 9 credits from Major Requirements, items 1 and 2, must be earned at the University of Alaska Anchorage.

4. A total of 120 credits is required for the degree, of which a minimum of 45 credits must be upper division.
Minor, Computer Information Systems*

Students majoring in another subject who wish to minor in Computer Information Systems (CIS) must complete the following requirements. A total of 18 credits is required for the minor, 12 of which must be upper division.

<table>
<thead>
<tr>
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<td>CIS A110</td>
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<td>CIS A210</td>
<td>Contemporary Business Applications</td>
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<td>CIS A330</td>
<td>Database Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>CIS A376**</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>(GER Integrative Capstone)</td>
<td></td>
</tr>
<tr>
<td>Upper division CIS electives**</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

*Not available to BBA Management Information Systems majors.

**BBA Economics, Finance, Global Logistics, Management, and Marketing degree students must take CIS A310 Analysis of Business Systems, instead of CIS A376 for the minor and 6 credits of upper division CIS electives from the following list:

- CIS A310 Analysis of Business Systems
- CIS A360 Object-Oriented Programming
- CIS A361 Advanced Contemporary Business Applications Development
- CIS A365 Object-Oriented Programming
- CIS A390 Selected Topics in Management Information Systems
- CIS A395 Programmer/Analyst Internship
- CIS A375 E-Training Design and End-User Support
- CIS A385 Multimedia Authoring
- CIS A430 Client-Server Programming for Business Applications
- CIS A445 Advanced Network Management
- CIS A460 Web Development in the .Net Environment
- CIS A495 Systems Analyst/User Support Internship
- CIS A498 Individual Research Project
- ECON A312 Econometrics for Business and Economics
- ECON A429 Business Forecasting
- CIS A360 CIS A375 CIS A395 CIS A460
- CIS A361 CIS A385 CIS A430 CIS A495
- CIS A365 CIS A390 CIS A445 CIS A498
- ECON A312 ECON A429 and other approved electives

All students pursuing a minor in CIS must apply to the College of Business and Public Policy for upper division standing prior to taking any upper division course in CIS. Students pursuing a baccalaureate degree outside the College of Business and Public Policy with a minor in CIS can establish upper division standing by going to the College of Business and Public Policy Student Information Office and certifying they have completed at least 54 credits in their degree program and have completed the General Education Requirements of 6 credits of written communications, 3 credits of oral communication, 3 credits of college algebra (MATH A107 College Algebra or MATH A172 Applied Finite Mathematics or equivalent), and 12 credits in GER courses in fine arts, humanities, social sciences, or natural sciences.

FACULTY
Alpana Desai, Associate Professor, AFAMD@uaa.alaska.edu
Dennis Drinka, Associate Professor, AFED@uaa.alaska.edu
David Fitzgerald, Associate Professor, AFDAF@uaa.alaska.edu
Bogdan Hoanca, Associate Professor, AFBH@uaa.alaska.edu
Yoshito Kanamori, Assistant Professor, AFYK@uaa.alaska.edu
# Course Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>AS CAS</th>
<th>1b. Division</th>
<th>AHUM Division of Humanities</th>
<th>1c. Department</th>
<th>Languages</th>
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<tbody>
<tr>
<td>2. Course Prefix</td>
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<td>3. Course Number</td>
<td>A201</td>
<td>4. Previous Course Prefix &amp; Number</td>
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<td>5b. Contact Hours (Lecture + Lab)</td>
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</table>

## 6. Complete Course Title

**Second Year Chinese I**

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

## 7. Type of Course

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

## 8. Type of Action:

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

*If a change, mark appropriate boxes:*

- [ ] Prefix
- [ ] Credits
- [ ] Grade
- [ ] Grading Basis
- [ ] Title
- [ ] Course Description
- [ ] Text Score Prerequisites
- [ ] Other Restrictions
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major

<table>
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<th>9. Repeat Status No</th>
<th># of Repeats</th>
<th>Max Credits</th>
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<tr>
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</tbody>
</table>

## 10. Grading Basis

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

## 11. Implementation Date

**semester/year**

**From:** Fall/2011  **To:** Fall/9999

## 12. Cross Listed

- [ ] with
- [ ] Stacked with

**Cross-Listed Coordination Signature**

## 13a. Impacted Courses or Programs:

List any programs or college requirements that require this course.

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

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<thead>
<tr>
<th>Impacted Program/Course</th>
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<th>Chair/Coordinator Contacted</th>
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<tr>
<td>3.</td>
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</tr>
</tbody>
</table>

**Initiator Name (typed):** Patricia Fagan  
**Initiator Signed Initials:** _________  
**Date:** __________

## 13b. Coordination Email

**Date:** November 23, 2010

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

## 13c. Coordination with Library Liaison

**Date:** November 23, 2010

## 14. General Education Requirement

**Mark appropriate box:**

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

## 15. Course Description

Intermediate course for students with basic knowledge of Chinese. Enhances listening, speaking, reading, and writing skills for effective communication at the second year level. Students critically examine diverse cultural perspectives. Course conducted in Chinese.

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

- CHIN A102

## 16b. Test Score(s)

- N/A

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

- N/A

## 16d. Other Restriction(s)

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

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

- N/A

## 17. Mark if course has fees

- [ ]

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

- [ ]

## 19. Justification for Action

Reinstatement of second year Chinese, first semester, meets student demand and can be applied to B.A. in Languages, Option II: Dual Languages, and to the B.A. in International Studies: Northeast Asia Track.

**Initiator (faculty only):** Patricia Fagan  
**Initiator (TYPE NAME):** Patricia Fagan

**Date:** __________

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**Initiator (faculty only):** Patricia Fagan  
**Initiator (TYPE NAME):** Patricia Fagan

**Date:** __________

**Approved**

<table>
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<th>Dean/Director of School/College</th>
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<th>Undergraduate/Graduate Academic</th>
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<th>Board Chairperson</th>
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<thead>
<tr>
<th>Date</th>
<th>Provost or Designee</th>
</tr>
</thead>
</table>

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**148**
I. Initiation Date: Fall 2011

II. Course Information:
   A. College: College of Arts & Sciences
   B. Course Title: Second Year Chinese I
   C. Course Subject/Number: CHIN A201
   D. Credit Hours: 4.0
   E. Contact Time: 4 + 0 hours per week
   F. Grading Information: A-F
   G. Course Description: Intermediate course for students with basic knowledge of Chinese. Enhances listening, speaking, reading, and writing skills for effective communication at the second year level. Students critically examine diverse cultural perspectives. Course conducted in Chinese.
   H. Status of course relative to degree or certificate programs: Required for B.A. degree in Languages with a secondary emphasis in Chinese.
   I. Course Attributes: Applies toward GER Tier II Humanities and toward CAS Languages/Humanities two-semester sequence.
   J. Course Fees: Yes
   K. Coordination: UAA Faculty List Serve
   L. Course Prerequisite: CHIN A102
   M. Registration Restriction: None

III. Instructional Goals and Defined Student Outcomes:

   **Instructional Goals:** The instructor will:
   1) Create course assignments and class activities which continue to enhance listening, speaking, reading, and writing proficiency in Chinese.
   2) Develop approaches in identifying the variety of ways in which cultural objects and belief systems of Chinese-speaking communities acquire value and significance.
   3) Provide tools with which students can critically examine values, customs and institutions that differ from their own.
Defined Student Outcomes:

<table>
<thead>
<tr>
<th>Demonstrate second year proficiency in listening in Chinese: Comprehend simple, yet connected discourse relating to generally predictable topics, personal environment, and social demands.</th>
<th>Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate second year proficiency in speaking in Chinese: Communicate to satisfy simple personal needs and social demands as well as narrate or describe basic information in major time frames. Expand upon the vocabulary, grammar, and communicative functions acquired in CHIN A102.</td>
<td>Interviews and dialogues</td>
</tr>
<tr>
<td>Demonstrate second year proficiency in reading in Chinese: Comprehend simple, yet connected discourse relating to generally predictable topics and daily environment.</td>
<td>Tests</td>
</tr>
<tr>
<td>Demonstrate second year proficiency in writing in Chinese: Present uncomplicated creative language pertaining to familiar topics or relating to major aspects of life.</td>
<td>Writing samples and tests</td>
</tr>
<tr>
<td>Demonstrate cultural knowledge of new topics addressed. Adopt critical perspectives for understanding diversity.</td>
<td>Tests</td>
</tr>
</tbody>
</table>

IV. Course Activities:
   This course reflects a balance of learner-centered, small-group collaboration as well as instructor-delivered lesson format.

V. Methods of Assessment:
   A student’s grade will be based upon individual performance in class-session preparedness and participation in Chinese; listening, speaking, reading, and writing assignments; oral presentations or aural/oral evaluations; written quizzes and exams.

VI. Course-level Justification:
   This class is appropriate at the 200-level because it requires two semesters of previous study in Chinese.

VII. Course Outline:
   A. Listening in Chinese at the second year level:
      Comprehension of simple, yet connected discourse relating to generally predictable topics, personal environment, and social demands. Expansion upon the vocabulary, grammar, and communicative functions of CHIN A102.
   B. Speaking in Chinese at the second year level:
      Oral communication to satisfy simple personal needs and social demands as well as narrate or describe basic information in major time frames. Expansion upon the vocabulary, grammar, communicative functions of CHIN A102.
C. Reading in Chinese at the second year level:
Comprehension of simple, yet connected discourse relating to generally
predictable topics and daily environment. Expansion upon
the vocabulary, grammar, and communicative functions of CHIN A102.

D. Writing in Chinese at the second year level:
Presentation of uncomplicated creative language pertaining to familiar
topics or relating to major aspects of life. Expansion upon the vocabulary,
grammar, and communicative functions of CHIN A102.

E. Cultural knowledge of the communities which speak Chinese:
Critical examination of diverse cultural perspectives.

VIII. Suggested Texts:


Liu Y., Yao, T., Integrated Chinese Character Workbook, Simplified Character

Liu Y., Yao, T., Integrated Chinese Character Audio CDs, Level I, Part II. 3rd

Recommended:


IX. Bibliography and Resources:

Barne, Geremie R. In the Red: On Contemporary Chinese Culture. New York:

Bean, John C. Engaging Ideas. The Professor’s Guide to Integrating Writing,

Besio, Kimberly. Three Kingdoms and Chinese Culture. New York: State

Brown, H. Douglas. Teaching by Principles: An Interactive Approach to


Recommended websites:
http://www.usc.edu/dept/ealc/chinese/newweb/character_page.html
http://www.language.berkeley.edu/ic/mb/toc.html
### Course Action Request

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

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<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<td>CHIN</td>
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**6. Complete Course Title**  
Second Year Chinese II  
Abbreviated Title for Transcript (30 character):

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

**8. Type of Action:**  
- Add
- Change
- Delete

**9. Repeat Status No # of Repeats**  
N/A

**10. Grading Basis**  
- A-F
- P/NP
- NG

**11. Implementation Date**  
From: Fall/2011  
To: Fall/9999

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

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

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</table>

**Initiator Name (typed): Patricia Fagan**  
Initiator Signed Initials: [________]  
Date: [________]

**13b. Coordination Email**  
Date: November 23, 2010  
submitted to Faculty Listserv: [uaa-faculty@lists.ualaska.edu](mailto:uaa-faculty@lists.ualaska.edu)

**13c. Coordination with Library Liaison**  
Date: November 23, 2010

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

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


**16a. Course Prerequisite(s) (list prefix and number)**  
CHIN A201

**16b. Test Score(s)**  
N/A

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

**16d. Other Restriction(s)**  
- College
- Major
- Class
- Level

**16e. Registration Restriction(s) (non-codable)**  
N/A

**17. Mark if course has fees**

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

**19. Justification for Action**

Addition of second year Chinese, semester II, meets student demand and can be applied to B.A. in Languages, Option II: Dual Languages, and to the B.A. in International Studies: Northeast Asia Track.

**Initiator (faculty only) Patricia Fagan**  
Initiator (TYPE NAME)

<table>
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<tr>
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</table>

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

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

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

**Approved**  
**Disapproved**  
Provost or Designee  
Date
I. Initiation Date: Fall 2011

II. Course Information:
   A. College: College of Arts & Sciences
   B. Course Title: Second Year Chinese II
   C. Course Subject/Number: CHIN A202
   D. Credit Hours: 4.0
   E. Contact Time: 4 + 0 hours per week
   F. Grading Information: A-F
   G. Course Description: Continuation of first semester in second year Chinese. Further develops listening, speaking, reading and writing proficiency for effective communication and in preparation for advanced study of Chinese. Students interpret diverse cultural perspectives. Course conducted in Chinese.
   H. Status of course relative to degree or certificate programs: Required for B.A. degree in Languages with a secondary emphasis in Chinese.
   I. Course Attributes: Applies toward GER Tier II Humanities and toward CAS Languages/Humanities two-semester sequence.
   J. Course Fees: Yes
   K. Coordination: UAA Faculty List Serve
   L. Course Prerequisite: CHIN A201
   M. Registration Restriction: None

III. Instructional Goals and Defined Student Outcomes:

   **Instructional Goals:** The instructor will:
   1) Create course assignments and class activities which continue to advance listening, speaking, reading, and writing skills in Chinese.
   2) Develop approaches in analyzing the variety of ways in which cultural objects and belief systems of Chinese-speaking communities acquire value and significance.
   3) Provide tools with which students can interpret the values, customs, and institutions that differ from their own.
### Defined Student Outcomes:

<table>
<thead>
<tr>
<th>Defined Student Outcomes:</th>
<th>Assessment Procedures:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate second year, second semester proficiency in listening in Chinese: Comprehend simple, yet sustained discourse built upon the vocabulary, grammar, and communicative functions acquired in CHIN A201.</td>
<td>Tests</td>
</tr>
<tr>
<td>Demonstrate second year, second semester proficiency in speaking in Chinese: Communicate to satisfy personal needs and work/school demands or to convey information which is built upon the vocabulary, grammar, and communicative functions acquired in CHIN A201.</td>
<td>Interviews and dialogues</td>
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<td>Demonstrate second year, second semester proficiency in reading in Chinese: Comprehend simple, yet sustained discourse built upon the vocabulary, grammar, and communicative functions acquired in CHIN A201.</td>
<td>Tests</td>
</tr>
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<td>Demonstrate second year, second semester proficiency in writing in Chinese: Present creative language built upon the vocabulary, grammar, and communicative functions acquired in CHIN A201.</td>
<td>Writing samples and tests</td>
</tr>
<tr>
<td>Demonstrate cultural knowledge of new topics addressed. Integrate this knowledge with previously acquired analytical skills for interpreting diverse perspectives and practices.</td>
<td>Tests</td>
</tr>
</tbody>
</table>

### IV. Course Activities:

This course reflects a balance of learner-centered, small-group collaboration as well as instructor-delivered lesson format.

### V. Methods of Assessment:

A student’s grade will be based upon individual performance in class-session preparedness and participation in Chinese; listening, speaking, reading, and writing assignments; oral presentations or aural/oral evaluations; written quizzes and exams.

### VI. Course-level Justification:

This class is appropriate at the 200-level because it requires three semesters of previous study in Chinese.

### VII. Course Outline:

A. Listening in Chinese at the second year level:
   Comprehension of simple, yet sustained discourse building upon the vocabulary, grammar, and communicative functions of CHIN A201.

B. Speaking in Chinese at the second year level:
   Oral communication building upon the vocabulary, grammar, and communicative functions of CHIN A201.
C. Reading in Chinese at the second year level:
   Comprehension of simple, yet sustained discourse building upon the vocabulary, grammar, and communicative functions of CHIN A201.

D. Writing in Chinese at the second year level:
   Presentation of creative language building upon the vocabulary, grammar, and communicative functions of CHIN A201.

E. Cultural knowledge of the communities which speak Chinese:
   Interpretation of diverse cultural perspectives.

VIII. Suggested Texts:


Recommended:


IX. Bibliography and Resources:


Recommended websites:

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<td>5b. Contact Hours</td>
<td>(Lecture + Lab)</td>
<td>(4+)</td>
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<td>6. Complete Course Title</td>
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<tr>
<td>7. Type of Course</td>
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<td>8. Type of Action:</td>
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<td>9. Repeat Status Yes # of Repeats 1 Max Credits</td>
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<td>10. Grading Basis</td>
<td>A-F</td>
<td>11. Implementation Date</td>
<td>semester/year</td>
<td>From: Fall/2011</td>
<td>To: 9999/9999</td>
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<td>12. Cross Listed with</td>
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<tr>
<td>14. General Education Requirement</td>
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<tr>
<td>Mark appropriate box:</td>
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<td>Written Communication</td>
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<td></td>
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<td></td>
<td>Quantitative Skills</td>
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<td>Integrative Capstone</td>
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<tr>
<td>15. Course Description (suggested length 20 to 50 words)</td>
<td>Examine contemporary works through various media (printed, electronic, and audiovisual) of multiple Spanish-speaking communities. Critical analysis through a variety of disciplinary methodologies (e.g. historical, cultural, artistic); terminology also explored and developed. Enhances Spanish language skills in writing, reading, speaking, listening, and cultural literacy. Special note: Course may be repeated once for credit with change of subtitle.</td>
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<td>16a. Course Prerequisite(s) (list prefix and number)</td>
<td>SPAN A302 with a grade of &quot;C&quot; or better</td>
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<td>N/A</td>
<td>16c. Co-requisite(s) (concurrent enrollment required)</td>
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<td>College Major Class Level</td>
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<td>17. Mark if course has fees</td>
<td></td>
<td>18. Mark if course is a selected topic course</td>
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<tr>
<td>19. Justification for Action</td>
<td>Course created to meet the growing student and community demand in contemporary Hispanic Cultural Studies.</td>
<td></td>
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Initiator Name (typed): Patricia Fagan  Initiator Signed Initials: ________ Date: ____________

Initiator (faculty only) Patricia Fagan
Initiator (TYPE NAME)

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<th>Approved</th>
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Dean/Director of School/College  Date

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Undergraduate/Graduate Academic Board Chairperson  Date

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Provost or Designee  Date
University of Alaska Anchorage
Course Content Guide
Department of Languages
SPAN A320
Studies in Contemporary Cultures

I. Initiation Date: Fall 2011
II. Course Information:
   A. College: College of Arts and Sciences
   B. Course Title: Studies in Contemporary Cultures
   C. Course Subject/Number: SPAN A320
   D. Credit Hours: 4.0
   E. Contact Time: 4 + 0 hours per week
   F. Grading Information: A-F
   G. Course Description: Examines contemporary works through various media (printed, electronic, and audiovisual) of multiple Spanish-speaking communities. Critical analysis through a variety of disciplinary methodologies (e.g. historical, cultural, artistic); terminology also explored and developed. Enhances Spanish language skills in writing, reading, speaking, listening, and cultural literacy. Special note: Course may be repeated once for credit with change of subtitle.
   H. Status of Course Relative to Degree or Certificate Programs:
      Course may be used as an elective to satisfy the upper-division component of a Spanish major or minor, as well as an elective for the major in International Studies, Europe Track.
   I. Course Attributes: Applies toward the upper-division requirement for Spanish majors and minors.
   J. Lab Fees: Yes
   K. Coordination: UAA Faculty List Serve
   L. Course Prerequisite: SPAN A302 with a grade of “C” or better.

III. Instructional Goals and Defined Student Outcomes:
Instructional Goals: The instructor will
1. Conduct the class in Spanish, soliciting student collaboration via discussion of course material.
2. Present representative authentic media and relate them to the cultural contexts in which they were composed.
3. Enhance stylistic and rhetorical skills through engagement with contemporary works.
4. Guide students in critically analyzing and interpreting cultural artifacts, using appropriate disciplinary approaches and terminology.

Defined Student Outcomes:

| Demonstrate comprehension of class instruction. | Performance in class participation and discussion |
| Identify representative contemporary works and relate them to the cultural context in which they were composed. | Performance on a variety of quizzes, exams, oral presentations, and papers |
| Demonstrate analytical skills in Spanish through engagement with cultural artifacts. | Performance on a variety of quizzes, exams, oral presentations, and papers |
| Apply appropriate disciplinary approaches and terminology in investigative analyses executed in the target language. | Performance on final term papers and oral presentations |

IV. Course Activities:
This course reflects a balance of learner-centered, small-group collaboration as well as instructor-delivered lesson format.

V. Course-level Justification:
Course requires prior formal study of college Spanish grammar at the upper-division level.

VI. Course Outline:
The following is a possible version of the course: “Reality Bytes”
In this class the student will work each week with real-life media (radio, T.V, newspapers, magazines articles, etc.) that presents different aspects of culture and traditions of the Spanish-speaking world. Students will learn the specific linguistic and semantic characteristics—and particular lexicon—of press, personal ads (from the Internet), horoscopes (magazine), cooking recipes (magazine), events calendar (brochures), three ads (T.V, radio and press), comic strip (Sunday newspaper), Interview (radio and press), Poem (song-writer song and poem), travel section (Sunday newspaper), movie review (film and magazine), literary review (short story and magazine), news article (online
article, newspaper and personal interview with a Chilean journalist). Students have to produce their own magazine with corresponding sections.

VII. Suggested texts


VIII. Bibliography


Bravo Bosch, M.C. "Lava más blanco, o la publicidad en la clase de E/LE."


09/22/10.


TO: Curriculum Committees of the College of Arts & Sciences, General Education Review, and Undergraduate Academic Board

FROM: Patricia Fagan, Ph.D., Department of Languages Curriculum Committee Chair

RE: Program Revision of B.A. in Languages, Option II: Dual Languages

DATE: UPDATED April 10, 2011

The purpose of this memo is to announce the proposed addition of Chinese to the selection of languages available for secondary emphasis within the existing Bachelor of Arts degree in Languages, Option II: Dual Languages. The Department of Languages is in the process of expanding its course offerings in Chinese, which will include 8 credits at the Second Year Level—CHIN A201 and CHIN A202—beginning Fall 2011. As such, students wishing to major in Languages with a secondary emphasis in Chinese will have available the appropriate coursework to fulfill all degree requirements. The Department of Languages is very excited to expand its existing language and cultural offerings and support the Confucius Institute on campus.

Following the recommendations of the UAB on April 8, 2011, changes made to the Catalog Copy are found on page 110, paragraph 2 ("These options and the students' selection of courses from outside the department..."), and on page 111 under the "Option II: Dual Languages" heading, Section a. ("Choose an emphasis language from French, German, Japanese, Russian, or Spanish; and a second language from among those, ASL, or Chinese.") and Section c. ("Chinese and Japanese courses have the same course number, but different titles, respectively: CHIN A201 Second Year Chinese I and CHIN A202 Second Year Chinese II; JPN A201 Second Year Japanese I and JPN A202 Second Year Japanese II."). The UAB Committee members recommended that this language regarding Chinese A201-A202 be included on p.110 in “Option I: Single Language” heading, Section c., however, this is not relative since Chinese is not offered as a Single Emphasis Language within the B.A. Languages degree.

Since ASL A101-A202 have been approved as 4-credit courses by UAB during Spring Semester 2011, the wording "(6 credits for ASL)” is no longer pertinent and has been removed from page 111, “Option II: Dual Languages” heading, Section e.
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<tr>
<td>Languages</td>
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<tr>
<td>Initiator Name (typed): Patricia Fagan</td>
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<tr>
<td>Initiator Signed Initials:</td>
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<tr>
<td>Date:</td>
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<tr>
<th>6b. Coordination Email submitted to Faculty Listserv (<a href="mailto:uaa-faculty@lists.uaa.alaska.edu">uaa-faculty@lists.uaa.alaska.edu</a>)</th>
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<th>6c. Coordination with Library Liaison</th>
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<th>7. Title and Program Description - Please attach the following:</th>
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<td>Catalog Copy in Word using the track changes function</td>
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<th>8. Justification for Action</th>
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<td>With the addition of CHIN A201 and CHIN A202 (Second Year Chinese I-II), the Department of Languages is able to offer Chinese as a secondary emphasis language within the existing Dual Language Option for a B.A. in Languages.</td>
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<tr>
<th>Initiator (faculty only)</th>
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<tr>
<td>Patricia Fagan</td>
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<tbody>
<tr>
<td>Curriculum Committee Chairperson</td>
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<td>Date:</td>
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</table>
Studying languages prepares a student to live and work in an increasingly interdependent world in which contact with other cultures is frequent and the appreciation and respect for linguistic and cultural diversity is important. The Department of Languages offers a Bachelor of Arts degree, a minor in a single language, and courses that fulfill CAS and GER requirements.

The Bachelor of Arts in Languages affords students the option of concentrating on one emphasis language (Option I), or of studying an emphasis language in combination with a second language (Option II). These options, and the students’ selection of courses from outside the department to fulfill major requirements, reflect the diverse context in which students live and work, and recognize the inherent multidisciplinary nature of language study. This flexibility also allows students to select a program most suited to their educational and career goals.

The Department of Languages offers French, German, Japanese, Russian, and Spanish as emphasis languages, with additional lower division courses in American Sign Language (ASL), Chinese, Korean, and Latin. First-year courses begin building the foundations of language learning: listening, speaking, reading, and writing. Since language can only be understood within a cultural context, studying culture is included from the first semester. In courses beyond the first year, students expand and refine their language skills and further develop their cultural knowledge.

As an integral part of their education, the department recommends that all students majoring in Languages study abroad in a country of their target language(s). UAA offers a variety of opportunities for study abroad. For a full description of study abroad opportunities through UAA, students should refer to the International Study Abroad Coordinator in the Office of International Affairs. Students wishing to apply study abroad credit toward a Languages degree must petition to satisfy major and/or minor requirements with study abroad experience. The department may require post-program examinations. The department highly recommends that students discuss their study abroad plans with their academic advisor prior to participation.

Honors in Languages
The Department of Languages recognizes exceptional undergraduate students by awarding them Departmental Honors in Languages. To graduate with departmental honors, students must be declared Languages majors and meet the following requirements:

1. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations;
2. Satisfy all requirements for a BA degree in Languages;
3. Maintain an overall UAA GPA of 3.50 with a 3.85 in the major;
4. Notify their departmental advisor in writing at least two semesters prior to graduation of intent to graduate with departmental honors;
5. Receive an honors score (90 percent) (based upon criteria established by the department) on a comprehensive examination in the language(s) of focus; the comprehensive examination must be completed at least one semester prior to graduation.

Bachelor of Arts, Languages
Admission Requirements
Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Academic Progress
No course in which a grade below C has been received will count toward the major or minor.

Graduation Requirements
Students must complete the following graduation requirements:
A. General University Requirements
Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements
Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements
Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements
1. Students working toward a degree in Languages may choose from two options:

   Option I: Single Language
   a. Choose an emphasis language from French, German, Japanese, Russian, or Spanish.
   b. Complete one of the following four courses: 3
      ENGL A311 Advanced Composition (3)
      ENGL A435 History of Criticism (3)
      LING A101 The Nature of Language (3)
      LSSS A111 Cultural Foundations of Human Behavior (3)
   c. Complete the following four courses in the emphasis language (16 credits):
      A201 Intermediate I* 4
      A202 Intermediate II* 4
      A301 Advanced I 4
      A302 Advanced II 4
   *Japanese courses have the same course number but different titles: JPN A201 Second Year Japanese I and JPN A202 Second Year Japanese II.
   d. Complete 12 credits of approved upper division electives in or related to the emphasis language or culture, at least 9 of which must be taught in the emphasis language (contact Language Program Coordinator for list of approved courses taught in English). 12
   e. Complete an additional 6 credits of emphasis language approved electives in or related to the emphasis language or culture, but which must be upper division if taught in the emphasis language (contact department for list of approved courses taught in English). 6

   Option II: Dual Languages
   a. Choose an emphasis language from French, German, Japanese, Russian, or Spanish; and a second language from among those, or ASL, or Chinese.
   b. Complete one of the following four courses: 3
      ENGL A311 Advanced Composition (3)
      ENGL A435 History of Criticism (3)
      LING A101 The Nature of Language (3)
      LSSS A111 Cultural Foundations of Human Behavior (3)
   c. Complete the following four courses in the emphasis language (16 credits):
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      A202 Intermediate II* 4
      A301 Advanced I 4
      A302 Advanced II 4
Language Credit by Placement

An accepted, degree-seeking UAA student who has completed in residence one of the Department of Languages UAA catalog courses (A102-A301) with a grade of B or better is eligible to receive credit for the two immediately preceding courses, if any, up to a total of 8 credits not to exceed the level of A202. Language Credit by Placement is limited to one time per language. This policy does not apply to credit earned through Credit by Examination, the College Board Advanced Placement Examination Program, nor to special topics (-93), independent study (-97), the course A302, or Department of Languages literature or culture courses. In order to receive credit the student must complete the appropriate form in the Office of the Registrar and pay an administrative fee.

Minor, Languages

Students who wish to minor in languages must complete the following requirements: a total of 19 credits taught in the target language at or above the 200 level with at least 11 credits being upper division. Credits must be in one discipline chosen from the following languages:

- French
- German
- Japanese
- Russian
- Spanish

FACULTY

Michihiro Ama, Assistant Professor, Japanese, AFMA6@uaa.alaska.edu
Margritt Engel, Professor Emerita, German, AFMAE@uaa.alaska.edu
Patricia Fagan, Associate Professor, Spanish, AFPCF@uaa.alaska.edu
Hiroko Harada, Professor, Japanese, AFHH@uaa.alaska.edu
Susan Kalina, Professor, Russian, AFSMK@uaa.alaska.edu
Theodore Kassier, Professor, Spanish, AFTLK@uaa.alaska.edu
Nataša Masnović, Associate Professor, German, AFNM@uaa.alaska.edu
Rebeca Maseda García, Assistant Professor, Spanish, AFRMG@uaa.alaska.edu
Francisco Miranda, Associate Professor, Spanish, AFFM1@uaa.alaska.edu
Sudarsan Rangarajan, Associate Professor, French, sudarsan@uaa.alaska.edu
Dave Robertson, Coordinator, American Sign Language, AFDER@uaa.alaska.edu
Annie Zeng, Assistant Professor, Chinese
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As an integral part of their education, the department recommends that all students majoring in Languages study abroad in a country of their target language(s). UAA offers a variety of opportunities for study abroad. For a full description of study abroad opportunities through UAA, students should refer to the International Study Abroad Coordinator in the Office of International Affairs. Students wishing to apply study abroad credit toward a Languages degree must petition to satisfy major and/or minor requirements with study abroad experience. The department may require post-program examinations. The department highly recommends that students discuss their study abroad plans with their academic advisor prior to participation.

**Honors in Languages**

The Department of Languages recognizes exceptional undergraduate students by awarding them Departmental Honors in Languages. To graduate with departmental honors, students must be declared Languages majors and meet the following requirements:

1. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations;
2. Satisfy all requirements for a BA degree in Languages;
3. Maintain an overall UAA GPA of 3.50 with a 3.85 in the major;
4. Notify their departmental advisor in writing at least two semesters prior to graduation of intent to graduate with departmental honors;
5. Receive an honors score (90 percent) (based upon criteria established by the department) on a comprehensive examination in the language(s) of focus; the comprehensive examination must be completed at least one semester prior to graduation.

**Bachelor of Arts, Languages**

**Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

**Academic Progress**

No course in which a grade below C has been received will count toward the major or minor.

**Graduation Requirements**

Students must complete the following graduation requirements:
A. **General University Requirements**

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. **General Education Requirements**

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C. **College of Arts and Sciences Requirements**

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. **Major Requirements**

1. Students working toward a degree in Languages may choose from two options:

   **Option I: Single Language**
   
   a. Choose an emphasis language from French, German, Japanese, Russian, or Spanish.
   
   b. Complete one of the following four courses:  
      - ENGL A311 Advanced Composition (3)
      - ENGL A435 History of Criticism (3)
      - LING A101 The Nature of Language (3)
      - LSSS A111 Cultural Foundations of Human Behavior (3)
   
   c. Complete the following four courses in the emphasis language (16 credits):
      - A201 Intermediate I* 4
      - A202 Intermediate II* 4
      - A301 Advanced I 4
      - A302 Advanced II 4
   
   *Japanese courses have the same course number but different titles: JPN A201 Second Year Japanese I and JPN A202 Second Year Japanese II.

   d. Complete 12 credits of approved upper division electives in or related to the emphasis language or culture, at least 9 of which must be taught in the emphasis language (contact Language Program Coordinator for list of approved courses taught in English).
   
   e. Complete an additional 6 credits of emphasis language approved electives in or related to the emphasis language or culture, but which must be upper division if taught in the emphasis language (contact department for list of approved courses taught in English).

   **Option II: Dual Languages**
   
   a. Choose an emphasis language from French, German, Japanese, Russian, or Spanish; and a second language from among those, or ASL, or Chinese.
   
   b. Complete one of the following four courses:  
      - ENGL A311 Advanced Composition (3)
      - ENGL A435 History of Criticism (3)
      - LING A101 The Nature of Language (3)
      - LSSS A111 Cultural Foundations of Human Behavior (3)
   
   c. Complete the following four courses in the emphasis language (16 credits):
      - A201 Intermediate I* 4
      - A202 Intermediate II* 4
      - A301 Advanced I 4
A302  Advanced II  4

*Chinese and Japanese courses have the same course number but
different titles, respectively: CHIN A201 Second Year Chinese I
and CHIN A202 Second Year Chinese II; JPN A201 Second Year
Japanese I and JPN A202 Second Year Japanese II.

d. Complete 9 credits of approved upper division
electives in or related to the emphasis language or
culture, at least 6 of which must be taught in the
emphasis language (contact Language Program
Coordinator see department for list of approved
courses taught in English).

e. Complete 8 credits (6 credits for ASL) beyond
A102 in the second language.  8

2. Students must petition to substitute study abroad
language courses for certain major requirements.
3. Students may not earn a major and a minor in the same
language.
4. Students must take at least 6 upper division credits, in the
respective emphasis language, in courses numbered higher
than A302 physically in residence at UAA.
5. A total of 120 credits is required for the degree, of which
42 credits must be upper division.

Language Credit by Placement

An accepted, degree-seeking UAA student who has completed in residence one of the Department of Languages UAA
catalog courses (A102-A301) with a grade of B or better is eligible to receive credit for the two immediately preceding
courses, if any, up to a total of 8 credits not to exceed the level of A202. Language Credit by Placement is limited to one
time per language. This policy does not apply to credit earned through Credit by Examination, the College Board
Advanced Placement Examination Program, nor to special topics (-93), independent study (-97), the course A302, or
Department of Languages literature or culture courses. In order to receive credit the student must complete the
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Minor, Languages

Students who wish to minor in languages must complete the following requirements: a total of 19 credits taught in the
target language at or above the 200 level with at least 11 credits being upper division. Credits must be in one discipline
chosen from the following languages:

- French
- German
- Japanese
- Russian
- Spanish

FACULTY

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Dave Robertson, Coordinator, American Sign Language, AFDER@uaa.alaska.edu
Annie Zeng, Assistant Professor, Chinese
### Course Action Request

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

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<th>1c. Department</th>
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<td>ASSC Division of Social Science</td>
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<th>5b. Contact Hours (Lecture + Lab)</th>
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#### 6. Complete Course Title
**Comparative Northern Politics**  
*Abbreviated Title for Transcript (30 character)*

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

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

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

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

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

#### 11. Implementation Date
From: SPRING/2012  To: 9999/9999

#### 12. ☐ Cross Listed with  ☐ Stacked with

Cross-Listed Coordination Signature

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s)</th>
<th>Impacted</th>
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<th>Chair/Coordinator Contacted</th>
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Initiator Name (typed): Dalee Sambo Dorough  
Initiator Signed Initials: __________________________ Date: ______________

#### 13b. Coordination Email
Date: 2/25/11  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

#### 13c. Coordination with Library Liaison
Date: 2/25/11

#### 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 comparative analysis of political systems, political actors, and political institutions across the northern region, to contrast such entities and evaluate the complex range of issues relevant to the region and the international community.

#### 16a. Course Prerequisite(s) (list prefix and number)
ENGL A111 or PS A102

#### 16b. Test Score(s)
N/A

#### 16c. Co-requisite(s) (concurrent enrollment required)
N/A

#### 16d. Other Restriction(s)
- ☐ College  ☐ Major  ☐ Class  ☐ Level

#### 16e. Registration Restriction(s) (non-codable)
N/A

#### 17. ☐ Mark if course has fees

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

#### 19. Justification for Action
Update course description, CCG, and elective nature of course

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<td>☐ Disapproved</td>
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<tr>
<td>Curriculum Committee Chairperson</td>
<td>Date</td>
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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

Comparative Northern Politics

PS A312

Date: February 25, 2011

College: College of Arts and Sciences

Course Number: PS A312

Number of Credits: 3

Contact Hours: 3 + 0

Course Program Title: Comparative Northern Politics

Grading Basis: A - F

Course Description:

Detailed comparative analysis of political systems, political actors, and political institutions across the northern region, to contrast such entities and evaluate the complex range of issues relevant to the region and the international community.

Course Prerequisites: ENGL A111 or PS A102

Status of Course: Political Science major elective

1. Instructional Goals and Student Outcomes:

   a. Instructors will

      1. Examine the evolution of politics and political development throughout the northern region.
      2. Examine and compare northern political systems and institutions at the international, nation-state, regional and local level.
      3. Examine the general contours of intergovernmental organization, nation-state, regional, and local behavior as well as the traditional and alternative structures for furthering political interactions.
      4. Develop student communication skills, both written and oral applicable to the study of northern political development.
      5. Develop student research skills relevant to the process and methods of the field of political science, particularly comparative politics.
b. Student will be able to

1. Discuss the linkages between northern political development and institutions, domestic politics, and international affairs.
2. Compare political systems across the northern region.
3. Analyze northern-specific issues and politics using a comparative approach.
4. Analyze issues relating to structures and mechanisms specific to the northern region, including human rights, security, development, economics, and environmental issues.
5. Demonstrate research and analytical skills as well as written and oral skills.

2. Guidelines for Evaluation:

Student evaluation is based on regular course attendance and participation in class discussion and debate; analytical essays; assigned readings; and an assessment of the student knowledge of the basic theories and specific content of contemporary northern political issues and institutions through performance on a midterm and a final examination. Letter grades correspond to current University grading criteria.

3. Course Level Justification:

This course has traditionally been at the 300-level, which is appropriate to the challenges of its subject matter and to the challenges posed by level of content introduced by the text and supplementary materials. It is a comparative course, which offers an introduction to a unique body of knowledge and literature.

4. Topical Course Outline:

- Definition of and introduction to the northern region
- History and emergence of the north as a distinct region
- Political actors in the north
- Political systems in the north: a comparative analysis
- Nation-states, nationalism and their traditional and alternative orientations
- Indigenous governance: a comparative analysis
- Relevant international law and organizations in the north
- Economic, social, and cultural development
- Environment and development
- Human rights
- Security issues
- Globalization and its impacts on the arctic and northern region
- Contemporary issues and challenges
5. **Suggested Texts:**


6. **Bibliography**


Government of Greenland available at [http://uk.nanoq.gl/](http://uk.nanoq.gl/)

Government of Iceland available at [http://www.government.is/](http://www.government.is/)


Inuit Circumpolar Conference available at [http://inuit.org](http://inuit.org)

Sami Council available at [http://www.saamicouncil.net/?deptid=1113](http://www.saamicouncil.net/?deptid=1113)


MEMO

TO: Curriculum Committee

FROM: Dalee Sambo Dorough, Department of Political Science

DATE: February 23, 2011

RE: PAR for PS A312

Please see the attached Program/Prefix Action Request concerning PS A312 Comparative Politics: Case Studies. The faculty of the Political Science Department met this past January to discuss course offerings and determined that we should be offering a course specifically addressing Northern Politics. Our intent is to provide students with an opportunity to learn more about the political institutions, structures, and developments specific to our Northern political environment. Therefore, we are transmitting the necessary forms (including CCG, CAR, PAR, impacted catalog pages, and this memo) for review and approval by the Committee. If you have any questions concerning this information, please contact me at 786 4993.
### Program/Prefix Action Request

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
<tr>
<td>AS CAS</td>
<td>ASSC Division of Social Science</td>
<td>Political Science</td>
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</tbody>
</table>

**2. Complete Program Title/Prefix**  
Bachelor of Arts, Political Science

**3. Type of Program**  
- [X] OEC  
- [ ] Undergrad Certificate  
- [ ] AA/AAS  
- [ ] Baccalaureate  
- [ ] Minor  
- [ ] Post Baccalaureate Certificate  
- [ ] Graduate  
- [ ] Graduate Certificate  
- [ ] Doctoral  
- [ ] Specialty

**4. Type of Action:**  
- [X] PROGRAM  
- [ ] PREFIX  
- [ ] Add  
- [ ] Change  
- [ ] Delete  
- [ ] Inactivate

**5. Implementation Date (semester/year)**  
From: Spring/2012  
To: 9999/9999

**6a. Coordination with Affected Units**  
Department, School, or College: Political Science  
Initiator Name (typed): DSD  
Initiator Signed Initials: _________  Date:________________

**6b. Coordination Email submitted to Faculty Listserv**  
(uaa-faculty@lists.uaa.alaska.edu)  
Date: 2/25/11

**6c. Coordination with Library Liaison**  
Date: 2/25/11

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

**8. Justification for Action**  
Change of course title, content, description

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179
In its oldest definition, political science was called the master science. More modern definitions are less comprehensive, but of the social sciences, political science has perhaps the least definite boundaries and the widest concerns. Consequently, political science covers many different subjects, uses several diverse methods, and appeals to a variety of students.

Students come to political science because they are interested in politics: some of them with an eye to a political career, some with a scholarly intent, and many wishing to know more about this central, inescapable human concern. The Department of Political Science aims to make all students aware and critical of their first opinions (since human beings are at their most opinionated in politics), to open up the possibilities of politics, to reveal the permanent political problems, to impart an intellectual discipline, and to supply a guide for choice.

The Political Science program is divided into five areas: comparative politics, international relations, political philosophy, American politics, and political behavior. Majors in Political Science are required to take at least one course in each of these areas, to specialize in one of them, and to complete introductory courses in political science.

The department also offers minors in Political Science and Public Administration. Students selecting the Political Science minor take two introductory courses and four additional, upper division Political Science electives. Students selecting the Public Administration minor take two introductory courses; courses in public administration, public policy, and organization theory; and one additional starred (*) course in Political Science.

The department welcomes all students who want to learn more about politics. It reserves its honors for majors who earn qualifying marks both in a senior seminar and on a comprehensive examination.

**Honors in Political Science**

Students majoring in Political Science are eligible to graduate with departmental honors if they satisfy all of the following requirements:

1. Meet the requirements for a BA degree in Political Science.
2. Maintain a grade point average of 3.50 or above in courses applicable to the degree requirements.
3. Complete PS A492 Senior Seminar in Politics in the final spring term of study with an honor grade (A or B).
4. Receive an honors score (based upon criteria established by the department) on a comprehensive examination for majors.

*Note: Departmental honors are awarded by the Political Science faculty.*

**Bachelor of Arts, Political Science**

**Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

**Graduation Requirements**

Students must complete the following graduation requirements:

A. **General University Requirements**

   Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. **General Education Requirements**

   Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. **College of Arts and Sciences Requirements**

   Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. **Major Requirements**
Note: Courses required for Political Science minors which may be used to meet General Education Requirements and/or College of Arts and Sciences BA requirements are designated by a section mark (§) after their titles.

1. Complete the following core courses:
   
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<td>PS A101</td>
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<td>PS A102</td>
<td>Introduction to Political Science §</td>
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<td>PS A301</td>
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<td>The American Political Tradition</td>
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<td>PS/SOC A361</td>
<td>Social Science Research Methods</td>
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2. Complete one starred (*) course from each of the five areas below:
   
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3. Complete 6 credits in additional upper division Political Science courses from one of the five areas listed above. PS A490 may be repeated with different subtitle.

4. A total of 120 credits is required for the degree, of which 42 credits must be upper division, and a minimum of 39 Political Science credits.

Minors

The Department of Political Science offers two minors, one in Political Science and one in Public Administration. A minor requires
18 credits earned according to the following rules.

Note: Courses required for Political Science minors which may be used to meet General Education Requirements and/or College of Arts and Sciences BA requirements are designated by an section mark (§) after their titles.

**Political Science Minor**

**Introductory courses:**
- PS A101 Introduction to American Government § 3
- PS A102 Introduction to Political Science § 3
- Upper division Political Science courses 12

**Public Administration Minor**

**Introductory courses:**
- PS A101 Introduction to American Government § 3
- PS A102 Introduction to Political Science § 3

**Additional courses, as follows:**
- PS A347 Public Administration 3
- PS A348 Public Policy 3
- PS A453 Organization Theory 3
- One additional starred (*) course from one of the areas listed in item 2 above under major requirements. 3

Note: Political Science majors who earn a minor in Public Administration may not count upper division courses required for the minor (i.e., PS A347, PS A348, or PS A453) toward the major requirements in item 3 above for additional upper division credits in Political Science.

**FACULTY**

Akihiro Aoki, Affiliate Instructor, aokiakihiro@hotmail.com
Diddy R. M. Hitchins, Professor Emerita, AFDH1@uaa.alaska.edu
William A. Jacobs, Professor Emeritus, AFWAJ@uaa.alaska.edu
Mara E. Kimmel, Term Assistant Professor, AFMEK1@uaa.alaska.edu
David C. Maas, Professor Emeritus, AFDCM@uaa.alaska.edu
James W. Muller/Chair, Professor, AFJWM@uaa.alaska.edu
Kimberly J. Pace, Term Assistant Professor, AFKJP@uaa.alaska.edu
Dalee Sambo-Dorough, Assistant Professor, AFDSD@gci.net
Carl E. Shepro, Professor, AFCES1@uaa.alaska.edu
April D. Wilson, Term Assistant Professor, AFAWS2@uaa.alaska.edu
In its oldest definition, political science was called the master science. More modern definitions are less comprehensive, but of the social sciences, political science has perhaps the least definite boundaries and the widest concerns. Consequently, political science covers many different subjects, uses several diverse methods, and appeals to a variety of students.

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The department also offers minors in Political Science and Public Administration. Students selecting the Political Science minor take two introductory courses and four additional, upper division Political Science electives. Students selecting the Public Administration minor take two introductory courses; courses in public administration, public policy, and organization theory; and one additional starred (*) course in Political Science.

The department welcomes all students who want to learn more about politics. It reserves its honors for majors who earn qualifying marks both in a senior seminar and on a comprehensive examination.

**Honors in Political Science**

Students majoring in Political Science are eligible to graduate with departmental honors if they satisfy all of the following requirements:

1. Meet the requirements for a BA degree in Political Science.
2. Maintain a grade point average of 3.50 or above in courses applicable to the degree requirements.
3. Complete PS A492 Senior Seminar in Politics in the final spring term of study with an honor grade (A or B).
4. Receive an honors score (based upon criteria established by the department) on a comprehensive examination for majors.

*Note: Departmental honors are awarded by the Political Science faculty.*

**Bachelor of Arts, Political Science**

**Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

**Graduation Requirements**

Students must complete the following graduation requirements:

A. **General University Requirements**

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. **General Education Requirements**

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. **College of Arts and Sciences Requirements**

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. **Major Requirements**
1. Complete the following core courses:
   - PS A101  Introduction to American Government § 3
   - PS A102  Introduction to Political Science § 3
   - PS A301  Comparative Political Economy 3
   - PS A330  The American Political Tradition 3
   - PS/SOC A361  Social Science Research Methods 3
   - PS A492  Senior Seminar in Politics § 3

2. Complete one starred (*) course from each of the five areas below: 15
   - **Comparative Politics**
     - *PS A311  Comparative Politics § (3)
     - *PS A312  Comparative Northern Politics: Case Studies (3)
     - PS/AKNS A411  Tribes, Nations, and Peoples (3)
     - PS A490  Studies in Politics (1-3)
   - **International Relations**
     - *PS A321  International Relations § (3)
     - *PS A322  United States Foreign Policy (3)
     - PS A324  Model United Nations (3)
     - PS A424  International Law and Organizations (3)
     - PS A490  Studies in Politics (1-3)
   - **Political Philosophy**
     - *PS A331  Political Philosophy § (3)
     - *PS A332  History of Political Philosophy I: Classical § (3)
     - *PS A333  History of Political Philosophy II: Modern § (3)
     - PS A490  Studies in Politics (1-3)
   - **American Politics**
     - *PS A341  The United States Congress (3)
     - *PS A342  The American Presidency (3)
     - PS/JUST A343  Constitutional Law (3)
     - PS A344  State and Local Politics (3)
     - PS A345  Alaska Government and Politics (3)
     - PS/AKNS A346  Alaska Native Politics (3)
     - PS A347  Public Administration (3)
     - PS A348  Public Policy (3)
     - PS A490  Studies in Politics (1-3)
   - **Political Behavior**
     - *PS/SOC A351  Political Sociology § (3)
     - *PS A353  Political Behavior, Participation, and Democracy (3)
     - PS A453  Organization Theory (3)
     - PS A490  Studies in Politics (1-3)
     - PS A495  Internship in Political Science (3)

3. Complete 6 credits in additional upper division Political Science courses from one of the five areas listed above. PS A490 may be repeated with different subtitle.

4. A total of 120 credits is required for the degree, of which 42 credits must be upper division, and a minimum of 39 Political Science credits.

**Minors**

The Department of Political Science offers two minors, one in Political Science and one in Public Administration. A minor requires...
18 credits earned according to the following rules.

Note: Courses required for Political Science minors which may be used to meet General Education Requirements and/or College of Arts and Sciences BA requirements are designated by an section mark (§) after their titles.

### Political Science Minor

**Introductory courses:**
- PS A101  Introduction to American Government § 3
- PS A102  Introduction to Political Science § 3
- Upper division Political Science courses 12

### Public Administration Minor

**Introductory courses:**
- PS A101  Introduction to American Government § 3
- PS A102  Introduction to Political Science § 3

**Additional courses, as follows:**
- PS A347  Public Administration 3
- PS A348  Public Policy 3
- PS A453  Organization Theory 3

One additional starred (*) course from one of the areas listed in item 2 above under major requirements. 3

Note: Political Science majors who earn a minor in Public Administration may not count upper division courses required for the minor (i.e., PS A347, PS A348, or PS A453) toward the major requirements in item 3 above for additional upper division credits in Political Science.

### FACULTY

Akihiro Aoki, Affiliate Instructor, aokiakihiro@hotmail.com
Diddy R. M. Hitchins, Professor Emerita, AFDH1@uaa.alaska.edu
William A. Jacobs, Professor Emeritus, AFWAJ@uaa.alaska.edu
Mara E. Kimmel, Term Assistant Professor, AFMEK1@uaa.alaska.edu
David C. Maas, Professor Emeritus, AFDCM@uaa.alaska.edu
James W. Muller/Chair, Professor, AFJWM@uaa.alaska.edu
Kimberly J. Pace, Term Assistant Professor, AFKJP@uaa.alaska.edu
Dalee Sambo-Dorough, Assistant Professor, AFDSD@gci.net
Carl E. Shepro, Professor, AFCES1@uaa.alaska.edu
April D. Wilson, Term Assistant Professor, AFAWS2@uaa.alaska.edu
# Course Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS CAS</td>
<td>AHUM Division of Humanities</td>
<td>Philosophy</td>
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<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL</td>
<td>A321</td>
<td>NA</td>
<td>3</td>
<td>(3+0)</td>
</tr>
</tbody>
</table>

6. **Complete Course Title**

**Philosophy of Religion**

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

7. **Type of Course**

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

8. **Type of Action:**

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

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)

9. **Repeat Status No**

- [ ] # of Repeats
- [x] Max Credits NA

10. **Grading Basis**

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

11. **Implementation Date**

- [ ] semester/year

- From: Fall/2011
- To: 9999/9999

12. **Cross Listed with**

- [ ] Stacked with
- [ ] Cross-Listed/Stacked
- [ ] Cross-Listed Coordination Signature

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

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
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<tr>
<td>3.</td>
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</tbody>
</table>

**Initiator Name (typed):**

Initiator Signed Initials:_________

Date:________________

13b. **Coordination Email**

Date: 2/22/10

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

13c. **Coordination with Library Liaison**

Date: 2/28/10

14. **General Education Requirement**

Mark appropriate box:

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

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

An advanced study of current issues in philosophy of religion including topics such as the existence of God, the nature of divine attributes, the problem of evil, science and religion, the meaningfulness of religious language, the epistemology of religious experience, and non-western perspectives on religion, with an emphasis on critical reasoning, argument evaluation, and analysis.

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

(PHIL A101 or PHIL A201 or PHIL A211 or PHIL A212 or PHIL A301) with a minimum grade of C

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

NA

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

NA

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

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

16e. **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**

Students have expressed great interest in a course of this type. Also, this course is a key component to the new religious studies track within the philosophy BA program.

---

**Initiator (faculty only)**

John Mouracade

Initiator (TYPE NAME)

- [ ] Approved
- [ ] Disapproved

**Date**

**Dean/Director of School/College**

- [ ] Approved
- [ ] Disapproved

**Date**

**Undergraduate/Graduate Academic**

- [ ] Approved
- [ ] Disapproved

**Board Chairperson**

- [ ] Approved
- [ ] Disapproved

**Date**

**Provost or Designee**

- [ ] Approved
- [ ] Disapproved

**Date**

---
COURSE CONTENT GUIDE

I. Date of course initiation April 8, 2011

II.
  A. College: College of Arts and Sciences
  B. Course Subject: Philosophy
  C. Course Number: PHIL A321
  D. 3 credits/3 lecture hours per week
  E. Course Program: CAS Bachelor of Arts
  F. Course Title: Philosophy of Religion
  G. Grading Basis: A-F
  H. Course Description: An advanced study of current issues in philosophy of religion including topics such as the existence of God, the nature of divine attributes, the problem of evil, science and religion, the meaningfulness of religious language, the epistemology of religious experience, and non-western perspectives on religion, with an emphasis on critical reasoning, argument evaluation, and analysis.
  I. Prerequisites: (PHIL A101 or PHIL A201 or PHIL A211 or PHIL A212 or PHIL A301) with a minimum grade of C.
  Registration Restriction: none
  J. Course Fee: No.

III. Instructional Goals and Student Outcomes

   Instructional Goals. The instructor will:
   • Provide instruction in and background to central problems in philosophy of religion.
   • Provide meaningful connections between philosophy of religion and other fields of inquiry.
   • Provide techniques and methodologies for critical thinking in philosophy of religion including some informal instruction in logic.

   Student Outcomes. Students will be able to:
   • Participate in the scholarly debate on issues in philosophy of religion.
   • Draw connections between scholarship in philosophy of religion and fields of study in philosophy and elsewhere.
• Critically evaluate positions and arguments on religious topics.

IV. Guidelines for Evaluation:
Evaluation procedures are at the discretion of the faculty member teaching the course; however, evaluation will include, but not be limited to, exams, papers, presentations, argument analyses, and quizzes.

V. Course Level Justification:
The course satisfies all the criteria for an upper division course. This course includes knowledge integration of GER Basic College-Level skills (Tier 1) and Disciplinary Areas (Tier 2) as part of its design.

PHIL 321
Philosophy of Religion
Course Outline

I. Existence of God
   a. Arguments
      i. Ontological
      ii. Cosmological
      iii. Teleological
      iv. Pascal’s Wager

II. Divine attributes
    a. Omniscience
    b. Omnipotence
    c. Impassibility
    d. Moral perfection
    e. The Openness of God

III. Religious Epistemology
    a. Religious experience
    b. Mysticism
    c. Social and cultural knowledge

IV. The Problem of Evil
    a. Logical version
    b. Evidential version
    c. Existential version
    d. Defense and theodicy

V. Non-Western or non-traditional concepts of God
    a. Impersonal conceptions of God
    b. Materialist conceptions of God
    c. Feminist critique of traditional theology
    d. God and nature
Selected Textbooks:


Bibliography


Augustine 1972 [426], *The City of God* (translated by H. Bettenson), Harmondsworth: Penguin.


# Course Action Request

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

<table>
<thead>
<tr>
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<th>5b. Contact Hours</th>
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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)

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Cross-Listed Coordination Signature

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Initiator Name (typed): ____________ Initiator Signed Initials: _________ Date:____________

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

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<td>Natural Sciences</td>
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<td>Integrative Capstone</td>
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<th>15. Course Description</th>
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<td>(suggested length 20 to 50 words)</td>
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Evaluates the philosophical merits of contemporary (20th Century to present) theories of justice, government, citizenship, culture, and society. Theories are explored in light of their foundations in ethics, epistemology, metaphysics, philosophy of language, and theories of rationality. Topics include, but are not limited to, the justification of human rights, democracy, economic social structures; and critical theories of society.

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<tr>
<th>19. Justification for Action</th>
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<tr>
<td>Department and College currently has no course devoted to contemporary social and political philosophy. Social and political philosophy is a key area of the discipline and for students in the program's law track.</td>
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<tr>
<td>Role</td>
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<tr>
<td>------------------------------------</td>
</tr>
<tr>
<td>Initiator (faculty only)</td>
</tr>
<tr>
<td>John Mouracade</td>
</tr>
<tr>
<td>Initiator (TYPE NAME)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Department Chairperson</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Curriculum Committee Chairperson</td>
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COURSE CONTENT GUIDE

I. Date of course initiation April 8, 2011

II.
   A. College: College of Arts and Sciences
   B. Course Subject: Philosophy
   C. Course Number: PHIL A350
   D. 3 credits/3 lecture hours per week
   E. Course Program: CAS Bachelor of Arts in Philosophy
   F. Course Title: Contemporary Social and Political Philosophy
   G. Grading Basis: A-F

H. Course Description: Evaluates the philosophical merits of contemporary (20th Century to present) theories of justice, government, citizenship, culture, and society. Theories are explored in light of their foundations in ethics, epistemology, metaphysics, philosophy of language, and theories of rationality. Topics include, but are not limited to, the justification of human rights, democracy, economic social structures; and critical theories of society.

I. Prerequisites: Completion of (ENGL 111 or ENGL 211 or ENGL 212)

J. Course Fee: No.

III. Instructional Goals and Student Outcomes

   Instructional Goals. The instructor will:
   • Provide a theoretical context for understanding the leading philosophical debates in social and political philosophy.
   • Explore the foundations of political and social philosophy in ethics, epistemology, metaphysics, and theories of rationality.
   • Promote the techniques and methodologies important for critical thinking and civic reasoning.

   Student Outcomes. Students will be able to:
   • Analyze the critical debates in social and political philosophy through critical discussion and thesis-driven writing assignments.
• Articulate the philosophical foundations for various theories in social and political philosophy.
• Provide a rational critique, both written and oral, of theories and positions held by contemporary political and social philosophers.

IV. Guidelines for Evaluation and Assessment

Evaluation procedures are at the discretion of the faculty member teaching the course; however, evaluation will include, but not be limited to, exams, papers, presentations, argument analyses, and quizzes.

V. Course Level Justification

The course satisfies all of the criteria for an upper division course. This course includes knowledge integration of GER Basic College-Level skills (Tier 1) and Disciplinary Areas (Tier 2) as part of its design.

VI. Course Outline

Social and Political Philosophy

1. Introduction
   1.1 Historical overview
   1.2 Theoretical background
   1.3 Philosophical nature of social and political philosophy
2. State and Society
   2.1. Skinner on the state
   2.2. Gauthier on the social contract as ideologue
   2.3. Taylor on civil society
3. Democracy
   3.1. Habermas on the public sphere
   3.2. Dahl on procedural democracy
   3.3. Cohen on deliberation and democratic legitimacy
4. Justice
   4.1. Rawls on justice as fairness
   4.2. Nozick on distributive justice
   4.3. Young on policy and group difference
   4.4 Waldron on historic injustice
5. Rights
   5.1. Hart, “Are There any Natural Rights?”
   5.2. Dworkin, “Taking Rights Seriously”
   5.3. Kymlicka, “Justice and Minority Rights”
6. Liberty
6.1. Different conceptions of liberty
6.2. Taylor on negative liberty
6.3. Cohen on liberty and equality
6.4. Galston on liberty in a pluralistic society

7. Equality
   7.2. Parfit, “Equality and Priority”
   7.4. Arneson, “Egalitarianism and the Undeserving Poor”

VII. Suggested Texts


VIII. Bibliography


1a. School or College  
AS CAS

1b. Division  
AHUM Division of Humanities

1c. Department  
Philosophy

2. Complete Program Title/Prefix  
Bachelor of Arts, Philosophy

3. Type of Program  
☐ OEC  
☐ Undergrad Certificate  
☐ AA/AAS  
☒ Baccalaureate  
☐ Minor  
☐ Post Baccalaureate Certificate  
☐ Graduate  
☐ Graduate Certificate  
☐ Doctoral  
☐ Specialty

4. Type of Action:  
PROGRAM  
☐ Add  
☒ Change  
☐ Delete

PREFIX  
☐ Add  
☐ Change  
☐ Inactivate

5. Implementation Date (semester/year)  
From: Fall /2011  
To: 9999/9999

6a. Coordination with Affected Units  
Initiator Name (typed): John Mouracade  
Date:________________

Department, School, or College: CAS  
Initiator Signed Initials: __________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)  
Date: 2/22/10

6c. Coordination with Library Liaison  
Date: 3/04/10

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

8. Justification for Action  
(1) For addition of religious studies track, this proposal is in response to student needs and interest. Using the law track as a model, the philosophy department is able to offer a rigorous and interdisciplinary program of study with an emphasis on religious studies.

Initiator (faculty only)  
John Mouracade  
Initiator (TYPE NAME)

☒ Approved
☐ Disapproved  
Department Chairperson  
Date

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

☐ Approved
☐ Disapproved  
Undergraduate/Graduate Academic Board Chairperson  
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

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<th>1c. Department</th>
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2. Complete Program Title/Prefix  
Minor, Philosophy

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5. Implementation Date (semester/year)  
From: Fall /2011  
To: 9999/9999

6a. Coordination with Affected Units  
Department, School, or College: CAS  
Initiator Name (typed): John Mouracade  
Date:__________  
Initiator Signed Initials: ________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)  
Date: 2/22/10

6c. Coordination with Library Liaison  
Date: 3/4/10

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

8. Justification for Action  
The philosophy minor was described inconsistently in the previous catalog. We needed to correct that error and decided to modify the minor so as to simplify the options and give students more flexibility in completing a minor in philosophy.

Initiator (faculty only)  
John Mouracade  
Initiator (TYPE NAME)

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

| Approved  
Department Chairperson | Date | Disapproved  
Undergraduate/Graduate Academic Board Chairperson | Date |

| Approved  
Curriculum Committee Chairperson | Date | Disapproved  
Provost or Designee | Date |
Philosophy is the creative and critical reflection on enduring questions concerning the nature of the world and our place in it. For example, philosophy asks metaphysical questions about what exists, epistemic questions about what we can claim to know, and ethical questions about the nature of the good life and right action. In addition, philosophy involves the study and practice of good reasoning and clear thinking, skills that are essential to any discipline or profession.

The Philosophy Department offers a variety of courses in the central areas of philosophy that acquaint students with the rich, living traditions of the world and explore historical and contemporary issues. Departmental faculty have a wide range of philosophical interests and expertise, with a particular strength in theoretical and applied ethics.

The Philosophy Department offers several options for students interested in the study of philosophy: (1) a Bachelor of Arts in Philosophy, with a philosophy track, a law track, or an applied ethics track; (2) a Certificate of Applied Ethics; (3) a minor in Philosophy, with a philosophy track or law track. Please read the introduction to each program below to determine which one of these options may be suitable for your particular needs.

The philosophy track is designed for students planning to go on to graduate school in philosophy or other humanities areas such as religious studies, theology, or classics. It would also be a suitable second major for those planning graduate studies in history, English, French or German literature. In general, it is ideal for students who are seeking jobs in fields where writing, critical thinking, and general liberal arts skills are in demand, or for lifelong learners interested in philosophy.

The Religious Studies Track is designed for students who want to learn about and reflect on religious traditions in a philosophical manner. Students completing this track will be prepared for graduate study in philosophy or religion.

The law track is designed for students planning on attending law school or related professional schools.

The applied ethics track is designed for four types of students: (1) those who intend to pursue a graduate degree in philosophy with programs that specialize in applied ethics; (2) those interested in a strong liberal arts degree (3) those who are seeking careers in the nonprofit sector, public administration, helping professions, or government service; and (4) those interested in the study of practical ethics.

The Certificate in Applied Ethics is designed for students whose intended careers will be complemented by emphasis in ethics education: for example, business majors who may plan also to be ethics officers; those who intend to become professionals, such as lawyers, nurses, social workers, or engineers; or those in public administration, the helping professions, government service, and nonprofits. It will also be applicable to persons presently in the workforce such as corporate ethics officers, executives, and professionals who are seeking career advancement or simply want to acquire skills and knowledge in ethical decision-making.

The minor in Philosophy is designed for students who are interested in philosophy but pursuing another degree, and for students majoring in a discipline that is complemented by the study of philosophy, such as History, Justice, English, Psychology, Anthropology, Sociology, Mathematics, or the natural sciences. The law track is intended for students who plan to attend law school but may be majoring in another degree. This is an appropriate minor for Justice majors.

**Philosophy Department Honors**

The Department of Philosophy recognizes exceptional undergraduate students by awarding them Departmental Honors in Philosophy. Students majoring in any one of the Bachelor of Arts tracks in Philosophy are eligible to graduate with departmental honors upon satisfaction of all of the following requirements:

1. Meet the requirements for a Bachelor of Arts degree in Philosophy.
2. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations.
3. Maintain a grade point average of 3.75 or above in courses specific to the Philosophy major.
4. Complete PHIL A498 Senior Research Project with an honor grade (A), and a recommendation for departmental
honors from the student’s faculty committee for this course.

5. Notify the chair in writing, on or before date on which the Application for Graduation is filed with the Office of the Registrar, of the intention to graduate with departmental honors.

**Bachelor of Arts, Philosophy**

**Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

**Graduation Requirements**

Students must complete the following graduation requirements:

**A. General University Requirements**

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

**B. General Education Requirements**

Complete the General Education Requirements for Baccalaureate Degrees located at the beginning of this chapter.

**C. College of Arts and Sciences Requirements**

Complete the College of Arts and Sciences Requirements for the Bachelor of Arts listed at the beginning of the CAS section.

**D. Major Requirements**

1. Complete the following core courses (15 credits):

   **Logical Reasoning and Argumentation:**
   - PHIL A101 Introduction to Logic 3

   **Foundations of Philosophy:**
   - PHIL A201 Introduction to Philosophy 3
   - PHIL A211 History of Philosophy I 3
   - PHIL A212 History of Philosophy II 3

   **Ethical Theory and Value studies:**
   - PHIL A301 Ethics 3

2. Choose one of the following tracks:

   *Note: Courses selected may not be used in more than one track.*

   **Philosophy Track (21 credits)**

   Complete the following courses:

   **Applied Ethics: Complete one course from the following:**
   - PHIL A302 Biomedical Ethics (3)
   - PHIL A321 Environmental Ethics (3)
   - PHIL A320 Business Ethics (3)
   - PHIL A405 Professional Ethics (3)

   **Philosophical Problems: Complete one course from each of the following two groups:**
   - **Group A**
     - PHIL A309 Philosophy of Mind (3)
     - PHIL A317 Metaphysics (3)
   - **Group B**
     - PHIL A318 Epistemology (3)
     - PHIL A421 Philosophy of the Sciences (3)

   **Topics in Philosophy: Complete one course from the following:**
   - PHIL A313 Eastern Philosophy and Religion (3)
   - PHIL A314 Western Religion (3)
   - PHIL A321 Philosophy of Religion (3)
   - PHIL A350 Contemporary Social and Political Philosophy (3)
PHIL A401  Aesthetics (3)
PHIL A406  Philosophy of Law (3)
PHIL A415  Feminist Philosophy (3)

Complete the following three courses (9 credits):
PHIL A423  Advanced Ethical Theory 3
PHIL A490  Topics in Contemporary Philosophy 3
PHIL A492  Seminar on an Enduring Philosopher 3

Religious Studies Track (21 credits)
Complete the following courses:
PHIL A313  Eastern Philosophy and Religion 3
PHIL A314  Western Religions 3
PHIL A321  Philosophy of Religion 3
Complete one of the following: 3
PHIL A317  Metaphysics (3)
PHIL A318  Epistemology (3)
Complete one of the following: 3
ANTH A200  Natives of Alaska (3)
AKNS A201  Alaska Native Perspectives (3)
Complete one of the following: 3
SOC A347  Sociology of Religion (3)
ANTH A335  Native North Americans (3)
ANTH A400  Anthropology of Religion (3)
Complete one of the following: 3
PHIL A423  Advanced Ethical Theory (3)
PHIL A490  Topics in Contemporary Philosophy (3)
PHIL A492  Seminar on an Enduring Philosopher (3)

Law Track (21 credits)
Complete the following courses:

Professional Ethics:
PHIL A405  Professional Ethics 3

Philosophical Foundations of the Law:
PS A332  History of Political Philosophy I: Classical 3
PS A333  History of Political Philosophy II: Modern 3
PS/JUST A343  Constitutional Law 3
PHIL A350  Contemporary Social and Political Philosophy 3
PHIL A406  Philosophy of Law 3
PHIL A423  Advanced Ethical Theory 3

Applied Ethics Track (18 credits)
Complete the following courses:

Professional Ethics:
PHIL A405  Professional Ethics 3

Applied Ethics Core: Complete two courses from the following: 6
PHIL A302  Biomedical Ethics (3)
PHIL A303  Environmental Ethics (3)
PHIL A304  Business Ethics (3)
PHIL A350  Contemporary Social and Political Philosophy (3)
PHIL A406  Philosophy of Law (3)
PHIL A415  Feminist Philosophy (3)
Complete the following three courses (9 credits):

- PHIL A423 Advanced Ethical Theory 3
- PHIL A490 Topics in Contemporary Philosophy 3
- PHIL A495 Service Learning in Applied Ethics 3

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

**Undergraduate Certificate, Applied Ethics**

**Admission Requirements**

A student must satisfy the Admission to Certificate Requirements in Chapter 7, Academic Standards and Regulations.

**Graduation Requirements**

1. Complete the following requirements:

   **Written Communication Skills**
   - Complete two courses from the GER requirements for written communication skills. 6

   **Oral Communication Skills**
   - Complete one course from the GER requirements for oral communication skills. 3

   **Quantitative Skills**
   - Complete one course from the GER requirements for quantitative skills. 3

   **Critical Reasoning Skills**
   - Complete the following course:
     - PHIL A101 Introduction to Logic 3

   **Ethical Theory**
   - Complete the following course:
     - PHIL A301 Ethics 3

   **Applied Ethics**
   - Complete two courses from the following:
     - PHIL A302 Biomedical Ethics (3)
     - PHIL/ENVI A303 Environmental Ethics (3)
     - PHIL A304 Business Ethics (3)

   **Professional Ethics**
   - Complete one course from the following:
     - PHIL A405 Professional Ethics (3)
     - BA A488 Environment of Business (3)
     - HUMS A412 Ethical Issues in Human Services Practice (3)
     - PADM A618 Public Accountability, Ethics and Law (3)
     - PSY A611 Ethics and Professional Practice (3)

   *Note: Graduate courses taken to satisfy this requirement cannot also be counted towards a graduate degree in that program.*

   **Service Learning**
   - Complete the following course:
     - PHIL A495 Service Learning in Applied Ethics 3

2. A total of 30 credits is required for the certificate.

**Minor, Philosophy**

Students majoring in another subject who wish to minor in Philosophy must complete the following requirements. A total of 18 credits is required for the minor, 6 of which must be upper division.
Choose one of the following tracks. *(Courses selected may not be used in more than one track.)*

**Philosophy Track (18 credits)**

1. Complete the following courses:

   **Ways of Knowing (pick one):**
   - PHIL A101  Introduction to Logic  (3)
   - PHIL A201  Introduction to Philosophy (3)
   - PHIL A301  Ethics (3)

   **Foundations of Philosophy:**
   - PHIL A211  History of Philosophy I     3
   - PHIL A212  History of Philosophy II     3

2. **Upper Level Electives (9 credits)**
   - Choose any 3 upper level Philosophy Courses

**FACULTY**

Raymond Anthony, Associate Professor, AFRXA@uaa.alaska.edu
Stephanie Bauer, Assistant Professor, AFSLB@uaa.alaska.edu
Thomas Builer, Associate Professor, AFTGB@uaa.alaska.edu
William Jamison, Term Instructor, AFWSJ@uaa.alaska.edu
Terry Kelly, Term Instructor, AFTMK@uaa.alaska.edu
James Liszka, Professor, AFJJL@uaa.alaska.edu
John Mouracade, Associate Professor/Chair, AFJMM2@uaa.alaska.edu
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2. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations.
3. Maintain a grade point average of 3.75 or above in courses specific to the Philosophy major.
4. Complete PHIL A498 Senior Research Project with an honor grade (A), and a recommendation for departmental
honors from the student’s faculty committee for this course.

5. Notify the chair in writing, on or before date on which the Application for Graduation is filed with the Office of the Registrar, of the intention to graduate with departmental honors.

**Bachelor of Arts, Philosophy**

**Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

**Graduation Requirements**

Students must complete the following graduation requirements:

**A. General University Requirements**

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

**B. General Education Requirements**

Complete the General Education Requirements for Baccalaureate Degrees located at the beginning of this chapter.

**C. College of Arts and Sciences Requirements**

Complete the College of Arts and Sciences Requirements for the Bachelor of Arts listed at the beginning of the CAS section.

**D. Major Requirements**

1. Complete the following core courses (15 credits):

   **Logical Reasoning and Argumentation:**
   - PHIL A101 Introduction to Logic 3

   **Foundations of Philosophy:**
   - PHIL A201 Introduction to Philosophy 3
   - PHIL A211 History of Philosophy I 3
   - PHIL A212 History of Philosophy II 3

   **Ethical Theory and Value studies:**
   - PHIL A301 Ethics 3

2. Choose one of the following tracks:

   *Note: Courses selected may not be used in more than one track.*

   **Philosophy Track (21 credits)**

   Complete the following courses:

   **Applied Ethics:** Complete one course

   - PHIL A302 Biomedical Ethics (3)
   - PHIL/ENVI A303 Environmental Ethics (3)
   - PHIL A304 Business Ethics (3)
   - PHIL A405 Professional Ethics (3)

   **Philosophical Problems:** Complete one course from each of the following two groups:

   **Group A**
   - PHIL A309 Philosophy of Mind (3)
   - PHIL A317 Metaphysics (3)

   **Group B**
   - PHIL A318 Epistemology (3)
   - PHIL A421 Philosophy of the Sciences (3)

   **Topics in Philosophy:** Complete one course from

   the following:

   - PHIL A313 Eastern Philosophy and Religion (3)
   - PHIL A314 Western Religion (3)
   - PHIL A321 Philosophy of Religion (3)
   - PHIL A350 Contemporary Social and Political Philosophy (3)
PHIL A401  Aesthetics (3)
PHIL A406  Philosophy of Law (3)
PHIL A415  Feminist Philosophy (3)

Complete the following three courses (9 credits):
PHIL A423  Advanced Ethical Theory 3
PHIL A490  Topics in Contemporary Philosophy 3
PHIL A492  Seminar on an Enduring Philosopher 3

Religious Studies Track (21 credits)
Complete the following courses:
PHIL A313  Eastern Philosophy and Religion 3
PHIL A314  Western Religions 3
PHIL A321  Philosophy of Religion 3
Complete one of the following:
PHIL A317  Metaphysics (3)
PHIL A318  Epistemology (3)
Complete one of the following:
ANTH A200  Natives of Alaska (3)
AKNS A201  Alaska Native Perspectives (3)
Complete one of the following:
SOC A347  Sociology of Religion (3)
ANTH A335  Native North Americans (3)
ANTH A400  Anthropology of Religion (3)
Complete one of the following:
PHIL A423  Advanced Ethical Theory (3)
PHIL A490  Topics in Contemporary Philosophy (3)
PHIL A492  Seminar on an Enduring Philosopher (3)

Law Track (21 credits)
Complete the following courses:
Professional Ethics:
PHIL A405  Professional Ethics 3
Philosophical Foundations of the Law:
JUST A250  Development of Law 3
PHIL A406  Philosophy of Law 3
PHIL A423  Advanced Ethical Theory 3
PS A332  History of Political Philosophy I: Classical 3
PS A333  History of Political Philosophy II: Modern 3
PS/JUST A343  Constitutional Law 3
PHIL A350  Contemporary Social and Political Philosophy 3
PHIL A406  Philosophy of Law 3
PHIL A423  Advanced Ethical Theory 3

Applied Ethics Track (18 credits)
Complete the following courses:
Professional Ethics:
PHIL A405  Professional Ethics 3
Applied Ethics Core: Complete two courses from the following: 6
PHIL A302  Biomedical Ethics (3)
PHIL/ENVI A303  Environmental Ethics (3)
PHIL A304  Business Ethics (3)
PHIL A350  Contemporary Social and Political Philosophy 3
**Undergraduate Certificate, Applied Ethics**

**Admission Requirements**
A student must satisfy the Admission to Certificate Requirements in Chapter 7, Academic Standards and Regulations.

**Graduation Requirements**

1. Complete the following requirements:
   
   **Written Communication Skills**
   Complete two courses from the GER requirements for written communication skills. 6
   
   **Oral Communication Skills**
   Complete one course from the GER requirements for oral communication skills. 3
   
   **Quantitative Skills**
   Complete one course from the GER requirements for quantitative skills. 3
   
   **Critical Reasoning Skills**
   Complete the following course:
   PHIL A101 Introduction to Logic 3
   
   **Ethical Theory**
   Complete the following course:
   PHIL A301 Ethics 3
   
   **Applied Ethics**
   Complete two courses from the following: 6
   PHIL A302 Biomedical Ethics (3)
   PHIL/ENVI A303 Environmental Ethics (3)
   PHIL A304 Business Ethics (3)
   
   **Professional Ethics**
   Complete one course from the following: 3
   PHIL A405 Professional Ethics (3)
   BA A488 Environment of Business (3)
   HUMS A412 Ethical Issues in Human Services Practice (3)
   PADM A618 Public Accountability, Ethics and Law (3)
   PSY A611 Ethics and Professional Practice (3)
   
   **Note:** Graduate courses taken to satisfy this requirement cannot also be counted towards a graduate degree in that program.

   **Service Learning**
   Complete the following course:
   PHIL A495 Service Learning in Applied Ethics 3

2. A total of 30 credits is required for the certificate.

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

Choose one of the following tracks. (Courses selected may not be used in more than one track.)

**Philosophy Track (18 credits)**

1. Complete the following courses:
   - **Ways of Knowing (pick one)** Logical Reasoning and Argumentation
     - PHIL A101 Introduction to Logic (3)
   - **Foundations of Philosophy**
     - PHIL A201 Introduction to Philosophy (3)
     - PHIL A301 Ethics (3)
   - **Foundations of Philosophy:**
     - PHIL A211 History of Philosophy I (3)
     - PHIL A212 History of Philosophy II (3)

2. Upper Level Electives (9 credits)
   - Choose any 3 upper level Philosophy Courses (9)
     - PHIL A202 Biomedical Ethics (3)
     - PHIL A203 Environmental Ethics (3)
     - PHIL A204 Business Ethics (3)
     - PHIL A205 Philosophy of Mind (3)
     - PHIL A217 Metaphysics (3)
     - PHIL A218 Epistemology (3)
     - PHIL A219 Eastern Philosophy and Religion (3)
     - PHIL A211 History of Philosophy I (3)
     - PHIL A212 History of Philosophy II (3)
     - PHIL A301 Ethics (3)
     - PHIL A302 Biomedical Ethics (3)
     - PHIL/AENV A303 Environmental Ethics (3)
     - PHIL A304 Business Ethics (3)
     - PHIL A300 Philosophy of Mind (3)
     - PHIL A317 Metaphysics (3)
     - PHIL A318 Epistemology (3)
     - PHIL A319 Eastern Philosophy and Religion (3)
     - PHIL A311 History of Philosophy I (3)
     - PHIL A312 History of Philosophy II (3)
     - PHIL A301 Ethics (3)
     - PHIL A302 Biomedical Ethics (3)
     - PHIL A303 Environmental Ethics (3)
     - PHIL A304 Business Ethics (3)
     - PHIL A300 Philosophy of Mind (3)
     - PHIL A317 Metaphysics (3)
     - PHIL A318 Epistemology (3)
     - PHIL A319 Eastern Philosophy and Religion (3)

**Law Track (21 credits)**

Complete the following courses:

- Logical Reasoning and Argumentation:
  - PHIL A101 Introduction to Logic (3)

- **Foundations of Philosophy**
  - PHIL A201 Introduction to Philosophy (3)
  - PHIL A211 History of Philosophy I (3)
  - PHIL A212 History of Philosophy II (3)

- Ethics and Values:
  - PHIL A301 Ethics (3)

- Philosophical Foundations of the Law
  - PHIL A306 Philosophy of Law (3)
  - PHIL A423 Advanced Ethical Theory (3)

**FACULTY**

Raymond Anthony, Associate Professor, AFRX@uaa.alaska.edu
Stephanie Bauer, Assistant Professor, AFSLB@uaa.alaska.edu
Thomas Bulir, Associate Professor, AFTGB@uaa.alaska.edu
William Jamison, Term Instructor, AFWSJ@uaa.alaska.edu
Terry Kelly, Term Instructor, AFTMK@uaa.alaska.edu
James Liszka, Professor, AFJJL@uaa.alaska.edu
John Mouracade, Associate Professor/Chair, AFJMM2@uaa.alaska.edu
Proposal to Initiate, Add, Change, or Delete a Course

**Initiator Name (typed):** Phyllis Fast

**Initiator Signed Initials:** _________  **Date:** __________

**12. Cross Listed with**

- **Stacked**

**Cross-Listed Coordination Signature**

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

<table>
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<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<td>1. BA/BS in Anthropology</td>
<td>87-88</td>
<td>2/12/10</td>
<td>Steve Langdon, Anthropology Department Chair</td>
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<tr>
<td>2. Minor in Anthropology</td>
<td>88</td>
<td>2/12/10</td>
<td>Steve Langdon, Anthropology Department Chair</td>
</tr>
<tr>
<td>3. Minor in English</td>
<td>101</td>
<td>3/22/11</td>
<td>Genie Babb, English Department Chair</td>
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13b. Coordination Email

- Date: 2/12/10

13c. Coordination with Library Liaison

- Date: 2/12/10

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

Explores languages as communicative interaction and discourse strategies. Discusses multilingualism, sociolinguistics, language change and variation, language endangerment and revitalization, linguistic typologies, folk taxonomies, and kinship in relation to language and culture.

18. Mark if course is a selected topic course

19. Justification for Action

Update CCG to maintain professional standards; description more closely matches course content; deletion of unnecessary special note.

Initiator (faculty only)  
Phyllis A. Fast  
Initiator (TYPE NAME)

**Approved**  
**Disapproved**

- **Dean/Director of School/College**  
- **Undergraduate/Graduate Academic**  
- **Provost or Designee**  

**Date**  

**Approved**  
**Disapproved**

- **Department Chairperson**  
- **Board Chairperson**

**Date**  

**Approved**  
**Disapproved**

- **Curriculum Committee Chairperson**  

**Date**

---

**University of Alaska Anchorage**

**Course Action Request**

---

**211**
I. **Date of Initiation:** January 22, 2010

II. **Course Information**

College: College of Arts and Sciences
Course Name: Introduction to Linguistic Anthropology
Course Subject: ANTH
Course Subject/Number: A210
Credits: 3.0
Contact Hours: 3+0
Course Description: Explores languages as communicative interaction and discourse strategies. Discusses multilingualism, sociolinguistics, language change and variation, language endangerment and revitalization, linguistic typologies, folk taxonomies, and kinship in relation to language and culture.

Grading Basis: A-F
Prerequisites: None
Registration Restrictions: None
Lab Fees: No

III. **Instructional Goals and Student Outcomes**

**Instructional Goals:** The instructor will:
1. Examine factors of communication theory
2. Introduce concepts of language and language learning
3. Introduce students to a variety of analytical styles of thought about language in an anthropological context
4. Challenge students to critically evaluate theories and findings in the study of linguistics

**Defined Outcomes:** The students will be able to:
1. Explain how linguistic anthropology fits into four-field anthropology
2. Describe key features of language
3. Discuss competing theories on the origins of the earliest human language(s)
4. Give examples of applied linguistic anthropology and discuss potential ethical dilemmas
5. Describe key features in language endangerment and language revitalization
IV. Course Activities
The course is conducted through lectures and seminar-style discussions with occasional films, guest speakers, and exercises conducted in class.

V. Methods of Assessment
In-class written exercises, examinations, occasional field exercises, student presentations.

VI. Course Level Justification
This is an introductory course that provides an overview of linguistic anthropology within the four fields of anthropology.

VII. Topical Course Outline
1. Overview of linguistic anthropology within four-field anthropology
2. Communication among animal species and human language
3. Language, Culture, and the Sapir-Whorf Hypothesis
4. Phonology, phonetics, and phonemics
5. Morphology, syntax, semantics, and pragmatics
6. Origins of language
7. Historical linguistics
8. Synchronic language variation
9. Language in its social context
10. Language, gender, ethnicity, and class
11. Ethnography of communication
12. Non-verbal communication, sign languages, writing, and spoken art
13. Linguistic anthropology in the contemporary world: applied anthropology
14. Endangered languages and language revitalization

VIII. Suggested Text

IX. Bibliography


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

2. Course Prefix  
ANTH  
3. Course Number  
A211  
4. Previous Course Prefix & Number  
N/A  
5a. Credits/CEUs  
3.0  
5b. Contact Hours  
(Lecture + Lab)  
(3+)  

6. Complete Course Title  
Fundamentals of Archaeology  
Abbreviated Title for Transcript (30 character)  

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

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

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

9. Repeat Status No  ☐ # of Repeats  ☐ N/A  ☐ Max Credits  

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

11. Implementation Date  
semester/year  
From: Spring/2012  
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.  
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<td>02/12/10</td>
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<td>Lee Ann Munk, Geological Sciences Dept. Chair</td>
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13b. Coordination Email  
Date: 02/12/10  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)  

13c. Coordination with Library Liaison  
Date: 02/12/10  

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)  
Introduction to basic concepts, theories, and methods of archaeology with overview of historical development and major findings. Prepares students for archaeological field schools and more specialized courses.  

16a. Course Prerequisite(s) (list prefix and number)  
N/A  
16b. Test Score(s)  
N/A  
16c. Co-requisite(s) (concurrent enrollment required)  
N/A  
16d. Other Restriction(s)  
☐ College  ☐ Major  ☐ Class  ☐ Level  
16e. Registration Restriction(s) (non-codable)  
N/A  

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

19. Justification for Action  
Update CCG to maintain professional standards; small change to course description  

Initiator Name (typed): Paul White  
Initiator Signed Initials: __________________  Date: __________________  

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

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☐ Approved  ☐ Disapproved  
Board Chairperson  
Date: __________________  

Curriculum Committee Chairperson  
☐ Approved  ☐ Disapproved  
Provost or Designee  
Date: __________________
I. Date of Initiation
   11/20/2009

II. Course Information

College:       College of Arts and Sciences
Course Title:  Fundamentals of Archaeology
Course Subject: ANTH
Course Number: A211
Credits:       3.0
Contact Hours: 3 + 0
Course Description: Introduction to basic concepts, theories, and methods of archaeology with overview of historical development and major findings. Prepares students for archaeology field schools and more specialized courses.
Grading Basis: A-F
Prerequisite(s): None
Registration Restriction(s): None
Lab Fees: No

III. Instructional Goals and Student Outcomes

Instructional Goals: The instructor will
1. Detail the historical development of archaeology as a profession and its relationship to anthropology.
2. Expose students to the common techniques by which archaeological data are gathered, analyzed, and reported.
3. Demonstrate the scientific basis of archaeological interpretations.
4. Outline the broader legal and ethical contexts in which the archaeological profession operates.
Defined Outcomes: Students will be able to
1. Discuss the historical development of archaeological method and theory.
2. Explain the principles undergirding archaeological classification systems and dating methods.
3. Articulate key differences between archaeological interpretation and pseudoscience.
4. Explain key ethical issues in the collection, presentation, and repatriation of archaeological materials.

IV. Methods of Assessment
Midterm and final examinations; written assignments on topics such as site mapping, site formation processes, artifact typology, artifact interpretation, and archaeological ethics.

V. Course-level Justification
This is an introductory course that covers topics in the history and practice of the field fundamental for upper division courses.

VI. Course Activities
The course is conducted through lectures supplemented with occasional videos/films, guest speakers, class exercises, and short field trips.

VII. Topical Course Outline
1. Background
   a. The place of archaeology within the field of anthropology
   b. The history of archaeology
   c. The nature of archaeological data
2. Archaeological field methods
   a. Surveying techniques
   b. Excavation techniques
   c. Research design and the scientific method
3. Analytical methods
   a. Radiometric dating techniques
   b. Relative dating techniques
   c. Other dating methods
   d. Artifact description and classification
   e. Floral and faunal analysis
4. Archaeological interpretation
   a. Cultural historical interpretations
   b. Processual interpretations
   c. Post-processual interpretations
5. Cultural resource management
   a. Antiquities legislation
   b. Ethical issues in archaeology
   c. Repatriation of archaeological materials
6. Archaeological reporting
   a. Organization of site reports
   b. Site report critique

VIII. Suggested Texts

Fagan, Brian M.

Renfrew, Colin, and Paul Bahn

Thomas, David Hurst, and Robert L. Kelly

IX. Bibliography

Feder, Kenneth

Hester, Thomas R., Harry Shafer, and Kenneth Feder

Hodder, Ian (ed.)

Johnson, Matthew

Kelly, Robert L., and David Hurst Thomas

Patterson, Thomas C.

Preucel, Robert W., and Ian Hodder (eds.)

Price, T. Douglas

Price, T. Douglas, and Gary Feinman
Renfrew, Colin, and Paul Bahn  

Roskams, Steve  

Sutton, Mark Q., and Brooke S. Arkush  

Swidler, Nina, Kurt E. Dongoske, Roger Anyon, and Alan S. Downer  
1997 *Native Americans and Archaeologists: Stepping Stones to Common Ground*. Walnut Creek, CA: AltaMira.

Thomas, David Hurst  

Trigger, Bruce G.  

Vitelli, Karen D., and Chip Colwell-Chanthaphoh  
2006 *Archaeological Ethics*. 2nd ed. Walnut Creek, CA.: AltaMira.

Zimmerman, Larry J., and William Green (eds.)  
# Course Action Request

**University of Alaska Anchorage**

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

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**If a change, mark appropriate boxes:**

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- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Other Restrictions
- Class
- Level
- College
- Major

**Other Update CCG (please specify):**

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**Initiator Name (typed):** David R. Yesner

**Initiator Signed Initials:**

**Date:**

**13b. Coordination Email**

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

**13c. Coordination with Library Liaison**

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**14. General Education Requirement**

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

Study of the peoples and cultures of the Native, Russian, and American periods of the Cook Inlet region. Includes archaeological, ethnohistoric, and ethnographic studies.

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

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

| N/A |

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

| N/A |

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

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

| N/A |

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<th>Mark if course has fees</th>
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**17.**

**18.**

**19. Justification for Action**

Update CCG to maintain professional standards. Changed course number more accurately reflects level at which course is taught. Slight corrections of description. Special note no longer applies.

**Initiator (faculty only) David R. Yesner**

**Initiator Signed Initials:**

**Date:**

<table>
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**Approved**

**Disapproved**

**Undergraduate/Graduate Academic Board Chairperson**

**Approved**

**Disapproved**

**Provost or Designee**

**Approved**

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**Course Action Request**

**University of Alaska Anchorage**

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

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**Initiator Name (typed):** David R. Yesner

**Initiator Signed Initials:**

**Date:**

**13b. Coordination Email**

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

| N/A |

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

| N/A |

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

<table>
<thead>
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<th>College</th>
<th>Major</th>
<th>Class</th>
<th>Level</th>
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**16e. Registration Restriction(s) (non-codable)**

| N/A |

<table>
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<tr>
<th>Mark if course has fees</th>
<th>Mark if course is a selected topic course</th>
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</table>

**17.**

**18.**

**19. Justification for Action**

Update CCG to maintain professional standards. Changed course number more accurately reflects level at which course is taught. Slight corrections of description. Special note no longer applies.

**Initiator (faculty only) David R. Yesner**

**Initiator Signed Initials:**

**Date:**

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

**Approved**

**Disapproved**

**Undergraduate/Graduate Academic Board Chairperson**

**Approved**

**Disapproved**

**Provost or Designee**

**Approved**

**Disapproved**

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<table>
<thead>
<tr>
<th>Date</th>
</tr>
</thead>
</table>
1. Initiation date: 01/01/10

2. A. College or school: College of Arts and Sciences
   
   B. Course name: Cook Inlet Anthropology
   
   C. Course prefix: ANTH
   
   D. Course number: A225
   
   E. Number of credits and contact hours: 3+0
   
   F. Grading basis: A-F
   
   G. Course description: Study of the peoples and cultures of the Native, Russian, and American periods of the Cook Inlet region. Includes archaeological, ethnohistoric, and ethnographic studies.
   
   H. Course prerequisite(s)/test score(s)/corequisite(s): None
   
   I. Registration restrictions: None
   
   J. Course fee: No

3. Course level justification: survey-level course that requires little background in archaeological method or theory

4. Instructional goals and student outcomes

   A. The instructor will:

   1. Discuss the environmental background to human cultures of the Cook Inlet region
   2. Describe the prehistory of the Cook Inlet region
   3. Discuss the Russian and American contact periods in the Cook Inlet region
   4. Discuss the ecology, subsistence, and economy of traditional Native cultures of the Cook Inlet region
   5. Describe the languages, oral history, and mythology of traditional Native cultures of the Cook Inlet region
   6. Discuss the social structure and political organization of traditional Native cultures of the Cook Inlet region
   7. Discuss the transformation of Cook Inlet cultures during the 20th century
B. The student will be able to:

1. Describe the major elements of prehistoric cultures of the Cook Inlet region
2. Describe the antecedents of Alutiiq and Dena’ina Athabascan cultures of the Cook Inlet region
3. Describe in detail the major elements of traditional Alutiiq and Dena’ina cultures of the Cook Inlet region
4. Analyze the impacts of Russian and early American contact in the Cook Inlet region
5. Analyze the transformation of various elements of traditional Alutiiq and Dena’ina cultures of the Cook Inlet region during the 20th century

C. Assessment Measures: midterm and final examinations; term paper or project

5. Topical course outline

A. Geography and Geology of the Cook Inlet Region
B. Paleoenvironments of the Cook Inlet Region
C. Prehistory of the Cook Inlet Region
D. The Russian Contact Period in the Cook Inlet Region: Dena’ina and Alutiiq Cultures
E. The American Period in the Cook Inlet Region: Dena’ina and Alutiiq Cultures
F. The Gold Rush Era in the Cook Inlet Region
G. Traditional Alutiiq and Dena’ina Cultures of the Cook Inlet Region
H. Urban and Rural Transformations of Traditional Alutiiq and Dena’ina Cultures in the Cook Inlet Region
I. Current Crises in Alutiiq and Dena’ina Culture and Identity in the Cook Inlet Region

6. Suggested text:

7. Bibliography:

Crowell, Aron L., Amy F. Steffian, and Gordon L. Pullar  
2001 *Looking Both Ways: Heritage and Identity of the Alutiiq People.*  
Alaska Native Language Center, University of Alaska Fairbanks.

Kari, James, and James A. Fall  
2005 *Shem Pete’s Alaska* (2nd ed.). Alaska Native Language Center,  
University of Alaska Fairbanks.

Klein, Janet R.  
1995 *Archaeology of Kachemak Bay, Alaska.* Kachemak Country  
Publications, Homer, AK.
### Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

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

**1b. Division**
ASSC Division of Social Science

**1c. Department**
Anthropology

**2. Course Prefix**
ANTH

**3. Course Number**
A270

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

**5a. Credits/CEUs**
3.0

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

**6. Complete Course Title**
Women in Cross-cultural Perspective

**Abbreviated Title for Transcript (30 character)**
Women X-cultural Perspective

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

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

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

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

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

**11. Implementation Date**
From: Spring/2012
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](http://www.uaa.alaska.edu/governance).

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<tr>
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<tr>
<td>Womens Studies minor</td>
<td>127</td>
<td>1/28/2010</td>
<td>Kimberly Pace</td>
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<tr>
<td>BA. and BS. in Anthropology</td>
<td>87-88</td>
<td>2/12/2010</td>
<td>Steve Langdon</td>
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<tr>
<td>AAS in Human Services</td>
<td>150-151</td>
<td>3/21/2011</td>
<td>Laura Kelley</td>
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Initiator Name (typed): Phyllis Fast
Initiator Signed Initials: ___________ Date: ___________

**13b. Coordination Email**
- [ ] Date: 2/10/10
  submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

**13c. Coordination with Library Liaison**
- [ ] Date: 2/10/10

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

**15. Course Description** *(suggested length 20 to 50 words)*
Surveys women in a cross-cultural perspective, exploring the nature of the relationship between gender and sex roles.

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

**16b. Test Score(s)**
N/A

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

**16d. Other Restriction(s)**
- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

**16e. Registration Restriction(s) (non-codable)**
N/A

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

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

**19. Justification for Action**
Update CCG to maintain professional standards. Deletion of unnecessary special note.

Initiator (faculty only) Phyllis A. Fast
Initiator (TYPE NAME)

Initiator Signed Initials: ___________ Date: ___________

Approved
- Disapproved

Dean/Director of School/College
- Date

Approved
- Disapproved

Undergraduate/Graduate Academic
- Date

Approved
- Disapproved

Board Chairperson
- Date

Approved
- Disapproved

Provost or Designee
- Date
I. **Date of Initiation**: January 22, 2010

II. **Course Information**

College: College of Arts and Sciences  
Course Title: Women in Cross-cultural Perspective  
Course Subject: ANTH  
Course Subject/Number: A270  
Credits: 3.0  
Contact Hours: 3+0  
Course Description: Surveys women in a cross-cultural perspective, exploring the nature of the relationship between gender and sex roles  
Grading Basis: A-F  
Prerequisites: None  
Registration Restrictions: None  
Lab Fees: No

III. **Instructional Goals and Student Outcomes**

**Instructional Goals**: The Instructor will:
1. Introduce students to a variety of analytical styles of thought about women in an Anthropological context  
2. Discuss variation in perspectives on women from a variety of cultures and languages as well as different historical contexts  
3. Introduce the variety of ways that women are described in writing  
4. Outline various roles of females from nonhuman primates and band societies to tribal concepts of gatherers and goddesses, gender roles in chiefdom and state-level societies, and contemporary movements such as the Chinese revolution and western feminism  
5. Examine factors determining the status of women in human societies, including subsistence, mobility, and access to power  
6. Challenge students to evaluate theories and findings in the study of women in cross-cultural perspective
**Defined Outcomes:** The student will be able to:
1. Specify how women’s roles vary from culture to culture
2. Critique the major concepts, methods, theories, and debates in gender studies
3. Evaluate current writing and discussions in the study of women in a variety of cultures
4. Synthesize the holistic inquiry mode of gender studies

IV. **Course Activities**
The course is conducted through lectures and seminar-style discussions with occasional films, guest speakers, and exercises conducted in class.

V. **Methods of Assessment**
Course requirements: Daily readings, in-class participation, daily journals about the readings, assigned discussion topics, participation in class, and research paper.

VI. **Course Level Justification**
This is an introductory course that covers topics in women’s studies in the field of anthropology.

VII. **Topical Course Outline**
Unit 1: Biology, Gender, and Human Evolution

Unit 2: Gender and Prehistory

Unit 3: Domestic Worlds and Public Worlds

Unit 4: Equality and Inequality: the Sexual Division of Labor and Gender Stratification

Unit 5: The Cultural Construction of Gender and Personhood

Unit 6: Culture, Sexuality, and the Body

Unit 7: Gender, Property, and the State

Unit 8: Gender, Household, and Kinship

Unit 9: Gender, Ritual, and Religion

Unit 10: Gender, Politics, and Reproduction

Unit 11: Gender, Culture Contact, Development, and the Global Economy
VIII. **Suggested Text**


IX. **Bibliography**


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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<td>ASSC Division of Social Science</td>
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<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours</th>
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<td>N/A</td>
<td>3.0</td>
<td>(Lecture + Lab) (3+0)</td>
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6. Complete Course Title
North American Archaeology

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

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

If a change, mark appropriate boxes:
- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [x] Course Description
- [ ] Cross-Listed/Stacked
- [ ] Test Score Prerequisites
- [ ] Course Prerequisites
- [ ] Other Restrictions
- [ ] Registration Restrictions
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major
- [x] Other Update CCG (please specify)

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

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

11. Implementation Date
From: Spring/2012
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 fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
<thead>
<tr>
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<th>Catalog Page(s) Impacted</th>
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<th>Chair/Coordinator Contacted</th>
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<td>1. Ethnogr. area course in BA/BS in Anthropology</td>
<td>pp. 67-88</td>
<td>02/12/10</td>
<td>Steve J. Langdon, Chair, Department of Anthropology</td>
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<td>2. ANTH A413</td>
<td>p. 314</td>
<td>02/12/10</td>
<td>Steve J. Langdon, Chair, Department of Anthropology</td>
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<td>3. Minor in Anthropology</td>
<td>p. 88</td>
<td>02/12/10</td>
<td>Steve J. Langdon, Chair, Department of Anthropology</td>
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13b. Coordination Email
Date: 02/10/10
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 01/10/10

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

15. Course Description
(suggested length 20 to 50 words)
Traces human cultural developments in the New World north of Mexico up to the time of European contact.

16a. Course Prerequisite(s) (list prefix and number)
ANTH A211

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

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

19. Justification for Action
Updating CCG to maintain professional standards. Deletion of unnecessary special note. Grammatical correction of description.

Initiator Name (typed): David R. Yesner
Initiator Signed Initials: _________ Date: __________

13b. Coordination Email
Date: 02/10/10

13c. Coordination with Library Liaison
Date: 01/10/10

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

15. Course Description
(suggested length 20 to 50 words)
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16a. Course Prerequisite(s) (list prefix and number)
ANTH A211

16b. Test Score(s)
N/A

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

16d. Other Restriction(s)
- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

17. [ ] Mark if course has fees

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

19. Justification for Action
Updating CCG to maintain professional standards. Deletion of unnecessary special note. Grammatical correction of description.

Initiator Name (typed): David R. Yesner
Initiator Signed Initials: _________ Date: __________
UNIVERSITY OF ALASKA ANCHORAGE
COURSE CONTENT GUIDE

1. Initiation date: 02/01/10

2. A. College or school: College of Arts and Sciences
   B. Course title: North American Archaeology
   C. Course prefix: ANTH
   D. Course number: A312
   E. Number of course credits: 3.0
   F. Number of contact hours: 3+0
   G. Grading basis: A-F
   H. Course description: Traces human cultural developments in the New World north of Mexico up to the time of European contact.
   I. Course prerequisite: ANTH A211
   J. Registration restrictions: None
   K. Course fee: No

3. Course level justification: intermediate survey-level course that requires limited background in archaeological method and theory

4. Instructional goals and student outcomes

   A. The instructor will:
      1. Discuss the development of organizing concepts in North American archaeology from the 1780s to the present
      2. Discuss the relationship between past and present environments and the development of Native cultures of North America
      3. Discuss the development of Native cultures in individual regions of North America
      4. Discuss the effects of European contact on traditional North American Native cultures
B. The student will be able to:

1. Describe basic organizing concepts in North American archaeology from the 1780s to the present
2. Articulate the relationship between past and present environments and the development of Native cultures of North America
3. Describe the development of Native cultures in individual regions of North America
4. Analyze the effects of European contact on traditional North American Native cultures

C. Assessment Measures: midterm and final examinations

5. Topical course outline

A. Concepts and problems in North American archaeology
B. North America as a human habitat
C. The development of North American archaeology
D. The "stage" concept in North American archaeology
E. Ice Age environments and peopling of the Americas
   1. The archaeology of Beringia
   2. Paleoindians south of Beringia
F. Arctic cultures
G. Northwest Coast prehistory
H. California prehistory: Archaic and Pacific periods
   I. Plateau prehistory
J. Great Basin prehistory
K. The Great Plains: Bison hunters and village farmers
L. Southwestern US prehistory
M. Archaic Cultures of the Eastern Subarctic
N. Eastern Woodlands prehistory
O. Early European contact: chronology and effects
6. Suggested text:

Neusius, Sarah W., and G. Timothy Gross
Routledge, New York.

7. Bibliography:

Fagan, Brian M.
Thames and Hudson, New York.

2011  *The First North Americans: An Archaeological Journey.*  Ancient
Peoples and Places Series, Thames and Hudson, New York.

Pauketat, Timothy R., and Diana D. Loren, eds.

Plew, Mark G.

Snow, Dean R.

Willey, Gordon R., and Jeremy A. Sabloff
1993  *A History of American Archaeology.*  Harvard University Press,
Cambridge, MA.
1a. School or College AS CAS
1b. Division ASSC Division of Social Science
1c. Department Anthropology

2. Course Prefix ANTH
3. Course Number A333
4. Previous Course Prefix & Number N/A

5a. Credits/CEUs 3.0
5b. Contact Hours (Lecture + Lab) (3+0)

6. Complete Course Title Peoples and Cultures of Southeast Asia
   Abbreviated Title for Transcript (30 character)

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

8. Type of Action: ☐ Add ☐ Change ☑ Delete
   If a change, mark appropriate boxes:
   ☐ Prefix ☐ Course Number ☐ Contact Hours ☐ Repeat Status ☐ Cross-Listed/Stacked
   ☐ Title ☐ Course Prerequisites ☐ Co-requisites ☐ Registration Restrictions
   ☐ Grading Basis ☐ Test Score Prerequisites ☐ Co-requisites ☐ Registration Restrictions
   ☐ Other Restrictions ☐ Class ☐ Level ☐ College ☐ Major ☐ Other

9. Repeat Status No # of Repeats Max Credits
   10. Grading Basis ☑ A-F ☐ P/NP ☐ NG
   11. Implementation Date semester/year From: Spring/2012 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.

13b. Coordination Email Date: 02/10/10
    submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

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

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

15. Course Description (suggested length 20 to 50 words)
   Cultural variation and unifying traditions of Southeast Asian peoples, including their prehistory, early cultural influences, effects of European contact, major cultural traditions and selected current issues.

16a. Course Prerequisite(s) (list prefix and number) N/A
16b. Test Score(s) N/A
16c. Co-requisite(s) (concurrent enrollment required) N/A
16d. Other Restriction(s) ☐ College ☐ Major ☐ Class ☐ Level
16e. Registration Restriction(s) (non-codable) N/A

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

19. Justification for Action
    Faculty no longer available to teach course; course no longer integral part of undergraduate Anthropology curriculum.

Initiator Name (typed): David R. Yesner
Initiator Signed Initials: __________ Date: __________

Initiator (faculty only) David R. Yesner Initiator (TYPE NAME)

Approved ☐ Disapproved ☐ Date: __________

Dean/Director of School/College Date: __________

Approved ☐ Disapproved ☐ Date: __________

Undergraduate/Graduate Academic Board Chairperson Date: __________

Approved ☐ Disapproved ☐ Date: __________

Provost or Designee Date: __________

Approved ☐ Disapproved ☐ Date: __________

Department Chairperson Date: __________

Approved ☐ Disapproved ☐ Date: __________

Curriculum Committee Chairperson Date: __________

Approved ☐ Disapproved ☐ Date: __________
## Course Action Request

### University of Alaska Anchorage

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

<table>
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<th>1c. Department</th>
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### 6. Complete Course Title

Native North Americans

Abbreviated Title for Transcript (30 character)

### 7. Type of Course

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

### 8. Type of Action:

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

If a change, mark appropriate boxes:

- [ ] Prefix
- [ ] Course Number
- [ ] Credits
- [ ] Title
- [ ] Repeat Status
- [ ] Grading Basis
- [ ] Contact Hours
- [ ] Cross-Listed/Stacked
- [ ] Course Description
- [ ] Course Prerequisites
- [ ] Test Score Prerequisites
- [ ] Co-requisites
- [ ] Other Restrictions
- [ ] Registration Restrictions
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major
- [x] Other Update CCG (please specify)

### 9. Repeat Status No

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### 10. Grading Basis

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

### 11. Implementation Date

- From: Spring/2012
- To: /9999

### 12. Cross Listed with

- [ ] Stacked with

### 13a. Impacted Courses or Programs

List any programs or college requirements that require this course.

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

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<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tr>
<td>1. B.A./B.S. in Anthropology</td>
<td>88-89</td>
<td>2/12/2010</td>
<td>Steve Langdon, Department of Anthropology</td>
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### 13c. Coordination with Library Liaison

Date: 2/10/10

### 14. General Education Requirement

Mark appropriate box:

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

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

Examines traditional cultures of Native North Americans, effects of contact with Europeans, and contemporary adaptations.

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

ANTH A202

### 16b. Test Score(s)

N/A

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

N/A

### 16d. Other Restriction(s)

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

### 17. Mark if course has fees

- [ ]

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

- [ ]

### 19. Justification for Action

Addition of prerequisite and update of CCG to maintain professional standards. Deletion of unnecessary special note.

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[233]
I. Date of Initiation: January 22, 2010

II. Course Information

College: College of Arts and Sciences
Course title: Native North Americans
Course Subject: ANTH
Course Subject/Number: A335
Credits: 3.0
Contact Hours: 3+0
Course Description: Examines traditional cultures of Native North Americans, effects of contact with Europeans, and contemporary adaptations.

Grading Basis: A-F
Prerequisite: ANTH A202
Registration Restrictions: None
Lab Fees: No

III. Instructional Goals and Student Outcomes

Instructional Goals: The Instructor will:
1. Introduce the variation in Native North American cultures by regional and environmental areas
2. Introduce the variety of ways that Native North Americans have been described in writing
3. Introduce the students to a variety of analytical styles of thought about Native North Americans
4. Challenge students to critically evaluate theories and findings in the study of Native North Americans

Defined Outcomes: The students will be able to:
1. Describe ethnographic information about key tribal areas of Native North Americans and compare the information provided with essays and with ethnological and biographical studies.
2. Discuss differences in etic and emic styles of understanding Native North American cultures.
IV. Course Activities
The course is conducted through lectures and seminar-style discussions with occasional films and guest speakers.

V. Methods of Assessment
In-class participation, unit writing assignments, and examination scores.

VI. Course Level Justification
This is an upper level course which requires knowledge of cultural principles. Students are expected to use analytical techniques they have learned in lower division writing and principles of anthropology courses.

VII. Topical Course Outline
Unit 1: Northeast North America
Unit 2: Southeast US
Unit 3: Great Plains
Unit 4: Great Basin
Unit 5: Southwest US and Northern Mesoamerica
Unit 6: California
Unit 7: Northwest Coast

VIII. Suggested Texts
Bonvillain, Nancy

IX. Bibliography
Lambert, Valerie

Nabokov, Peter (ed.)
Nagel, Joanne

Nies, Judith

Sayre, Gordon M.

Smoak, Gregory E.

Sutton, Mark Q.
2000 *An Introduction to Native North America*. Allyn and Bacon, Boston.
### Course Action Request
#### University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

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<th>1c. Department</th>
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<tr>
<td>Peoples and Cultures of South America</td>
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<td>Peoples &amp; Cultures/S. America</td>
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If a change, mark appropriate boxes:
- Prefix
- Credits
- Title
- Grading Basis
- Course Number
- Course Description
- Test Score Prerequisites
- Co-requisites
- Other Restrictions
- Class
- Level
- College
- Major
- Other Update CCG (please specify)

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11. Implementation Date:
- From: Spring/2012
- To: /9999

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Cross Listed with
- Course Description
- Registration Restrictions

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

- Mark if course is a selected topic course

13b. Coordination Email Date: 02/10/10

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

13c. Coordination with Library Liaison Date: 01/10/10

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

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

Cultural traditions of South American peoples, including origins, prehistory, languages, biological and cultural affiliations, effects of European contact, historical transformations, contemporary adaptations, and current issues.

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

- ANTH A202 or ANTH A211

16b. Test Score(s) N/A

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

16d. Other Restriction(s) |

- College
- Major
- Class
- Level

16e. Registration Restriction(s) (non-codable) N/A

17. Mark if course has fees

18. Mark if course is a selected topic course

19. Justification for Action

Upgrade of prerequisites and update of CCG to maintain professional standards. Deletion of unnecessary special note.

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<th>Board Chairperson</th>
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<th>Provost or Designee</th>
<th>Date:</th>
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237
1. Initiation date: 02/01/10

2. A. College or school: College of Arts and Sciences
   B. Course name: Peoples and Cultures of South America
   C. Course prefix: ANTH
   D. Course number: A336
   E. Number of course credits: 3.0
   F. Number of contact hours: 3+0
   G. Grading basis: A-F

   H. Course description: Cultural traditions of South American peoples, including origins, prehistory, languages, biological and cultural affiliations, effects of European contact, historical transformations, contemporary adaptations, and current issues.

   I. Course prerequisite(s): ANTH A202 or ANTH A211

   J. Registration restrictions: None

   K. Course fees: No

3. Course level justification: intermediate survey-level course that requires some background in anthropological method and theory

4. Instructional goals and student outcomes

   A. The instructor will:

      1. Discuss the environmental backdrop to the peoples and cultures of South America

      2. Describe the linguistic and tribal groupings of indigenous South Americans

      3. Discuss the human biology of South American indigenous people
4. Present the prehistoric cultural developments in various regions of South America

5. Discuss the traditional indigenous cultures of the Amazon, Matto Grosso, Pampas, and Patagonia

6. Describe the transformations of indigenous cultures resulting from European contact, colonial experience, and later historical processes

B. The student will be able to:

1. Discuss the geology, geography, plants, animals, and other natural resources of South America relevant to indigenous cultures

2. Delineate the linguistic and tribal groupings of indigenous South Americans

3. Describe the human biology of South American indigenous people

4. Articulate prehistoric cultural developments in various regions of South America

5. Describe important elements of the traditional indigenous cultures of the Amazon, Matto Grosso, Pampas, and Patagonia

6. Critically analyze the transformations of indigenous cultures resulting from European contact, colonial experience, and later historical processes

C. Assessment Measures: midterm and final examinations; student journal

5. Topical course outline

A. Geology and Geography of South America

B. Plants and Animals of South America

C. Linguistic and Tribal Groupings of South America

D. Human Biology of South America

E. Peopling of South America

F. Early South American Culture History

G. Early Andean Civilizations
H. Later Andean Civilizations

I. The Inka State

J. The Northern Chiefdoms

K. Archaeology of Amazonia

L. The Archaeology of Patagonia

M. The Colonial Experience

N. The Andean Heritage

O. Tropical Rainforest Cultures

P. The Peoples of Patagonia and Tierra del Fuego

6. Suggested texts:

Bruhns, Karen Olsen  

Willson, David J.  

7. Bibliography:

Joyce, Thomas Atholl  

Richardson, James B. III  
1994 *People of the Andes*. Smithsonian Press, Washington, DC.

Salomon, Frank, and Stuart B. Schwartz, eds.  

Silverman, Helaine  

Silverman, Helaine, and William H. Isbell, eds.  
### Course Action Request

**University of Alaska Anchorage**

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

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<thead>
<tr>
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#### Complete Course Title

Peoples and Cultures of Scandinavia  
Peoples & Cultures/Scandinavia

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

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<th>13a. Impacted Courses or Programs:</th>
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<td>List any programs or college requirements that require this course.</td>
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<tr>
<td>Mark appropriate box:</td>
<td>Cultural history and variations of Scandinavian peoples including their origins, prehistory, biological affiliations, major migrations and selected current issues. Special note: STAT A252 or STAT A253 strongly recommended.</td>
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<td>Mark if course is a selected topic course</td>
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#### Justification for Action

Upgrade course prerequisite, addition of special note, and update CCG to maintain professional standards. Deletion of previous unnecessary special note.

Initiator Name (typed): Christine Hanson  
Initiator Signed Initials: ___________  Date: ___________

Initiator (faculty only)  
Initiator (TYPE NAME)  
Initiator (faculty only)  
Initiator (TYPE NAME)
I. Date of Initiation

February 2010

II: Course Information

College: College of Arts and Sciences

Course Title: Peoples and Cultures of Scandinavia

Course Subject: ANTH

Course Number: A338

Credits: 3.0

Contact Hours: 3 + 0

Course Description: Cultural history and variations of Scandinavian peoples including their origins, prehistory, biological affiliations, major migrations, and selected current issues. Special note: STAT A252 or STAT A253 strongly recommended.

Grading Basis: A-F

Prerequisite: ANTH A205

Registration Restriction(s): None

Lab Fees: No

III. Instructional Goals and Student Outcomes

Instructional Goals: The instructor will:

1. Trace the development of the peoples of the area now known as Scandinavia
2. Outline the development of the Scandinavian peoples from food foraging to the first farmers through the Viking Age

Defined Outcomes: Students will be able to:

1. Describe the geology, climate and physiogeography of Scandinavia
2. Discuss the settlement of Scandinavia and the shift from foraging to food production
3. Describe cultural and ethnic differences within Scandinavia

IV. Course Activities:
Lectures, guest speakers, discussion, films

V. Methods of Assessment
Examinations, term paper, annotated bibliography, class presentations

VI. Course-Level Justification
Students are expected to have a substantial background in anthropological concepts.

VII. Course Outline
1. Geography and geology of Scandinavia
2. The Paleolithic period and the Settlement of Scandinavia
3. The Mesolithic period and Coastal Adaptations
4. The Neolithic period and the Origins of Agriculture in Scandinavia
5. The Bronze Age period in Scandinavia
6. The Iron Age period in Scandinavia
7. The Viking Age in Scandinavia and Beyond
8. Ethnogenesis in Scandinavia

VIII. Suggested Text:

IX Bibliography:


## Course Action Request

### University of Alaska Anchorage

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

---

### 1. School or College

AS CAS

### 2. Course Prefix

ANTH

### 3. Course Number

A361

### 4. Previous Course Prefix & Number

N/A

### 5a. Credits/CEUs

3.0

### 5b. Contact Hours

(Lecture + Lab)

### 6. Complete Course Title

Language and Culture

### 7. Type of Course

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

### 8. Type of Action:

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

**If a change, mark appropriate boxes:**

- [ ] Prefix
- [ ] Course Number
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [ ] Repeat Status
- [ ] Cross-Listed/Stacked
- [ ] Course Description
- [ ] Course Prerequisites
- [ ] Co-requisites
- [ ] Test Score Prerequisites
- [ ] Registration Restrictions
- [ ] Other Restrictions
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major

**Other Update CCG (please specify):**

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### 9. Repeat Status

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

### 10. Grading Basis

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

### 11. Implementation Date

- From: Spring/2012
- To: /9999

### 12. Cross Listed

- [ ] with
- [ ] Stacked

**Cross-Listed Coordination Signature**

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### 13a. Impacted Courses or Programs:

- List any programs or college requirements that require this course.

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

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<td>2/12/2010</td>
<td>Steve Langdon, Anthropology Department Chair</td>
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<td>2. Minor in English</td>
<td>101</td>
<td>3/14/2011</td>
<td>Genie Babb, English Department Chair</td>
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**Initiator Name (typed): Phyllis A. Fast**

**Initiator Signed Initials:**

**Date:**

---

### 13b. Coordination Email

Date: 2/12/10

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

---

### 13c. Coordination with Library Liaison

Date: 2/12/10

---

### 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)**

Study of the relationship between language and culture. Includes language variation, meaning in culture, taxonomies, and phonemic principles.

---

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

- ANTH A210 or LING A101

### 16b. Test Score(s)

N/A

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

N/A

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### 16d. Other Restriction(s)

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

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

N/A

---

### 17. Mark if course has fees

- [ ]

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

- [ ]

---

### 19. Justification for Action

Simplify course description; upgrade course prerequisites and CCG to maintain professional standards.

---

**Initiator (faculty only) Phyllis A. Fast**

**Initiator Signed Initials:**

**Date:**

---

**Approved**

Dean/Director of School/College

**Date:**

---

**Approved**

Undergraduate/Graduate Academic Board Chairperson

**Date:**

---

**Approved**

Provost or Designee

**Date:**

---

245
I. Date of Initiation: February 12, 2010

II. Course Information

College: College of Arts and Sciences
Course Subject: ANTH
Course Subject/Number: A361
Credits: 3.0
Contact Hours: 3+0
Course Title: Language and Culture
Course Description: Study of the relationship between language and culture. Includes language variation, meaning in culture, taxonomies, and phonemic principles.
Grading Basis: A-F
Prerequisites: ANTH A210 or LING A210
Registration Restrictions: None
Lab Fees: No

III. Instructional Goals and Student Outcomes

Instructional Goals: The Instructor will:

1. Provide a comprehensive overview of linguistic anthropology
2. Introduce students to a variety of analytical approaches in the study of language and culture
3. Challenge students critically to evaluate theories and findings in the fields of linguistics, folkloristics, and language planning

Defined Outcomes: The students will be able to:

1. Describe how linguistic anthropology fits in with four-field anthropology and with linguistics
2. Discuss how aspects of culture are lost with loss of language
3. Give examples of applied linguistic anthropology and discuss potential ethical dilemmas
4. Compare and contrast the utility of models of culture-and-society versus habitus-and-praxis in explaining features of language use cross-culturally
IV. Course Activities

The course is conducted through lectures and seminar-style discussions with occasional films, guest speakers, and in-class exercises.

V. Methods of Assessment

In-class written exercises and examinations, field exercises

VI. Course Level Justification

This is an upper level course which requires knowledge of linguistic principles. Students are expected to use analytical techniques they have learned in lower division linguistic courses.

VII. Topical Course Outline

1. Overview of phonology, morphology, syntax, semantics, and pragmatics
2. Foundations of linguistic anthropology, the Sapir-Whorf hypothesis, lexical and cultural categories
3. Metaphors and the extension and transference of meaning
4. Ethnography of communication
5. Communicative interactions, conversations, and politeness
6. Social correlates of language use
7. Language and gender cross-culturally
8. Language acquisition and acquisition of communicative competence
9. Multilingual nations, bilingual communities and interactions
10. Language and institutional encounters
11. Language, ideology, and power
12. Folklore
13. Indigenous languages and traditional knowledge

VIII. Suggested Texts


IX. Bibliography


# Course Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
<tr>
<td>AS CAS</td>
<td>ASSC Division of Social Science</td>
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<table>
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<th>2. Course Prefix</th>
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<th>4. Previous Course Prefix &amp; Number</th>
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<tr>
<td>ANTH</td>
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<tr>
<td>Modern Human Biological Diversity</td>
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<td>Modern Human Biol. Diversity</td>
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- Abbreviated Title for Transcript (30 character): Modern Human Biological Diversity

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<tr>
<th>13a. Impacted Courses or Programs:</th>
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<tr>
<td>List any programs or college requirements that require this course.</td>
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<th>14. General Education Requirement</th>
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<td>Oral Communication</td>
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<td>Written Communication</td>
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<td>Quantitative Skills</td>
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<td>Humanities</td>
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<td>Fine Arts</td>
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<tr>
<td>Social Sciences</td>
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<tr>
<td>Natural Sciences</td>
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<tr>
<td>Integrative Capstone</td>
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<table>
<thead>
<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
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<tbody>
<tr>
<td>Survey of modern human biological variation in an evolutionary perspective. Comparison of the differences (and similarities) within and between modern human populations and the distribution of those differences. Special note: STAT A252 or STAT A253 strongly recommended.</td>
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<th>16a. Course Prerequisite(s) (list prefix and number)</th>
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<td>College</td>
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<td>Level</td>
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<th>16e. Registration Restriction(s) (non-codable)</th>
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<tr>
<td>Mark if course has fees</td>
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<tr>
<th>17. Mark if course is a selected topic course</th>
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<tr>
<th>19. Justification for Action</th>
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<tbody>
<tr>
<td>Upgrade course prerequisite and special note, and update CCG to maintain professional standards. Deletion of previous unnecessary special note and level restriction.</td>
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---

**Initiator Name (typed): Christine Hanson**

**Initiator Signed Initials:**

**Date:**

---

**13b. Coordination Email**

- Date: 2/12/10
- submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

**13c. Coordination with Library Liaison**

- Date: 2/12/10

---

**15. Course Description**

- (suggested length 20 to 50 words)

---

**Course Description**

Survey of modern human biological variation in an evolutionary perspective. Comparison of the differences (and similarities) within and between modern human populations and the distribution of those differences. Special note: STAT A252 or STAT A253 strongly recommended.

---

**Initiator (faculty only)**

**Christine Hanson**

**Initiator (TYPE NAME)**

---

**19. Justification for Action**

Upgrade course prerequisite and special note, and update CCG to maintain professional standards. Deletion of previous unnecessary special note and level restriction.

---

**Initiator (faculty only)**

**Christine Hanson**

**Initiator (TYPE NAME)**

---

**19. Justification for Action**

Upgrade course prerequisite and special note, and update CCG to maintain professional standards. Deletion of previous unnecessary special note and level restriction.

---

**Approved**

**Disapproved**

**Dean/Director of School/College**

**Date**

---

**Approved**

**Disapproved**

**Undergraduate/Graduate Academic Board Chairperson**

**Date**

---

**Approved**

**Disapproved**

**Provost or Designee**

**Date**
I. Date of Initiation
February 2010

II: Course Information

College: College of Arts and Sciences
Course Title: Modern Human Biological Diversity
Course Subject: ANTH
Course Number: A365
Credits: 3.0
Contact Hours: 3 + 0
Course Description: Survey of modern human biological variation in an evolutionary perspective. Comparison of the differences (and similarities) within and between modern human populations and the distribution of those differences. Special note: STAT A252 or STAT A253 strongly recommended.

Grading Basis: A-F
Prerequisite: ANTH A205
Registration Restriction(s): None
Lab Fees: No

III. Instructional Goals and Student Outcomes

Instructional Goals: The instructor will:

1. Explain the biological basis of human diversity
2. Discuss the distribution of human variation
3. Describe the evolution and adaptive significance of human biological diversity
Defined Outcomes: The student will be able to:

1. Discuss the range of human biological diversity
2. Explain the evolutionary significance of human variation
3. Explain the distribution of biological variation in humans

IV. Course Activities:
Lectures; guest speakers; class discussion.

V. Methods of Assessment
Examinations, term paper, annotated bibliography, class presentation.

VI. Course-Level Justification
Students are expected to have a background in anthropological concepts.

VII. Course Outline

1.0 Introduction
1.1 Physical anthropology and the study of human variation
1.2 Early explanations of human variation
1.3 Concept of race
1.4 History of racial classification and anthropometry

2.0 Principles of inheritance and evolution
2.1 Population genetics
2.2 Hardy-Weinberg theory of genetic equilibrium
2.3 Modern evolutionary theory (the new synthesis): natural selection, mutation, and migration

3.0 Traits of simple inheritance
3.1 Blood
3.2 Phenylthiocarbamide (PTC), G6PD deficiency, Tay-Sachs disease

4.0 Traits of complex inheritance
4.1 Skin color, dermatoglyphics
4.2 Head size and shape, skulls and teeth

5.0 Statistics and analysis
5.1 Levels of measurement
5.2 Mean, standard deviation, chi-square

6.0 Human adaptability: physiological response to hypoxia, heat/cold, diet
7.0 Human variability and behavior
   7.1 Biological determinism past and present
   7.2 IQ and race

8.0 Distribution of human variability and definition of race

VIII. Suggested Text:


IX Bibliography:


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

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

2. Course Prefix  
ANTH  
3. Course Number  
A400

4. Previous Course Prefix & Number  
N/A  
5a. Credits/CEUs  
3.0  
5b. Contact Hours (Lecture + Lab)  
(3+0)

6. Complete Course Title  
Anthropology of Religion

Abbreviated Title for Transcript (30 character)

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

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

If a change, mark appropriate boxes:

| Prefix | Credits | Title | Grading Basis | Cross-Listed/Stacked | Course Description | Test Score Prerequisites | Co-requisites | Other Restrictions | Credits | Contact Hours | Repeat Status | Course Prerequisites | Registration Restrictions | Course Prerequisites | Registration Restrictions | Course Prerequisites | Registration Restrictions | Course Prerequisites | Registration Restrictions | Course Prerequisites | Registration Restrictions | Course Prerequisites | Registration Restrictions | Course Prerequisites | Registration Restrictions | Course Prerequisites | Registration Restrictions |
|--------|---------|-------|---------------|----------------------|-------------------|---------------------|-----------------|-------------------|---------|---------------|---------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| ☒      |         |       | ☒             |                      |                   |                     |                 |                   |         |               |               |                     |                        |                     |                     |                     |                     |                     |                     |                     |

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

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

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

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

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

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

<table>
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<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tr>
<td>1. B.A./B.S. in Anthropology</td>
<td>88-89</td>
<td>2/12/2010</td>
<td>Steve Langdon, Anthropology Department Chair</td>
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Initiator Name (typed): Phyllis A. Fast  
Initiator Signed Initials:  
Date:

13b. Coordination Email  
Date: 2/10/10  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

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

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)

Descriptive and comparative study of religious phenomena in traditional societies including myth, ritual, magic, witchcraft, and shamanism.

16a. Course Prerequisite(s) (list prefix and number)  
ANTH A202  
16b. Test Score(s)  
N/A  
16c. Co-requisite(s) (concurrent enrollment required)  
N/A

16d. Other Restriction(s)

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<th>☐ Major</th>
<th>☐ Class</th>
<th>☐ Level</th>
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16e. 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

Upgrade course prerequisite and update CCG to maintain professional standards. Deletion of unnecessary special note.

Initiator (faculty only)  
Phyllis A. Fast  
Initiator (TYPE NAME)

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

☐ Approved  
☐ Disapproved  
Department Chairperson  
Date  
Undergraduate/Graduate Academic Board Chairperson  
Date

☐ Approved  
☐ Disapproved  
Curriculum Committee Chairperson  
Date  
Provost or Designee  
Date
UNIVERSITY OF ALASKA ANCHORAGE
COURSE CONTENT GUIDE

I. Date of Initiation: February 12, 2010

II. Course Information

College: College of Arts and Sciences
Course title: Anthropology of Religion
Course Subject: ANTH
Course Number: A400
Credits: 3.0
Contact Hours: 3+0
Course Description: Descriptive and comparative study of religious phenomena in traditional societies including myth, ritual, magic, witchcraft, and shamanism.
Grading Basis: A-F
Prerequisites: ANTH A202
Registration Restrictions: None
Lab Fees: No

III. Instructional Goals and Student Outcomes

Instructional Goals: The Instructor will:

• Explain the major methods and findings in the anthropological approaches to the understanding of religion and related phenomena;
• Challenge students to critically evaluate theories and findings in the anthropology of religion.

Defined Outcomes: The student will be able to:

• Critique major concepts, methods, theories and debates in the anthropology of religion;
• Evaluate current writing and discussions in the anthropology of religion;
• Synthesize the holistic inquiry mode of anthropological approaches to the study of religion.
IV. **Course Activities**

The course is conducted through lectures and seminar-style discussions with occasional films, guest speakers, and exercises conducted in-class.

V. **Methods of Assessment**

Examinations based on lectures, videos, class discussion, library and internet research, term paper and/or field project.

VI. **Course Level Justification**

This is an optional course for BA and BS Anthropology majors but can fulfill both the required 18 credits of Upper Division in Anthropology and three of the required six credits of topical/theoretical courses. The emphasis of the course is on anthropological theory in this field of inquiry, research findings and abstract concepts. The student is required to understand how anthropology, as a culturally constructed and historically grounded discipline, approaches human social phenomena holistically. The foundation for holistic thinking is laid down in ANTH A202 Cultural Anthropology.

VII. **Topical Course Outline**

1. Introduction: What is “religion?”
2. History of speculative (non-empirically based) origin of religion theories of 19th and 20th centuries I: The writings and theories of Mueller, Marrett, Tylor, Frazer, Malinowski, and Freud
3. History of speculative (non-empirically based) origin of religion theories of 19th and 20th centuries II: Sociological approaches of Durkheim and Robertson-Smith
4. Functionalist/structural-functionalist approaches to understanding and explaining sacred stories and rituals: What is “myth” (sacred stories) and “ritual”? Approaches of Malinowski and Radcliffe-Brown
5. Structural and symbolic approaches to ritual, sacred stories and symbols of the sacred: Levi-Strauss, Geertz, Douglas, and Turner
6. Cultural materialist approaches to religious phenomena: Harris, Rappaport
7. The “Magic-religion Continuum”: What is “magic”? 
8. Religious specialists: shamans, priests, prophets, diviners, healers etc.
9. Witchcraft in sociocultural contexts
10. Sorcery in sociocultural contexts
11. Religious use of drugs: Peyotism, marijuana, sacred enemas, etc.
12. Religion and sociocultural change: Revitalization movements
13. Origins and continuity of religion: Current research, archaeological research, biological foundations argued for religion
VIII.  Suggested Texts


IX.  Bibliography


[N.B.: All pre-1990 references represent “classical” texts.]
Proposal to Initiate, Add, Change, or Delete a Course

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

2. Course Prefix: ANTH
3. Course Number: A413
4. Previous Course Prefix & Number: N/A
5a. Credits/CEUs: 3.0
5b. Contact Hours (Lecture + Lab): (3+0)

6. Complete Course Title:
Peopling of the Americas

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

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

If a change, mark appropriate boxes:
- Prefix
- Credits
- Title
- Grading Basis
- Cross-Listed/Stacked
- Course Description
- Course Prerequisites
- Other Restrictions
- Contact Hours
- Repeat Status
- Co-requisites
- Registration Restrictions
- Level
- Major
- Other Update CCG (please specify)

9. Repeat Status No:

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

11. Implementation Date:
From: Spring/2012  To: 9992

12. ☐ Cross Listed with

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

13b. Coordination Email: Date: 02/10/10

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

13c. Coordination with Library Liaison: Date: 01/10/10

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)
Critical analysis of the literature concerning the origins of the first Americans, the timing and nature of the earliest migrations across the Bering Land Bridge, and the adaptations developed by early peoples in the Americas from 14,000 to 10,000 years ago. Detailed analysis of relevant archaeological sites as well as linguistic and biological data pertaining to Native American origins. Special note: ANTH A434 strongly recommended.

16a. Course Prerequisite(s) (list prefix and number) ANTH A211
16b. Test Score(s) (N/A)
16c. Co-requisite(s) (concurrent enrollment required) N/A

16d. Other Restriction(s) (non-codable)
- ☐ College  ☐ Major  ☐ Class  ☐ Level

16e. Registration Restriction(s) (non-codable) N/A

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action:
Upgrade prerequisite and update CCG to maintain professional standards. Description change reflects current use of calendar rather than radiocarbon years. Deletion of unnecessary previous special note and substitute of new note.

Initiator Name (typed): David R. Yesner  Initiator Signed Initials: ____________________  Date: ____________________

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

Initiator (faculty only):
David R. Yesner
Initiator (TYPE NAME)

Disapproved  Date  Dean/Director of School/College  Date
Disapproved  Date  Undergraduate/Graduate Academic  Date
Disapproved  Date  Board Chairperson  Date
Approved  Date  Provost or Designee  Date
1. Initiation date: 02/01/10

2. A. College or school: College of Arts and Sciences
   B. Course prefix: ANTH
   C. Course number: A413
   D. Course name: Peopling of the Americas
   E. Number of credits and contact hours: 3+0
   F. Grading basis: A-F

   G. Course description: Critical analysis of the literature concerning the origins of the first Americans, the timing and nature of the earliest migrations across the Bering Land Bridge, and the adaptations developed by early peoples in the Americas from 14,000 to 10,000 years ago. Detailed analysis of relevant archaeological sites as well as linguistic and biological data pertaining to Native American origins. Special note: ANTH A434 strongly recommended.

   H. Course prerequisite: ANTH A211

   I. Registration restrictions: None

   J. Course fee: No

3. Course level justification: specialized upper-level undergraduate/graduate course that synthesizes archaeological, biological, and linguistic data relevant to the problem of the timing and nature of the earliest peopling of the Americas

4. Instructional goals and student outcomes

   A. The instructor will:

      1. Discuss the historiography of Ideas about the peopling of the Americas
      2. Convey the importance of biological data to the peopling of the Americas
      3. Convey the importance of linguistic data to the peopling of the Americas
      4. Discuss possible antecedents to Paleoindian populations of the Americas
      5. Discuss the paleoecology and early archaeology of Beringia
      6. Present alternative hypotheses concerning the timing, routes, and processes involved with peopling of the Americas
      7. Discuss Paleoindian technology and adaptations
8. Describe Paleoindian archaeology in various regions of North America
9. Describe Paleoindian archaeology in various regions of South America
10. Present alternative hypotheses concerning the extinction of Pleistocene megafauna

B. The student will be able to:

1. Critically analyze major historical theories of the peopling of the Americas
2. Synthesize biological, linguistic, and archaeological approaches to the peopling of the Americas
3. Critically analyze alternative hypotheses concerning the timing, routes, and processes involved with peopling of the Americas
4. Describe the range of Paleoindian technology and adaptations in various regions of the Arctic, North America, and South America

C. Assessment Measures: midterm and final examinations; student journal

5. Topical course outline

1. History of Ideas about the Peopling of the Americas
2. The Paleoindian Concept
3. “Clovis” and “Pre-Clovis”
4. Biological Anthropology
   a. Bones and Teeth
   b. The Genetic Story
5. Linguistic Reconstructions
6. The “Solutrean Hypothesis”
7. Northern Eurasia in the Late Ice Age: Paleoenvironments and Archaeology
8. The Bering Land Bridge and the Peopling of the Americas
   a. The Paleoecology of Eastern Beringia
   b. Early Archaeology in the Northern Yukon and the Alaskan North Slope
   c. The “Nenana” and “Denali” Complexes of Interior Alaska
9. New World Colonization: Routes and Processes
10. Paleoindian Technology
11. Paleoindian Adaptations
12. Regional Paleoindian Archaeology in North America
   a. Early Archaeology of the Far West and Great Plains
   b. Early Archaeology of the Northeast and Great Lakes Regions
   c. Early Archaeology of the Southeast US
13. Peopling of South America
14. End of the Paleoindian Era
15. Terminal Pleistocene Extinctions and Environmental Change
6. Suggested texts:

Barton, Michael C., Geoffrey A. Clark, David R. Yesner, and Georges A. Pearson, eds.

Huckell, Bruce B., and J. David Kilby, eds.
2004 *Readings in Late Pleistocene North America and Early Paleoindians.* Society for American Archaeology, Washington, DC.

Jablonski, Nina G., ed.

Madsen, David B.
2004 *Entering America: Northeast Asia and Beringia Before the Last Glacial Maximum.* University of Utah Press, Salt Lake City.

Meltzer, David J.
2009 *First Peoples in a New World: Colonizing Ice Age America.* University of California Press, Berkeley.

Walker, Renee B., and Bruce Driskell, eds.
2007 *Foragers of the Terminal Pleistocene in North America.* University of Nebraska Press, Lincoln.

7. Bibliography:

Adovasio, James M., and Jake Page

Bonnichsen, Robson, Bradley Lepper, Dennis Stanford, and Michael Waters
2005 *Paleoamerican Origins: Beyond Clovis.* Center for the Study of the First Americans, Department of Anthropology, Texas A&M University, College Station.

Dewar, Elaine

Dillehay, Thomas D.
Fagan, Brian M.

Gillespie, Jason, Susan Tupakka, and Christy de Mille, eds.
2001 *Being First: Cultural Innovation and Environmental Consequences of First Peopling*. Chacmool, University of Calgary, Calgary.

Haynes, Gary

Hoffecker, John F., and Scott A. Elias

Koppel, Tom

Lepper, Bradley T., and Robson Bonnichsen, eds.
2004 *New Perspectives on the First Americans*. Center for the Study of the First Americans, Texas A&M University, College Station.

O’Neill, Dan

Storck, Peter L.

Tankersley, Kenneth
2002 *In Search of Ice Age Americans*. Gibbs Smith, Layton, UT.
1a. School or College | 1b. Division | 1c. Department  
AS CAS | ASSC Division of Social Science | Anthropology  
2. Course Prefix | 3. Course Number | 4. Previous Course Prefix & Number  
ANTH | A415 | n/a  
5a. Credits/CEUs | 5b. Contact Hours (Lecture + Lab)  
3.0 | (3+0)  
6. Complete Course Title  
Applied Anthropology  
Abbreviated Title for Transcript (30 character)  
7. Type of Course  
☑ Academic  
☐ Preparatory/Development  
☐ Non-credit  
☐ CEU  
☐ Professional Development  
8. Type of Action:  
☐ Add  
☐ Change  
☐ Delete  
If a change, mark appropriate boxes:  
☐ Prefix  
☐ Credits  
☐ Contact Hours  
☐ Repeat Status  
☐ Course Number  
☐ Cross-Listed/Stacked  
☐ Grading Basis  
☐ Course Prerequisites  
☐ Course Description  
☐ Co-requisites  
☐ Test Score Prerequisites  
☐ Registration Restrictions  
☐ Other Restrictions  
☐ College  
☐ Level  
☐ Major  
☐ Other Update CCG (please specify)  
9. Repeat Status No  
# of Repeats  
Max Credits  
10. Grading Basis  
☑ A-F  
☐ P/NP  
☐ NG  
11. Implementation Date  
semester/year  
From: Spring/2012  
To: 9999/9999  
12.  
☐ Cross Listed with  
☐ Stacked with ANTH A615  
Cross-Listed Coordination  
Signature  
13a. Impacted Courses or Programs: List any programs or college requirements that require this course.  
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.aaa.alaska.edu/governance.  
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Initiator Name (typed): Kerry Feldman  
Initiator Signed Initials: ___________  
Date: ___________  
13b. Coordination Email  
Date: 2/10/10  
sent to Faculty Listserv: (uaa-faculty@lists.aaa.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)  
Considers the methods, theory, and history of application of cultural anthropology to sociocultural issues and problems with an emphasis on the circumpolar north.  
16a. Course Prerequisite(s) (list prefix and number)  
ANTH A101 or ANTH A202  
16b. Test Score(s)  
n/a  
16c. Co-requisite(s) (concurrent enrollment required)  
n/a  
16d. Other Restriction(s)  
☐ College  
☐ Major  
☐ Class  
☐ Level  
16e. Registration Restriction(s) (non-codable)  
n/a  
17. ☐ Mark if course has fees  
18. ☐ Mark if course is a selected topic course  
19. Justification for Action  
Update of course CCG to maintain professional standards. Correction of course description. Special note no longer applies.  
Initiator (faculty only)  
Kerry Feldman  
Initiator (TYPE NAME)  
☐ Approved  
☐ Disapproved  
Date: ___________  
Dean/Director of School/College  
Date: ___________  
Undergraduate/Graduate Academic  
Board Chairperson  
Date: ___________  
Provost or Designee  
Date: ___________
UNIVERSITY OF ALASKA ANCHORAGE
COURSE CONTENT GUIDE

I. Date of Initiation: February 13, 2010

II. A. College or School: College of Arts and Sciences
B. Course Title: Applied Anthropology
C. Course Prefix: ANTH
D. Course Number: A415
E. Number of Credits and Contact Hours: 3.0 credits, 3+0 Contact Hours
F. Grading Basis: A-F
G. Stacking: ANTH A615
H. Course Description: The methods, theory, and history of application of cultural anthropology to sociocultural issues and problems with an emphasis on the circumpolar north.
I. Course Prerequisite(s): ANTH A101 or ANTH A202
J. Registration restrictions: None
K. Course fee: No

III. Course Level Justification: Upper-level course requiring knowledge and understanding of core concepts in anthropology. This is an optional course for BA and BS anthropology majors but can fulfill both the required 18 upper division credits for anthropology degrees and three of the required six credits of topical/theoretical courses. Unlike the graduate version of this course (ANTH A615), students will not be required to prepare a formal research paper.

IV. Instructional Goals and Student Outcomes:
A. The Instructor will:
   1. Explain core concepts, historical developments, methods employed, and major results of applying anthropological theory and method to the understanding and amelioration of sociocultural problems or challenges in Alaska, the US, and worldwide.
   2. Identify and discuss the major subfields in applied anthropology, and the kinds of employment available in each related to one's educational achievement and experience.
   3. Explain the ethical principles required of applied and practicing anthropologists, providing illustrations of both appropriate and unethical activity in the field.

B. The student will be able to:
   1. Discuss the core concepts, historical developments, methods and results of the application of anthropological theory and method to sociocultural problems and challenges.
   2. Discuss the development, activities appropriate to, and notable results of the major subfields of applied anthropology.
   3. Discuss ethical principles adhered to in this field.
C. Assessment measures: Examinations based on lectures, videos, class discussion, readings, library or internet research projects, and/or class presentations. Unlike the graduate version of this course (ANTH A615), students will not be required to prepare a formal research paper.

V. Topical Course Outline

1. Introduction and Overview; Distinction between Basic and Applied Research
2. History and Kinds of Applied Anthropology
3. Ethics in Applied Research and Practice
4. Method and Theory in Applied Cultural Anthropology
   a. Ethnography, Participant Observation and Key-Informant Interviewing
   b. Focus Groups, Social Indicators, Questionnaires
5. Anthropology and Public Policy
6. Applied Medical Anthropology
7. Business Anthropology & Development Anthropology
8. Anthropology, Law and Dispute Resolution
10. Advocacy Anthropology
11. Social Marketing

VI. Suggested Texts

Gwynne, Margaret A.

McDonald, James H. (ed.)

VII. Bibliography

American Anthropological Association Ethical Guidelines

Baer, Hans A., Merrill Singer, and Ida Susser

Denzin, Norman K. and Yvonne S. Lincoln

Ellen, Roy, Peter Parkes and Alan Bicker
Ervin, Alexander M.  
2000  *Applied Anthropology: Tools and Perspectives for Contemporary Practice.*  
Boston: Allyn and Bacon.

Feldman, Kerry D., Steve J. Langdon and David C. Natcher  

Hill, Carole E. and Marietta Baba (eds)  
2000  *The Unity of Theory and Practice in Anthropology: Rebuilding a Fractured Synthesis.*  

Kedia, Satish and John van Willigen (eds)  

McElroy, Ann and Patricia Townsend  

Natcher, David C., Clifford G. Hickey, Mark Nelson and Susan Davis  
2009  Implications of Tenure Insecurity for Aboriginal Land Use in Canada.  
*Human Organization* 68(3): 245-257.

Trotter, Robert T. and Jean J. Schensul  
Walnut Creek, CA: Altamira.

U.S. Department of Health, Education, and Welfare  

Wheeler, Polly and Tom Thornton  
2005  Subsistence Research in Alaska: A Thirty Year Retrospective.  

Whiteford, Linda and Lenore Manderson (eds)  
2000  *Global Health Policy, Local Realities: The Fallacy of the Level Playing Field.*  
Boulder: Reiner.
# Course Action Request

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

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<th>1b. Division</th>
<th>1c. Department</th>
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6. Complete Course Title
Advanced Applied Anthropology

Abbreviated Title for Transcript (30 character)

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If a change, mark appropriate boxes:
- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Other Restrictions
- Class
- Level
- College
- Major

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

11. Implementation Date
- semester/year
From: Spring/2012
To: /9999

12. Cross Listed with
- ANTH A415

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](http://www.uaa.alaska.edu/governance).

**Impacted Program/Course**
- MA in Anthropology
  - Catalog Page(s) Impacted: p. 257
  - Date of Coordination: 2/15/10
  - Chair, Department of Anthropology: Chair, Department of Anthropology

13b. Coordination Email
- Date: 2/10/10
- submitted to Faculty Listserv: uaa-faculty@lists.uaa.alaska.edu

13c. Coordination with Library Liaison
- Date: 02/10/10

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

15. Course Description (suggested length 20 to 50 words)
Relates to the methods, theory, and history of application of cultural anthropology to sociocultural issues and problems with an emphasis on the circumpolar north. Special note: In addition to meeting all requirements for ANTH A415, graduate students will be required to make mixed-media class presentations based on literature research or interviews with local practicing anthropologists.

16a. Course Prerequisite(s) (list prefix and number)
- n/a

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)
- Graduate Standing

17. Mark if course has fees standard ANTH grad fee

18. Mark if course is a selected topic course

19. Justification for Action
Update of course CCG to maintain professional standards. Modification of special note.
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UNIVERSITY OF ALASKA ANCHORAGE  
COURSE CONTENT GUIDE  

I. Date of Initiation: February 13, 2010  

II.  
A. College or School: College of Arts and Sciences  
B. Course Name: Advanced Applied Anthropology  
C. Course Prefix: ANTH  
D. Course Number: A615  
E. Number of Course Credits: 3.0 credits  
F. Grading Basis: A-F  
G. Stacking: ANTH A415  
H. Course Description: Relates to the methods, theory, and history of application of cultural anthropology to sociocultural issues and problems with an emphasis on the circumpolar north. Special note: In addition to meeting all requirements for ANTH A415, graduate students will be required to make mixed-media class presentations based on literature research or interviews with local practicing anthropologists.  
I. Course Prerequisite(s): N/A  
J. Registration restrictions: Graduate Standing  
K. Course fee: Yes (standard ANTH grad fee)  

III. Course Level Justification:  
This is a graduate course requiring advanced knowledge and understanding of principal concepts, methods and theories in cultural anthropology. This is a required course for graduate (MA) anthropology students in the Applied Cultural Anthropology track. Unlike the stacked undergraduate version (ANTH A415), graduate students will be required to make mixed-media class presentations based on literature research or interviews with local practicing anthropologists.  

IV. Instructional Goals and Student Outcomes:  
A. The Instructor will:  

   1. Explain how core concepts, historical developments and methods of applied cultural anthropology have resulted in understanding and amelioration of sociocultural problems or challenges in Alaska, the U.S. and worldwide.  
   2. Identify and critically discuss the major subfields in applied anthropology, and the kinds of employment available after completing the M.A. degree in anthropology.  
   3. Critically examine the ethical principles required of applied and practicing anthropologists, providing illustrations of both appropriate and unethical activity in the field.
B. The student will be able to:

1. Critically analyze the core concepts, historical developments, methods and results of the application of anthropological theory and method to sociocultural problems and challenges, especially in Alaska and the Circumpolar North.
2. Explain the development, activities appropriate to, and notable results of the major subfields of applied anthropology.
3. Explain and critically analyze the ethical principles adhered to in the field of applied anthropology.
4. Explain the major differences and similarities between basic and applied anthropological research.

C. Assessment measures: Examinations based on lectures, videos, class discussion, readings, library or internet research projects, and class presentations. Unlike ANTH A415, all graduate students will be required to make mixed-media class presentations based on literature research or interviews with local practicing anthropologists.

V. Topical Course Outline

1. Introduction and Overview; Distinction between Basic and Applied Research
2. History and Kinds of Applied Anthropology: Emphasis on US
3. Ethics in Applied Research and Practice
4. Method and Theory in Applied Cultural Anthropology
   a. Ethnography, Participant Observation and Key-Informant Interviewing,
   b. Focus Groups, Social Indicators, Surveys & Questionnaires
5. Anthropology and Public Policy
6. Applied Medical Anthropology
7. Business Anthropology and Development Anthropology
8. Anthropology, Law and Dispute Resolution
10. Advocacy Anthropology
11. Social Marketing

VI. Suggested Texts

Gwynne, Margaret A.

Kedia, Satish and John van Willigen (eds)

McDonald, James H. (ed.).
VII. Bibliography

Baer, Hans A., Merrill Singer, and Ida Susser

Cernea, Michael M. and Christopher McDowell (eds)
2000  *Risks and Reconstruction: Experiences of Settlers and Refugees.* Washington,
DC: World Bank.

Denzin, Norman K. and Yvonne S. Lincoln

Eddy, Elizabeth M. and William L. Partridge (eds)
Press.

Ellen, Roy, Peter Parkes and Alan Bicker
2000  *Indigenous Environmental Knowledge and its Transformations: Critical
Anthropological Perspectives.* Australia: Harwood Academic.

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2000  *Applied Anthropology: Tools and Perspectives for Contemporary Practice.*
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Sabloff, Paula L. W. (ed)
2000  *Careers in Anthropology: Profiles of Practitioner Anthropologists.*
Washington, DC: National Association for the Practice of Anthropology.

Trotter, Robert T. and Jean J. Schensul
US Department of Health, Education and Welfare

Wheeler, Polly and Tom Thornton

Whiteford, Linda and Lenore Manderson (eds)
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

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

2. Course Prefix
ANTH
3. Course Number
A416
4. Previous Course Prefix & Number
N/A
5a. Credits/CEUs
3.0
5b. Contact Hours
(Lecture + Lab)
(3+0)

6. Complete Course Title
Arctic Archaeology

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

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

If a change, mark appropriate boxes:
☐ Prefix
☐ Credits
☐ Title
☐ Contact Hours
☐ Repeat Status
☐ Grading Basis
☐ Cross-Listed/Stacked
☐ Course Description
☐ Test Score Prerequisites
☐ Other Restrictions
☐ Level
☐ College
☐ Major
☐ Other Update CCG (please specify)

9. Repeat Status No
# of Repeats
Max Credits

10. Grading Basis
☐ A-F
☐ P/NC
☐ NG

11. Implementation Date
From: Spring/2012
To: 9999

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

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

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<th>Catalog Page(s) Impacted</th>
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<th>Chair/Coordinator Contacted</th>
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<td>02/12/10</td>
<td>Steve Langdon, Anthropology Department Chair</td>
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<tr>
<td>2. International Studies - Canada Track</td>
<td>p. 107</td>
<td>03/21/11</td>
<td>Susan Kalina, International Studies Dept. Chair</td>
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<tr>
<td>3. Minor in Anthropology</td>
<td>p. 88</td>
<td>02/12/10</td>
<td>Steve Langdon, Anthropology Department Chair</td>
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Initiator Name (typed): Diane K. Hanson
Initiator Signed Initials:_________
Date:_________

13b. Coordination Email
Date: 02/01/10
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 02/01/10

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

15. Course Description (suggested length 20 to 50 words)
Origin and development of the prehistoric cultures of northern North America and adjacent northeast Asia.

16a. Course Prerequisite(s) (list prefix and number)
ANTH A211

16b. Test Score(s)
N/A

16c. Co-requisite(s) (concurent enrollment required)
N/A

16d. Other Restriction(s)
☐ College
☐ Major
☐ Class
☐ Level

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

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

19. Justification for Action
Update prerequisites and CCG to maintain professional standards. Special note no longer applies.

Initiator (faculty only)
Diane K. Hanson
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved

Dean/Director of School/College
Date

Undergraduate/Graduate Academic
Board Chairperson
Date

Provost or Designee
Date

273
I. Date of Initiation
   February 2010

II. Course Information

   College: College of Arts and Sciences
   Course Subject: ANTH
   Course Number: A416
   Course Name: Arctic Archaeology
   Course Credits: 3.0
   Contact Hours: 3 + 0
   Course Description: Origin and development of the prehistoric cultures of northern North America and adjacent northeast Asia.
   Grading Basis: A-F
   Prerequisite: ANTH A211
   Registration Restriction(s): None
   Lab Fees: No

III. Instructional Goals and Student Outcomes

   Instructional Goals: The instructor will:

   1. Describe available knowledge of major aspects of
      a. precontact culture history of the Arctic.
      b. evidence for culture change over time.
   2. Provide students with an understanding of
      a. human cultural responses to northern environments.
      b. the present status of archaeological knowledge bearing on archaeological cultures of Arctic Asia, America, and Greenland.
Defined Outcomes: The student will be able to:

1. Describe and discuss the essential characteristics of the Arctic environment.
2. Articulate culture histories from the major geographic regions of the Arctic.
3. Evaluate the technological responses of cultures to different environments in the Arctic and Subarctic.
4. Critically analyze the major controversies in the archaeological understanding of precontact people of the Arctic.

IV. Course Activities
Lectures, guest speakers, discussion, films.

V. Methods of Assessment
Examinations and a term paper or project that may include a making a poster, manufacturing an item, or giving a presentation to the class.

VI. Course-Level Justification
Students are expected to have a substantial prior background in anthropological concepts.

VII. Course Outline
1. Getting to the Arctic
   a. First humans in the Arctic
   b. Adaptations to the Arctic
2. European and Asian Arctic cultures
3. Siberian cultures
4. Beringia and early Alaskan Cultures
5. Early Alaskan Cultures
6. South Coast – Kodiak, Gulf of Alaska, Alaska Peninsula
7. Aleutian Islands
8. Western Alaska
10. Canada – Paleo-Eskimo Cultures
11. Canada – Dorset, Dorset/Thule Transition
12. Thule expansion/European expansion westward

VIII. Suggested Texts

IX. Bibliography
Ackerman, Robert E.,

Ackerman, Robert E.

Bever, Michael R.

Blankholm, H.P.

Buchanan, Briggs and Mark Collard.

Crowell, Aron L. and Sonja Lührmann.

Dumond, Don E.

Dumond, Don E. and Richard A. Knecht.

Griffin, Dennis.

Hall, Roberta, Diana Roy, and David Boling.


**Course Action Request**

University of Alaska Anchorage

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

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<th>1a. School or College</th>
<th>AS CAS</th>
<th>1b. Division</th>
<th>ASSC Division of Social Science</th>
<th>1c. Department</th>
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6. Complete Course Title

Ethnohistory of Alaska Natives

Abbreviated Title for Transcript (30 character)

7. Type of Course

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

8. Type of Action:

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

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<td>[ ] Major</td>
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9. Repeat Status No

- [ ] # of Repeats
- [x] Max Credits

10. Grading Basis

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

11. Implementation Date

- [ ] semester/year
- From: Spring/2012
- To: 9999

12. [ ] Cross Listed with

- [x] Stacked with ANTH A627
- 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**

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<tr>
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<td>3. Minor in Anthropology</td>
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Initiator Name (typed): Steve J. Langdon

<table>
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<th>Date:</th>
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14. **General Education Requirement**

Mark appropriate box:

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

15. **Course Description**

(suggested length 20 to 50 words)

Examination of major changes in Alaskan Native societies from initial contact to 1940, through the integration of archeological evidence, oral traditions, historical narratives, and governmental documents.

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

(choose prefix and number)

| ANTH A200 |  |

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

N/A

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

(Non-codable concurrent enrollment required)

N/A

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

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

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

N/A

17. [ ] Mark if course has fees

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

19. **Justification for Action**

Update course prerequisite and CCG to maintain professional standards; description more closely matches course content; deletion of special note.

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**Initiator (TYPE NAME)**

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</table>
I. Date of Initiation: Feb. 12, 2010  

II. A. College or school: College of Arts and Sciences  
B. Course Title: Ethnohistory of Alaska Natives  
C. Course Prefix: ANTH  
D. Course Number: A427  
E. Number of Credits and Contact Hours: 3.0 credits, 3+0 Contact Hours  
F. Grading Basis: A-F  
G. Cross-listing: N/A  
H. Stacking: ANTH A627  
I. Course Description: Examines major changes in Alaskan Native societies from initial contact to 1940, through the integration of archeological evidence, oral traditions, historical narratives, and governmental documents.  
J. Course prerequisite: ANTH A200  
K. Registration restrictions: None  
L. Course fee: No

III. Course level justification:  
Upper level course requiring knowledge and comprehension of basic information on Alaska Native societies. This is an optional course for BA and BS anthropology majors but can fulfill both the required 18 upper division credits for anthropology undergraduate degrees and three of the required six credits of topical/theoretical courses. Unlike in ANTH A627, students in ANTH A427 will not be required to prepare a formal research paper.

IV. Instructional Goals and Student Outcomes

A. The instructor will:

1. Explain difference between history and Ethnohistory and explore different forms of ethnohistory;  
2. Discuss trajectory of change in Alaska Native societies prior to sustained contact with Euroamericans including population, technology, settlement, spirituality and conflict;  
3. Present information on early contact including perspectives from explorers/traders and various Native groups;  
4. Discuss epidemic disease, trade and technological change prior to colonization;  
5. Discuss Russian and American forms of colonial governance and impact;  
6. Discuss US period changes including military subjugation, economic appropriation, missionization, education, and political mobilization.
B. The student will be able to:

1. Discuss the concept and practice of ethnohistory;
2. Describe the cultural trajectory of Alaska Native societies prior to European contact;
3. Describe the differential impacts of European contact, exploration, and early trade on Alaska Native societies;
4. Describe the impacts of Russian colonization on different Native populations deriving from economic policy, religion, and governance;
5. Describe the impacts of US colonization on different Native populations deriving from economic policy, religion, education, governance and land/resource rights.

C. Assessment measures: Quizzes and examinations based on lectures, videos, class discussion, library, archival, interview and internet research. Unlike in ANTH A627, students will not be required to prepare a formal research paper.

V. Topical Course Outline

1. Introduction and Overview
2. Alaskan Native Prehistory: Prehistoric Trajectories
3. Proto-contact
4. First Contact Experiences: Native Oral Traditions & European Narrative
5. Traders and the Fur trade
6. Epidemic Disease: Population decline and cultural impact
7. Russian America: Mercantile Colonialism
8. Creoles
9. US Purchase and Governmentality
10. Russian Orthodoxy and Protestantism
11. European Contact: Explorers and Traders
12. Euroamerican Colonization: Alaska and British Columbia
13. Education and Economics
14. Political Mobilization and Land Claims

VI. Suggested Texts

Burch, Ernest S.

Dauenhauer, R.

Luehrmann, S.

Oswalt, W.
VII. Bibliography

Black, Lydia
1984 *Atka: The Ethnohistory of a Western Aleutian Village*. Limestone Press, Kingston, ON.

Black, Lydia

Bockstoce, John

Crowell, Aron (ed)

Dauenhauer, Richard, Nora Dauenhauer, and Lydia Black

Ellanna, L. and G. Sherrod

Fienup-Riordan, Ann

Fortune, Robert

Grinev, Andrei

Harris, Christie

Hinckley, Theodore

Laguna, Frederica de

Ray, Dorothy Jean

Ray, Dorothy Jean
1983 *Ethnohistory in the Arctic: The Bering Strait Eskimo*. Limestone Press, Kingston, ON.

Smith, Barbara and Redmond Barrett (eds.)
# Ethnohistory of Alaska Natives

## Abbreviated Title for Transcript (30 character)

### 2. Course Prefix

ANTH

### 3. Course Number

A627

### 4. Previous Course Prefix & Number

N/A

### 5a. Credits/CEUs

3

### 5b. Contact Hours

(3+0)

### 6. Complete Course Title

Ethnohistory of Alaska Natives

### 7. Type of Course

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

### 8. Type of Action:

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

**If a change, mark appropriate boxes:**

- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [X] Course Description
- [ ] Test Score Prerequisites
- [ ] Co-requisites
- [ ] Other Restrictions
- [ ] Other CCG (please specify)

### 9. Repeat Status No

**# of Repeats**

**Max Credits**

### 10. Grading Basis

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

### 11. Implementation Date

- From: Spring/2012
- To: /9999

### 12. Cross Listed with

- ANTH A427

### 13a. Impacted Courses or Programs:

List any programs or college requirements that require this course.

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

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Initiator Name (typed): **Steve J. Langdon**

Initiator Signed Initials: __________________ Date: __________________

### 13b. Coordination Email Date: 2/12/10

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

### 13c. Coordination with Library Liaison Date: 2/12/10

### 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 major changes in Alaskan Native societies from initial contact through 1940, through the integration of archeological evidence, oral traditions, historical narratives, and government documents. Special note: In addition to meeting all requirements for ANTH A427, graduate students will be required to prepare a research paper from primary sources (oral, written, or both) and give a presentation of findings to the class. Not available to students who have taken ANTH A427.

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

N/A

### 16b. Test Score(s)

N/A

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

Graduate standing

### 16d. Other Restriction(s)

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

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

**Mark if course has fees standard ANTH grad fee**

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

### 19. Justification for Action

Upgrading course description and prerequisite and updating CCG to maintain professional standards. Special note reflects overlap in course content.
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UNIVERSITY OF ALASKA ANCHORAGE
COURSE CONTENT GUIDE

I. Date of Initiation: Feb. 12, 2010

II. A. College or school: College of Arts and Sciences
B. Course Title: Ethnohistory of Alaska Natives
C. Course Prefix: ANTH
D. Course Number: A627
E. Number of Credits and Contact Hours: 3.0 credits, 3+0 Contact Hours
F. Grading Basis: A-F
G. Cross listing: N/A
H. Stacking: ANTH A427
I. Course Description: Examines major changes in Alaskan Native societies from initial contact through 1940, through the integration of archeological evidence, oral traditions, historical narratives, and governmental documents. Special note: In addition to meeting all requirements for ANTH A427, graduate students will be required to prepare a research paper from primary sources (oral, written, or both) and give a presentation of findings to the class. Not available to students who have taken ANTH A427.
J. Course prerequisite: N/A
K. Registration restrictions: Graduate standing
L. Course fee: Yes (standard ANTH grad fee)

III. Course level justification

Graduate course requiring knowledge and comprehension of basic information on Alaska Native societies. This is an optional course for the MA in Anthropology.

IV. Instructional Goals and Student Outcomes

A. The instructor will:

1. Explain differences between history and ethnohistory and explore different forms of ethnohistory
2. Discuss trajectory of change in Alaska Native societies prior to sustained contact with Euroamericans including population, technology, settlement, spirituality and conflict
3. Present information on early contact including perspectives from explorers/traders and various Native groups
4. Discuss epidemic disease, trade and technological change prior to colonization
5. Discuss Russian and American forms of colonial governance and impact
6. Discuss US period changes including military subjugation, economic appropriation, missionization, education, and political mobilization
B. The student will be able to:

1. Critically analyze the concept and practice of ethnohistory
2. Discuss the cultural trajectory of Alaska Native societies prior to European contact
3. Discuss the differential impacts of European contact, exploration, and early trade on Alaska Native societies
4. Critically analyze the impacts of Russian colonization on different Native populations deriving from economic policy, religion, and governance
5. Critically analyze the impacts of US colonization on different Native populations deriving from economic policy, religion, education, governance and land/resource rights

C. Assessment measures: Quizzes and examinations based on lectures, videos, class discussion, library, archival, interview and internet research. All graduate students will be required to prepare a research paper from primary sources (oral, written, or both) and give a presentation of findings to the class.

V. Topical Course Outline

1. Introduction and Overview
2. Alaskan Native Prehistory: Prehistoric Trajectories
3. Protocontact
4. First Contact Experiences: Native Oral Traditions and European Narrative
5. Traders and the Fur trade
6. Epidemic Disease: Population decline and Cultural Impact
7. Russian America: Mercantile Colonialism
8. Creoles
9. US Purchase and Governmentality
10. Russian Orthodoxy and Protestantism
11. European Contact: Explorers and Traders
12. Euroamerican Colonization: Alaska and British Columbia
13. Education and Economics
14. Political Mobilization – Land Claims

VI. Suggested Texts

Burch, Ernest S.

Dauenhauer, R.
Luehrmann, S.
2008 *Alutiiq Villages under Russian and US Rule.* University of Alaska Press, Fairbanks.

Oswalt, W.

VII. Bibliography

Black, Lydia

Bockstoce, John

Crowell, Aron (ed.)

Dauenhauer, Richard, Nora Dauenhauer, and Lydia Black

Ellanna, L. and G. Sherrod

Fienup-Riordan, Ann

Fortune, Robert

Grinev, Andrei
2005 *The Tlingit Indians in Russian America, 1741-1867.* University of Nebraska Press, Lincoln.

Harris, Christie

Smith, Barbara and Redmond Barrett (eds.)
# Course Action Request

## University of Alaska Anchorage

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

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<th>1a. School or College</th>
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<td>Anthropology</td>
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### 6. Complete Course Title

**Field Methods in Archaeology**

Abbreviated Title for Transcript (30 character): Field Methods in Archaeology

### 7. Type of Course

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

### 8. Type of Action:

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

If a change, mark appropriate boxes:

- [ ] Prefix
- [ ] Course Number
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [ ] Cross-Listed/Stacked
- [x] Course Description
- [ ] Course Prerequisites
- [ ] Co-requisites
- [ ] Test Score Prerequisites
- [x] Registration Restrictions
- [ ] Other Restrictions
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major
- [x] Other Update CCG (please specify)

### 9. Repeat Status

- Repeat Status: Yes
- # of Repeats: 1
- Max Credits: 16

### 10. Grading Basis

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

### 11. Implementation Date

- From: Spring/2012
- To: 9999

### 12. Cross Listed with

- [ ] Cross Listed with
- ANTH A631

### 13a. Impacted Courses or Programs:

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<td>Steve J. Langdon</td>
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### 13b. Coordination Email

Date: 02/10/10

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

### 13c. Coordination with Library Liaison

Date: 01/10/10

### 14. General Education Requirement

Mark appropriate box:

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

### 15. Course Description

(suggested length 20 to 50 words)

Introduction to basic techniques of archaeological survey and excavation, including archaeological data recovery and recording techniques, initial laboratory processing, and preliminary analysis of archaeological materials. Special note: May be repeated once for credit.

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

ANTH A211

### 16b. Test Score(s)

N/A

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

N/A

### 16d. Other Restriction(s)

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

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

n/a

### 17. Mark if course has fees

- [ ] Mark if course is a selected topic course

### 18. Justification for Action

Upgrade course prerequisite and update CCG to maintain professional standards. Change in description reflects course content more accurately.

## Approval Log

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<td>David R. Yesner</td>
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## Signature

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UNIVERSITY OF ALASKA ANCHORAGE
COURSE CONTENT GUIDE

1. Initiation date: 02/01/10

2. A. College or school: College of Arts and Sciences
   B. Course prefix: ANTH
   C. Course number: A431
   D. Number of course credits and: 3-8
   E. Number of contact hours: 0 + (3-24)
   F. Course title: Field Methods in Archaeology
   G. Grading basis: A-F
   H. Stacking: ANTH A631
   I. Course description: Introduction to basic techniques of archaeological survey and excavation, including archaeological data recovery and recording techniques, initial laboratory processing, and preliminary analysis of archaeological materials. Special note: May be repeated once for credit.
   J. Course prerequisite: ANTH A211
   K. Registration restrictions: None
   L. Course fee: No

3. Course level justification: upper-level course that generally requires background coursework in archaeological methods

4. Instructional goals and student outcomes
   A. The instructor will:
      1. Deliver hands-on instruction on basic techniques of archaeological survey, including the use of a total station (laser transit) and/or GPS devices as appropriate.
2. Demonstrate basic archaeological excavation techniques, including the use of a variety of excavation methods as well as various approaches to stratigraphic excavation; methods appropriate to a particular field setting will be emphasized.

3. Demonstrate basic archaeological sampling, retrieval, and conservation techniques for a variety of materials, including various types of artifacts, animal bones, radiocarbon samples, and other materials.

4. Demonstrate basic archaeological recording techniques, including artifact drawings, feature drawings, stratigraphic profiles, digital field photography, and field note recording.

5. Demonstrate basic archaeological cataloging techniques, including both hardcopy and digital techniques.

6. Demonstrate initial sorting of major categories of archaeological materials for specialized analysis.

7. Through field lectures, provide information on the environmental background and regional archaeological record relevant to a field class.

8. Through field lectures, provide information on specialized analytical approaches to recovered materials, including geoarchaeology, lithic analysis, other artifact analyses, zooarchaeology, and (when appropriate) paleoethnobotany and/or human osteology.

B. The student will be able to:

1. Utilize a range of equipment for undertaking archaeological survey and mapping, including contour mapping and locating site features.

2. Apply a variety of archaeological excavation methods, including the use of a range of equipment as well as various approaches to stratigraphic excavation.

3. Sample a variety of archaeological materials, including various types of artifacts, animal bones, radiocarbon samples, and other materials.

4. Demonstrate basic archaeological recording techniques, including artifact drawings, feature drawings, stratigraphic profiles, digital field photography, and field note recording.

C. Assessment Measures: student archaeological field notes; observation of student fieldwork; final examination.
6. Topical course outline (as appropriate to particular field settings):

   A. Classroom and field lectures
   B. Transportation of archaeological materials to field setting
   C. Archaeological field camp setup
   D. Archaeological site mapping and surface survey with use of total station
   E. Assigning archaeological units for excavation
   F. Archaeological excavation
   G. Archaeological unit profiling (with use of drawing and field photography)
   H. Column sampling and baulk removal
   I. Completion of field cataloging and packing of archaeological materials
   J. “Backfilling” of archaeological excavation units
   K. Regional archaeological survey as time allows
   L. Transportation of archaeological materials to university laboratory

7. Suggested texts:

   Balme, Jane, and Alistair Paterson, eds.  
   2006 *Archaeology in Practice: A Student Guide to Archaeological Analysis.* 
   Blackwell, New York.

   Hester, Thomas R., Harry J. Shafer, and Kenneth L. Feder  
   2008 *Field Methods in Archaeology* (8th ed.).  
   Mayfield, Mountain View, CA.

   Stewart, R. Michael  
   2002 *Archaeology: Basic Field Methods.* Kendall/Hunt, Dubuque.

8. Bibliography:

   Dancey, William S.  

   Joukowsky, Martha  

   McMillon, William  
   University Press of America, Chicago.

   Rice, Patricia C.  
### Course Action Request

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

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<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<td>ASSC Division of Social Science</td>
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**If a change, mark appropriate boxes:**
- Prefix
- Credits
- Title
- Grading Basis
- Cross-Listed/Stacked
- Course Description
- Course Prerequisites
- Co-requisites
- Registration Restrictions
- Other Restrictions
- Class
- Level
- College
- Major
- Other Update CCG (please specify)

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**Cross-Listed Coordination**

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<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>1. MA in Anthropology</td>
<td>p. 257</td>
<td>02/01/10</td>
<td>Diane K. Hanson, Graduate Coordinator in Anthropology</td>
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Initiator Name (typed): David R. Yesner  
Initiator Signed Initials: ___________  
Date: __________________

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

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<th>13c. Coordination with Library Liaison</th>
<th>Date: 02/10/10</th>
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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 techniques of archaeological survey and excavation, including archaeological data recovery and recording techniques, initial laboratory processing, and preliminary analysis of archaeological materials. Special note: May be repeated once for credit. Graduate students will supervise the work of less experienced undergraduates under the overall supervision of the project director. They will be responsible for the quality of the excavation and recording of their undergraduate crew. They will be critically evaluated as potential professionals.

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

ANTH A211 or equivalent

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)**

Graduate standing

17. Mark if course has fees Yes

18. Mark if course is a selected topic course

19. **Justification for Action**

Upgrading prerequisite and updating CCG to maintain professional standards. Change in description reflects course content more accurately. Modification of and correction of spelling in special note. Registration restrictions reflect change in admissions policy.
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<th>Disapproved</th>
<th>Date</th>
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<tr>
<td>Initiator (faculty only)</td>
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<td></td>
<td>David R. Yesner</td>
</tr>
<tr>
<td>Initiator (TYPE NAME)</td>
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<td>Dean/Director of School/College</td>
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<tr>
<td>Department Chairperson</td>
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<tr>
<td>Curriculum Committee Chairperson</td>
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<td>Undergraduate/Graduate Academic</td>
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<td>Provost or Designee</td>
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1. Initiation date: 02/01/10

2. A. College or school: College of Arts and Sciences
   
   B. Course prefix: ANTH
   
   C. Course number: A631
   
   D. Course name: Field Methods in Archaeology
   
   E. Number of course credits: 3-8
   
   F. Number of contact hours: 0 + (3-24)
   
   G. Grading basis: A-F
   
   H. Stacking: ANTH A431

   I. Course description: Advanced techniques of archaeological survey and excavation, including archaeological data recovery and recording techniques, initial laboratory processing, and preliminary analysis of archaeological materials. Special note: May be repeated once for credit. Graduate students will supervise the work of less experienced undergraduates under the overall supervision of the project director. They will be responsible for the quality of the excavation and recording of their undergraduate crew. They will be critically evaluated as potential professionals.

   J. Course prerequisite: ANTH A211 or equivalent

   K. Registration restrictions: Graduate standing

   L. Course fee: Yes (standard ANTH grad course fee; special fees to support field transportation, equipment, supplies, and personnel, specific to each field project

3. Course level justification: graduate level course that requires background coursework in archaeological method and theory

4. Instructional goals and student outcomes

   A. The instructor will:
1. Deliver hands-on instruction on basic techniques of archaeological survey, including the use of a total station (laser transit) and/or GPS devices as appropriate.

2. Demonstrate basic archaeological excavation techniques, including the use of a variety of excavation methods as well as various approaches to stratigraphic excavation; methods appropriate to a particular field setting will be emphasized.

3. Demonstrate basic archaeological sampling, retrieval, and conservation techniques for a variety of materials, including various types of artifacts, animal bones, radiocarbon samples, and other materials.

4. Demonstrate basic archaeological recording techniques, including artifact drawings, feature drawings, stratigraphic profiles, digital field photography, and field note recording.

5. In so far as possible, demonstrate basic archaeological cataloging techniques, including both hardcopy and digital techniques.

6. In so far as possible, demonstrate initial sorting of major categories of archaeological materials for specialized analysis.

7. Through field lectures, provide information on the environmental background and regional archaeological record relevant to a field class.

8. In so far as possible, through field lectures, provide information on specialized analytical approaches to recovered materials, including geoarchaeology, lithic analysis, other artifact analyses, zooarchaeology, and (when appropriate) paleoethnobotany and/or human osteology.

B. The student will be able to:

1. Utilize a range of equipment for undertaking archaeological survey and mapping, including contour mapping and locating site features.

2. Apply a variety of archaeological excavation methods, including the use of a range of equipment as well as various approaches to stratigraphic excavation.

3. Sample a variety of archaeological materials, including various types of artifacts, animal bones, radiocarbon samples, and other materials.

4. Demonstrate basic archaeological recording techniques, including artifact drawings, feature drawings, stratigraphic profiles, digital field photography, and field note recording.
5. Discuss the regional archaeological record relevant to a field class.

6. Exercise a leadership role in helping to mentor undergraduate students, supervise excavation areas, direct survey teams, and record essential archaeological materials.

C. Assessment Measures: supervisor’s archaeological field notes; observation of student field supervision; possible final examination and/or final paper

6. Topical course outline: As appropriate to particular field settings

A. Classroom and field lectures
B. Transportation of archaeological materials to field setting
C. Archaeological field camp setup
D. Archaeological site mapping and surface survey with use of total station
E. Assigning archaeological units for excavation
F. Archaeological excavation
G. Archaeological unit profiling (with use of drawing and field photography)
H. Column sampling and baulk removal
I. Completion of field cataloging and packing of archaeological materials
J. “Backfilling” of archaeological excavation units
K. Regional archaeological survey as time allows
L. Transportation of archaeological materials to university laboratory

7. Suggested texts:

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2006 Archaeology in Practice: A Student Guide to Archaeological Analysis.  
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### Course Action Request

**University of Alaska Anchorage**

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

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<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours</th>
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<td>Add or Change or Delete</td>
<td># of Repeats</td>
<td>Max Credits</td>
<td>A-F</td>
<td>semester/year</td>
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<td>Hunting &amp; Gathering Societies</td>
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<td>1. Topical/theoretical course, BA/BS</td>
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**Initiator Name (typed): David R. Yesner**

**Initiator Signed Initials:** _________

**Date:__________**

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

**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)*

Cross-cultural analysis of hunting and gathering societies, including their prehistory, subsistence, demography, economic and political organization, social structure, and ideology, with special attention given to contemporary issues such as gender roles and aboriginal land rights.

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**19. Justification for Action**

Upgrade course prerequisite and update CCG to maintain professional standards. Deletion of unnecessary special note.

**Initiator (Faculty only):** David R. Yesner

**Initiator (TYPE NAME):**

**Date:**

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**20d. Approved | 21d. Disapproved**

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1. Initiation date: 02/01/10

2. A. College or school: College of Arts and Sciences
   
   B. Course prefix: ANTH

   C. Course number: A432

   D. Course name: HUNTING AND GATHERING SOCIETIES

   E. Number of credits and contact hours: 3+0

   F. Grading basis: A-F

   G. Course description: Cross-cultural analysis of hunting and gathering societies, including their prehistory, subsistence, demography, economic and political organization, social structure, and ideology, with special attention given to contemporary issues such as gender roles and aboriginal land rights.

   H. Course prerequisite: ANTH A202

   I. Registration restrictions: None

   J. Course fee: No

3. Course level justification: upper-level course that requires a background in anthropological theory

4. Instructional goals and student outcomes

   A. The instructor will:

      1. Discuss the distribution and location of surviving hunter-gatherer groups.

      2. Describe problems in applying ethnographic data from surviving hunter-gatherers to those of the past, particularly of the Pleistocene (Ice Age period).

      3. Discuss the diversity of lifeways and adaptations associated with traditional hunter-gatherer societies.
4. Present in detail information on the technology, demography, economy, social structure, political organization, and ideology of hunter-gatherer societies.

5. Discuss the transformations of indigenous hunter-gatherer societies resulting from European contact, colonial experience, and later historical processes.

6. Describe contemporary problems of hunter-gatherer societies, including issues of aboriginal land rights, economic survival, and current political struggles.

B. The student will be able to:

1. Describe the distribution and location of surviving hunter-gatherer groups.

2. Critically analyze problems in applying ethnographic data from surviving hunter-gatherers to those of the past.

3. Describe in detail the diversity of lifeways and adaptations associated with traditional hunter-gatherer societies.

4. Describe in detail the technology, demography, economy, social structure, political organization, and ideology of hunter-gatherer societies.

5. Critically analyze the transformations of indigenous hunter-gatherer societies resulting from European contact, colonial experience, and later historical processes.

6. Critically analyze the problems of contemporary hunter-gatherer societies, including issues of aboriginal land rights, economic survival, and current political struggles.

C. Assessment Measures: midterm and final examinations; student journal; daily questions; research paper (graduate students only).

5. Topical course outline

A. Lines of Inquiry: Diversity among Hunter-gatherer Societies

B. Early Ideas about Hunter-gatherers: From “Nasty and Brutish” to “Noble”

C. Hunter-gatherers and Anthropological Theory
D. Hunter-gatherers and National Traditions: Germany, Russia, Japan, India
E. Hunter-gatherers of the Ethnographic Present as “Pleistocene Relics”?
F. Hunter-gatherers in Archaeology
G. Ecology and Economy among Hunter-gatherers
H. Hunter-gatherers as the “Original Affluent Societies”
I. Traditional Ecological Knowledge among Hunter-gatherers
J. Behavioral Ecology of Hunter-gatherers
K. Hunter-gatherer Technology
L. Hunter-gatherer Health and Nutrition
M. Hunter-gatherer Demography
N. Egalitarianism and Inequality among Hunter-gatherers
O. Gender Roles among Hunter-gatherers
P. “Simple” v. “Complex” Hunter-gatherers
Q. Concepts of Territoriality among Hunter-gatherers
R. Conflict and Warfare among Hunter-gatherers
S. Hunter-gatherer Linguistics
T. Hunter-gatherer Cosmology and Ideology
U. Effects of Culture Contact on Hunter-gatherers
V. Hunter-gatherers in the Contemporary Nation-state
W. Indigenous Perspectives and Identity Preservation among Hunter-gatherers
X. Post-modernist Perspectives and Hunter-gatherer Anthropology
Y. The Future of Hunter-gatherers and Hunter-gatherer Studies
6. Suggested texts:

Barnard, Alan, ed.  

Panter-Brick, Catherine, Robert H. Layton, and Peter Rowley-Conwy, eds.  

7. Bibliography:

Burch, Ernest S., and Linda J. Ellanna, eds.  

Gowdy, John, ed.  

Ingold, Tim, David Riches, and James Woodburn, eds.  

Isaac, Barry L., ed.  

Lee, Richard B., and Richard Daly, eds.  
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College
AS CAS

1b. Division
ASSC Division of Social Science

1c. Department
ANTH

2. Course Prefix
ANTH

3. Course Number
A435

4. Previous Course Prefix & Number
N/A

5a. Credits/CEUs
3

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

6. Complete Course Title
Northwest Coast Cultures

Abbreviated Title for Transcript (30 character)

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

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

If a change, mark appropriate boxes:
☐ Prefix ☐ Course Number ☐ Contact Hours ☐ Repeat Status ☐ Credits ☐ Grading Basis ☐ Cross-Listed/Stacked
☒ Course Description ☐ Other Restrictions ☐ Cross Prerequisites ☐ Other Update CCG (please specify)
☐ Test Score Prerequisites ☐ Registration Restrictions

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

10. Grading Basis
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date
From: Spring/2012 To: /9999

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

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

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

<table>
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<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>1. International Studies Program - Canada Track</td>
<td>107</td>
<td>3/21/11</td>
<td>Susan Kalina, Chair, International Studies Program</td>
</tr>
<tr>
<td>2. Alaska Native Studies Minor</td>
<td>87</td>
<td>2/12/10</td>
<td>Nancy Furfow, Chair, Alaska Native Studies Program</td>
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<td>3. BA/BS in anthropology; ANTH A438</td>
<td>88-89</td>
<td>2/12/10</td>
<td>Steve Langdon, Chair, Anthropology Department</td>
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</table>

Initiator Name (typed): Steve J. Langdon

Initiator Signed Initials: ____________ Date: ____________

13b. Coordination Email
Date: 1/25/10
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 1/25/10

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)

Indigenous peoples and cultures of the Northwest Coast, including prehistory, regional variations, key institutions (potlatch, art, slavery, spirituality, warfare), cultural history, ethnohistoric change, and contemporary issues such as cultural revitalization, land and resources rights, and self-determination.

16a. Course Prerequisite(s) (list prefix and number)
ANTH A200

16b. Test Score(s)
N/A

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

16d. Other Restriction(s)

☐ College ☐ Major ☐ Class ☐ Level

16e. Registration Restriction(s) (non-codable)
N/A

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action

Correction of prerequisite; update of CCG; course description more closely matches course content; deletion of unnecessary special note.

Initiator (faculty only)

Steve J. Langdon
Initiator (TYPE NAME)

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

☐ Approved ☐ Disapproved
Undergraduate/Graduate Academic Date

☐ Approved ☐ Disapproved
Board Chairperson

☐ Approved ☐ Disapproved
Provost or Designee Date

Approved
Disapproved
I. Date of Initiation: Jan. 22, 2010

II. A. College or school: College of Arts and Sciences
B. Course Prefix: ANTH
C. Course Number: A
D. Course Name: Northwest Coast Cultures
E. Number of Credits and Contact Hours: 3.0 credits, 3+0 Contact Hours
F. Grading Basis: A-F
G. Course Description: Indigenous peoples and cultures of the Northwest Coast, including prehistory, regional variations, key institutions (potlatch, art, slavery, spirituality, warfare), cultural history, ethnohistoric change, and contemporary issues such as cultural revitalization, land and resources rights, and self-determination.
H. Course prerequisite: ANTH A200
I. Registration restrictions: None
J. Course fee: No

III. Course level justification:

Upper level course requiring knowledge and comprehension of cultural anthropological concepts and theories. This is an optional course for BA and BS anthropology majors but can fulfill both the required 18 upper division credits for anthropology undergraduate degrees and three of the required six credits of topical/theoretical courses.

IV. Instructional Goals and Student Outcomes

A. The instructor will:

1. Explain background information on the environment and prehistory of the region
2. Describe key characteristics of the Northwest Coast as a culture area
3. Present basic information on regional variations of the Northwest Coast culture area through ethnographic descriptions
4. Explain major institutions and interpretations of those institutions, i.e. potlatch, war, kinship forms, spirituality, and art
5. Present information on ethnohistoric changes and current political, legal, social and cultural conditions
6. Challenge students to critically evaluate theories and findings
B. The student will be able to:

1. Specify the cultures of the regions, their languages and institutional variation
2. Specify stages of cultural development indicating key developments and regional differences
3. Critique major concepts, methods, theories and debates concerning the cultures of the Northwest Coast
4. Evaluate current writing and discussions on topics related to the cultures of Northwest Coast peoples
5. Analyze and discuss issues related to sovereignty, resource rights, cultural status for Northwest Coast peoples in three political jurisdictions – Alaska, British Columbia, Washington (state)

C. Assessment measures: Quizzes and examinations based on lectures, videos, class discussion, library and internet research. Presentations of research findings and term paper maybe required.

V. Topical Course Outline

1. Introduction and Overview
2. Definition of Northwest Coast Culture area: Distinctive characteristics
3. Environment: Key conditions and resources
4. Prehistory and Archeology
5. Physical Anthropology and Demography
6. Linguistics
7. Southern Region: Chinook and Salish
8. Central Region: Kwakw’akwa and Nuu Chah Nulth
9. Northern Region: Haida, Tlingit, Tsimshian
10. Rank, Class and Slavery
11. Theories of Potlatch
12. Art and Aesthetics
13. Spirituality
14. Historic contact and culture change: Stages
15. Appropriation and Representation: Repatriating Art and Expression
16. Contemporary Political and Sociocultural Conditions

VI. Suggested Texts

Drucker, Philip

Kirk, Ruth

McFeat, Thomas, ed.
VII. Bibliography

Bierwert, Crisca

Blackman, Margaret

Boelscher, Marianne

Bracken, Christopher

Cohen, Fay

Cole, Douglas

Cole, Douglas and Ira Chaikin

Cybulski, Jerome, ed.

Dauenhauer, Richard and Nora Dauenhauer, eds.

Dauenhauer, Richard and Nora Dauenhauer, eds.

Donald, Leland
Harkin, Michael
2000 *The Heiltsuks: Dialogues of Culture and History on the Northwest Coast.* University of Nebraska Press, Lincoln.

Harris, Christie

Jonaitis, Aldona
1986 *Art of the Northern Tlingit.* University of Washington Press, Seattle.

Jonaitis, Aldona

Kan, Sergei

Knight, Rolf

Matson, R.G., Coupland, and Quentin Mackie

Mauze, Marie, Michael Harkin and Sergei Kan, eds.
2004 *Coming to Shore: Northwest Coast Ethnology, Traditions and Visions.* University of Nebraska Press, Lincoln.

McDowell, Jim

McKee, William

McLennan, Bill and Karen Duffer

Miller, Jay
1997 *Tsimshian Culture: A Light through the Ages.* University of Nebraska Press, Lincoln.
Shearar, Cheryl

Suttles, Wayne

Thornton, Thomas
2008 *Being and Place among the Tlingit.* University of Washington Press, Seattle.
# Proposal to Initiate, Add, Change, or Delete a Course

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

**1b. Division**
ASSC Division of Social Science

**1c. Department**
Anthropology

**2. Course Prefix**
ANTH

**3. Course Number**
A436

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

**5a. Credits/CEUs**
3.0

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

**6. Complete Course Title**
Aleut Adaptations

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

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

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

If a change, mark appropriate boxes:
- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [x] Course Description
- [ ] Test Score Prerequisites
- [ ] Other Restrictions
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major
- [x] Other Update CCG (please specify)

**9. Repeat Status No**

**# of Repeats**

**Max Credits**

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

**11. Implementation Date**
From: Spring/2012
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](http://www.uaa.alaska.edu/governance).

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<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>1. BA/BS in Anthropology</td>
<td>87-88</td>
<td>02/12/10</td>
<td>Steve Landon, Chair, Anthropology Department</td>
</tr>
<tr>
<td>2. Minor in Alaska Native Studies</td>
<td>87</td>
<td>02/12/10</td>
<td>Nancy Furlow, Chair, Alaska Native Studies Program</td>
</tr>
</tbody>
</table>

**13b. Coordination Email**

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

**13c. Coordination with Library Liaison**

Date: 02/10/10

**14. General Education Requirement**

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

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

Intensive study of traditional and post-contact Aleut (Unangan) culture. Includes origins, prehistory, biological and cultural adaptations. Also considers contemporary Aleut social, economic, and political status.

**16a. Course Prerequisite(s) (list prefix and number)**
ANTH A200

**16b. Test Score(s)**
N/A

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

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

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

**17. Mark if course has fees**

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

**19. Justification for Action**

Upgrade of course prerequisite and update of CCG to maintain professional standards. Deletion of unnecessary special note.

**Initiator Name (typed):** Diane K. Hanson

Initiator Signed Initials: ____________ Date: ____________

__309__
I. Date of Initiation                January 2010

II: Course Information

College:                               College of Arts and Sciences
Course Subject:                        ANTH
Course Number:                         A436
Course Name:                           Aleut Adaptations
Course Credits:                        3.0
Contact Hours:                         3 + 0
Course Program Title:                 Aleut Adaptations
Course Description:                   Intensive study of traditional and post-contact Aleut (Unangan) culture. Includes origins, prehistory, biological and cultural adaptations. Also considers contemporary Aleut social, economic, and political status.
Grading Basis:                        A-F
Prerequisite(s):                      ANTH A200
Registration Restriction(s):           None
Lab Fees:                             No

III. Instructional Goals and Student Outcomes

Instructional Goals: The instructor will:

1. Describe available knowledge of major aspects of
   a. precontact and
   b. postcontact Aleut culture
2. Provide students with an understanding of
   a. the impact of western contact on Aleut culture and
   b. contemporary political, economic, and social conditions
Defined Outcomes: The student will be able to:

1. Identify the essential characteristics of precontact Aleut subsistence, including which food resources and raw materials were utilized and how and by whom they were obtained
2. Describe the precontact Aleut social system, including kinship, marriage, and household composition
3. Describe the precontact Aleut political system, including ranking, leadership, and regional groups
4. Describe precontact Aleut ideology, religious beliefs, and shamanism
5. Describe the events of the Russian and American periods and analyze the ways in which Aleut culture changed
6. Identify recent and contemporary issues of economic, social, and political importance to Aleuts

IV. Course Activities:
Lectures, guest speakers, class discussions, films

V. Methods of Assessment
Examinations, term paper, and class presentations

VI. Course-Level Justification
Students are expected to have a substantial background in anthropological concepts.

VII. Course Outline
1. Climate and natural environment of the Aleutian and Pribilof Islands
2. Original peopling of the Aleutian Islands
3. Aleut culture before Russian contact
4. Russian and American periods in the Aleutian and Pribilof Islands
5. Anthropological and archaeological investigations in the Aleutian region
6. Contemporary issues in the Aleutian Islands
   a. Cultural
   b. Political
   c. Economic
7. The Pribilof Islands and the fur seal industry

VIII. Suggested Text

Laughlin William S.
IX. Bibliography

Allen P. McCartney and Douglas W. Veltre

Berreman, Gerald.

Black, Lydia T.

Black, Lydia T.

Black, Lydia [Trans.]

Dumond, Don.

Frøhlich, Bruno, Albert B. Harper, and Rolf Gilberg, eds.

Jones, Dorothy

Kohlhoff, Dean

Lantis, Margaret
Loring, Stephen, and Douglas W. Veltre

McCartney, Allen P.

Merculieff, Ilarion (Larry)

Petrivelli, Patricia J.

Reedy-Maschner, Katherine L.

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

<table>
<thead>
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<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<td>ASSC Division of Social Science</td>
<td>Anthropology</td>
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<th>5b. Contact Hours</th>
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<th>6. Complete Course Title</th>
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<td>Eskimo Adaptations</td>
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Abbreviated Title for Transcript (30 character)  |

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<th>8. Type of Action:</th>
<th>9. Repeat Status No</th>
<th>10. Grading Basis</th>
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<td>From: Spring/2012</td>
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<td>List any programs or college requirements that require this course.</td>
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<th>14. General Education Requirement</th>
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<td>Fine Arts</td>
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<td>Quantitative Skills</td>
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<th>15. Course Description (suggested length 20 to 50 words)</th>
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<td>Addresses peoples of the Arctic coastal areas of Alaska and Canada whose traditional languages are of the Inuit-Unangan language family. Students will learn about public debates over the use of the word “Eskimo” and other terms. Focuses on the Inuit and Yup’ik language areas, including the Kalaallit (Greenlanders).</td>
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<th>17. Mark if course has fees</th>
<th>18. Mark if course is a selected topic course</th>
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<th>19. Justification for Action</th>
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<tr>
<td>Upgrade of course prerequisite and update of CCG to maintain professional standards; description is a more accurate reflection of the course content; deletion of unnecessary special note.</td>
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Initiator Name (typed): Phyllis A. Fast  
Initiator Signed Initials: _______  
Date:________________

Initiator (faculty only):  
Phyllis A. Fast  
Initiator (TYPE NAME)

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<td>Date</td>
<td>Date</td>
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</table>

Dean/Director of School/College  
Date: __________________

Undergraduate/Graduate Academic  
Date: __________________

Board Chairperson  
Date: __________________

Provost or Designee  
Date: __________________

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UNIVERSITY OF ALASKA ANCHORAGE
COURSE CONTENT GUIDE

I. Date of Initiation:    February 12, 2010

II. Course Information

College: College of Arts and Sciences
Course Subject: ANTH
Course Number: A437
Course Name: Eskimo Adaptations
Course Credits: 3.0
Contact Hours: 3+0
Course Description: Addresses peoples of the Arctic coastal areas of Alaska and Canada whose traditional languages are of the Inuit-Unangan language family. Students will learn about public debates over the use of the word “Eskimo” and other terms. Focuses on the Inuit and Yup’ik language areas, including the Kalaallit (Greenlanders).

Grading Basis: A-F
Prerequisites: ANTH A200
Registration Restrictions: None
Lab Fees: No

III. Instructional Goals and Student Outcomes

Instructional Goals: The Instructor will:
• Introduce the students to the variation in social organization of the Arctic coastal peoples, including religious traditions, language, and expressive culture
• Introduce the students to the variation in subsistence strategies along the Arctic coasts over time
• Introduce the students to contemporary social, political, and economic issues of Arctic coast peoples

Defined Outcomes: The student will be able to:
• Describe the cultural variations among peoples of the Arctic coastal areas
• Compare subsistence adaptations between regions of coastal Alaska
• Critique the major concepts, methods, theories, and debates in the ethnographies of Arctic coastal peoples

IV. Course Activities
The course is conducted through lectures and seminar-style discussions with occasional films, guest speakers, and exercises conducted in class.

V. Methods of Assessment
Examinations based on lectures, videos, class discussion, library and internet research, and research papers.

VI. Course Level Justification
This course can fulfill both the requirement for Upper Division in Anthropology and three of the required nine credits of ethnographic area courses for the BA/BS degrees in anthropology.

VII. Topical Course Outline
Unit 1 Overview of the region of study, including the principles of the Inuit-Yupik languages.

Unit 2 Iñupiat of Alaska
a. archaeological studies
b. material culture
c. economic organization
d. social structure
e. political organization
f. religious/spiritual beliefs

Unit 3 Yupiit of Alaska
a. archaeological studies
b. material culture
c. economic organization
d. social structure
e. political organization
f. religious/spiritual beliefs

Unit 4 Inuit of Canada
a. archaeological studies
b. material culture
c. economic organization
d. social structure
e. political organization
f. religious/spiritual beliefs
Unit 5 Kalaallit of Greenland
   a. archaeological studies
   b. material culture
   c. economic organization
   d. social structure
   e. political organization
   f. religious/spiritual beliefs

VIII. Suggested Texts


IX. Bibliography


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

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<th>5b. Contact Hours (Lecture + Lab)</th>
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<td>ANTH</td>
<td>A438</td>
<td>N/A</td>
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6. Complete Course Title  
Tlingit and Haida Adaptations  

Abbreviated Title for Transcript (30 character)  

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

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

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

9. Repeat Status No  
# of Repeats  
Max Credits  

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

11. Implementation Date  
semester/year  
From: Spring/2012  
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.  
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<td>Alaska Native Studies Program</td>
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<td>Nancy Furlow</td>
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<td>BA/BS in Anthropology</td>
<td>88-89</td>
<td>2/12/10</td>
<td>Steve Langdon</td>
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13b. Coordination Email  
submitted to Faculty Listserv:  
(uaa-faculty@lists.uaa.alaska.edu)  

Date: 2/12/10  

13c. Coordination with Library Liaison  
Date: 1/25/10  

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)  
Comparative analysis of Tlingit and Haida adaptations to the north Pacific Coast including ecological, social, ceremonial, political and cultural characteristics over the period from prehistoric emergence to contemporary conditions in Alaska and British Columbia.  

16a. Course Prerequisite(s) (list prefix and number)  
ANTH A200 or ANTH A435  

16b. Test Score(s)  

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

16d. Other Restriction(s)  
☐ College  
☐ Major  
☐ Class  
☐ Level  

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

17. ☐ Mark if course has fees  

18. ☐ Mark if course is a selected topic course  

19. Justification for Action  
Upgrading prerequisites and updating CCG to maintain professional standards; course description more closely matches course content; deletion of unnecessary special note.  

Initiator Name (typed): Steve J. Langdon  
Initiator Signed Initials:  

Date:  

19a. Course Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course  

Initiator (faculty only)  
Steve J. Langdon  
Initiator (TYPE NAME)  

Approved  
Disapproved  
Dean/Director of School/College  
Date  

Approved  
Disapproved  
Undergraduate/Graduate Academic  
Date  

Approved  
Disapproved  
Board Chairperson  
Date  

Approved  
Disapproved  
Provost or Designee  
Date  

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UNIVERSITY OF ALASKA ANCHORAGE
COURSE CONTENT GUIDE

I. Date of Initiation: Feb. 12, 2010

II. A. College or school: College of Arts and Sciences
    B. Course Prefix: ANTH
    C. Course Number: A438
    D. Course Name: Tlingit and Haida Adaptations
    D. Number of Credits: 3.0 credits
    E. Number of Contact Hours: 3+0
    F. Grading Basis: A-F
    G. Course Description: Comparative analysis of Tlingit and Haida adaptations to the
        north Pacific Coast including ecological, social, ceremonial, political and cultural
        characteristics over the period from prehistoric emergence to contemporary
        conditions in Alaska and British Columbia.
    H. Course prerequisite: ANTH A200 or ANTH A435
    I. Registration restrictions: None
    J. Course fee: No

III. Course level justification:
    Upper level course requiring knowledge and
    comprehension of basic information on Alaska Native societies. This is an
    optional course for BA and BS anthropology majors but can fulfill both the required
    18 upper division credits for anthropology undergraduate degrees and three of the
    required six credits of topical/theoretical courses.

IV. Instructional Goals and Student Outcomes

A. The instructor will:
   1. Explain background information on the environment and prehistory of the region.
   2. Describe similar and contrasting characteristics of the Tlingit and Haida
      including language, cultural ecology, social structure and spirituality
   3. Present basic information on cultural variations of the regional groups in
      southeast Alaska and British Columbia
   4. Explain major institutions and interpretations of those institutions, i.e.
      moiety, lineage/clan, potlatch, war, kinship forms, spirituality, and art
   5. Present information on ethnohistoric changes and current political, legal,
      social and cultural conditions
   6. Challenge students to critically evaluate theories and findings.

B. The student will be able to:
1. Locate and describe Tlingit and Haida and their regional divisions
2. Specify the language families, cultural differences, and institutional variations of the groups;
3. Specify stages of cultural development indicating key developments and regional differences;
4. Evaluate current writing and discussions on topics related to the cultural revitalization of Tlingit and Haida groups;
5. Analyze and discuss comparatively issues related to sovereignty, resource rights, and cultural status for Tlingit and Haida in Alaska and British Columbia.

C. Assessment measures: Quizzes and examinations based on lectures, videos, class discussion, library and internet research. Presentations of research findings and term paper maybe required.

V. Topical Course Outline

1. Introduction and Overview
2. Environment: Key conditions and resources
3. Prehistory and Archeology
4. Origin Traditions
5. Physical Anthropology and Demography
6. Linguistics: Tlingit and Haida
7. Cultural Ecology
8. Social Organization: Moieties, Lineages and Clans
9. Spirituality: Shamanism
10. Art
11. European Contact: Explorers and Traders
12. Euroamerican Colonization: Alaska and British Columbia
13. Education and Economics
14. Political Mobilization – Land Claims
15. Current Issues

VI. Suggested Texts

Emmons, G.

Hinckley, T.

Stearns, M.

Thornton, T.
2008 *Being and Place among the Tlingit.* University of Washington Press, Seattle.
VII. Bibliography

Blackman, Margaret

Boelscher, Marianne

Cybulski, Jerome, ed.

Dauenhauer, Richard and Nora Dauenhauer, eds.

Dauenhauer, Richard and Nora Dauenhauer, eds.

Dauenhauer, Richard, Nora Dauenhauer, and Lydia Black

Goldschmidt, W. and T. Haas

Grinev, Andrei
2005 *The Tlingit Indians in Russian America, 1741-1867.* University of Nebraska Press, Lincoln.

Harris, Christie

Hinckley, Theodore

Hinckley, Theodore

Jonaitis, Aldona
Kan, Sergei

Kan, Sergei
2000 *Memory Eternal: Tlingit culture and Russian Orthodox Christianity through Two Centuries.* University of Washington Press, Seattle.

Krause, Aurel (translated by E. Gunther)

Oberg, Kalervo

Wright, Robin
### Course Action Request

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>AS CAS</th>
<th>1b. Division</th>
<th>ASSC Division of Social Science</th>
<th>1c. Department</th>
<th>Anthropology</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Course Prefix</td>
<td>ANTH</td>
<td>3. Course Number</td>
<td>A439</td>
<td>4. Previous Course Prefix &amp; Number</td>
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</tr>
<tr>
<td>5b. Contact Hours</td>
<td>(Lecture + Lab)</td>
<td>(3+0)</td>
<td></td>
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</tr>
</tbody>
</table>

### 6. Complete Course Title

**Athabascan Adaptations**

*Abbreviated Title for Transcript (30 character)*

### 7. Type of Course

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

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

**If a change, mark appropriate boxes:**

- [ ] Prefix  
- [ ] Credits  
- [X] Title  
- [ ] Grading Basis  
- [ ] Cross-Listed/Stacked  
- [ ] Course Description  
- [ ] Course Prerequisites  
- [ ] Test Score Prerequisites  
- [ ] Co-requisites  
- [ ] Registration Restrictions  
- [ ] Class  
- [ ] Level  
- [ ] College  
- [ ] Major  
- [X] Other update CCG (please specify)

### 9. Repeat Status No

- [X] # of Repeats  
- Max Credits

### 10. Grading Basis

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

### 11. Implementation Date

- From: Spring/2012  
- To: /9999

### 12. Cross Listed with

- [ ] Stacked  
- Cross-Listed Coordination Signature

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

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

**Initiator Name (typed): Phyllis A. Fast**  
Initiator Signed Initials: _________  
Date: ________

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BA/BS in Anthropology</td>
<td>87-88</td>
<td>2/12/2010</td>
<td>Steve Langdon, Chair, Anthropology Department</td>
</tr>
<tr>
<td>3. Alaska Native Studies minor</td>
<td>87</td>
<td>3/21/2011</td>
<td>Nancy Furlow, Director, Alaska Native Studies</td>
</tr>
</tbody>
</table>

### 13b. Coordination Email

Date: 2/10/10  
submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

### 14. General Education Requirement

Mark appropriate box:  
- [ ] Oral Communication  
- [ ] Written Communication  
- [ ] Quantitative Skills  
- [ ] Social Sciences  
- [ ] Natural Sciences  
- [ ] Humanities  
- [ ] Integrative Capstone

### 15. Course Description

(323 words)

Traditional and contemporary northern Athabascan cultures and their history in Alaska and Canada, with relevant information pertaining to Athabascans of the Pacific Northwest. Emphasis on environmental adaptations, commonalities and variations in cultural patterning, the impact of interactions with neighboring peoples and Europeans, and culture changes over time.

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

ANTH A200

### 16b. Test Score(s)

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

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

N/A

### 16d. Other Restriction(s)

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

### 17. Mark if course has fees

- [ ] Mark if course is a selected topic course

### 19. Justification for Action

New title reflects currently accepted spelling of "Athabascan"; course description more accurately reflects current course content; update of CCG to maintain professional standards; deletion of unnecessary special note.

- [ ] Approved  
- [ ] Disapproved  
- [ ] Approved  
- [ ] Disapproved  
- [ ] Approved  
- [ ] Disapproved  
- [ ] Approved  
- [ ] Disapproved  
- [ ] Approved

**Phyllis A. Fast**  
Initiator (TYPE NAME)

Initiator (faculty only)  
Date

Approved  
Dean/Director of School/College  
Date

Disapproved  
Undergraduate/Graduate Academic  
Date

Approved  
Board Chairperson  
Date

Approved  
Provost or Designee  
Date
I. Date of Initiation: February 12, 2010

II. Course Information

College: College of Arts and Sciences
Course Subject: ANTH
Course Number: A439
Course Name: Athabascan Adaptations
Credits 3.0
Contact Hours: 3+0

Course Description: Traditional and contemporary northern Athabascan cultures and their history in Alaska and Canada, with relevant information pertaining to Athabascans of the Pacific Northwest. Emphasis on environmental adaptations, commonalities and variations in cultural patterning, the impact of interactions with neighboring peoples and Europeans, and culture changes over time.

Grading Basis: A-F
Prerequisite: ANTH A200
Registration Restrictions: None
Lab Fees: No

III. Instructional Goals and Student Outcomes

Instructional Goals: The instructor will:

- Introduce the students to the variation in social organization of Athabascan peoples, including religious traditions, language and expressive culture
- Introduce the students to the variation in subsistence strategies in the various Athabascan regions over time
- Introduce the students to contemporary social, political and economic issues of Athabascan peoples of Alaska, Canada, and the Pacific Coast.
Defined Outcomes: The student will be able to:

- Describe the cultural variations among Athabascan peoples of Alaska, Canada, and the Pacific Coast
- Compare different adaptations in subsistence patterns from one region to another
- Critique the major concepts, methods, theories, and debates in the ethnographies of Athabascan peoples

IV. Course Activities

The course is conducted through lectures and seminar-style discussions with occasional films, guest speakers, and exercises conducted in-class.

V. Methods of Assessment

Examinations based on lectures, videos, class discussion, library and internet research, and research papers.

VI. Course Level Justification

This course fulfills both the requirement for Upper Division in Anthropology and 3 of 9 credits of ethnographic area courses required for the BA/BS in Anthropology.

VII. Topical Course Outline

UNIT 1: Overview of Athabascan prehistory and languages

UNIT 2: Athabascans of the Pacific Northwest
a. Language
b. Religious traditions
c. Oral traditions
d. History
e. Subsistence strategies
f. Contemporary issues

UNIT 3: Northern Athabascans of Canada
a. Language
b. Religious traditions
c. Oral traditions
d. History
e. Subsistence strategies
f. Contemporary issues
UNIT 4: Northern Athabascans of Alaska
a. Language
b. Religious traditions
c. Oral traditions
d. History
e. Subsistence strategies
f. Contemporary issues

VIII. Suggested Texts

Kari, James, and James A. Fall (Shem Pete, principal contributor)

Sharp, Henry S.

Youst, Lionel, and William R. Seaburg

IX. Bibliography

Axelrod, Melissa

De Laguna, Frederica

Helm, June (ed.)

Sapir, Edward
Sapir, Edward

Simeone, William
Evolution of Humans and Disease
Evolution of Humans & Disease

ANTH A445

3.0

3+0

UNIVERSITY OF ALASKA ANCHORAGE  
COURSE CONTENT GUIDE

I. Date of Initiation  
January 2010

II. Course Information

College: College of Arts and Sciences
Course Subject: ANTH
Course Number: A445
Course Name: Evolution of Humans and Disease
Course Credits: 3.0
Contact Hours: 3 + 0
Course Description: Evolution of human response to disease; evolution of disease response to humans. Interrelationships of human behavior, biology, and disease. Special note: STAT A252 or STAT A253 strongly recommended.

Grading Basis: A-F
Prerequisite: ANTH A205
Registration Restrictions: None
Lab Fees: No

III. Instructional Goals and Student Outcomes

Instructional Goals: The instructor will:
1. Describe available knowledge of major aspects of  
a. the impact of humans on pathogen ecology and evolution  
b. the impact of pathogens on human ecology and evolution  
2. Provide students with an understanding of  
a. interrelationship of human behavior and evolution and disease organisms  
b. the nature of infection and human biological and behavioral response
Defined Outcomes: The students will be able to:
1. Identify the essential characteristics of pathogens
2. Describe the processes of disease
3. Identify the different classes of pathogens
4. Discuss impact of disease on human history

IV. Course Activities:
Lectures, guest speakers, class discussion, films. Use of a database management program to input and output bibliographic data.

V. Methods of Assessment
Examinations, term paper, annotated bibliography, class presentation.

VI. Course-Level Justification
Students are expected to have a general background in anthropological concepts, and a specific background in biological anthropology.

VII. Course Outline

1.0 Introduction
   1.1 Health and disease in anthropological perspective
   1.2 Medical history and the fossil record

2.0 Parasites, vectors and hosts

3.0 Viruses
   3.1 Kuru
   3.2 RNA Viruses: Influenza, measles, poliomyelitis, yellow fever
   3.3 DNA Viruses: smallpox and HIV/AIDS

4.0 Bacteria
   4.1 Cholera
   4.2 Legionellosis
   4.3 Typhoid fever
   4.5 Plague, then and now
   4.6 Leprosy (Disease of the Soul)
   4.7 Tuberculosis
   4.8 Treponematoses - pinta, yaws, and syphilis

5.0 Animal Parasites
   5.1 Protozoa: Malaria - biography of a successful parasite
   5.2 Schistosomiasis - a worm's eye view

6.0 Selection and Disease
6.1 Diabetes and the thrifty genotype
6.2 Botulism

7.0 Women and Reproduction: Biocultural Enigmas

8.0 Food: Too Little and Too Much
8.1 Kwashiorkor
8.2 Marasmus

9.0 Vitamins and Minerals
9.1 Vitamins A and C
9.2 The B complex
9.3 Vitamin D and calcium

10.0 A Toxic Environment: Ergotism and Witchcraft in Salem Village

11.0 The New World: A New Perspective

VIII Suggested Texts:

No textbook exists at this time. Reading materials will be chosen from past and current publications.

IX Bibliography:


**Course Action Request**

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
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<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<tbody>
<tr>
<td>ANTH</td>
<td>A645</td>
<td>N/A</td>
<td>3.0</td>
<td>(3+)</td>
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</table>

**Complete Course Title**

Advanced Evolution of Humans and Disease

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

**Type of Course**

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

**Type of Action:**

- Add
- Change
- Delete

**Repeat Status No**

- # of Repeats
- Max Credits

**Grading Basis**

- A-F
- P/NP
- NG

**Implementation Date**

From: Spring/2012                To:       /9999

**Cross Listed with**

- ANTH A445

**Compatibility with Library Liaison**

Date: 02/01/10

**General Education Requirement**

Mark appropriate box:

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

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

Methods, techniques, and theoretical approaches to the evolution of human response to disease and evolution of disease response to humans. Interrelationships of human behavior, biology, and disease. Special note: In addition to meeting all requirements for ANTH A445, graduate students will be required to pursue a major research project, to deliver a presentation of their research findings to the class, and to report their results in written form. Not available to students who have taken ANTH A445.

**Course Prerequisite(s)**

N/A

**Test Score(s)**

N/A

**Co-requisite(s)**

N/A

**Other Restriction(s)**

- College
- Major
- Class
- Level

**Mark if course has fees standard ANTH grad fee**

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

**Justification for Action**

Update course description and CCG to maintain professional standards; slight modification of special note.

---

**Initiator Name (typed):** Christine Hanson

**Initiator Signed Initials:** ________  Date: __________

---

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

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

<table>
<thead>
<tr>
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<th>Catalog Page(s)</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator</th>
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<tbody>
<tr>
<td>MA in Anthropology</td>
<td>257</td>
<td>Feb 2010</td>
<td>Dr. Steve J Langdon, Chair, Department of Anthropology</td>
</tr>
</tbody>
</table>

---

**Department Chairperson**

Date: __________

**Curriculum Committee Chairperson**

Date: __________

---

**Provost or Designee**

Date: __________

**Dean/Director of School/College**

Date: __________
I. Date of Initiation  January 2010

II. Course Information

College: College of Arts and Sciences
Course Subject: ANTH
Course Number: A645
Course Name: Advanced Evolution of Humans and Disease
Course Credits: 3.0
Contact Hours: 3 + 0
Course Description: Methods, techniques and theoretical approaches to the evolution of human response to disease and evolution of disease response to humans. Interrelationships of human behavior, biology, and disease. Special note: In addition to meeting all requirements for ANTH A445, graduate students and will be required to pursue a major research project, to deliver a presentation of their research findings to the class, and to report their results in written form. Not available to students who have taken ANTH A445.

Grading Basis: A-F
Prerequisite(s): N/A
Registration Restriction(s): Graduate standing
Lab Fees: Yes (standard ANTH grad fee)
III. Instructional Goals and Student Outcomes

Instructional Goals: The instructor will:
1. Describe available knowledge of major aspects of
   a. the impact of humans on pathogen ecology and evolution
   b. the impact of pathogens on human ecology and evolution
2. Provide students with an understanding of
   a. interrelationship of human behavior and evolution and
      disease organisms
   b. the nature of infection and human biological and
      behavioral response

Defined Outcomes: The student will be able to:
1. Discuss the essential characteristics of pathogens
2. Analyze the processes of disease
3. Describe the different classes of pathogens
4. Critically analyze the impact of disease on human history

IV. Methods of Assessment

Examinations, term paper, annotated bibliography, class presentation. Graduate students will be assigned more extensive reading and will be required to pursue a major semester-long research project, to deliver a presentation of their research findings to the class, and to report their results in written form.

V. Course Level Justification

Graduate level course; includes more statistical treatments and more student projects than ANTH A445.

VI. Course Activities

Lectures; guest speakers; discussion; films about the the impact of disease. Use of a database management program to input and output bibliographic data.

VII. Course Outline

1.0 Introduction
   1.1 Health and disease in anthropological perspective
   1.2 Medical history and the fossil record
2.0 Parasites, vectors and hosts
3.0 Viruses
3.1 Kuru
3.2 RNA Viruses: Influenza, measles, poliomyelitis, yellow fever
3.3 DNA Viruses: smallpox and HIV/AIDS

4.0 Bacteria
4.1 Cholera
4.2 Legionellosis
4.3 Typhoid fever
4.5 Plague, then and now
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4.7 Tuberculosis
4.8 Treponematoses - pinta, yaws, and syphilis

5.0 Animal Parasites
5.1 Protozoa: Malaria - biography of a successful parasite
5.2 Schistosomiasis - a worm's eye view

6.0 Selection and Disease
6.1 Diabetes and the thrifty genotype
6.2 Botulism

7.0 Women and Reproduction: Biocultural Enigmas

8.0 Food: Too Little and Too Much
8.1 Kwashiorkor
8.2 Marasmus

9.0 Vitamins and Minerals
9.1 Vitamins A and C
9.2 The B complex
9.3 Vitamin D and calcium

10.0 A Toxic Environment: Ergotism and Witchcraft in Salem Village
11.0 The New World: A New Perspective

VIII. Suggested Texts:

No textbook exists at this time. Reading materials will be chosen from past and current publications.

IX. Bibliography:


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

1a. School or College
AS CAS

1b. Division
ASSC Division of Social Science

1c. Department
Anthropology

2. Course Prefix
ANTH

3. Course Number
A457

4. Previous Course Prefix & Number
N/A

5a. Credits/CEUs
3.0

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

6. Complete Course Title
Food and Nutrition: An Anthropological Perspective

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

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

If a change, mark appropriate boxes:

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

9. Repeat Status No

# of Repeats

Max Credits

10. Grading Basis
☒ A-F
☐ P/NC
☐ NG

11. Implementation Date
From: Spring/2012
To: /9999

12. ☐ Cross Listed with
☒ Stacked with ANTH A657
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.

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<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tr>
<td>MA Program in Anthropology</td>
<td>2009-10 catalog p. 257</td>
<td>02/01/10</td>
<td>Steve J. Langdon, Chair, Department of Anthropology</td>
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<tr>
<td>2.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
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</tbody>
</table>

Initiator Name (typéd): David R. Yesner
Initiator Signed Initials: _________ Date:________________

13b. Coordination Email
Date: 02/10/10

13c. Coordination with Library Liaison
Date: 01/10/10

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

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)
Relationship of human culture to food and nutrition. Includes the history of human diet and its relationship to biological and cultural evolution, contemporary human nutrition in cross-cultural perspective, dietary adequacy and nutritional pathology, food-getting and food-preparation technology, and relationship between food and population, gender, ideology, and socioeconomic status.

16a. Course Prerequisite(s) (list prefix and number)
ANTH A202 or ANTH A205

16b. Test Score(s)
N/A

16c. Co-requisite(s) (concurren enrollment required)
N/A

16d. Other Restriction(s)

☐ College ☐ Major ☐ Class ☐ Level

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

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Update CCG to maintain professional standards. Change in description reflects course content more accurately. Change in prerequisites reflects diverse student backgrounds. Special note no longer applies.

Initiator (faculty only)
David R. Yesner

Initiator (TYPE NAME)

☐ Approved
☐ Disapproved

Dean/Director of School/College

Date

Undergraduate/Graduate Academic

Board Chairperson

Date

Provost or Designee

Date
1. Initiation date: 02/01/10

2. A. College or school: College of Arts and Sciences
   B. Course prefix: ANTH
   C. Course number: A457
   D. Course name: Food and Nutrition: An Anthropological Perspective
   E. Number of credit hours: 3.0
   F. Number of contact hours: 3+0
   G. Grading basis: A-F
   H. Stacking: ANTH A657

I. Course description: Relationship of human culture to food and nutrition. Includes the history of human diet and its relationship to biological and cultural evolution, contemporary human nutrition in cross-cultural perspective, dietary adequacy and nutritional pathology, food-getting and food-preparation technology, and relationship between food and population, gender, ideology, and socioeconomic status.

J. Course prerequisite(s): ANTH A202 or ANTH A205

K. Registration restrictions: None

L. Course fees: No

3. Course level justification: upper-level course that requires some background in anthropology and/or human nutrition

4. Instructional goals and student outcomes

A. The instructor will:

   1. Discuss the basic role of human dietary substances (carbohydrates, proteins, fats; vitamins, minerals) in human nutrition

   2. Discuss intracultural and intercultural variation in dietary needs and dietary patterns
3. Discuss field and laboratory techniques for assessing human diets and human nutrition

4. Describe the history of human diet and nutrition, from early hominids to contemporary Western diets

5. Discuss the relationship between diet and social patterns, including ethnicity, gender, ideology, and social stratification

B. The student will be able to:

1. Describe the basic role of human dietary substances (carbohydrates, proteins, fats; vitamins, minerals) in human nutrition

2. Critically analyze intracultural and intercultural variation in dietary needs and dietary patterns

3. Describe field and laboratory techniques for assessing human diets and human nutrition

4. Critically analyze the history of human diet and nutrition, from early hominids to contemporary Western diets

5. Critically analyze the relationship between diet and social patterns, including ethnicity, gender, ideology, and social stratification

C. Assessment Measures: midterm and final examinations; student journal; daily questions; class discussions

5. Topical course outline

A. An overview of anthropology, food, and nutrition

B. Human nutritional needs: human energetics

C. Human nutritional needs: protein, fats, vitamins, minerals

D. Human nutrition: individual variation and intracultural variation

E. Malnutrition and undernutrition; biological adaptation to dietary intake

F. Food-getting and preparation; food storage; nutrient yields and toxicants

G. Food sharing and food exchange

H. Assessing modern diets; dietary recall
I. Assessing ancient diets: human remains, bioarchaeology

J. Primate diets

K. Hunter-gatherer diets, past/present; optimal foraging theory (OFT)

L. The transition to agriculture

M. Intensive agriculture and pastoralism

N. Cultural adaptation: perception, classification, preferences

O. Cultural adaptation: conservation and “overexploitation” of resources

P. Cultural adaptation: ethnicity, ideology, belief systems, taboos

Q. Food, nutrition, and population

R. The Post-Columbian exchange and modern cuisines

S. The Industrial Revolution and Western diets

T. Diet and social stratification

6. Suggested texts:

Bryant, Carol A., Kathleen M. DeWalt, Anita Courtney, and Jeffrey H. Schwartz (eds.)
2003 *The Cultural Feast: An Introduction to Food and Society* (2nd ed.).
Wadsworth/Thompson, Belmont, CA.

Goodman, Alan, Dana Dufour, and Gretel H. Pelto (eds.)

Ungar, Peter S., and Mark S. Teaford (eds.)

7. Bibliography:

Harris, Marvin, and Eric B. Ross
1987 *Food and Evolution: Toward a Theory of Human Food Habits.*
Temple University Press, Philadelphia.

Wing, Elizabeth S., and Antoinette Brown
Course Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course

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<th>1b. Division</th>
<th>1c. Department</th>
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6. Complete Course Title  
Nutritional Anthropology  
Abbreviated Title for Transcript (30 character)

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

8. Type of Action: □ Add or □ Change or □ Delete

If a change, mark appropriate boxes:

▫ Prefix □ Course Number □ Credits □ Title □ Repeat Status □ Grading Basis □ Contact Hours □ Cross-Listed/Stacked
▫ Course Prerequisites □ Co-requisites □ Test Score Prerequisites □ Registration Restrictions □ Other Restrictions
▫ Class □ Level □ College □ Major □ Other Update CCG (please specify)

9. Repeat Status No  # of Repeats  Max Credits

10. Grading Basis  □ A-F □ P/NP □ NG

11. Implementation Date  semester/year  From: Spring/2012  To: 9999

12. □ Cross Listed with  □ Stacked with  ANTH A457  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.

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<td>Steve J. Langdon, Chair, Department of Anthropology</td>
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Initiator Name (typed): David R. Yesner  Initiator Signed Initials: _________  Date:________________

13b. Coordination Email  Date: 02/10/10
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  Date: 01/10/10

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)
Relationship of human culture to food and nutrition. Includes the history of human diet and its relationship to biological and cultural evolution, contemporary human nutrition in cross-cultural perspective, dietary adequacy and nutritional pathology, food-getting and food-preparation technology, and relationship between food and population, gender, ideology, and socioeconomic status. Special note: In addition to meeting all requirements for ANTH A457, graduate students will be required to research the literature on a current topic in nutritional anthropology, and to submit an extensive, detailed paper summarizing their findings in a rigorous analytical framework. Additional class readings may also be assigned. Not available to students who have completed ANTH A457.

16a. Course Prerequisite(s) (list prefix and number)  N/A
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)  Graduate standing;

17. □ Mark if course has fees standard ANTH grad fee

18. □ Mark if course is a selected topic course

19. Justification for Action  
Update CCG to maintain professional standards. Change in description reflects course content more accurately. Slight modification of special note.
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Initiator (TYPE NAME)

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1. Initiation date: 02/01/10

2. A. College or school: College of Arts and Sciences
   B. Course prefix: ANTH
   C. Course number: A657
   D. Course name: Nutritional Anthropology
   E. Number of course credits: 3.0
   F. Number of contact hours: 3+0
   G. Grading basis: A-F
   H. Stacking: ANTH A457

I. Course description: Relationship of human culture to food and nutrition. Includes the history of human diet and its relationship to biological and cultural evolution, contemporary human nutrition in cross-cultural perspective, dietary adequacy and nutritional pathology, food-getting and food-preparation technology, and relationship between food and population, gender, ideology, and socioeconomic status. Special note: In addition to meeting all requirements for ANTH A457, graduate students will be required to research the literature on a current topic in nutritional anthropology, and to submit an extensive, detailed paper summarizing their findings in a rigorous analytical framework. Additional class readings may also be assigned. Not available to students who have completed ANTH A457.

J. Course prerequisite(s)/test score(s)/corequisite(s): N/A

K. Registration restrictions: Graduate standing.

L. Course fee: Yes (standard ANTH grad fee)

3. Course level justification: graduate-level course that requires previous knowledge about anthropological methods, concepts, and theories.
4. Instructional goals and student outcomes

A. The instructor will:

1. Discuss the basic role of human dietary substances (carbohydrates, proteins, fats; vitamins, minerals) in human nutrition

2. Discuss intracultural and intercultural variation in dietary needs and dietary patterns

3. Discuss field and laboratory techniques for assessing human diets and human nutrition

4. Describe the history of human diet and nutrition, from early hominids to contemporary Western diets

5. Discuss the relationship between diet and social patterns, including ethnicity, gender, ideology, and social stratification

B. The student will be able to:

1. Describe the basic role of human dietary substances (carbohydrates, proteins, fats; vitamins, minerals) in human nutrition

2. Critically analyze intracultural and intercultural variation in dietary needs and dietary patterns

3. Describe field and laboratory techniques for assessing human diets and human nutrition

4. Critically analyze the history of human diet and nutrition, from early hominids to contemporary Western diets

5. Critically analyze the relationship between diet and social patterns, including ethnicity, gender, ideology, and social stratification

C. Assessment Measures: midterm and final examinations; student journal; daily questions; research paper, class presentations, class discussions. Graduate students will be required to research the literature on a current topic in nutritional anthropology, and to submit an extensive, detailed paper summarizing their findings in a rigorous analytical framework. Additional class readings may also be assigned.
5. Topical course outline

A. An overview of anthropology, food, and nutrition
B. Human nutritional needs: human energetics
C. Human nutritional needs: protein, fats, vitamins, minerals
D. Human nutrition: individual variation and intracultural variation
E. Malnutrition and undernutrition; biological adaptation to dietary intake
F. Food-getting and preparation; food storage; nutrient yields and toxicants
G. Food sharing and food exchange
H. Assessing modern diets; dietary recall
I. Assessing ancient diets: human remains, bioarchaeology
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K. Hunter-gatherer diets, past/present; optimal foraging theory (OFT)
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P. Cultural adaptation: ethnicity, ideology, belief systems, taboos
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R. The Post-Columbian exchange and modern cuisines
S. The Industrial Revolution and Western diets
T. Diet and social stratification
6. Suggested texts:

Bryant, Carol A., Kathleen M. DeWalt, Anita Courtney, and Jeffrey H. Schwartz (eds.)
2003 *The Cultural Feast: An Introduction to Food and Society* (2nd ed.).
              Wadsworth/Thompson, Belmont, CA.

Goodman, Alan, Dana Dufour, and Gretel H. Pelto (eds.)

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              Temple University Press, Philadelphia.

Wing, Elizabeth S., and Antoinette Brown
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

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

2. Course Prefix
ANTH
3. Course Number
A480
4. Previous Course Prefix & Number
N/A
5a. Credits/CEUs
3.0
5b. Contact Hours
(Lecture + Lab)
(0+9)

6. Complete Course Title
Analytical Techniques in Archaeology
(Analytic. Tech. in Archaeology)
Abbreviated Title for Transcript (30 character)

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

8. Type of Action:
☐ Add or ☒ Change or ☐ Delete
If a change, mark appropriate boxes:
☐ Prefix
☐ Course Number
☐ Credits
☐ Title
☒ Grading Basis
☐ Repeat Status
☑ Cross-Listed/Stacked
☐ Course Prerequisites
☐ Co-requisites
☐ Other Restrictions
☐ Class
☐ Level
☐ College
☒ Major
☐ Other Update CCG (please specify)

9. Repeat Status No
# of Repeats
Max Credits

10. Grading Basis
☒ A-F
☐ P/NP
☐ NG

11. Implementation Date
semester/year
From: Spring/2012
To: /9999

12. ☐ Cross Listed with
☒ Stacked with ANTH A680
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.

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<th>Chair/Coordinator Contacted</th>
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<td>1. BA/BS Anthropology</td>
<td>p. 88-89</td>
<td>02/12/10</td>
<td>Steve Langdon, Chair, Anthropology Department</td>
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<td>2. ANTH A480</td>
<td>p. 316</td>
<td>02/12/10</td>
<td>Steve Langdon, Chair, Anthropology Department</td>
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Initiator Name (typed): Diane K. Hanson
Initiator Signed Initials: ___________ Date: ___________

13b. Coordination Email
Date: 12/10/10
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 1/25/10

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)
Methods and techniques of description, classification, and analysis of archaeological data. Laboratory work with archaeological specimens and data is emphasized.

16a. Course Prerequisite(s) (list prefix and number)
ANTH A211
16b. Test Score(s)
N/A
16c. Co-requisite(s) (concurrent enrollment required)
N/A

16d. Other Restriction(s)

☐ College
☐ Major
☐ Class
☐ Level

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

19. Justification for Action
Upgrade of course prerequisite and update of CCG to maintain professional standards. Special note no longer applies.

Initiator (faculty only) Date
Diane K. Hanson
Initiator (TYPE NAME)

Approved
Disapproved
Dean/Director of School/College
Date

Approved
Disapproved
Undergraduate/Graduate Academic
Date

Approved
Disapproved
Board Chairperson
Date

Approved
Disapproved
Provost or Designee
Date
I. Date of Initiation

February 2010

II: Course Information

College: College of Arts and Sciences

Course Subject: ANTH

Course Number: A480

Course Name: Analytical Techniques in Archaeology

Credits: 3.0

Contact Hours: 0 + 9

Course Description: Methods and techniques of description, classification, and analysis of archaeological data. Laboratory work with archaeological specimens and data is emphasized.

Grading Basis: A-F

Stacking: ANTH A680

Prerequisite: ANTH A211

Registration Restriction(s): None

Lab Fees: Yes

III. Instructional Goals and Student Outcomes

Instructional Goals. The instructor will:

1. Describe available knowledge of major aspects of
   a. laboratory techniques commonly used to analyze major classes of archaeological remains.
   b. proper procures and ethics involved in handling artifacts

2. Provide students with an understanding of
a. the appropriate ways to present the results of analyses
b. the research applications of the analysis of archaeological remains.

Defined Outcomes. The student will be able to:

1. Identify different kinds of archaeological data
2. Describe accepted procedures for handling and processing archaeological data
3. Create basic databases for archaeological collections
4. Undertake basic cleaning and cataloging of archaeological specimens
5. Describe methods of treatment and preservation for different kinds of archaeological specimens
6. Conduct basic descriptive artifact studies, particularly of stone and bone materials

IV. Course Activities
The course is laboratory-oriented, with most course work being done by students on an independent basis in the anthropology laboratory. Demonstrations and presentations, including guest lectures, will supplement laboratory assignments.

V. Methods of Assessment
Evaluation will be based on the quality and timeliness of laboratory and other assignments. There will be examinations at the discretion of the instructor.

VI. Course-Level Justification
Students are expected to have a substantial background in anthropological concepts.

VII. Course Outline
a. Science in archaeology, hypothesis testing, typologies, ethics
b. Curating, processing, labeling, and storing artifacts
c. Database management
d. Documenting artifacts: drawing, photographs, scanning, microscopes and photography
e. Computer drafting and drawing, submitting illustrations, maps, drawings for publication
f. Quantification and statistics
g. Historic artifacts: textiles, beads, ceramics, metals
h. Faunal analysis
i. Lithic analysis
j. Ceramics analysis
k. Analysis of human remains
l. Plant remains: seeds, wood, leaves, pollen
VIII. Suggested Texts


IX. Bibliography


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

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6. Complete Course Title
Advanced Analytical Techniques in Archaeology
Adv Analyt Tech in Archaeology
Abbreviated Title for Transcript (30 character)

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

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

9. Repeat Status No # of Repeats Max Credits
- A-F
- P/NP
- NG

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

11. Implementation Date
- Semester/year
- From: Spring/2012
- To: 9999

12. Cross Listed with
- Stacked with ANTH A480
- Cross-Listed Coordination

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

- MA Anthropology
- ANTH A680

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<td>Langdon, Chair, Department of Anthropology</td>
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<td>2. ANTH A680</td>
<td>p. 258</td>
<td>02/01/10</td>
<td>Hanson, Coordinator, MA Program in Anthropology</td>
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Initiator Name (typed): Diane K. Hanson
Initiator Signed Initials: __________
Date: __________

13b. Coordination Email
- Date: 12/10/10
- Submitted to Faculty Listserv: (uaa-faculty@listserv.uaa.alaska.edu)

13c. Coordination with Library Liaison
- Date: 1/25/10

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

15. Course Description (suggested length 20 to 50 words)
Advanced methods and techniques of description, classification, and analysis of archaeological data. Laboratory work with archaeological specimens and data is emphasized. Special note: In addition to meeting all requirements for ANTH A480, graduate students will be required to pursue a major research project, to deliver a presentation of their research finds to the class, and to report their results in written form.

16a. Course Prerequisite(s) (list prefix and number)
N/A

16b. Test Score(s)
N/A

16c. Co-requisite(s) (concurrent enrollment required)
Graduate standing

17. Mark if course has fees
- Yes

18. Mark if course is a selected topic course

19. Justification for Action
Change in description to clarify content of stacked courses. Updating CCG to maintain professional standards.

Initiator (faculty only) Diane K. Hanson
Initiator (TYPE NAME)

Approved
Disapproved
UNIVERSITY OF ALASKA ANCHORAGE  
COURSE CONTENT GUIDE

I. Date of Initiation  
February 2010

II: Course Information  
College:  
College of Arts and Sciences
Course Subject:  
ANTH
Course Number:  
A680
Credits:  
3.0
Contact Hours:  
3 + 0
Course Title:  
Advanced Analytical Techniques in Archaeology
Course Description:  
Methods and techniques of description, classification, and analysis of archaeological data. Laboratory work with archaeological specimens and data is emphasized. Special note: In addition to meeting all requirements for ANTH A480, graduate students will be required to pursue a major research project, to deliver a presentation of their research findings to the class, and to report their results in written form.
Grading Basis:  
A-F
Stacking:  
ANTH A480
Prerequisite(s):  
ANTH A211
Registration Restriction(s):  
Graduate standing
Lab Fees:  
Yes (standard ANTH grad fee; special fees)
III. Instructional Goals and Student Outcomes

Instructional Goals: The instructor will:

1. Describe available knowledge of major aspects of
   a. laboratory techniques commonly used to analyze major classes of archaeological remains
   b. proper procedures and ethics involved in handling artifacts

2. Provide students with an understanding of
   a. the appropriate ways to present the results of analyses
   b. the research applications of the analysis of archaeological remains

Defined Outcomes: The student will be able to:

1. Identify different kinds of archaeological data
2. Describe accepted procedures for handling and processing archaeological data
3. Create databases for archaeological collections
4. Undertake cleaning and cataloging of archaeological specimens
5. Describe methods of treatment and preservation for different kinds of archaeological specimens
6. Conduct basic descriptive artifact studies, particularly of stone and bone materials

IV. Course Activities:
The course is laboratory-oriented, with most course work being done by students on an independent basis in the anthropology laboratory. Demonstrations and presentations, including guest lectures, will supplement laboratory assignments.

V. Methods of Assessment
Evaluation will be based on the quality and timeliness of laboratory and other assignments. There will be examinations at the discretion of the instructor. Graduate students will be assigned more extensive reading and will be required to pursue a major laboratory analysis project and report their findings in written and oral form to the class.

VI. Course Level Justification
Students are expected to have a substantial background in anthropological concepts.
VII. Course Outline
   a. Science in archaeology, hypothesis testing, typologies, ethics
   b. Curating, processing, labeling, and storing artifacts
   c. Database management
   d. Documenting artifacts: drawing, photographs, scanning, microscopes and photography
   e. Computer drafting and drawing, submitting illustrations, maps, drawings for publication
   f. Quantification and statistics
   g. Historic artifacts: textiles, beads, ceramics, metals
   h. Faunal analysis
   i. Lithic analysis
   j. Ceramics analysis
   k. Analysis of human remains
   l. Plant remains: seeds, wood, leaves, pollen

VIII. Suggested Texts


IX. Bibliography


### Course Action Request

**University of Alaska Anchorage**

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

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<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours (Lecture + Lab)</th>
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| 7. Type of Course | | |
|------------------|-----------------|
| ☒ Academic       | | |

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<th>8. Type of Action:</th>
<th>Add or</th>
<th>Change or</th>
<th>Delete</th>
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If a change, mark appropriate boxes:

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

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<th># of Repeats</th>
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<th>Max Credits</th>
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| 10. Grading Basis | | |
|------------------|-----------------|
| ☒ A-F            | N/A              |

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| 12. Cross Listed with | | |
|----------------------|-----------------|
| ☐ Cross Listed       | □ Stacked with A681 |

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<td>Six credits of Anthropology and/or museum studies.</td>
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| 19. Justification for Action | Update CCG to maintain professional standards |

Initiator (faculty only) | Date |
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<td>Dean/Director of School/College</td>
<td>Date</td>
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<td>Department Chairperson</td>
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<td>Provost or Designee</td>
<td>Date</td>
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UNIVERSITY OF ALASKA ANCHORAGE
COURSE CONTENT GUIDE

I. Date of Initiation
   11/20/2009

II. Course Information

   College: College of Arts and Sciences
   Course Subject: ANTH
   Course Number: A481
   Course Title: Museum Studies in Anthropology
   Course Credits: 3.0
   Contact Hours: 3 + 0
   Course Stacking: ANTH A681
   Course Description: History and practice of anthropology in museums. Anthropological and metaphysical dimensions of museums and material culture; the history of ethnographic collecting and research (particularly in North America); critical theory and practice of exhibitions and cultural representation; repatriation and indigenous museums in historical context.
   Grading Basis: A-F
   Prerequisite(s): ANTH A202 or ANTH A205 or ANTH A211
   Registration Restriction(s): N/A
   Lab Fees: No

III. Instructional Goals and Student Outcomes

   Instructional Goals: The instructor will:
   1. Detail the history of museums in the US and Alaska, and their pivotal and continuing connection to anthropological practice.
   2. Expose students to seeing museums as social institutions that reflect and reify cultural projections about the past, present, and future.
   3. Define how museums function in the contemporary context, including an understanding of curation issues, legal frameworks, funding concerns, and engagement with multiple publics.
4. Explain techniques important for critically evaluating and developing museum exhibits.
5. Advise students through the varied stages of exhibit design and creation.

Defined Outcomes: The student will be able to:
1. Describe the historical development of museums in the US and Alaska, in relationship to developments within anthropology.
2. Discuss the contemporary context of museums within an anthropological framework.
3. Describe key concerns and debates in museum practice, including ethical issues such as repatriation.

IV. Methods of Assessment
Discussion of assigned weekly readings (students may in some weeks be asked to lead discussions); critical essays on readings; museum assignments, such as gallery reviews, for presentation in class. Students are expected to work interdependently on tasks necessary for the development of a small exhibit at the Anchorage Museum or other museum arranged by the instructor.

V. Course-Level Justification
Course requires that students have a sound understanding of anthropological concepts and theories taught in lower division classes.

VI. Course Activities
The course will be taught in seminar format led by the instructor. Readings and discussion will be supplemented with behind-the-scenes tours of museum collections, gallery visits, occasional guest presentations, and work with collections. This course is generally taught off campus in a museum setting.

VII. Topical Course Outline

1. History of museums
   a. Collecting culture and the rise of antiquarianism
   b. Establishment of ethnological museums
   c. Connections between museum collections and anthropological theory
   d. History of anthropological and historical museums in the United States
2. Legal and ethical frameworks
   a. Ethics of curation and display
   b. Legal protocols for collections management
   c. Repatriation
   d. Relationships between museums and indigenous peoples
3. Exhibition
   a. Controversies and debates in museum exhibits
   b. Rules of exhibit design
   c. Stages of exhibit production
4. Interpretation
   a. Contemporary issues of cultural representation
   b. Critical analysis of museum displays
   c. Visitor surveys and polls
   d. Incorporating public feedback into museum design

5. Collections management
   a. Preservation and conservation of artifacts
   b. Research in the museum context

6. Future of museums
   b. Financing museum exhibits
   c. Issues in museum financing
   d. Contemporary issues in museum management

VIII. Suggested Texts

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Cooper, Karen Coody

Karp, Ivan, and Steven Lavine (eds.)

Weil, Stephen

IX. Bibliography

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Falk, John

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Kreps, Christina

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Linenthal, Edward

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Stocking, George (ed.)

Thomas, Nicholas
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<th>1a. School or College</th>
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**Impacted Program/Course** | **Catalog Page(s) Impacted** | **Date of Coordination** | **Chair/Coordinator Contacted** |
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<td>p. 258</td>
<td>02/12/10</td>
<td>Stephen Langdon, Chair, Department of Anthropology</td>
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<td>History and practice of anthropology in museums. Anthropoligical and metaphysical dimensions of museums and material culture; the history of ethnographic collecting and research (particularly in North America); critical theory and practice of exhibitions and cultural representation; repatriation and indigenous museums in historical context. Special Note: In addition to doing the work assigned to undergraduates, graduate students will be expected to undertake an extensive collection research or exhibition preparation project which will constitute a significant portion of their grade.</td>
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<th>Provost or Designee</th>
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I. **Date of Initiation**  
11/20/2009

II. **Course Information**

College: College of Arts and Sciences

Course Subject: ANTH

Course Number: A681

Credits: 3.0

Contact Hours: 3 + 0

Course Program/Title: Advanced Museum Studies in Anthropology

Course Description:
History and practice of anthropology in museums. Anthropological and metaphysical dimensions of museums and material culture; the history of ethnographic collecting and research (particularly in North America); critical theory and practice of exhibitions and cultural representation; repatriation and indigenous museums in historical context.

Special note: In addition to doing the work assigned to undergraduates, graduate students will be expected to undertake an extensive collection research or exhibition preparation project which will constitute a significant portion of their grade.

Grading Basis: A-F

Prerequisite(s): Graduate Standing

Registration Restriction(s): N/A

Lab Fees: Yes (standard ANTH grad fee)

III. **Instructional Goals and Student Outcomes**

Instructional Goals: The instructor will:
1. Detail the history of museums in the US and Alaska, and their pivotal and continuing connection to anthropological practice.
2. Expose students to seeing museums as social institutions that reflect and reify cultural projections about the past, present, and future.
3. Define how museums function in the contemporary context, including an understanding of curation issues, legal frameworks, funding concerns, and engagement with multiple publics.
4. Explain techniques important for critically evaluating and developing museum exhibits.
5. Advise students through the varied stages of exhibit design and creation.

Defined Outcomes: The student will be able to:

1. Critically analyze the historical development of museums in the US and Alaska, in relationship to developments within anthropology.
2. Elucidate the contemporary context of museums within an anthropological framework.
3. Detail key concerns and debates in museum practice, including ethical issues such as repatriation.
4. Demonstrate skills and preparation necessary to stage a small-scale exhibit.

IV. Methods of Assessment
Students are expected to come prepared to discuss readings assigned each week and may in some weeks be asked to lead discussion. Students additionally write a series of short critical essays on readings and complete museum assignments, such as gallery reviews, for presentation in class. Graduate students are expected to take lead positions in developing a small exhibit at the Anchorage Museum or other museum arranged by the instructor.

IV. Course-Level Justification
Course requires that graduate students take a leading role either in exhibit preparation and design or in collections management, commensurate with graduate-level responsibilities and developing skills for professional employment.

V. Course Activities
The course will be taught in seminar format led by the instructor. Readings and discussion will be supplemented with behind-the-scenes tours of museum collections, gallery visits, occasional guest presentations, and work with museum collections. This course is generally taught off campus in a museum setting.

VI. Topical Course Outline
1. History of museums
   a. Collecting culture and the rise of antiquarianism
   b. Establishment of ethnocultural museums
   c. Connections between museum collections and anthropological theory
   d. History of anthropological and historical museums in the United States
2. Legal and ethical frameworks
   a. Ethics of curation and display
   b. Legal protocols for collections management
   c. Repatriation
   d. Relationships between museums and indigenous peoples
3. Exhibition
   a. Controversies and debates in museum exhibits
   b. Rules of exhibit design
   c. Stages of exhibit production
4. Interpretation
   a. Contemporary issues of cultural representation
   b. Critical analysis of museum displays
   c. Visitor surveys and polls
   d. Incorporating public feedback into museum design
5. Collections management
   a. Preservation and conservation of artifacts
   b. Research in the museum context
6. Future of museums
   a. Financing museum exhibits
   b. Issues in museum financing
   c. Contemporary issues in museum management

VII. Suggested Texts

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Boquet, Mary (ed.)  

Cabonell, Bettina (ed.)  

Clifford, James  

Cole, Douglas  

Cooper, Karen Coody  

Crowell, Aron, Amy Steffian, Gordon Pullar (eds.)  

Dean, David  

Falk, John  
Fitzhugh, William, and Aron Crowell

Fitzhugh, William, and Chisato Dubreuil (eds.)

Fitzhugh, William, and Susan Kaplan

Genoways, Hugh

Genoways, Hugh, and Mary Anne Andrei (eds.)

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Stocking, George (ed.)
Thomas, Nicholas

Weil, Stephen
18Feb2011

To: Toby Widdicombe, Chair, CAS Course and Curriculum Committee
    Hillary Davies, Chair, Undergraduate Academic Board

From: Khrys Duddleston, Chair
       Department of Biological Sciences Curriculum Committee

RE: Changes to the B.S. in Natural Sciences Degree

The Department of Biological Sciences proposes the following changes to the B.S. in Natural Sciences Degree:

1. Implementing three options
   a. Environmental Sciences
   b. Pre-Health Professions
   c. General Science

2. Require that student apply for admission into the degree program
   a. Students will submit a form indicating they have met with an advisor in the Sciences to
      i. Choose an option
      ii. File a preliminary plan of study with the Department of Biological Sciences

Our changes are primarily meant to maintain the flexibility of the degree program while providing more guidance to students as well as simplifying the advising process for both students and faculty. In addition, within the General Sciences option we have also included guidance for students wishing to meet the National Science Teacher Association Standards for Science Teacher Preparation.

While developing these changes the Dept. Curriculum Committee has communicated with the following individuals:

LeeAnn Munk, Geology (personal communications during Fall, 2010 semester)
Dorn Van Dommelen, Environmental Studies (19Nov10 and follow-up e-mail)
Janet Johnston, Health Sciences (21Jan11 and follow-up e-mail)
Jim Pantaleone and Travis Rector, Physics and Astronomy (many e-mail and personal communications beginning in Spring, 2010)
Eric Holmberg, Chemistry (16Feb2011 and follow-up e-mail).
Susan Barstow, Donna Gail Shaw, Jim Powell, COE (numerous communications)

Please feel free to contact me with any questions you may have.
# Program/PREFIX Action Request
## University of Alaska Anchorage
### Proposal to Initiate, Add, Change, or Delete a Program of Study or PREFIX

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
<tr>
<td>AS CAS</td>
<td>AMSC Division of Math Science</td>
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<th>2. Complete Program Title/PREFIX</th>
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<th>5. Implementation Date (semester/year)</th>
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<th>6a. Coordination with Affected Units</th>
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<tr>
<td>Department, School, or College:</td>
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<tr>
<td>UAA Faculty Listserv</td>
</tr>
<tr>
<td>Initiator Name (typed): Khrystyne Duddleston</td>
</tr>
<tr>
<td>Initiator Signed Initials: _________</td>
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<table>
<thead>
<tr>
<th>6b. Coordination Email submitted to Faculty Listserv (<a href="mailto:uaa-faculty@lists.uaa.alaska.edu">uaa-faculty@lists.uaa.alaska.edu</a>)</th>
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<th>6c. Coordination with Library Liaison</th>
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<th>7. Title and Program Description - Please attach the following:</th>
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<tbody>
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<td>☑ Cover Memo</td>
</tr>
<tr>
<td>☑ Catalog Copy in Word using the track changes function</td>
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</table>

<table>
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<th>8. Justification for Action</th>
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<tr>
<td>Our changes are designed to a) address student needs by providing more guidance to students earning a B.S. in Natural Sciences while maintaining the flexibility of the program and b) improve the advising process.</td>
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<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khrystyne Duddleston</td>
</tr>
<tr>
<td>Initiator (TYPE NAME)</td>
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</tbody>
</table>

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

| Approved |
| Disapproved |
| Undergraduate/Graduate Academic Board Chairperson |
| Date |

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

| Approved |
| Disapproved |
| Curriculum Committee Chairperson |
| Date |
The undergraduate program in Natural Sciences is founded on a curriculum that emphasizes the interrelationships among the sciences. A program of study in the Natural Sciences requires that students select an option within the degree, and complete all courses required within the option, as well as sufficient science elective courses to meet minimum unit requirements for graduation.

Students accepted into this flexible degree program select one of three options: the General Sciences Option is designed for students who are interested in understanding the interrelationships among various scientific fields, or in teaching science at the secondary level. The Pre-Health Professions Option is designed to meet the admission requirements of specific professional schools in medicine, dentistry, and veterinary medicine. The Environmental Sciences Option is designed to prepare students for graduate school or for employment in the private or public sector.

The Natural Sciences program is administered by the Department of Biological Sciences. Upon acceptance to the major, an academic advisor from the Department of Biological Sciences will be assigned in accordance with the student’s declared option, and students are strongly encouraged to consult with their academic advisors to determine which electives best suit their career requirements.

**Bachelor of Science, Natural Sciences**

**Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations. Declare the major (see Major Requirements) and select one of 3 options: General Sciences, Pre-Health Professions or Environmental Sciences.

**Academic Progress**

To graduate with a BS in Natural Sciences, the student must complete all courses covered under Major Requirements for a BS in Natural Sciences with a grade of C or better. All prerequisites for courses used to meet the Natural Sciences degree requirements must be completed with a grade of C or better. Students who audit a course intended to meet the Natural Sciences degree requirements or who are unable to earn a grade of C or better in the course may repeat the course. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a lecture and laboratory component, both components must be repeated.

**Graduation Requirements**

Students must complete the following graduation requirements:

**A. General University Requirements**

Complete the General University Requirements for all Baccalaureate Degrees located at the beginning of this chapter.

**B. General Education Requirements**

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

**C. College of Arts and Sciences Requirements**

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section. It is recommended that MATH A200 or MATH A272, STAT A253 or STAT A307, and the computer programming requirements be completed in the first two years of study.

**D. Major Requirements**

1. To declare the Bachelor of Science in Natural Sciences as their major, students must meet with an advisor and then apply to be accepted into the major. To schedule your advising session, contact the Department of Biological Sciences. At the advising session students are required to:
   a. choose one of the three options and
   b. file a preliminary program of study with the Department of Biological Sciences.
2. It is strongly recommended that any changes to the preliminary program be reviewed by an advisor to ensure that the final program of study will meet all requirements for graduation.

3. Students must submit a final Program of Study-Natural Sciences Degree form signed by their advisor to both the Office of the Registrar and the Department of Biological Sciences during the semester prior to the semester in which they plan to graduate. All courses listed in the Program of Study-Natural Sciences Degree form must be approved by the formal advisor before submitting the form to the Office of the Registrar and the Department of Biological Sciences.

4. No more than 6 credits may come from courses designated as A495, A499 and A498 combined, with no more than 2 credits from A495.

5. No more than 4 credits may be A492, with no more than 2 from the same discipline.

6. Courses not listed as approved for the Natural Sciences degree may be considered by petition, which should be signed by an advisor.

7. A total of 120-124 credits is required for the degree, of which 42 credits must be upper division.

Note: It is suggested that the required science sequences for any option be completed in the first two years of study.

Note: Students are encouraged to pay careful attention to prerequisite requirements when designing their program of study.

Note: Some courses meet more than one of the requirements (GER, CAS, Major).

### Environmental Sciences Option (80 credits)

1. **Complete the following required courses (30 credits):**
   
   - BIOL A115/L  Fundamentals of Biology I with Laboratory  
   - BIOL A116/L  Fundamentals of Biology II with Laboratory  
   - CHEM A105  General Chemistry I  
   - CHEM A105L  General Chemistry I Laboratory  
   - CHEM A106  General Chemistry II  
   - CHEM A106L  General Chemistry II Laboratory  
   - GEOL A111/L  Physical Geology with Laboratory  
   - GEOL A221/L  Historical Geology with Laboratory  
   - ENVI A211  Environmental Science: Systems and Processes  
   - ENVI A212  Living on Earth: People and the Environment

2. **Complete an additional 50 credits of degree electives from the approved course lists for the Environmental Sciences Option.**
   
   a. A minimum of 32 credits must be upper division.
   
   b. A minimum of 20 credits must come from the following Natural and Physical Sciences Course List for the Environmental Sciences Option:
      
      - ASTR/
      - BIOL A365  Astrobiology* (3)
      - BIOL/
      - GEOL A178  Fundamentals of Oceanography (3)
      - BIOL/
      - GEOL A179  Fundamentals of Oceanography Laboratory (1)
      - BIOL/
      - CPLX A200  Introduction to Complexity (3)
      - BIOL A242  Fundamentals of Cell Biology (4)
      - BIOL A252  Principles of Genetics (4)
      - BIOL A271  Principles of Ecology (4)
      - BIOL A308  Principles of Evolution (3)
      - BIOL A309  Biogeography (3)
      - BIOL A310  Principles of Physiology (4)
      - BIOL A316  Introduction to Plant Physiology (3)
      - BIOL A331  Systematic Botany with Laboratory (4)
      - BIOL A333  Biology of Non-vascular Plants (4)
      - BIOL A334  Biology of Vascular Plants (4)
      - BIOL A340  General Microbiology (5)
      - BIOL A373  Conservation Biology (3)
      - BIOL A378  Marine Biology* (3)
      - BIOL A403  Microtechnique (4)
      - BIOL A415  Comparative Animal Physiology (3)
BIOL A423 Ichthyology (4)
BIOL A425 Mammalogy (3)
BIOL A426 Ornithology (4)
BIOL A427 Invertebrate Zoology (4)
BIOL A430 Marine Mammal Biology (4)
BIOL A441 Animal Behavior (4)
BIOL A445 Plant-Herbivore Ecology (4)
BIOL A450 Microbial Ecology (3)
BIOL A451 Applied Microbiology (3)
BIOL/CHEM/PHYS A456 Nonlinear Dynamics and Chaos* (3)
BIOL A477 Tundra and Taiga Ecosystems (3)
BIOL A478 Biological Oceanography (4)
BIOL A479 Physiological Plant Ecology (3)
BIOL A487 Comparative Anatomy of Vertebrates (4)
BIOL A489 Population Genetics and Evolutionary Processes* (3)
BIOL A490 Selected Lecture Topics in Biology (1-3)
BIOL A490L Selected Laboratory Topics in Biology (1-3)
BIOL A492 Undergraduate Seminar (1)
BIOL A495A Internship in the Biological Sciences (3)
BIOL A498 Individual Research (1-6)
BIOL A499 Senior Thesis (3)
CHEM A212 Quantitative Analysis (5)
CHEM A253 Principles of Inorganic Chemistry (3)
CHEM A311 Physical Chemistry: A Biological Orientation (3)
CHEM A321 Organic Chemistry I (3)
CHEM A322 Organic Chemistry II (3)
CHEM A323L Organic Chemistry Laboratory (2)
CHEM A331 Physical Chemistry I (3)
CHEM A332 Physical Chemistry II (3)
CHEM A333L Physical Chemistry Laboratory (2)
CHEM A434 Instrumental Methods (4)
CHEM A441 Principles of Biochemistry I* (3)
CHEM A442 Principles of Biochemistry II (3)
CHEM A443 Biochemistry Laboratory (2)
CHEM A450 Environmental Chemistry (3)
CHEM A453 Advanced Inorganic Chemistry (5)
CHEM A460 Chemical Ecotoxicology (3)
CHEM A492 Undergraduate Seminar (1)
CHEM A498 Individual Research (3)
GEOL A115 Environmental Geology (3)
GEOL A115L Environmental Geology Laboratory (1)
GEOL A190 Introductory Topics in Geology (1-3)
GEOL A320 Volcanology (3)
GEOL A321 Mineralogy (4)
GEOL A322 Igneous and Metamorphic Petrology (4)
GEOL A325 Geology of Ore Deposits (3)
GEOL A335 Structural Geology (4)
GEOL A340 Hydrogeology (3)
GEOL A350 Geomorphology (4)
GEOL A360 Geochemistry (3)
GEOL A380 Anchorage Field Studies (3)
GEOL A381 Kenai Peninsula Field Studies (3)
GEOL A382 Geological Field Studies (3)
GEOL A421 Invertebrate Paleontology (4)
GEOL A450 Paleoclimatology and Global Change (3)
GEOL A452 Sedimentology and Stratigraphy (4)
GEOL A454 Glacial and Quaternary Geology (3)
GEOL A455 Permafrost (3)
GEOL A456 Geoarchaeology* (3)
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<td>GEOL A460</td>
<td>Environmental Geochemistry</td>
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<td>GEOL A475</td>
<td>Environmental Geophysics</td>
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<td>GEOL A480</td>
<td>Geological Field Methods</td>
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<td>GEOL A481</td>
<td>Alaskan Field Investigations</td>
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<td>GEOL A482</td>
<td>Geological Field Investigations</td>
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<td>Advanced Topics in Geology</td>
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<td>Geology Seminar</td>
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<td>Geology Internship</td>
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<td>Student Research</td>
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**Students cannot get credit for both PHYS 123/L and PHYS 211/L or PHYS 124/L and 212/L.

c. A minimum of 15 credits must come from the following Math and Computational Skills Course List for the Environmental Sciences Option:

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<td>CS A111</td>
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<td>CS A304</td>
<td>Object-Oriented Analysis and Modeling</td>
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<td>Algorithms and Data Structures</td>
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<td>Automata, Algorithms, and Complexity</td>
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<td>GEO A157</td>
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<td>GIS and Remote Sensing</td>
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<td>Coastal Mapping</td>
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<td>Design and Management of Spatial Information</td>
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<td>Integration of Geomatics Technologies</td>
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<td>Internship in Geographic Information Systems II</td>
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<td>Introduction to Discrete Mathematics</td>
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<td>Ordinary Differential Equations</td>
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<td>Introduction to Modern Algebra</td>
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<td>MATH A408</td>
<td>Mathematical Statistics II</td>
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<td>STAT A253</td>
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<td>STAT A307</td>
<td>Probability and Statistics</td>
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<tr>
<td>STAT A308</td>
<td>Intermediate Statistics for the Sciences*</td>
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<td>STAT A402</td>
<td>Scientific Sampling</td>
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<td>Regression Analysis</td>
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<td>Analysis of Variance</td>
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<td>Nonparametric Statistics</td>
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<td>Multivariate Statistics</td>
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<tr>
<td>STAT A490</td>
<td>Selected Topics in Statistics</td>
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or

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<th>Credits</th>
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<tbody>
<tr>
<td>STAT A402</td>
<td>Scientific Sampling</td>
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<tr>
<td>STAT A403</td>
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<tr>
<td>STAT A490</td>
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**d.** A minimum of 9 credits must come from the following Social Sciences Course List for the Environmental Sciences Option:

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<tr>
<th>Course Code</th>
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<tr>
<td>ANTH A202</td>
<td>Cultural Anthropology</td>
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<td>ANTH A205</td>
<td>Biological Anthropology</td>
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</tr>
<tr>
<td>ANTH A335</td>
<td>Native North Americans</td>
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<tr>
<td>ANTH A354</td>
<td>Culture and Ecology</td>
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<tr>
<td>ANTH A415</td>
<td>Applied Anthropology</td>
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<tr>
<td>ANTH A445</td>
<td>Evolution of Humans and Disease</td>
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<td>CEL A292</td>
<td>Introduction to Civic Engagement</td>
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<td>CEL A390</td>
<td>Selected Topics in Civic Engagement</td>
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<td>ECON A201</td>
<td>Principles of Macroeconomics</td>
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</tr>
<tr>
<td>ECON A202</td>
<td>Principles of Microeconomics</td>
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<tr>
<td>ECON A210</td>
<td>Environmental Economics and Policy</td>
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</tr>
<tr>
<td>ECON A300</td>
<td>The Economy of Alaska</td>
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</tr>
<tr>
<td>ECON A321</td>
<td>Intermediate Microeconomics</td>
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<td>ECON A324</td>
<td>Intermediate Macroeconomics</td>
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<tr>
<td>ECON A435</td>
<td>Natural Resource Economics</td>
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<td>ENVI/</td>
<td>Environmental Ethics</td>
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<tr>
<td>ENVI A303</td>
<td>Environmental Planning and Problem Solving</td>
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</tr>
<tr>
<td>ENVI A490</td>
<td>Topics in Environment and Society</td>
<td>3</td>
</tr>
<tr>
<td>GEOG A101</td>
<td>Local Places/Global Regions: An Introduction to Geography</td>
<td>3</td>
</tr>
<tr>
<td>LSSS A311</td>
<td>People, Places and Ecosystems</td>
<td>3</td>
</tr>
<tr>
<td>SOC A101</td>
<td>Introduction to Sociology</td>
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</tr>
<tr>
<td>SOC A404</td>
<td>Environmental Sociology</td>
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</table>

*Integrative capstone courses*
**Pre-Health Professions Option (80 credits)**

1. Complete the following required courses (24 credits):
   - BIOL A115/L Fundamentals of Biology I with Laboratory 4
   - BIOL A116/L Fundamentals of Biology II with Laboratory 4
   - CHEM A105 General Chemistry I 3
   - CHEM A105L General Chemistry I Laboratory 1
   - CHEM A106 General Chemistry II 3
   - CHEM A106L General Chemistry II Laboratory 1
   - PHYS A123 Basic Physics I 3
   - PHYS A123L Basic Physics I Laboratory 1
   - PHYS A124 Basic Physics II 3
   - PHYS A124L Basic Physics II Laboratory 1

2. Complete an additional 56 credits of degree electives from the approved course lists for the Pre-Health Professions Option.
   a. A minimum of 32 credits must be upper division.
   b. A minimum of 24 credits must come from the following Natural Sciences Course List for the Pre-Health Professions Option:
      - BIOL A111/L Human Anatomy and Physiology I with Laboratory (4)
      - BIOL A112/L Human Anatomy and Physiology II with Laboratory (4)
      or
      - BIOL A340 General Microbiology (5)
      - BIOL A242 Fundamentals of Cell Biology (4)
      - BIOL A252 Principles of Genetics (4)
      - BIOL A310 Principles of Physiology (4)
      - BIOL A403 Microtechnique (4)
      - BIOL A415 Comparative Animal Physiology (3)
      - BIOL A425 Mammalogy (3)
      - BIOL A451 Applied Microbiology (3)
      - BIOL A452 Human Genome* (3)
      - CHEM A212 Quantitative Analysis (5)
      - CHEM A311 Physical Chemistry: A Biological Orientation (3)
      - CHEM A321 Organic Chemistry I (3)
      - CHEM A322 Organic Chemistry II (3)
      - CHEM A323L Organic Chemistry Laboratory (2)
      - CHEM A434 Instrumental Methods (4)
      - CHEM A441 Principles of Biochemistry I* (3)
      - CHEM A442 Principles of Biochemistry II (3)
      - CHEM A443 Biochemistry Laboratory (2)
      - CHEM A460 Chemical Ecotoxicology (3)
      - CHEM A492 Undergraduate Seminar (1)
c. A minimum of (15) credits must come from the following Social Sciences Course List for the Pre-Health Professions Option:  

ANTH A101  Introduction to Anthropology (3)  
ANTH A205  Biological Anthropology (3)  
ANTH A324  Psychological Anthropology (3)  
ANTH A365  Races: Modern Human Diversity (3)  
ANTH A445  Evolution of Humans and Disease (3)  
ANTH A455  Medical Anthropology (3)  
ANTH A457  Food and Nutrition: An Anthropological Perspective (3)  
ANTH A485  Human Osteology (4)  
ANTH A486  Applied Human Osteology (3)  
ANTH A490  Selected Topics in Anthropology (1-3)  
ECON A201  Principles of Macroeconomics (3)  
ECON A202  Principles of Microeconomics (3)  
HS A220  Core Concepts in Health Sciences (3)  
HS A210  Introduction to Environmental Health (3)  
HS A230  Introduction to Global Health (3)  
HS A326  Introduction to Epidemiology (3)  
HS A492  Senior Seminar: Contemporary Health Policy* (3)  
PHIL A302  Biomedical Ethics (3)  
PSY A111  General Psychology (3)  
PSY A143  Death and Dying (3)  
PSY A150  Lifespan Development (3)  
PSY A245  Child Development (3)  
PSY A245L  Child Development Laboratory (1)  
PSY A260  Statistics for Psychology (3)  
PSY A260L  Statistics for Psychology Lab (1)  
PSY A261  Research Methods in Psychology (4)  
PSY A345  Abnormal Psychology (3)  
PSY A355  Learning and Cognition (4)  
PSY A366  Perception (3)  
PSY A368  Personality (3)  
PSY A370  Biological Psychology* (3)  
PSY A412  Foundations of Modern Psychology (3)  
PSY A420  Conducting Research in Psychology (3)  
PSY A425  Clinical Psychology (3)  
PSY A428  Evolutionary Psychology (3)  
PSY A450  Adult Development and Aging (3)  
PSY A453  Application of Statistics to the Social Sciences (4)  
PSY A455  Mental Health Services in Alaska (3)  
PSY A485  Health Psychology (3)  
PSY A498  Individual Research (3)  

d. A minimum of 9 credits must come from the following Math and Computational Skills Course List for the Pre-Health Professions Option:  

MATH A200  Calculus I (4)  
MATH A272  Applied Calculus (3)  
MATH A201  Calculus II (4)  
MATH A202  Calculus III (4)  
MATH A215  Introduction to Mathematical Proofs (3)  
MATH A231  Introduction to Discrete Mathematics (3)  
MATH A302  Ordinary Differential Equations (3)  
MATH A303  Introduction to Modern Algebra (3)  
MATH A305  Introduction to Geometrics (3)  
MATH A306  Discrete Methods (3)  
MATH A314  Linear Algebra (3)
MATH A321 Analysis of Several Variables (3)
MATH A324 Advanced Calculus (3)
MATH A371 Stochastic Processes (3)
MATH A407 Mathematical Statistics I (3)
MATH A408 Mathematical Statistics II (3)
MATH A410 Introduction to Complex Analysis (3)
MATH A422 Partial Differential Equations (3)
MATH A490A Selected Topics in Pure Mathematics (3)
MATH A490B Selected Topics in Applied Mathematics (3)
MATH A498 Individual Research (1-3)
STAT A253 Applied Statistics for the Sciences (4)
or
STAT A307 Probability and Statistics (4)
STAT A308 Intermediate Statistics for the Sciences* (3)
STAT A402 Scientific Sampling (3)
STAT A403 Regression Analysis (3)
STAT A404 Analysis of Variance (3)
STAT A405 Nonparametric Statistics (3)
STAT A407 Time Series Analysis (3)
STAT A408 Multivariate Statistics (3)
STAT A490 Selected Topics in Statistics (1-3)

*Integrative capstone courses

General Sciences Option (80 credits)

1. Complete the following required courses (32 credits):
   - BIOL A115/L Fundamentals of Biology I with Laboratory 4
   - BIOL A116/L Fundamentals of Biology II with Laboratory 4
   - CHEM A105 General Chemistry I 3
   - CHEM A105L General Chemistry I Laboratory 1
   - CHEM A106 General Chemistry II 3
   - CHEM A106L General Chemistry II Laboratory 1
   - GEOL A111/L Physical Geology with Laboratory 4
   - GEOL A221/L Historical Geology with Laboratory 4
   - PHYS A123 Basic Physics I (3)
   - PHYS A123L Basic Physics I Laboratory (1)
   - PHYS A124 Basic Physics II (3)
   - PHYS A124L Basic Physics II Laboratory (1)
   - PHYS A211 General Physics I (3)
   - PHYS A211L General Physics I Laboratory (1)
   - PHYS A212 General Physics II (3)
   - PHYS A212L General Physics II Laboratory (1)

2. Complete an additional 48 credits of degree electives.*** 48
   a. The credits may come from the following course lists:
      i. Environmental Sciences Course Lists
      ii. Pre-Health Professions Course Lists
      iii. General Sciences Additional Course List (below).
   b. A minimum of 32 credits must be upper division
   c. At least 2 of the following disciplines must be represented at the upper division level: Astronomy, Biology, Chemistry, Geology, Mathematics, Physics, Statistics.

***Students wishing to meet the National Science Teachers Association Standards for Science Teacher Preparation will need to meet the following credit requirements within the 48 degree elective credits:
   i. Twenty of the 48 credits must come from 4 credits per each of the following:
1. Biology (BIOL) (4)  
   and  
2. Chemistry (CHEM) (4)  
   and  
3. Geology (GEOL) (4)  
   and  
4. Astronomy (ASTR) (4)  
   and  
5. Physics or Astronomy (PHYS or ASTR) (4)  

ii. In addition to the credits listed above (i), at least 17 additional credits must come from one of the following disciplines such that a minimum of 21 elective credits are taken in a single science discipline****:
   1. Biology (BIOL) (17)  
      or  
2. Chemistry (CHEM) (17)  
      or  
3. Geology (GEOL) (17)  
      or  
4. Physics/Astronomy (PHYS and/or ASTR) (17)  

****Students wishing to meet the National Science Teachers Association Standards for Science Teacher Preparation with an emphasis in Physics will be unable to do so while earning a degree in 120-125 credits. Options are to earn a degree with greater than 125 credits, or develop a degree plan that meets the majority of the standards’ requirements and complete the remainder as a post-Baccalaureate student.

d. Additional Courses for the General Sciences Option List:
   ASTR A103  Solar System Astronomy (3)  
   ASTR A103L  Solar System Astronomy Laboratory (1)  
   ASTR A104  Stars, Galaxies and Cosmology (3)  
   ASTR A104L  Stars, Galaxies and Cosmology Laboratory (1)  
   PHYS A311  Intermediate Classical Mechanics (3)  
   PHYS/  
   EE A314  Electromagnetics (3)  
   PHYS A320  Simulation of Physical Systems (3)  
   PHYS/  
   EE A324  Electromagnetics II (3)  
   PHYS A403  Quantum Mechanics (3)  
   PHYS A413  Statistical and Thermal Mechanics (3)  
   PHYS A498  Individual Research (1-6)  

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Modern sciences do not stand alone. Most draw heavily upon the tenets of at least one other discipline. The Natural Sciences curriculum emphasizes the interrelationships among the sciences and allows students to obtain a strong background in two or more sciences while meeting the requirements of a single degree program. A minimum of 74 science credits is required for this major, as specified below. For individuals pursuing careers as secondary science educators, it is required by the College of Education that they complete 12 credits in each of the following sciences: biology, chemistry, physics, and earth and space science.

The Natural Sciences program is administered by the Department of Biological Sciences. For further information about the Natural Sciences program, contact the chairperson of the Department of Biological Sciences. Upon acceptance into the major, an academic advisor from the Department of Biological Sciences will be assigned in accordance with the student’s declared area of emphasis.

Bachelor of Science, Natural Sciences

Admission Requirements
Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Academic Progress
In order to graduate with a BS in Natural Sciences, all courses covered under Major Requirements for a BS in Natural Sciences must be completed with a grade of C or better. Students who audit a course intended to meet the Natural Sciences degree requirements or who are unable to earn a grade of C or better in the course may repeat the course. All prerequisites for courses used to meet the Natural Sciences degree requirements must be completed with a grade of C or better. Students repeating a course in the Department of Biological Sciences are required to complete all components of the course during the semester in which the course is retaken. For a course with a lecture and laboratory component, students may not carry forward an individual lecture or laboratory grade from a previous semester in which the course was taken.

Graduation Requirements
Students must complete the following graduation requirements:

A. General University Requirements
Complete the General University Requirements for All Baccalaureate Degrees located at the beginning
of this chapter.

B. **General Education Requirements**
Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. **College of Arts and Sciences Requirements**
Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section. It is recommended that MATH A200 or MATH A272, STAT A253 or STAT A307, and the Computer Programming requirements be completed in the first two years of study.

Note: Major requirements may also be used to satisfy the College of Arts and Sciences Requirements.

Students must complete the following major requirements:

1. Complete three of the following course sequences:
   - BIOL A115/L: Fundamentals of Biology I with Laboratory (4)
   - BIOL A116/L: Fundamentals of Biology II with Laboratory (4)
   - CHEM A105: General Chemistry I (3)
   - CHEM A105L: General Chemistry I Laboratory (1)
   - CHEM A106: General Chemistry II (3)
   - CHEM A106L: General Chemistry II Laboratory (1)
   - GEOL A111: Physical Geology (4)
   - GEOL A221: Historical Geology (4)
   - PHYS A123: Basic Physics I (3)
   - PHYS A123L: Basic Physics I Laboratory (1)
   - PHYS A124: Basic Physics II (3)
   - PHYS A124L: Basic Physics II Laboratory (1)

   Note: It is recommended that the three science course sequences be completed in the first two years of study. For students whose emphasis lies in the area of the biological sciences, it is recommended that BIOL A242 and BIOL A252 also be completed within the first two years of study, as it is a prerequisite for several upper division biology courses.

2. Complete an additional 50 science credits, of which at least 35-38 credits must be upper division from at least two science disciplines. UAA science courses approved for the Natural Sciences degree are listed below.

   Anthropology
   Astronomy
   Biology
   Chemistry
   Computer Science
   Environmental Studies
   Geology
   Geologic Information Systems
   Geomatics
   Health Sciences
   Honors Program
   Mathematics
   Psychology
   Statistics
   UAF Palmer Research Center

   Other courses may be considered by petition. Acceptable credits from other accredited institutions include but are not limited to credits earned in the following disciplines:

   Statistics
   Natural Resource Management
   Environmental Sciences
   Wildlife Management
   Engineering
   Oceanography
Note: Credit for laboratory, internship or clinical practicum courses will be awarded on an individual basis with the general rule of 1 credit for three lab hours applying in most cases.

3. Courses taken to meet the 50-credit Natural Science major degree requirement must be chosen with the approval of your advisor.

4. Submit a Program of Study-Natural Sciences Degree Form signed by your advisor to both the Office of the Registrar and the Department of Biological Sciences during the semester prior to the semester in which you plan to graduate. All courses listed in the Program of Study-Natural Sciences Degree must be approved by your formal advisor before you can submit the form to the Office of the Registrar and the Department of Biological Sciences.

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

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The undergraduate program in Natural Sciences is founded on a curriculum that emphasizes the interrelationships among the sciences. A program of study in the Natural Sciences requires that students select an option within the degree, and complete all courses required within the option, as well as sufficient science elective courses to meet minimum unit requirements for graduation.

Students accepted into this flexible degree program select one of three options: the General Sciences Option is designed for students who are interested in understanding the interrelationships among various scientific fields, or in teaching science at the secondary level. The Pre-Health Professions Option is designed to meet the admission requirements of specific professional schools in medicine, dentistry, and veterinary medicine. The Environmental Sciences Option is designed to prepare students for graduate school or for employment in the private or public sector.

The Natural Sciences program is administered by the Department of Biological Sciences. Upon acceptance to the major, an academic advisor from the Department of Biological Sciences will be assigned in accordance with the student’s declared Option, and students are strongly encouraged to consult with their academic advisors to determine which electives best suit their career requirements.

Bachelor of Science, Natural Sciences

Admission Requirements
Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.
Declare the major (see Major Requirements) and select one of 3 options: General Sciences, Pre-Health Professions or Environmental Sciences.

**Academic Progress**
In order to graduate with a BS in Natural Sciences, all courses covered under Major Requirements for a BS in Natural Sciences must be completed with a grade of C or better. All prerequisites for courses used to meet the Natural Sciences degree requirements must be completed with a grade of C or better. Students who audit a course intended to meet the Natural Sciences degree requirements or who are unable to earn a grade of C or better in the course may repeat the course. Students repeating a Department of Biological Sciences course which contains a lecture and laboratory component are required to retake both components of the course.

**Graduation Requirements**
Students must complete the following graduation requirements:

**A. General University Requirements**
Complete the General University Requirements for all Baccalaureate Degrees located at the beginning of this chapter.

**B. General Education Requirements**
Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

**C. College of Arts and Sciences Requirements**
Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section. It is recommended that MATH A200 or MATH A272, STAT A253 or STAT A307, and the Computer Programming requirements be completed in the first two years of study.

**D. Major Requirements**

1. In order to declare the Bachelor of Science in Natural Sciences as their major, students must meet with an advisor and then apply to be accepted into the major. To schedule your advising session, contact the Department of Biological Sciences. At the advising session students are required to:
   a. choose one of the three options and
   b. file a preliminary program of study with the Department of Biological Sciences.

2. It is strongly recommended that any changes to the preliminary program be reviewed by an advisor to ensure that the final Program of study will meet all requirements for graduation.

3. Students must submit a final Program of Study-Natural Sciences Degree form signed by their advisor to both the Office of the Registrar and the Department of Biological Sciences during the semester prior to the semester in which they plan to graduate. All courses listed in the Program of Study-Natural Sciences Degree form must be
approved by the formal advisor before submitting the form to the Office of the Registrar and the Department of Biological Sciences.

4. No more than 6 credits may come from courses designated as 495, 499 and 498 combined, with no more than 2 credits from 495.

5. No more than 4 credits may be 492, with no more than 2 from the same discipline.

6. Courses not listed as approved for the Natural Sciences degree may be considered by petition, which should be signed by an advisor.

7. A total of 120-124 credits is required for the degree, of which 42 credits must be upper division.

Note: It is suggested that the required science sequences for any option be completed in the first two years of study.

Note: Students are encouraged to pay careful attention to pre-requisite requirements when designing their program of study.

Note: Some courses meet more than one of the requirements (GER, CAS, Major). Courses approved for the Natural Sciences degree options that meet more than one requirement are identified as follows in the approved course lists: **Bolded courses meet GER and Major requirements. Bold, Italicized courses meet CAS and Major requirements. Underlined courses meet GER, CAS and Major requirements.**

**Environmental Sciences Option (80 credits)**

1. Complete the following required courses (30 credits):

   - BIOL A115 Fundamentals of Biology I 4
   - BIOL A116 Fundamentals of Biology II 4
   - CHEM A105 General Chemistry I 3
   - CHEM A105L General Chemistry I Laboratory 1
   - CHEM A106 General Chemistry II 3
   - CHEM A106L General Chemistry II Laboratory 1
   - GEOL A111 Physical Geology 4
   - GEOL A221 Historical Geology 4
   - ENVI A211 Environmental Science: Systems & Processes 3
   - ENVI A212 Living on Earth: People and the Environment 3

2. Complete an additional 50 credits of degree electives from the approved course lists for the Environmental Sciences Option.

   a. A minimum of 32 credits must be upper division.

   b. A minimum of 20 credits must come from the following Natural and Physical Sciences Course List for the Environmental Sciences Option:

   - BIOL A178 Fundamentals of Oceanography 3
   - BIOL A179 Fundamentals of Oceanography Laboratory 1
   - BIOL A200 Introduction to Complexity 3
   - BIOL A242 Fundamentals of Cell Biology 4
   - BIOL A252 Principles of Genetics 4
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<td>BIOL A308</td>
<td>Principles of Evolution</td>
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<tr>
<td>BIOL A309</td>
<td>Biogeography</td>
<td>3</td>
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<tr>
<td>BIOL A310</td>
<td>Principles of Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A316</td>
<td>Introduction to Plant Physiology</td>
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<tr>
<td>BIOL A331</td>
<td>Systematic Botany</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A333</td>
<td>Biology of Non-Vascular Plants</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A334</td>
<td>Biology of Vascular Plants</td>
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<tr>
<td>BIOL A340</td>
<td>General Microbiology</td>
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<td>Kenai Peninsula Field Studies</td>
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<td>Sedimentology and Stratigraphy</td>
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<td>Glacial and Quaternary Geology</td>
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PHYS A123  Basic Physics I  3*
PHYS A123L Basic Physics I Laboratory  1
PHYS A124  Basic Physics II  3
PHYS A124L Basic Physics II Laboratory  1
PHYS A211  General Physics I  3
PHYS A211L General Physics I Laboratory  1
PHYS A212  General Physics II  3
PHYS A212L General Physics II Laboratory  1
PHYS A303  Modern Physics  3

*Note: Students cannot get credit for both PHYS 123/L and PHYS 211/L or PHYS 124/L and 212/L

c. A minimum of 15 credits must come from the following Math and Computational Skills Course List for the Environmental Sciences Option:

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<td>CS A110 Java Programming</td>
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<td>or</td>
<td>CS A111 Visual Basic .NET Programming</td>
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<td>or</td>
<td>CS A201 Programming Concepts I</td>
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<td>Algorithms and Data Structures</td>
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<td>Automata, Algorithms, and Complexity</td>
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<td>CS A405</td>
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<td>GEO A167</td>
<td>Remote Sensing and Image Analysis</td>
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<td>Digital Terrain Cartography</td>
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<td>Analytical and Digital Photogrammetry</td>
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<td>GIS and Remote Sensing</td>
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<td>GIS A433</td>
<td>GIS and the Marine Environment</td>
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d. A minimum of 9 credits must come from the following Social Sciences Course List for the Environmental Sciences Option:

- ANTH A101 Introduction to Anthropology 3
- ANTH A202 Cultural Anthropology 3
- ANTH A205 Biological Anthropology 3
- ANTH A335 Native North Americans 3
- ANTH A354 Culture and Ecology 3
- ANTH A415 Applied Anthropology 3
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<td>Introduction to Civic Engagement</td>
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<td>ECON A210</td>
<td>Environmental Economics and Policy</td>
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<td>The Economy of Alaska</td>
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<td>ENVI A303</td>
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<td>Local Places/Global Regions: An Introduction</td>
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**Pre-Health Professions Option (80 credits)**

1. Complete the following required courses (24 credits):
   - BIOL A115  Fundamentals of Biology I          | 4       |
   - BIOL A116  Fundamentals of Biology II         | 4       |
   - CHEM A105  General Chemistry I                | 3       |
   - CHEM A105L General Chemistry I Laboratory     | 1       |
   - CHEM A106  General Chemistry II               | 3       |
   - CHEM A106L General Chemistry II Laboratory    | 1       |
   - PHYS A123 Basic Physics I                      | 3       |
   - PHYS A123L Basic Physics I Laboratory          | 1       |
   - PHYS A124 Basic Physics II                     | 3       |
   - PHYS A124L Basic Physics II Laboratory         | 1       |

2. Complete an additional 56 credits of degree electives from the approved course lists for the Pre-Health Professions Option:
   a. A minimum of 32 credits must be upper division.
   b. A minimum of 23 credits must come from the following Natural Sciences Course List for the Pre-Health Professions Option:
      - BIOL A111 Human Anatomy and Physiology I     | 4       |
      - BIOL A112 Human Anatomy and Physiology II    | 4       |
      - BIOL A200 Introduction to Complexity          | 3       |
      - BIOL A240 Introductory Microbiology for Health Sciences | 4       |
      or
      - BIOL A340 General Microbiology                | 5       |
c. A minimum of (15) credits must come from the following Social Sciences Course List for the Pre-Health Professions Option:

**ANTH A101 Introduction to Anthropology** 3  
ANTH A205 Biological Anthropology 3  
ANTH A324 Psychological Anthropology 3  
ANTH A365 Races: Modern Human Diversity 3  
ANTH A445 Evolution of Humans and Disease 3  
ANTH A455 Medical Anthropology 3  
AHTH A457 Food and Nutrition: An Anthropological
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<td>Core Concepts in Health Sciences</td>
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<td>HS A220</td>
<td>Introduction to Environmental Health</td>
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<td>Introduction to Epidemiology</td>
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<td>Senior Seminar: Contemporary Health Policy</td>
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<td>PSY A143</td>
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<td>Lifespan Development</td>
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<td>PSY A245</td>
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<td>PSY A355</td>
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<td>Conducting Research in Psychology</td>
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<td>Clinical Psychology</td>
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<td>Adult Development and Aging</td>
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<td>Mental Health Services in Alaska</td>
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<td>Health Psychology</td>
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**d. A minimum of 9 credits must come from the following Math and Computational Skills Course List for the Pre-Health Professions Option:**

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<td>MATH A305</td>
<td>Introduction to Geometrics</td>
<td>3</td>
</tr>
<tr>
<td>MATH A306</td>
<td>Discrete Methods</td>
<td>3</td>
</tr>
<tr>
<td>MATH A314</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH A321</td>
<td>Analysis of Several Variables</td>
<td>3</td>
</tr>
<tr>
<td>MATH A324</td>
<td>Advanced Calculus</td>
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</tr>
<tr>
<td>MATH A371</td>
<td>Stochastic Processes</td>
<td>3</td>
</tr>
<tr>
<td>MATH A407</td>
<td>Mathematical Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>MATH A408</td>
<td>Mathematical Statistics II</td>
<td>3</td>
</tr>
<tr>
<td>MATH A410</td>
<td>Introduction to Complex Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MATH A422</td>
<td>Partial Differential Equations</td>
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</tr>
<tr>
<td>MATH A490A</td>
<td>Selected Topics in Pure Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH A490B</td>
<td>Selected Topics in Applied Mathematics</td>
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</tr>
<tr>
<td>MATH A498</td>
<td>Individual Research</td>
<td>1-3</td>
</tr>
<tr>
<td>STAT A253</td>
<td>Applied Statistics for the Sciences</td>
<td>4</td>
</tr>
<tr>
<td>STAT A307</td>
<td>Probability and Statistics</td>
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<tr>
<td>STAT A308</td>
<td>Intermediate Statistics for the Sciences</td>
<td>3</td>
</tr>
<tr>
<td>STAT A402</td>
<td>Scientific Sampling</td>
<td>3</td>
</tr>
<tr>
<td>STAT A403</td>
<td>Regression Analysis</td>
<td>3</td>
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<tr>
<td>STAT A404</td>
<td>Analysis of Variance</td>
<td>3</td>
</tr>
<tr>
<td>STAT A405</td>
<td>Nonparametric Statistics</td>
<td>3</td>
</tr>
<tr>
<td>STAT A407</td>
<td>Time Series Analysis</td>
<td>3</td>
</tr>
<tr>
<td>STAT A408</td>
<td>Multivariate Statistics</td>
<td>3</td>
</tr>
<tr>
<td>STAT A490</td>
<td>Selected Topics in Statistics</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**General Sciences Option (80 credits)**

1. **Complete the following required courses (32 credits):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL A115</td>
<td>Fundamentals of Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A116</td>
<td>Fundamentals of Biology II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM A105</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM A105L</td>
<td>General Chemistry I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM A106</td>
<td>General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM A106L</td>
<td>General Chemistry II Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>GEOL A111</td>
<td>Physical Geology</td>
<td>4</td>
</tr>
<tr>
<td>GEOL A221</td>
<td>Historical Geology</td>
<td>4</td>
</tr>
<tr>
<td>PHYS A123</td>
<td>Basic Physics I</td>
<td>8</td>
</tr>
<tr>
<td>PHYS A123L</td>
<td>Basic Physics I Laboratory (1)</td>
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</tr>
</tbody>
</table>

and

**or**

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>STAT A402</td>
<td>Scientific Sampling</td>
<td>3</td>
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<tr>
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<td>General Chemistry II</td>
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<tr>
<td>STAT A403</td>
<td>Regression Analysis</td>
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</tr>
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<td>Time Series Analysis</td>
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<tr>
<td>STAT A408</td>
<td>Multivariate Statistics</td>
<td>3</td>
</tr>
<tr>
<td>STAT A490</td>
<td>Selected Topics in Statistics</td>
<td>1-3</td>
</tr>
</tbody>
</table>
or

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS A211</td>
<td>3</td>
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<tr>
<td>PHYS A211L</td>
<td>1</td>
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<tr>
<td>PHYS A212</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A212L</td>
<td>1</td>
</tr>
</tbody>
</table>

and

2. Complete an additional 48 credits of degree electives.*
   a. The credits must come from the following course lists:
      i. Environmental Sciences Course Lists.
      ii. Pre-Health Professions Course Lists.
      iii. General Sciences Additional Course List (below).
   b. A minimum of 32 credits must be upper division.
   c. A minimum of 20 credits must come from at least 2 science disciplines (Astronomy, Biology, Chemistry, Geology, Physics).

*NOTE: Students wishing to meet the National Science Teachers Association Standards for Science Teacher Preparation will need to meet the following credit requirements within the 48 degree elective credits**:
   i. Twenty of the 48 credits must come from 4 credits per each of the following:
      1. Biology (BIOL) 4
      2. Chemistry (CHEM) 4
      3. Geology (GEOL) 4
      4. Astronomy (ASTR) 4
      5. Physics or Astronomy (PHYS or ASTR) 4
   ii. In addition to the credits listed above (i), at least 17 additional credits must come from one of the following disciplines such that a minimum of 21 elective credits are taken in a single science discipline:
      1. Biology (BIOL) 17
      OR
      2. Chemistry (CHEM)
      OR
      3. Geology (GEOL)
      OR
      4. Physics/Astronomy (PHYS and/or ASTR)

**NOTE: Students wishing to meet the National Science Teachers Association Standards for Science Teacher Preparation with an emphasis in Physics will be unable to do so while earning a degree in 120-125 credits. Options are to earn a degree with greater than 125 credits, or develop a degree plan that meets the majority of the standards’ requirements and complete the remainder as a post-Baccalaureate student.

   d. Additional Courses for the General Sciences Option List:
      ASTR A103  Solar System Astronomy  3
      ASTR A103L Solar System Astronomy Laboratory  1
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR A104</td>
<td>Stars, Galaxies and Cosmology</td>
<td>3</td>
</tr>
<tr>
<td>ASTR A104L</td>
<td>Stars, Galaxies and Cosmology Laboratory</td>
<td>1</td>
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<tr>
<td>ASTR A365</td>
<td>Astrobiology</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A311</td>
<td>Intermediate Classical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A314</td>
<td>Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A320</td>
<td>Simulation of Physical Systems</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A324</td>
<td>Electromagnetics II</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A403</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A413</td>
<td>Statistical and Thermal Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A456</td>
<td>Nonlinear Dynamics and Chaos</td>
<td>3</td>
</tr>
<tr>
<td>PHYS A498</td>
<td>Individual Research</td>
<td>1-6</td>
</tr>
</tbody>
</table>

**FACULTY**

Lilian Alessa, Professor, AFLA@uaa.alaska.edu  
Raymond Bailey, Professor, AFRPB@uaa.alaska.edu  
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Cindy Knall, Associate Professor, AFCMK@uaa.alaska.edu  
Jocelyn Krebs, Associate Professor, AFJEK@uaa.alaska.edu  
Jerry Kudensov, Professor, AFIDK@uaa.alaska.edu  
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Kristine Mann, Professor Emeritus, AFKEM@uaa.alaska.edu  
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Jerzy Maselko, Professor, AFJM1@uaa.alaska.edu  
Dean Milligan, Professor Emeritus, AFDEM1@uaa.alaska.edu  
LeeAnn Munk, Associate Professor, AFLM@uaa.alaska.edu  
Terry Naumann, Associate Professor, AFTRN@uaa.alaska.edu  
Jesse Owens, Professor, AFJLO@uaa.alaska.edu
1a. School or College  
EN SOENGR

1b. Division  
No Division Code

1c. Department  
Geomatics

2. Course Prefix  
GEO

3. Course Number  
A158

4. Previous Course Prefix & Number  
Not Applicable

5a. Credits/CEUs  
1

5b. Contact Hours  
(Lecture + Lab)  
0 + 2

6. Complete Course Title  
Geomatics Computer Fundamentals  
Geom Computer Fundamentals

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

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

If a change, mark appropriate boxes:

- ☐ Prefix
- ☒ Credits
- ☐ Title
- ☐ Grading Basis
- ☒ Contact Hours
- ☕ Repeat Status
- ☐ Cross-Listed/Stacked
- ☒ Course Prerequisites
- ☐ Co-requisites
- ☐ Registration Restrictions
- ☐ Class
- ☐ College
- ☐ Level
- ☐ Major
- ☐ Other
- ☐ (please specify)

9. Repeat Status No  
# of Repeats  
Max Credits

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

11. Implementation Date  
semester/year  
From: Fall/2011  To: /9999

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

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

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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</thead>
<tbody>
<tr>
<td>2. Bachelor of Science, Geomatics</td>
<td>231</td>
<td>3/11/2011</td>
<td>N.W.J. Hazelton</td>
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<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Initiator Name (typed):  
N.W.J. Hazelton  
Initiator Signed Initials:  
Date:

13b. Coordination Email  
Date: 3/23/2011

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

13c. Coordination with Library Liaison  
Date: 3/23/2011

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)  
Use of computational devices with applications in Geomatics. The basics of Reverse Polish Notation and keystroke programming will be covered. Use of Excel and MATLAB to solve geomatics problems will be emphasized. Special Note: To be taken concurrently with ENGR A161.

16a. Course Prerequisite(s) (list prefix and number)  
GEO A155 or concurrent enrollment

16b. Test Score(s)

16c. Co-requisite(s) (concurrent enrollment required)  
ENGR A161

16d. Other Restriction(s)  
☐ College  ☒ Major  ☐ Class  ☐ Level  
Prerequisites may be waived by instructor based on student's prior experience.

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
Revision of course to reflect changes in the Geomatics program and in technology. Course redesigned to work in concert with ENGR A161, providing a Geomatics application opportunity for Geomatics students.

Initiator (faculty only)  
John Bean  
Initiator (TYPE NAME)

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

☐ Approved  ☐ Disapproved  
Undergraduate/Graduate Academic  
Date

☐ Approved  ☐ Disapproved  
Board Chairperson  
Date

☐ Approved  ☐ Disapproved  
Provost or Designee  
Date
I. Date Initiated: March 7, 2011

II. Information for the Course Action Request

College/School: EN – School of Engineering
Department: Geomatics
Course Prefix: GEO
Course Number: A158
Title: Geomatics Computer Fundamentals
Credits: 1
Contact Hours: 2 hours of lab per week = 30 hours per semester. (0+2)
Grading Basis: A–F
Implementation Date: Fall, 2011
Course Description: Use of computational devices with applications in Geomatics. The basics of Reverse Polish Notation and keystroke programming will be covered. Use of Excel and MATLAB to solve geomatics problems will be emphasized. Special Note: To be taken concurrently with ENGR A161.

Course Prerequisites(s): GEO A155 or concurrent enrollment
Test Scores(s): N/A
Co-requisite(s) ENGR A161
Registration Restrictions: Prerequisites may be waived by instructor based on student’s prior experience.
Course Fee: ☒ Yes ☐ No
III. Course Level Justification
This course is an introduction to using MATLAB, spreadsheets and programmable calculators for geomatics students. There are two 100 level co-requisites.

IV. Instructional Goals

The instructor will:

1. Demonstrate how to use a programmable calculator for calculations
2. Demonstrate programming the calculator for repetitive calculations
3. Explain moderately complex computations using a spreadsheet
4. Explain formatting spreadsheets in any manner desired
5. Demonstrate MATLAB as a calculator using the command window
6. Explain writing MATLAB scripts to perform moderately complex computations
7. Demonstrate data exchange between a spreadsheet and MATLAB

V. Student Outcomes and Assessment Procedures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Effectively use the calculator for calculations</td>
<td>Homework &amp; Exam</td>
</tr>
<tr>
<td>2. Program the calculator for repetitive calculations</td>
<td>Homework &amp; Exam</td>
</tr>
<tr>
<td>3. Perform moderately complex computations using a spreadsheet</td>
<td>Homework &amp; Exams</td>
</tr>
<tr>
<td>4. Format spreadsheets in any manner</td>
<td>Homework &amp; Exams</td>
</tr>
<tr>
<td>5. Use MATLAB as a calculator using the command window</td>
<td>Homework &amp; Exams</td>
</tr>
<tr>
<td>6. Write MATLAB scripts to perform moderately complex computations</td>
<td>Homework &amp; Exams</td>
</tr>
<tr>
<td>7. Exchange data between a spreadsheet and MATLAB</td>
<td>Homework &amp; Exams</td>
</tr>
</tbody>
</table>
VI. Course Outline
1. Basic Surveying Calculations
   1.1 Overview
   1.2 Measurements
   1.3 Leveling
   1.4 Traversing
   1.5 Topographic mapping

2. Programmable Scientific Calculator
   2.1 Overview
   2.2 RPN data entry
   2.3 Built-in functions
   2.4 Keystroke programming
   2.5 Applications in Geomatics

3. Spreadsheets
   3.1 Overview
   3.2 Functions
   3.3 Formatting
   3.4 Applications in Geomatics

4. MATLAB
   4.1 Overview
   4.2 Command window calculations
   4.3 Scripting
   4.4 Applications in Geomatics

VII. Suggested Text(s)


VIII. Bibliography
## Complete Course Title
Construction Surveying
Construction Surveying

## Abbreviated Title for Transcript (30 character)
Construction Surveying

## Type of Course
Academic

## Type of Action:
Add

## Course Description (suggested length 20 to 50 words)
Basic construction surveying procedures, including staking for roads, buildings and excavations; use of maps, construction plans, datums, and coordinate systems; machine control systems. The course is predominantly field work.

## Course Prerequisite(s)
[] MATH A105 or MATH A107 or MATH A108 with a minimum grade of C

## Test Score(s)

## Co-requisite(s)
(concurrent enrollment required)

## Other Restriction(s)

## Registration Restriction(s)
(non-codable)

## Mark if course has fees

## Justification for Action
Creates a new lab-based course supporting surveying needs for Construction Management programs. Content decided through close co-operation between Construction Management and Geomatics faculty.

_________________________  ____________
Initiator (faculty only)        Date
N.W.J. Hazelton

_________________________  ____________
Dean/Director of School/College        Date

_________________________  ____________
Undergraduate/Graduate Academic        Date
Board Chairperson

_________________________  ____________
Provost or Designee        Date
I. Date Initiated: 2nd March, 2011.

II. Information for the Course Action Request

College/School: EN – School of Engineering

Department: Geomatics

Course Prefix: GEO

Course Number: A181

Course Title: Construction Surveying

Credits: 1

Contact Hours 3 hours per week of supervised laboratory time = 45 contact hours per semester. (0+3)

Grading Basis: A–F.

Implementation Date: Fall semester, 2011.

Course Description: Basic construction surveying procedures, including staking for roads, buildings and excavations; use of maps, construction plans, datums, and co-ordinate systems; machine control systems. The course is predominantly field work.

Course Prerequisites(s): [MATH A105 or MATH A107 or MATH A108] with a minimum grade of C

Test Scores(s): N/A

Corequisite(s) N/A

Registration Restrictions: N/A

Course Fee: ☒ Yes ☐ No
III. Course Level Justification
This course introduces students to the fundamental concepts and practical work involved in supporting construction with surveying services. Students require a foundation in Intermediate Algebra, but do not require a background in surveying. Because this course provides an introduction to this field of knowledge, together with basic field skills, it is well suited to being a 100-level course.

IV. Instructional Goals
The instructor will:

1. Demonstrate basic leveling surveys, including note keeping and reduction
2. Demonstrate basic traverses, including note keeping
3. Explain how to locate and stake out appropriate marks for the construction of roads
4. Explain how to locate and stake out appropriate marks for the construction of buildings
5. Explain how to compute and stake basic curves for roads
6. Demonstrate how to work from plans and maps to locate various works
7. Explain different datums and co-ordinate systems, including vertical
8. Explain the fundamentals of machine control in construction
9. Explain how to discuss construction matters with professional surveyors

V. Student Outcomes and Assessment Measures

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</tr>
</thead>
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<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Complete a basic leveling survey</td>
<td>Lab exercise, exam</td>
</tr>
<tr>
<td>2. Complete a basic traverse</td>
<td>Lab exercise, exam</td>
</tr>
<tr>
<td>3. Demonstrate the ability to stake out road construction</td>
<td>Lab exercise, exam</td>
</tr>
<tr>
<td>4. Stake out building construction</td>
<td>Lab exercise, exam</td>
</tr>
<tr>
<td>5. Compute and stake road curves</td>
<td>Lab exercise, exam</td>
</tr>
<tr>
<td>6. Work from plans and maps to stake out construction works</td>
<td>Lab exercise, exam</td>
</tr>
<tr>
<td>Student Outcomes</td>
<td>Assessment Measures</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
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<td>Upon successful completion of the course, the student will be able to do the</td>
<td>This outcome will be assessed by one or more of the</td>
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<td>following:</td>
<td>following:</td>
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<tr>
<td>7. Demonstrate an understanding of datums and co-ordinate systems</td>
<td>Exam, assignment, class discussion</td>
</tr>
<tr>
<td>8. Demonstrate an understanding of machine control systems</td>
<td>Exam, assignment, class discussion</td>
</tr>
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<td>9. Discuss construction matters with professional surveyors</td>
<td>Exam, assignment, class discussion</td>
</tr>
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</table>

VI. Topical Outline

1. Basic Leveling
   1.1 Leveling theory
   1.2 Misclosures and orders
   1.3 Reduction and computation
   1.4 Linear leveling
   1.5 Grid leveling

2. Azimuths and Bearing
   2.1 The nature of orientation
   2.2 Conversions and differences
   2.3 Applications

3. Basic Traversing
   3.1 Angle measurement
   3.2 Distance measurement
   3.3 Total stations

4. Locating and Staking for Building Construction
   4.1 Lines and co-ordinates
   4.2 Batter boards
   4.3 Distances and offsets
   4.4 Control systems

5. Topographic Surveying
   5.1 Levels, total stations and GPS
   5.2 Topographic surveying techniques

6. Locating and Staking for Road Construction
   6.1 Location methods
   6.2 Horizontal and vertical curves
   6.3 Cut and fill staking
7. Working from Maps and Construction Plans
   7.1 Plans, maps and plats
   7.2 Scale and precision
   7.3 Interpretation

8. Datums and Co-ordinate Systems
   8.1 Datums
   8.2 Co-ordinate systems
   8.3 Vertical datums

9. Machine Control Systems
   9.1 GPS
   9.2 Laser systems
   9.3 Hybrid systems

10. Interacting with Professional Surveyors
    10.1 Terminology
    10.2 Limitations of knowledge

VII. Suggested Text(s)


VIII. Bibliography

ACSM, 2005. Definitions of Surveying and Associated Terms. American Congress on Surveying and Mapping, Gaithersburg, MD.


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

<table>
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<tr>
<th>1a. School or College</th>
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<th>1b. Division</th>
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<th>1c. Department</th>
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<th>☐ Delete</th>
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**Notes:** If a change, mark appropriate boxes:

- ☐ Prefix
- ☐ Credits
- ☐ Title
- ☐ Grading Basis
- ☐ Course Description
- ☐ Test Score Prerequisites
- ☐ Other Restrictions
- ☐ Class
- ☐ College
- ☐ Major
- ☐ Level
- ☐ Other (please specify)

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

| 11. Implementation Date | semester/year | From: Fall/2011  | 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](http://www.uaa.alaska.edu/governance).

- **Impact Program/Course**
- **Catalog Page(s) Impacted**
- **Date of Coordination**
- **Chair/Coordinator Contacted**

| 2. Bachelor of Science, Geomatics | 231 | 3/11/2011 | N.W.J. Hazelton |
| 3. | | | |

**Initiator Name (typed):** N.W.J. Hazelton  
**Initiator Signed Initials:** ☐  
**Date:** __________

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| 13c. Coordination with Library Liaison | Date: 3/23/2011 |

**14. General Education Requirement**

Mark appropriate box:

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

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

Theory and application of engineering surveying, including design and implementation of horizontal and vertical control. Route surveys, horizontal and vertical curves, control surveys, quantity and as-built surveys. Mining surveys, terrestrial scanners. Application of the theory of errors, error budgets and error simulation.

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<th>18. ☐ Mark if course is a selected topic course</th>
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<td>☐ Class</td>
<td>☐ Level</td>
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**19. Justification for Action**

Update of course to include newer technology and techniques, as well as changes in the Geomatics program.

**Initiator (faculty only):** N.W.J. Hazelton  
**Initiator (TYPE NAME):** ☐

- ☑ Approved  
- ☐ Disapproved  

**Dean/Director of School/College**  
**Date:** __________

**Department Chairperson**  
**Date:** __________

**Curriculum Committee Chairperson**  
**Date:** __________

**Provost or Designee**  
**Date:** __________
Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Geomatics

I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

College/School: EN – School of Engineering

Department: Geomatics

Course Prefix: GEO

Course Number: A256

Title: Municipal and Civil Geomatics

Credits: 3

Contact Hours: 2 hours lecture and 3 hours lab per week for 15 weeks = 75 hours per semester. (2+3)

Grading Basis: A–F

Implementation Date: Fall, 2011

Course Description: Theory and application of engineering surveying, including design and implementation of horizontal and vertical control. Route surveys, horizontal and vertical curves, control surveys, quantity and as-built surveys. Mining surveys, terrestrial scanners. Application of the theory of errors, error budgets and error simulation.

Course Prerequisites(s): ([MATH A107 and MATH A108] or MATH A109 or MATH A200] and GEO A155, with a minimum grade of C in all courses.

Test Scores(s): N/A

Corequisite(s): N/A

Registration Restrictions: N/A
Course Fee: ☑ Yes ☐ No

III. Course Level Justification
This is a second course in surveying Geomatics, which builds on earlier Geomatics and Math courses.

IV. Instructional Goals

The instructor will:

<p>| | |</p>
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<tr>
<td>1.</td>
<td>Explain the fundamentals of providing control for engineering surveying</td>
</tr>
<tr>
<td>2.</td>
<td>Develop error budgets and explain basic errors in surveying measurements</td>
</tr>
<tr>
<td>3.</td>
<td>Demonstrate designing, computing and setting out a variety of horizontal and vertical curves</td>
</tr>
<tr>
<td>4.</td>
<td>Explain how to design and undertake surveys for volume and area determination</td>
</tr>
<tr>
<td>5.</td>
<td>Explain the fundamentals of mining surveying</td>
</tr>
<tr>
<td>6.</td>
<td>Explain the proper care and adjustment of equipment</td>
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<td>7.</td>
<td>Explain safety requirements for Geomatics work</td>
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V. Student Outcomes and Assessment Procedures

<table>
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<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
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<tr>
<td>Upon successful completion of the course, the student will be able to:</td>
<td>This outcome will be assessed by one or more of the following:</td>
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<tr>
<td>1. Explain and apply the principles of surveying to engineering surveying work</td>
<td>Assignments, labs and exams</td>
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<tr>
<td>2. Compare, contrast and evaluate data sources for engineering surveys</td>
<td>Assignments, labs and exams</td>
</tr>
<tr>
<td>3. Set out a variety of forms for engineering work</td>
<td>Assignments, labs and exams</td>
</tr>
<tr>
<td>4. Explain the creation and development of control that lies behind construction survey work.</td>
<td>Assignments, labs and exams</td>
</tr>
<tr>
<td>5. Produce professional maps and related products for construction surveys by hand and by computer</td>
<td>Assignments, labs and exams</td>
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VI. Course Outline

1. Safety in Geomatics
   1.1 Working safely
   1.2 Safety requirements
   1.3 OSHA
   1.4 Safety equipment

2. Vertical surveys
   2.1 Base leveling
   2.2 Standards of leveling
   2.3 Leveling errors
   2.4 Topographic leveling
   2.5 Construction leveling

3. Survey control
   3.1 Horizontal and vertical control
   3.2 Control methods for engineering surveys
   3.3 Quality and reliability of control
   3.4 Errors and their propagation

4. Curves
   4.1 Horizontal curves
   4.2 Transition curves / spirals
   4.3 Vertical curves
   4.4 Design and set out work

5. Quantity surveys
   5.1 Area determination and calculation
   5.2 Volume determination and calculation
   5.3 Cuts and fills
   5.4 Laser and Global Navigation Satellite System (GNSS) controlled construction

6. Utility and construction surveys
   6.1 Road surveys
   6.2 Utility surveys
   6.3 Line and grade
   6.4 Building construction surveys
   6.5 As-built surveys

7. Mining surveying
   7.1 Terminology and methods
   7.2 Azimuth and location transfer
   7.3 Borehole measurements
   7.4 Surveys for geophysical exploration
VII. Suggested Text(s)

VIII. Bibliography


## Course Action Request

**University of Alaska Anchorage**

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

<table>
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<td>GEO A166</td>
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### Impacted Program/Course

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<td>N.W.J. Hazelton</td>
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<td>GEO A256, GEO A456</td>
<td>393-394</td>
<td>3/11/2011</td>
<td>N.W.J. Hazelton</td>
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Initiator Name (typed): N.W.J. Hazelton
Initiator Signed Initials: __________ Date: __________

### Coordination Email

Date: 3/23/2011
submitted to Faculty Listserv: uaa-faculty@lists.uaa.alaska.edu

### Coordination with Library Liaison

Date: 3/23/2011

### General Education Requirement

Mark appropriate box:
- Oral Communication
- Written Communication
- Quantitative Skills
- Humanities
- Fine Arts
- Social Sciences
- Natural Sciences
- Integrative Capstone

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


### Course Prerequisite(s) (list prefix and number)

[GEAO155 and GEO A146 and GEO A157] all with a minimum grade of C.

### Test Score(s)

### Co-requisite(s) (concurrent enrollment required)

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### Mark if course has fees

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### Justification for Action

Revision of course to reflect more advanced material, as a result of developments in the field.

Initiator (faculty only)
Initiator Name: N.W.J. Hazelton
Initiator Signed Initials: __________ Date: __________

Approved: □
Disapproved: □

Dean/Director of School/College
Approved: □
Disapproved: □
Date: __________

Undergraduate/Graduate Academic
Approved: □
Disapproved: □
Date: __________

Provost or Designee
Approved: □
Disapproved: □
Date: __________
I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

College/School: EN – School of Engineering

Department: Geomatics

Course Prefix: GEO

Course Number: A266

Title: Advanced Surveying

Credits: 3

Contact Hours: 2 hours lecture and 3 hrs lab per week = 5 hours per week = 75 hours per semester. (2+3)

Grading Basis: A–F

Implementation Date: Fall, 2011


Course Prerequisites(s): [GEO A155 and GEO A146 and GEO A157] all with a minimum grade of C.

Test Scores(s): N/A

Corequisite(s) N/A

Registration Restrictions: N/A

Course Fee: ☒ Yes ☐ No
III. **Course Level Justification**
This course is a second year course that follows on from GEO A155 and requires knowledge of tools from GEO A146 and GEO A157.

IV. **Instructional Goals**
The instructor will:

<p>| | |</p>
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<tr>
<td>1.</td>
<td>Demonstrate quickly and effectively setting up a total station instrument</td>
</tr>
<tr>
<td>2.</td>
<td>Explain how to use a data collector to collect measurements</td>
</tr>
<tr>
<td>3.</td>
<td>Explain downloading the data collector to a computer</td>
</tr>
<tr>
<td>4.</td>
<td>Explain how to perform least squares adjustment using computer software</td>
</tr>
<tr>
<td>5.</td>
<td>Explain how to create a plan showing topography and site features</td>
</tr>
<tr>
<td>6.</td>
<td>Demonstrate researching existing horizontal and vertical control</td>
</tr>
<tr>
<td>7.</td>
<td>Demonstrate setting up and collecting geodetic GPS data</td>
</tr>
<tr>
<td>8.</td>
<td>Explain how to process GPS data and perform least squares adjustment on the results</td>
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<tr>
<td>9.</td>
<td>Explain how to translate, scale and rotate field data into a recognized coordinate system</td>
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V. **Student Outcomes and Assessment Procedures**

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<th>Assessment Procedures</th>
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<td>This outcome will be assessed by one or more of the following:</td>
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<td>1. Quickly and effectively set up a total station instrument</td>
<td>Labs, homework, projects, exams</td>
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<tr>
<td>2. Use a data collector to collect measurements</td>
<td>Labs, homework, projects, exams</td>
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<td>3. Download the data collector to a computer</td>
<td>Labs, homework, projects, exams</td>
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<td>4. Perform least squares adjustment using computer software</td>
<td>Labs, homework, projects, exams</td>
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<td>5. Create a plan showing topography and site features</td>
<td>Labs, homework, projects, exams</td>
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<tr>
<td>6. Research existing horizontal and vertical control</td>
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<td>7. Set up and collect geodetic GPS data</td>
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<td>8. Process GPS data and perform least squares adjustment on the results</td>
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<tr>
<td>9. Translate, scale and rotate field data into a recognized coordinate system</td>
<td>Labs, homework, projects, exams</td>
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</table>
VI. Course Outline

1. Safety
   1.1 General campus safety / emergency evacuation
   1.2 Vehicle traffic hazards during geomatics measurements
   1.3 Proper use and disposal of rechargeable batteries
   1.4 Electrical hazards during geomatics measurements
   1.5 Field safety
   1.6 Survey equipment safety
   1.7 Computer concerns and ergonomics
   1.8 Moose and bear safety

2. Field Notes
   2.1 Formats
   2.2 Elements

3. Field Survey Standards
   3.1 Methodology
   3.2 Codes

4. Survey Crew Dynamics

5. Field Survey Measurements Review
   5.1 Distance measurements
   5.2 Angle measurements
   5.3 Vertical measurements

6. Total Stations
   6.1 Conventional
   6.2 Reflectorless
   6.3 Robotic

7. Data Controllers
   7.1 Use and functions
   7.2 Coding
   7.3 Data exchange

8. Adjustment Computations
   8.1 Compass rule
   8.2 Transit rule
   8.3 Crandall’s adjustment
   8.4 Least squares adjustment
9. Topographic Surveying
   9.1 Methods of data acquisition
      9.1.1 Rectangular observations
      9.1.2 Radial observations
      9.1.3 Profiling
   9.2 Field techniques

10. Horizontal and Vertical Control

11. Basics of Geodetic GPS Surveying
    11.1 Collection
    11.2 Downloading
    11.3 Processing

VII. Suggested Text(s)

VIII. Bibliography


### Course Action Request

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

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

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| 12. | □ Cross Listed with |
|     | □ Stacked with |
|     | Cross-Listed Coordination Signature |

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

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Initiator Name (typed): ________ Initiator Signed Initials: ________ Date: __________

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<th>13b. Coordination Email</th>
<th>Date: 3/23/2011</th>
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<th>13c. Coordination with Library Liaison</th>
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<tbody>
<tr>
<td>Date: 3/23/2011</td>
</tr>
</tbody>
</table>

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

### 15. Course Description (suggested length 20 to 50 words)
An introduction to Geomatics design, problem-solving and structured thinking, focusing on breadth of thinking skills, and organization and analysis of thinking. The course has an emphasis on developing open-ended problem-solving skills, including ethical and legal Geomatics problems.

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

### 16b. Test Score(s)

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

### 16d. Other Restriction(s)
- □ College
- □ Major
- □ Class
- □ Level

### 16e. Registration Restriction(s) (non-codable)
- Junior or Senior standing

### 17. □ Mark if course has fees

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

### 19. Justification for Action
Addition of a course targeted to professional development for Geomatics students advancing beyond the AAS level. First course in a three course sequence.

Initiator (faculty only) ________ Date ________

Initiator (TYPE NAME) ________ Date ________

Approved

Disapproved

Dean/Director of School/College Date ________

Undergraduate/Graduate Academic Date ________

Board Chairperson

Approved

Disapproved

Provost or Designee Date ________

Approved

Disapproved

Department Chairperson Date ________

Approved

Disapproved

Curriculum Committee Chairperson Date ________
I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

College/School: EN – School of Engineering

Department: Geomatics

Course Prefix: GEO

Course Number: A301

Title: Geomatics Professional Development I

Credits: 1

Contact Hours: 2 hours lab per week for 15 weeks = 30 hours per semester. (0+2)

Grading Basis: A–F

Implementation Date: Fall, 2011

Course Description: An introduction to Geomatics design, problem-solving and structured thinking, focusing on breadth of thinking skills, and organization and analysis of thinking. The course has an emphasis on developing open-ended problem-solving skills, including ethical and legal Geomatics problems.

Course Prerequisites(s): N/A

Test Scores(s): N/A

Corequisite(s) N/A

Registration Restrictions: Junior or Senior standing

Course Fee: ☑ Yes ☐ No
III. **Course Level Justification**
This course begins a sequence for Geomatics students to introduce a range of fundamental professional skills, and so takes place beyond the AAS degree.

IV. **Instructional Goals**
The instructor will:

<p>| | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Help students develop skills in thinking and working through a wide range of problems, especially open-ended problems.</td>
</tr>
<tr>
<td>2.</td>
<td>Demonstrate how to work through various problems in groups and individually.</td>
</tr>
<tr>
<td>3.</td>
<td>Explain how to apply these skills to the remainder of the program, as well as to professional and life problems after graduation.</td>
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V. **Student Outcomes and Assessment Procedures**

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
</tr>
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<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Structure their thinking in an efficient and effective manner.</td>
<td>Lab participation, exam</td>
</tr>
<tr>
<td>2. Organize their thinking and problem-solving skills and apply them to a wide range of problems.</td>
<td>Lab participation, exam</td>
</tr>
<tr>
<td>3. Demonstrate the use of meta-thinking tools.</td>
<td>Lab participation, exam</td>
</tr>
<tr>
<td>4. Analyze, structure and evaluate arguments and cases, both their own and others.</td>
<td>Lab participation, exam</td>
</tr>
</tbody>
</table>

VI. **Course Outline**
1. Fundamental thinking skills and tools for Geomatics design and problem-solving
   1.1 Treatment of ideas and factors involved
   1.2 Rules, consequences and objectives
   1.3 Priorities, alternatives and decisions
   1.4 Other viewpoints
2. Organization and meta-thinking for Geomatics professionals
   2.1 Structural tools for thinking
   2.2 Organizational tools for thinking
   2.3 Meta-thinking tools

3. Interaction with thinking in Geomatics design and problem-solving
   3.1 Examining multiple viewpoints (legal, technical, ethical)
   3.2 Evidence evaluation
   3.3 Agreement and disagreement
   3.4 Right and wrong
   3.5 Outcomes

4. Ethical issues in Geomatics
   4.1 Applying various tools to ethical questions
   4.2 Arguing a side in an ethics or legal case

VII. Suggested Text(s)
    There is no suggested text. Worksheets and notes will be provided at each lab.

VIII. Bibliography


1a. School or College
EN SOENGR

1b. Division
No Division Code

1c. Department
Geomatics

2. Course Prefix
GEO

3. Course Number
A302

4. Previous Course Prefix & Number
Not Applicable

5. Credits/CEUs
1

6. Contact Hours
(Lecture + Lab)
(0+2)

6. Complete Course Title
Geomatics Professional Development II

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

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

If a change, mark appropriate boxes:
☐ Prefix
☐ Credits
☐ Title
☐ Grading Basis
☐ Course Description
☐ Test Score Prerequisites
☐ Other Restrictions
☐ Class
☐ Level
☐ College
☐ Major
☐ Other

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

10. Grading Basis
☑ A-F
☐ P/NP
☐ NG

11. Implementation Date
From: Fall/2011
To: /9999

12. Cross Listed with
☐ Stacked with

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

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

13b. Coordination Email
Date: 3/23/2011
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 3/23/2011

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

15. Course Description (suggested length 20 to 50 words)
A continuation of GEO A301, with an emphasis on creative problem-solving and design tools in Geomatics disciplines, together with information and emotion analysis in the thinking process. Bringing all the skills together in a co-ordinated thinking process for Geomatics professionals.

16a. Course Prerequisite(s) (list prefix and number)
GEO A301 with a minimum grade of C.

16b. Test Score(s)

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

16d. Other Restriction(s)
☐ College
☐ Major
☐ Class
☐ Level

16e. Registration Restricted (non-codable)

17. ☑ Mark if course has fees

18. ☑ Mark if course is a selected topic course

19. Justification for Action
Addition of a course targeted to professional development for Geomatics students advancing beyond the AAS level. Second course in a three course sequence

Initiator (faculty only) __________
Initiator Signed Initials: _________
Date: __________

N.W.J. Hazleton
Initiator (TYPE NAME)

Approved
☑ Disapproved
☐ Approved
Disapproved
☑ Approved
Disapproved
☐ Approved
Disapproved

Dean/Director of School/College
Date

Undergraduate/Graduate Academic
Date

Board Chairperson
Date

Provost or Designee
Date
Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Geomatics

I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

College/School: EN – School of Engineering
Department: Geomatics
Course Prefix: GEO
Course Number: A302
Title: Geomatics Professional Development II
Credits: 1
Contact Hours: 2 hours lab per week for 15 weeks = 30 hours per semester. (0+2)
Grading Basis: A–F
Implementation Date: Fall, 2011
Course Description: A continuation of GEO A301, with an emphasis on creative problem-solving and design tools in Geomatics disciplines, together with information and emotion analysis in the thinking process. Bringing all the skills together in a co-ordinated thinking process for Geomatics professionals.
Course Prerequisites(s): GEO A301 with a minimum grade of C.
Test Scores(s): N/A
Corequisite(s) N/A
Registration Restrictions: N/A
Course Fee: ☑ Yes ☐ No
III. Course Level Justification
This course follows directly from GEO A301 and continues the development of various professional skills for Geomatics students.

IV. Instructional Goals
The instructor will:

1. Develop student skills in thinking and working through a wide range of problems, especially open-ended problems.
2. Explain how to work through various problems in groups and individually.
3. Explain how to apply these skills to the remainder of the program, as well as to professional and life problems after graduation.

V. Student Outcomes and Assessment Procedures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Use creative thinking skills to solve complex problems.</td>
<td>Lab participation, exam</td>
</tr>
<tr>
<td>2. Use creative thinking in design work.</td>
<td>Lab participation, exam</td>
</tr>
<tr>
<td>3. Use constructive thinking to improve ideas and designs.</td>
<td>Lab participation, exam</td>
</tr>
<tr>
<td>4. Undertake information collection and processing, together with the emotional aspects of thinking.</td>
<td>Lab participation, exam</td>
</tr>
<tr>
<td>5. Use parallel thinking in groups to solve complex problems.</td>
<td>Lab participation, exam</td>
</tr>
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VI. Course Outline
1. Creativity and Creative Thinking for Geomatics
   1.1 Creative thinking in Geomatics
   1.2 Creative problem-solving
   1.3 Creativity and design for Geomatics
   1.4 Tools for creative thinking

2. Constructive Thinking in Geomatics
   2.1 Refining concepts
   2.2 Design processes
3. Information Collection and Processing for Geomatics
   3.1 Questions
   3.2 Information assessment and analysis
   3.3 Contradictions
   3.4 Guesses

4. Emotions and Feelings in Thinking and Geomatics Design Processes
   4.1 Beliefs
   4.2 Opinions
   4.3 Emotions
   4.4 Values
   4.5 Working with emotions in thinking

5. Large-scale Thinking Structures for Geomatics
   5.1 Decision-making processes
   5.2 Parallel thinking
   5.3 Combining sub-processes
   5.4 Managing thinking processes
   5.5 Meeting organization and management

VII. Suggested Text(s)
There is no suggested text. Worksheets and notes will be provided at each lab.

VIII. Bibliography


**Course Action Request**

**University of Alaska Anchorage**

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

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<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<th>3. Course Number</th>
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<th>5b. Contact Hours (Lecture + Lab)</th>
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6. **Complete Course Title**

Geomatics Professional Development III

Abbreviated Title for Transcript (30 character)

- Geom Prof Development III

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
- Co-requisites
- Registration Restrictions
- Class
- Level
- College
- Major
- Other (please specify)

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

10. **Grading Basis**

- A-F
- P/NP
- NG

11. **Implementation Date** semester/year

From: Fall/2011 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.

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<th>Chair/Coordinator Contacted</th>
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13b. **Coordination Email** Date: 3/23/2011

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

13c. **Coordination with Library Liaison** Date: 3/23/2011

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)

Introduction to presentation skills for Geomatics professionals: verbal, written, audio-visual and electronic. Use of presentation support equipment and software, and the art of presentation in the Geomatics field. Introduction to organizational skills, with an emphasis on understanding how modern businesses involved in Geomatics operate.

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

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

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

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

- College
- Major
- Class
- Level

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

- Junior or Senior standing

17. **Mark if course has fees**

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

19. **Justification for Action**

Addition of a course targeted to professional development for Geomatics students advancing beyond the AAS level. Third course in a three course sequence.

**Initiator Name (typed):**

Initiator Signed Initials: __________ Date: __________

**Initiator (faculty only):**

N.W.J. Hazelton

Initiator (TYPE NAME)

Approved

Disapproved

Date

Dean/Director of School/College

Date

Approved

Disapproved

Department Chairperson

Date

Undergraduate/Graduate Academic

Date

Approved

Disapproved

Board Chairperson

Date

Approved

Disapproved

Provost or Designee

Date
Course Content Guide  
University of Alaska Anchorage  
School of Engineering  
Department of Geomatics

I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

College/School: EN – School of Engineering
Department: Geomatics
Course Prefix: GEO
Course Number: A303
Title: Geomatics Professional Development III
Credits: 1
Contact Hours: 2 hours lab per week for 15 weeks = 30 hours per semester. (0+2)
Grading Basis: A-F
Implementation Date: Fall, 2011

Course Description: Introduction to presentation skills for Geomatics professionals: verbal, written, audio-visual and electronic. Use of presentation support equipment and software, and the art of presentation in the Geomatics field. Introduction to organizational skills, with an emphasis on understanding how modern businesses involved in Geomatics operate.

Course Prerequisites(s): N/A
Test Scores(s): N/A
Corequisite(s): N/A
Registration Restrictions: Junior or Senior Standing
Course Fee: Yes ☒ No ☐
III. Course Level Justification
This course continues a sequence for Geomatics students to introduce a range of fundamental professional skills, and so takes place beyond the AAS degree.

IV. Instructional Goals
The instructor will:

1. Describe carrying out a literature search and the requirements of effective writing for technical literature in the geomatics field.
2. Explain planning and executing a presentation using a range of support systems.
3. Describe designing and developing electronic presentation materials.
4. Explain applying these skills to the remainder of the Geomatics program, as well as to professional and life problems after graduation.
5. Explain how to carry out an analysis of an organization on the basis of its published material and a site visit.
6. Explain the functions and responsibilities of the Geomatics professional within the community.
7. Discuss the skills required for professional consulting in the Geomatics industry.

V. Student Outcomes and Assessment Procedures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
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<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Make a professional multi-media presentation</td>
<td>Lab work, presentations, assignments</td>
</tr>
<tr>
<td>2. Present professional written materials</td>
<td>Lab work, presentations, assignments</td>
</tr>
<tr>
<td>3. Present professional electronic materials</td>
<td>Lab work, presentations, assignments</td>
</tr>
<tr>
<td>4. Analyze an organization and report on it to the class</td>
<td>Lab work, presentations, assignments</td>
</tr>
<tr>
<td>5. Discuss organizational analysis tools, and organizational discourse analysis</td>
<td>Lab work, presentations, assignments</td>
</tr>
<tr>
<td>6. Discuss organizational structures and processes</td>
<td>Lab work, presentations, assignments</td>
</tr>
</tbody>
</table>
VI. Course Outline

1. Written presentation skills for Geomatics professionals
   1.1 Writing and editing skills
   1.2 Using graphics software
   1.3 Professional presentation of text and pages
   1.4 Literature searches and citations in Geomatics

2. Visual presentation skills for Geomatics professionals
   2.1 Graphics
   2.2 PowerPoint, slides, overheads
   2.3 Print vs screen vs projected hardware and circumstances

3. Verbal presentation skills for Geomatics professionals
   3.1 Structuring a presentation
   3.2 Hooks and body language

4. Using electronic support systems
   4.1 Multi-media
   4.2 Audio-visual and web-based systems
   4.3 Video
   4.4 Mobile devices

5. Organizational structures
   5.1 Hierarchies and flat structures
   5.2 Different organizational structures
   5.3 Re-engineering and organizational change

6. Organizational analysis in the Geomatics industry
   6.1 Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis
   6.2 Organizational discourse analysis
   6.3 Analyzing organizational materials

7. Marketing your skills and services in the Geomatics industry
   7.1 Resumes and CVs
   7.2 Meeting and interview skills
   7.3 Consulting in Geomatics

VII. Suggested Text(s)

There is no suggested text. Worksheets and notes will be provided at each lab.
VIII. Bibliography


# Course Action Request

## University of Alaska Anchorage

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

<table>
<thead>
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<th>EN SOENGR</th>
<th>1b. Division</th>
<th>No Division Code</th>
<th>1c. Department</th>
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<th>GEO</th>
<th>3. Course Number</th>
<th>A354</th>
<th>4. Previous Course Prefix &amp; Number</th>
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<th>3</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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## 6. Complete Course Title

City and Regional Planning

City and Regional Planning

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

<table>
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<tr>
<th>7. Type of Course</th>
<th>☒ Academic</th>
<th>☐ Preparatory/Development</th>
<th>☐ Non-credit</th>
<th>☐ CEU</th>
<th>☐ Professional Development</th>
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<th>8. Type of Action:</th>
<th>☒ Add</th>
<th>☐ Change</th>
<th>☐ Delete</th>
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**If a change, mark appropriate boxes:**

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- ☐ Credits
- ☐ Title
- ☐ Grading Basis
- ☐ Course Description
- ☐ Test Score Prerequisites
- ☐ Other Restrictions
- ☐ Class
- ☐ College
- ☐ Major
- ☐ Level
- ☐ Other

**9. Repeat Status No**

<table>
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**10. Grading Basis**

- ☒ A-F
- ☐ P/np
- ☐ NG

**11. Implementation Date**

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<th>Semester/Year</th>
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**12. Cross Listed with**

- ☐ Stacked with

**Cross Listed Coordination Signature**

<table>
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<tr>
<th>13a. Impacted Courses or Programs:</th>
<th>List any programs or college requirements that require this course.</th>
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<tbody>
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<td></td>
<td>Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at <a href="http://www.uaa.alaska.edu/governance">www.uaa.alaska.edu/governance</a>.</td>
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<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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**Initiator Name (typed):** Initiator Signed Initials: __________ Date: __________

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<th>Date: 3/23/2011</th>
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**14. General Education Requirement**

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<th>Mark appropriate box:</th>
<th>Oral Communication</th>
<th>Written Communication</th>
<th>Social Sciences</th>
<th>Quantitative Skills</th>
<th>Humanities</th>
<th>Integrative Capstone</th>
</tr>
</thead>
</table>

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

Introduction to fundamentals concepts, including physical planning, transportation, housing, land use, urban development and preservation. Population movement to cities and suburbs; rural depopulation. Regional growth and development. Political and economic development drivers. History, theory and ethics of planning. Virtual environments, GIS and support tools for planning decisions.

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

<table>
<thead>
<tr>
<th>16b. Test Score(s)</th>
<th>16c. Co-requisite(s) (concurrent enrollment required)</th>
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</table>

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

- ☐ College
- ☐ Major
- ☒ Class
- ☐ Level

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

- Junior or Senior standing

**17. Mark if course has fees**

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

**19. Justification for Action**

New course required to include a city and regional planning background for Geomatics students.

<table>
<thead>
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<td>N.W.J. Hazelton</td>
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**Initiator (TYPE NAME)**

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<th>Date</th>
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**Course Action Request**

University of Alaska Anchorage

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

439
Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Geomatics

I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

College/School: EN – School of Engineering
Department: Geomatics
Course Prefix: GEO
Course Number: A354
Title: City and Regional Planning
Credits: 3
Contact Hours: 3 hours of lectures per week = 45 hours per semester. (3+0)
Grading Basis: A–F
Implementation Date: Fall, 2011
Course Description: Introduction to fundamentals concepts, including physical planning, transportation, housing, land use, urban development and preservation. Population movement to cities and suburbs; rural depopulation. Regional growth and development. Political and economic development drivers. History, theory and ethics of planning. Virtual environments, GIS & support tools for planning decisions.

Course Prerequisites(s): N/A
Test Scores(s): N/A
Corequisite(s) N/A
Registration Restrictions: Junior or Senior standing.
Course Fee: ☒ Yes ☐ No
III. Course Level Justification
This course is designed to build on a foundation in Geomatics or similar fields. Being part of the BS in Geomatics, but not the AAS in Geomatics, the course is designed for third-year students.

IV. Instructional Goals
The instructor will:

1. Explain how to observe city and regional systems and environments and understand them in terms of various descriptive models
2. Explain how to evaluate the influence of different factors on growth, development and decline in a region
3. Discuss different approaches to improving urban and regional areas and spaces
4. Explain how space functions with people and how it is managed in various ways for different purposes
5. Explain how to apply different tools and theories to planning discussion and decision-making
6. Explain the role of the Geomatics professional in planning and development

V. Student Outcomes and Assessment Procedures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Discuss different approaches to planning and improvement</td>
<td>Assignments, exam, in-class discussion</td>
</tr>
<tr>
<td>2. Discuss the role of space and place and how it can be managed</td>
<td>Assignments, exam, in-class discussion</td>
</tr>
<tr>
<td>3. Discuss how to apply spatial tools and theories to planning and decision-making</td>
<td>Assignments, exam, in-class discussion</td>
</tr>
<tr>
<td>4. Analyze different aspects of real city and regional systems and report on analyses</td>
<td>Assignments, exam, in-class discussion</td>
</tr>
<tr>
<td>5. Discuss the role of non-planning professionals in the planning process</td>
<td>Assignments, exam, in-class discussion</td>
</tr>
</tbody>
</table>
VI. Course Outline

1. A Brief History of Planning
   1.1 Town planning
   1.2 City planning
   1.3 Regional planning
   1.4 Environment and sustainability
   1.5 Central Place Theory
   1.5 Integration

2. City Growth
   2.1 Movement to the cities
   2.2 Political and economic drivers of form and function
   2.3 Theories of growth
   2.4 Slums, neighborhoods, suburbs, urban areas
   2.5 Public vs private development

3. Directions for Cities
   3.1 Designing new cities
   3.2 Extending existing cities
   3.3 Redesigning city centers
   3.4 Edge cities
   3.5 Landscape, the environment and cities
   3.6 Transportation impacts
   3.7 Community activism
   3.8 The virtual city
   3.9 The secure city
   3.10 Energy, resources and sustainability

4. Regional Issues
   4.1 Rural depopulation
   4.2 Villages, small town, regional centers
   4.3 Resources, employment and economic factors
   4.4 Stimulating economic growth outside cities
   4.5 Ecotourism and geotourism

5. Planning Concepts
   5.1 Ordering space
   5.2 Place and space in planning
   5.3 Ethics of planning
   5.4 Socio-economic differentiation and city morphology
   5.5 Development vs preservation
6. Future Directions
   6.1 Changes in the agriculture, industrial and information sectors
   6.2 Changes in the services sector
   6.3 Changes in work and home life
   6.4 Community planning and development
   6.5 The impact of globalization

7. Support Tools
   7.1 Virtual environments and simulations
   7.2 GIS
   7.3 Spatial decision support systems and products
   7.4 Systems analysis

VII. Suggested Text(s)

VIII. Bibliography


### Course Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours (Lecture + Lab)</th>
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<td>Geomatics Adjustment and Analysis</td>
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If a change, mark appropriate boxes:

- Prefix
- Credits
- Title
- Repeat Status
- Cross-Listed/Stacked
- Course Prerequisites
- Co-requisites
- Registration Restrictions
- Class
- College
- Major
- Level
- Other

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Initiator Name (typed): N.W.J. Hazelton

Initiator Signed Initials: _______

Date: __________

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Date: 3/23/2011

13c. Coordination with Library Liaison

Date: 3/23/2011

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<tr>
<td>[MATH A272 or MATH A200 and STAT A253 and GEO A256] all with minimum grade of C</td>
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16b. Test Score(s)

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

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

Prerequisites may be waived by instructor based on student’s prior experience.

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

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<td>Update course title and prerequisite to reflect other changes in the Geomatics program.</td>
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Initiator (faculty only)

N.W.J. Hazelton

Initiator (TYPE NAME)

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444
Course Content Guide  
University of Alaska Anchorage  
School of Engineering  
Department of Geomatics

I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

College/School: EN – School of Engineering

Department: Geomatics

Course Prefix: GEO

Course Number: A365

Title: Geomatics Adjustment and Analysis

Credits: 4

Contact Hours: 4 hours lecture per week = 60 hours per semester. (4+0)

Grading Basis: A–F

Implementation Date: Fall, 2011


Course Prerequisites(s): [[MATH A272 or MATH A200] and STAT A253 and GEO A256] all with minimum grade of C

Test Scores(s): N/A

Corequisite(s) N/A

Registration Restrictions: Prerequisites may be waived by instructor based on student’s prior experience.

Course Fee: ☒ Yes ☐ No
III. Course Level Justification
This course builds on 200-level preparation courses, and develops Geomatics skills beyond the AAS level.

IV. Instructional Goals
The instructor will:

<p>| | |</p>
<table>
<thead>
<tr>
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<tr>
<td>1.</td>
<td>Explain the nature of errors in Geomatics data</td>
</tr>
<tr>
<td>2.</td>
<td>Explain how errors propagate through spatial data processes</td>
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<tr>
<td>3.</td>
<td>Explain how to model error propagation and develop an error budget</td>
</tr>
<tr>
<td>4.</td>
<td>Explain the fundamentals of least squares adjustment as they apply in the Geomatics disciplines</td>
</tr>
<tr>
<td>5.</td>
<td>Explain how to design and develop least squares adjustment for a wide range of Geomatics measurements</td>
</tr>
<tr>
<td>6.</td>
<td>Explain how to undertake least squares adjustments for various Geomatics applications</td>
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V. Student Outcomes and Assessment Procedures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
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<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
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<tr>
<td>1. Analyze Geomatics data and provide an error budget for measurements</td>
<td>Assignments, tests, exams</td>
</tr>
<tr>
<td>2. Analyze the propagation of errors through sequential processes</td>
<td>Assignments, tests, exams</td>
</tr>
<tr>
<td>3. Design least squares adjustments for a range of Geomatics applications</td>
<td>Assignments, tests, exams</td>
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<tr>
<td>4. Undertake a least squares adjustment and analyze the results</td>
<td>Assignments, tests, exams</td>
</tr>
<tr>
<td>5. Apply least squares adjustment to a wide range of Geomatics applications</td>
<td>Assignments, tests, exams</td>
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VI. Course Outline
1. Introduction to adjustment and analysis of Geomatics data
   1.1 Concepts of measurement and error
   1.2 Types of error in Geomatics data
   1.3 Relevant concepts in probability in Geomatics
   1.4 Reliability of Geomatics measurements
2. Error propagation and linearization in Geomatics
   2.1 Error propagation, Monte Carlo simulation
   2.2 Linearization of Geomatics observation equations
   2.3 Linear algebra applications for Geomatics

3. The concept of adjustment in Geomatics
   3.1 Introduction
   3.2 Simple adjustment methods
   3.3 Least squares adjustment for Geomatics

4. Least squares adjustment for Geomatics
   4.1 Techniques of least squares for Geomatics
   4.2 The concept of weights for Geomatics
   4.3 Geomatics least squares adjustment by condition equations
   4.4 Geomatics least squares adjustment by observation equations

5. Probability theory for Geomatics applications
   5.1 Normal, t, and Chi-square distributions
   5.2 Measures of precision and accuracy in Geomatics
   5.3 Covariance and correlation in Geomatics
   5.4 Variance-covariance, cofactor and weight matrices for Geomatics

6. Variance-covariance propagation in Geomatics
   6.1 Derivation of propagation laws for Geomatics measurements
   6.2 Stepwise propagation
   6.3 Propagation in condition equations LSA
   6.4 Propagation in observation equations LSA

7. Statistical analysis for spatial data in Geomatics
   7.1 Samples and statistics
   7.2 Mean and variance
   7.3 Confidence intervals
   7.4 Statistical testing for Geomatics data
   7.5 Bivariate and multi-variate normal distribution
   7.6 Error ellipses and ellipsoids in Geomatics

8. General least squares adjustment in Geomatics
   8.1 Derivation
   8.2 Precision estimation
   8.3 Special cases
   8.4 Parameter constraints
   8.5 Unified approach
   8.6 Sequential processing
   8.7 Phased adjustment
9. Applications in Geomatics
   9.1 Photogrammetry
   9.2 Surveying
   9.3 GIS
   9.4 Image processing
   9.5 GNSS and INS
   9.6 3-D geodetic model
   9.7 Combining Geomatics measurements
   9.8 Constrained and minimally-constrained adjustments in Geomatics

VII. Suggested Text(s)


VIII. Bibliography


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

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

2. Course Prefix  
GEO
3. Course Number  
A460
4. Previous Course Prefix & Number  
Not Applicable
5a. Credits/CEUs  
3
5b. Contact Hours  
(Lecture + Lab)  
(1+6)

6. Complete Course Title  
Geomatics Design Project  
Geomatics Design Project
Abbreviated Title for Transcript (30 character)

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

8. Type of Action:  
☐ Add  ☒ Change  ☐ Delete
If a change, mark appropriate boxes:
☒ Prefix  ☐ Credits  ☒ Title  ☒ Repeat Status  ☒ Grading Basis  ☒ Cross-Listed/Stacked
☒ Course Description  ☒ Text Score Prerequisites  ☒ Co-requisites  ☒ Registration Restrictions
☒ Other Restrictions
☐ Class  ☐ Level  ☒ College  ☒ Major
☒ Other (please specify)

9. Repeat Status Yes  ☐ # of Repeats 1  ☐ Max Credits 6

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

11. Implementation Date  
From: Fall/2011  
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.

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13b. Coordination Email  
Date: 3/23/2011  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 3/23/2011

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)  
Projects in Geomatics and Geographic Information Systems (GIS). Research, design, data compilation, analysis, and mapping for a Geomatics project. Professional standards and ethical concerns for Geomatics professionals.

16a. Course Prerequisite(s) (list prefix and number)  
(GEO A359 and GEO A365 and GIS A366) all with minimum grade of C

16b. Test Score(s)

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

16d. Other Restriction(s)
☐ College  ☐ Major  ☐ Class  ☐ Level

16e. Registration Restriction(s) (non-codable)
Prerequisites may be waived by instructor based on student's prior experience.

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
Need to update this course to reflect changing needs in program and for Honors students.

Initiator Name (typed): N.W.J. Hazelton  
Initiator Signed Initials: _________  
Date:________________

14. General Education Requirement

15. Course Description

16a. Course Prerequisite(s)

16d. Other Restriction(s)

17. Mark if course has fees

19. Justification for Action

________________________________________________________________________
Initiator (faculty only)  
N.W.J. Hazelton  
Initiator (TYPE NAME)

Approved  ☐ Disapproved  
Dean/Director of School/College  
Date  

Approved  ☐ Disapproved  
Department Chairperson  
Date

Approved  ☐ Disapproved  
Curriculum Committee Chairperson  
Date

Approved  ☐ Disapproved  
Provost or Designee  
Date
I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

College/School: EN – School of Engineering
Department: Geomatics
Course Prefix: GEO
Course Number: A460
Title: Geomatics Design Project
Credits: 3
Contact Hours: 1 hour of lecture and 6 hours of unsupervised lab for 15 weeks = 105 hours per semester. (1+6)
Grading Basis: A–F
Implementation Date: Fall, 2011
Course Description: Projects in Geomatics and Geographic Information Systems (GIS). Research, design, data compilation, analysis, and mapping for a Geomatics project. Professional standards and ethical concerns for Geomatics professionals.
Course Prerequisites(s): [GEO A359 and GEO A365 and GIS A366] all with minimum grade of C
Repeat Status: May be repeated once for a maximum of 6 credits.
Test Scores(s): N/A
Corequisite(s) N/A
Registration Restrictions: Prerequisites may be waived by instructor based on student’s prior experience.
Course Fee: ☒ Yes ☐ No
III. Course Level Justification

This is the senior-level capstone course for the Geomatics program and is designed to allow integration of several parts of the overall program, as well as allow students to practice design thinking and problem solving.

IV. Instructional Goals

The instructor will:

1. Explain how to plan and execute a design-based project on a Geomatics topic
2. Explain how to present a professional report and oral presentation of the project
3. Discuss the importance of critical, constructive and creative thinking in completing Geomatics projects
4. Explain the importance and practice of professional and ethical behavior

V. Student Outcomes and Assessment Procedures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
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<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
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<tr>
<td>1. Create a design project proposal with a research component</td>
<td>Discussion with faculty, reports and presentation</td>
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<tr>
<td>2. Conduct primary and secondary research</td>
<td>Discussion with faculty, reports and presentation</td>
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<tr>
<td>3. Develop a thesis statement</td>
<td>Discussion with faculty, reports and presentation</td>
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<tr>
<td>4. Analyze a problem</td>
<td>Discussion with faculty, reports and presentation</td>
</tr>
<tr>
<td>5. Integrate different knowledge from earlier in the Geomatics program to allow synthesis of a solution</td>
<td>Discussion with faculty, reports and presentation</td>
</tr>
<tr>
<td>6. Present findings and results in oral and written form.</td>
<td>Discussion with faculty, reports and presentation</td>
</tr>
</tbody>
</table>

VI. Course Outline

1. Research techniques
   1.1 Primary research
   1.2 Secondary research
   1.3 Thesis statements
2. Presentation
   2.1 Analysis of audience, purpose and approach
   2.2 Oral presentations
   2.3 Written presentations
   2.4 Graphical and video techniques

3. Ethical and professional considerations
   3.1 Surveyor’s Code of Ethics
   3.2 Other Codes of Ethics
   3.3 Professional affiliations
   3.4 Attributes of a professional

VII. Suggested Text(s)
This will vary depending upon the student’s individual topic.

VIII. Bibliography


1a. School or College  
EN SOENGR  

1b. Division  
No Division Code  

1c. Department  
Geomatics  

2. Course Prefix  
GEO  

3. Course Number  
A466  

4. Previous Course Prefix & Number  
Not Applicable  

5a. Credits/CEUs  
3  

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

6. Complete Course Title  
Geopositioning  

Abbreviated Title for Transcript (30 character)  

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

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

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

9. Repeat Status No  
# of Repeats  
Max Credits  

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

11. Implementation Date  
From:  Fall/2011  
To:  9/9999  

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

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>1. Bachelor of Science, Geomatics</td>
<td>231</td>
<td>3/11/2011</td>
<td>N.W.J. Hazelton</td>
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Initiator Name (typed):  N.W.J. Hazelton  
Initiator Signed Initials:  _________  
Date:  ____________  

13b. Coordination Email  
Date:  3/23/2011  
submitted to Faculty Listserv:  (uaa-faculty@lists.uaa.alaska.edu)  

13c. Coordination with Library Liaison  
Date:  3/23/2011  

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

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

16a. Course Prerequisite(s) (list prefix and number)  
(GEO A359 and GEO A365) with a minimum grade of C  

16b. Test Score(s)  

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

16d. Other Restriction(s)  
☐ College  ☐ Major  ☒ Class  ☐ Level  

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

17. ☒ Mark if course has fees  

18. ☐ Mark if course is a selected topic course  

19. Justification for Action  
Updating course to reflect changes in technology and the program.  

Initiator (faculty only)  
N.W.J. Hazelton  
Initiator (TYPE NAME)  

☐ Approved  
☐ Disapproved  

Dean/Director of School/College  
Date  

Undergraduate/Graduate Academic Board Chairperson  
Date  

Provost or Designee  
Date  

453
I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

| College/School: | EN – School of Engineering |
| Department: | Geomatics |
| Course Prefix: | GEO |
| Course Number: | A466 |
| Title: | Geopositioning |
| Credits: | 3 |
| Contact Hours: | 3 hours lecture per week = 45 hours per semester. (3+0) |
| Grading Basis: | A–F |
| Implementation Date: | Fall, 2011 |
| Course Prerequisites(s): | [GEO A359 and GEO A365] with a minimum grade of C |
| Test Scores(s): | N/A |
| Corequisite(s): | N/A |
| Registration Restrictions: | N/A |
| Course Fee: | ☑ Yes ☐ No |
III. Course Level Justification
Advanced course in geodesy and GNSS, building on earlier courses.

IV. Instructional Goals
The instructor will:

1. Explain the theoretical foundations of GNSS.
2. Connect suitable observation methodologies to match specific project specifications and needs
3. Demonstrate a range of GNSS observations
4. Explain how to reduce and analyze GNSS measurements
5. Explain how to apply GNSS technology in a range of Geomatics applications

V. Student Outcomes and Assessment Procedures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Explain the theoretical foundations of GNSS</td>
<td>Exams, projects and class participation</td>
</tr>
<tr>
<td>2. Undertake GNSS measurements and data collection</td>
<td>Exams, projects and class participation</td>
</tr>
<tr>
<td>3. Reduce, analyze and adjust GNSS observations</td>
<td>Exams, projects and class participation</td>
</tr>
<tr>
<td>4. Apply GNSS technology to a range of geomatics application areas</td>
<td>Exams, projects and class participation</td>
</tr>
</tbody>
</table>

VI. Course Outline
1. Review of geodetic concepts
   1.1 Reference frames and measurement systems
   1.2 Geodetic and Cartesian co-ordinates
   1.3 Ellipsoid and geoid heights

2. Review of previous systems
   2.1 Astronomical observations
   2.2 TRANSIT Doppler
   2.3 Classical terrestrial systems
   2.4 Loran, Omega and other radio positioning systems
   3.1 GPS (Global Positioning System)
   3.2 GLONASS (ГЛО́бальная НАвигаці́онна Спúтниковая Систéма)
   3.3 Galileo
   3.4 Compass
   3.5 Other satellite systems

4. GNSS methodologies
   4.1 Pseudo-range measurements
   4.2 Carrier phase measurements
   4.3 Static and rapid static measurements
   4.4 Kinematics and real-time kinematic measurements
   4.5 OTF measurements

5. GNSS elements
   5.1 Orbit determination and parameters
   5.2 Dilution of precision
   5.3 Ephemerides
   5.4 Reference frames

6. Signal structures
   6.1 Modulation techniques, CDMA
   6.2 Message formats
   6.3 SA and AS

7. Biases and errors
   7.1 Range error
   7.2 Clock and orbit biases
   7.3 Ionospheric and tropospheric errors
   7.4 Observation errors
   7.5 Multipath

8. Solutions
   8.1 Types of solutions
   8.2 Relative positioning using differencing solutions
   8.3 Network solutions
   8.4 Constrained solutions
   8.5 Iono-free solutions
   8.6 Wide-lane solutions

   9.1 Theory and operation
   9.2 Kalman filtering
   9.3 GNSS/INS positioning
10. Adjustment of GNSS measurements
   10.1 Reduction and checking
   10.2 Least squares adjustment
   10.3 Combining terrestrial measurements and GNSS
   10.4 Combining GNSS and INS measurements

11. Practical aspects
   11.1 Planning and field operations
   11.2 Data processing
   11.3 GNSS survey standards
   11.4 Advantages and limitations of GNSS measurements
   11.5 CORS and other base stations

VII. Suggested Text(s)


VIII. Bibliography


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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>EN SOENGR</th>
<th>1b. Division</th>
<th>No Division Code</th>
<th>1c. Department</th>
<th>Geomatics</th>
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<tbody>
<tr>
<td>2. Course Prefix</td>
<td>GIS</td>
<td>3. Course Number</td>
<td>A268</td>
<td>4. Previous Course Prefix &amp; Number</td>
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<td>5a. Credits/CEUs</td>
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<td>(2+3)</td>
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<tr>
<td>6. Complete Course Title</td>
<td>Elements of Geographic Information Systems (GIS)</td>
<td>Abbreviated Title for Transcript (30 character)</td>
<td>7. Type of Course</td>
<td>Academic</td>
<td>8. Type of Action:</td>
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<td>10. Grading Basis</td>
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<td>Initiator Name (typed): N.W.J. Hazelton</td>
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<td>14. General Education Requirement</td>
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<td>Updating an existing course to reflect changes in theory and technology in the subject matter.</td>
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<tr>
<td>Gennady Gienko</td>
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**Course Description**:  
Introduction to fundamentals of GIS, including common uses and technical concepts, e.g., data structures (raster and vector), data sources, metadata, databases, coordinate systems, geocoding, spatial analysis, georeferencing, cartographic design and map compilation. Investigation of spatial data quality and accuracy. Application of GIS analysis functions and standard query languages. Application of GIS to real-world problems.


Initiator Signed Initials: _______  
Date:________________

Coordination Email Date: 3/23/2011  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

Coordination with Library Liaison Date: 3/23/2011

Course Description (suggested length 20 to 50 words)

Introduction to fundamentals of GIS, including common uses and technical concepts, e.g., data structures (raster and vector), data sources, metadata, databases, coordinate systems, geocoding, spatial analysis, georeferencing, cartographic design and map compilation. Investigation of spatial data quality and accuracy. Application of GIS analysis functions and standard query languages. Application of GIS to real-world problems.

Mark if course has fees

Mark if course is a selected topic course

Justification for Action

Updating an existing course to reflect changes in theory and technology in the subject matter.

Initiator Name (faculty only)

Gennady Gienko

Initiator Signed Initials: _______  
Date:________________

Approved

Disapproved

Dean/Director of School/College Date

Approved

Disapproved

Undergraduate/Graduate Academic Chairperson Date

Approved

Disapproved

Board Chairperson

Approved

Disapproved

Provost or Designee Date

Gennady Gienko

Initiator (TYPE NAME)
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<td>1 Geographic Information Systems (GIS) Minor</td>
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<td>2 Undergraduate Certificate, GIS</td>
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<td>3 Bachelor of Science, Geomatics</td>
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<td>4 Associate of Applied Science, Geomatics</td>
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<td>5 Bachelor of Arts, Environment &amp; Society</td>
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<td>6 Bachelor of Science, Environment &amp; Society</td>
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<td>7 Minor, Environmental Studies</td>
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<td>8 Minor, Geography</td>
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<td>9 GIS A295</td>
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</table>
Course Content Guide  
University of Alaska Anchorage  
School of Engineering  
Department of Geomatics  

I. Date Initiated: 7th March, 2011.  

II. Information for the Course Action Request  

College/School: EN – School of Engineering  

Department: Geomatics  

Course Prefix: GIS  

Course Number: A268  

Title: Elements of Geographic Information Systems (GIS)  

Credits: 4  

Contact Hours: 2 hours per week lecture, 3 hours per week lab. = 75  

contact hours per semester. (2+3)  

Grading Basis: A-F  

Implementation Date: Fall Semester, 2011  

Course Description: Introduction to fundamentals of GIS, including common  
uses and technical concepts, e.g., data structures (raster and vector), data sources, metadata, databases, coordinate  
systems, geocoding, spatial analysis, georeferencing, cartographic design and map compilation. Investigation of  
spatial data quality and accuracy. Application of GIS analysis functions and standard query languages.  
Application of GIS to real-world problems.  

Course Prerequisites(s): N/A  

Test Scores(s): N/A  

Corequisite(s) N/A  

Registration Restrictions: N/A  

Course Fee: ☒ Yes ☐ No
III. Course Level Justification
This course provides students with the theoretical foundation and concepts of geographical information systems (GIS). It is an entry level class in GIS.

IV. Instructional Goals
The instructor will:

1. Explain and discuss the basic theory and concepts of GIS
2. Demonstrate and work with various spatial and non-spatial data
3. Explain basic cartographic concepts and design basic maps
4. Explain basic concepts and implement basic spatial analysis
5. Demonstrate and work with terrain surface representations and analysis
6. Demonstrate and work with georeferencing of spatial data in GIS
7. Explain typical workflow in applied GIS projects

V. Student Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Measures</th>
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</thead>
<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Demonstrate understanding of various spatial data models and structures</td>
<td>Exam, class discussion, lab exercise</td>
</tr>
<tr>
<td>2. Work with spatial and non-spatial data</td>
<td>Exam, class discussion, lab exercise</td>
</tr>
<tr>
<td>3. Design and compile thematic maps</td>
<td>Exam, class discussion, lab exercise</td>
</tr>
<tr>
<td>4. Undertake spatial analyses using spatial and non-spatial data</td>
<td>Exam, class discussion, lab exercise</td>
</tr>
<tr>
<td>5. Undertake data interpolation and work with terrain data in GIS</td>
<td>Exam, class discussion, lab exercise</td>
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<td>6. Georeference raster data in GIS</td>
<td>Exam, class discussion, lab exercise</td>
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<tr>
<td>7. Gather geo-spatial data, compile and design various maps using GIS</td>
<td>Exam, class discussion, lab exercise</td>
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</table>
VI. Course Outline

1. Introduction to GIS
   1.1 What is a GIS?
   1.2 Typical questions a GIS can answer
   1.3 Major areas of practical applications
   1.4 Contributing disciplines and technologies

2. Fundamental geospatial concepts and data models
   2.1 Data models: raster, vector
   2.2 Graphic and non-graphic data
   2.3 Digital spatial data in GIS; spatial data acquisition
   2.4 Data sources and formats

3. Data visualization in GIS
   3.1 Cartography and thematic mapping
   3.2 Graphic design and composition
   3.3 Cartographic generalization

4. Attribute data and spatial databases
   4.1 Data base fundamentals
   4.2 Spatial and non-spatial databases
   4.3 Attribute data in GIS
   4.4 Attribute and spatial queries
   4.5 Spatial and aspatial joins

5. Spatial analysis
   5.1 Analysis of graphic and attribute data
   5.2 Retrieval, classification and measurement
   5.3 Single-layer and multi-layer operations
   5.4 Overlay, proximity and connectivity operations

6. Raster data analysis
   6.1 Raster data types and sources
   6.2 Digital elevation models
   6.3 Elements of surface analysis
   6.4 Surface interpolation

7. Spatial reference
   7.1 Shape of the Earth
   7.2 Map projections
   7.3 Common coordinate systems
   7.4 Georeferencing
   7.5 Geocoding
8. Network analysis
   8.1 Spatial networks
   8.2 Utility and transportation network analysis

9. Spatial data compilation and editing
   9.1 On-screen digitizing
   9.2 Vector data editing

10. Spatial data quality
    10.1 Positional and attribute accuracy
    10.2 Logical consistency and completeness
    10.3 Accuracy assessment
    10.4 Metadata

11. GIS project: design and implementation

VI. Suggested Text(s)


VII. Bibliography


1a. School or College  
EN SOENGR

1b. Division  
No Division Code

1c. Department  
Geomatics

2. Course Prefix  
GIS

3. Course Number  
A366

4. Previous Course Prefix & Number  
Not Applicable

5a. Credits/CEUs  
3

5b. Contact Hours (Lecture + Lab)  
(2+2)

6. Complete Course Title  
Spatial Information Analysis and Modeling

Abbreviated Title for Transcript (30 character)  
Spatial Info Analysis & Model

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

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

9. Repeat Status No  # of Repeats  0  Max Credits

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

11. Implementation Date  
semester/year  
From: Fall/2011  To: /9999

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

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tr>
<td>Bachelor of Science, Geomatics</td>
<td>231</td>
<td>3/11/2011</td>
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Initiator Name (typed): N.W.J. Hazelton  
Initiator Signed Initials:  
Date:

13b. Coordination Email  
Date: 3/23/2011  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 3/23/2011

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)  
Analysis and modeling of spatial and attribute data: theoretical foundation and practical applications. Spatial and non-spatial databases, SQL, retrieval and indexing. Spatial statistics and their application in GIS analysis. Basic network analysis, surface interpolation and modeling. Error modeling and representation in GIS.

16a. Course Prerequisite(s) (list prefix and number)  
(GIS A268 and STAT A253) with a minimum grade of C

16b. Test Score(s)

16c. Co-requisite(s) (concurrent enrollment required)  
Prerequisites may be waived by instructor based on student’s prior experience.

16d. Other Restriction(s)  
☐ College  ☐ Major  ☐ Class  ☐ Level

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

19. Justification for Action  
Update content and course description.

Initiator (faculty only)  
N.W.J. Hazelton  
Initiator (TYPE NAME)  

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

☐ Approved  ☐ Disapproved  
Department Chairperson  
Date

☐ Approved  ☐ Disapproved  
Curriculum Committee Chairperson  
Date

☐ Approved  ☐ Disapproved  
Provost or Designee  
Date

465
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<td>233</td>
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<tr>
<td>2 Undergraduate Certificate in GIS</td>
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<tr>
<td>3 Bachelor of Science, Geomatics</td>
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<tr>
<td>4 GIS A433</td>
<td>399</td>
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<tr>
<td>5 GIS A458</td>
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<td>6 GIS A470</td>
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<td>Chair/Coordinator Contacted</td>
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<td>N.W.J. Hazelton</td>
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<td>11-Mar-2011</td>
<td>N.W.J. Hazelton</td>
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</table>
I. Date Initiated: 7th March, 2011.

II. Information for the Course Action Request

College/School: EN – School of Engineering

Department: Geomatics

Course Prefix: GIS

Course Number: A366

Title: Spatial Information Analysis and Modeling

Credits: 3

Contact Hours: 2 hours per week lecture, 2 hours per week lab. = 60 contact hours per semester. (2+2)

Grading Basis: A-F

Implementation Date: Fall Semester, 2011

Course Description: Analysis and modeling of spatial and attribute data: theoretical foundation and practical applications. Spatial and non-spatial databases, SQL, retrieval and indexing. Spatial statistics and their application in GIS analysis. Basic network analysis, surface interpolation and modeling. Map projections in GIS. Error modeling and representation in GIS.

Course Prerequisites(s): [GIS A268 and STAT A253] with a minimum grade of C

Test Scores(s): N/A

Corequisite(s): N/A

Registration Restrictions: Prerequisites may be waived by instructor based on student’s prior experience.

Course Fee: ☒ Yes ☐ No
III. Course Level Justification
This course provides students with advanced modeling and analysis techniques for spatial information systems. It builds upon the foundation developed in GIS A268 Elements of Geographic Information Systems (GIS)

IV. Instructional Goals, Student Outcomes, and Assessment Measures
The instructor will:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Discuss various spatial data models and structures</td>
</tr>
<tr>
<td>2.</td>
<td>Explain how to work with various spatial and non-spatial databases</td>
</tr>
<tr>
<td>3.</td>
<td>Explain working with spatial and non-spatial statistics</td>
</tr>
<tr>
<td>4.</td>
<td>Explain how to work with surface representations and analysis</td>
</tr>
<tr>
<td>5.</td>
<td>Explain working with errors in spatial databases</td>
</tr>
<tr>
<td>6.</td>
<td>Discuss how to work with various map projections in GIS</td>
</tr>
</tbody>
</table>

V. Student Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Discuss various spatial data models and structures</td>
<td>Exam, class discussion, lab exercise</td>
</tr>
<tr>
<td>2. Work with spatial and attribute databases</td>
<td>Exam, class discussion, lab exercise</td>
</tr>
<tr>
<td>3. Undertake statistical analyses using spatial and attribute data</td>
<td>Exam, class discussion, lab exercise</td>
</tr>
<tr>
<td>4. Undertake surface creation and analysis</td>
<td>Exam, class discussion, lab exercise</td>
</tr>
<tr>
<td>5. Analyze data quality and uncertainty in spatial and non-spatial data</td>
<td>Exam, class discussion, lab exercise</td>
</tr>
<tr>
<td>6. Work with various map projections in GIS</td>
<td>Exam, class discussion, lab exercise</td>
</tr>
</tbody>
</table>
VI. Course Outline

1. Foundation for modeling in GIS – Spatial
   1.1 Geometries
   1.2 Topology
   1.3 Tessellations
   1.4 Data structures and algorithms
   1.5 Other data structures, forms and indexing

2. Foundation for modeling in GIS – Attribute
   2.1 Databases, their design and implementation
   2.2 RDBMS and SQL

3. Foundation for analysis in GIS
   3.1 Descriptive and inferential statistics
   3.2 Spatial statistics
   3.3 Spatial autocorrelation
   3.4 Pattern analysis and descriptors

4. Surfaces
   4.1 Measuring surfaces
   4.2 Creating surfaces
   4.3 Surface modeling
   4.4 Surface analysis
   4.5 Higher dimensions

5. Error analysis and modeling in GIS
   5.1 Uncertainty and reliability and their representation in GIS
   5.2 Standards and error types
   5.3 Testing accuracy and precision

6. Network analysis
   6.1 Linear feature analysis
   6.2 Connectivity and accessibility
   6.3 Applications

7. Map projections and GIS
   7.1 Map projections as used in GIS
   7.2 Conversions between projections
   7.3 Choices of projections
   7.4 Co-ordinate systems and datums
VI. Suggested Text(s)


VII. Bibliography


## School or College
- **EN SOENGR**

## Division
- **No Division Code**

## Department
- **Geomatics**

### Course Information
- **Course Prefix**: GIS
- **Course Number**: A371
- **Previous Course Prefix & Number**: Not Applicable
- **Credits/CEUs**: 3
- **Contact Hours (Lecture + Lab)**: (1+4)

### Complete Course Title
- **GIS Applications I**

### Abbreviated Title for Transcript
- **GIS Applications I**

### Type of Course
- **Academic**

### Type of Action
- **Add**

### Repeat Status
- **No**
- **# of Repeats**: 0
- **Max Credits**: 0

### Grading Basis
- **A-F**

### Implementation Date
- **From**: Fall/2011
- **To**: /9999

### Cross Listed with
- **Stacked with**

### Coordination Email
- **Date**: 4/16/2011
- **Submitted to Faculty Listserv**: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

### General Education Requirement
- **Oral Communication**
- **Written Communication**
- **Quantitative Skills**
- **Humanities**
- **Fine Arts**
- **Social Sciences**
- **Natural Sciences**
- **Integrative Capstone**

### Course Prerequisite(s)
- **GIS A268 with a minimum grade of C**

### Test Score(s)

### Co-requisite(s)

### Other Restriction(s)

### Registration Restrictions

### Course Description
Detailed investigation of application areas of GIS, together with applications methodologies. Topics may include public health and epidemiology, decision-support, geological, transportation, maritime, temporal, utility, land parcel, business, logistics and natural resources applications. Students will complete several application projects during the semester.

### Justification for Action
New course to provide a project applications experience in GIS. The course is designed to allow a variety of possible applications projects to be run, based on topical issues and current faculty expertise.

---

**Initiator (faculty only)**: N.W.J. Hazelton

**Initiator (TYPE NAME)**

**Approved**  **Disapproved**

**Date**

**Dean/Director of School/College**

**Approved**  **Disapproved**

**Date**

**Undergraduate/Graduate Academic Board Chairperson**

**Approved**  **Disapproved**

**Date**

**Provost or Designee**

**Approved**  **Disapproved**

**Date**
I. Date Initiated: 7th March, 2011.

II. Information for the Course Action Request

College/School: EN – School of Engineering

Department: Geomatics

Course Prefix: GIS

Course Number: A371

Title: GIS Applications I

Credits: 3

Contact Hours: 1 hour per week lecture, 4 hours per week lab. = 75 contact hours per semester. (1+4)

Grading Basis: A–F

Implementation Date: Fall, 2011

Course Description: Detailed investigation of application areas of GIS, together with applications methodologies. Topics may include public health and epidemiology, decision-support, geological, transportation, maritime, temporal, utility, land parcel, business, logistics and natural resources applications. Students will complete several application projects during the semester.

Course Prerequisites(s): GIS A268 with a minimum grade of C

Test Scores(s): N/A

Corequisite(s): N/A

Registration Restrictions: N/A

Course Fee: ☑ Yes ☐ No
III. Course Level Justification
This course builds upon the foundation established in GIS A268 Elements of Geographic Information Systems (GIS), moving the students into more specific application areas. It is designed for upper division students.

IV. Instructional Goals
The instructor will:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Explain basic applications and approaches in GIS</td>
</tr>
<tr>
<td>2.</td>
<td>Explain and develop specific application approaches using GIS</td>
</tr>
<tr>
<td>3.</td>
<td>Guide completion of several applications projects in GIS</td>
</tr>
</tbody>
</table>

V. Student Outcomes and Assessment Procedures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Use various applications and explain the application needs in GIS</td>
<td>Lab exercises, class participation, project work.</td>
</tr>
<tr>
<td>2. Demonstrate development of several applications in GIS</td>
<td>Lab exercises, class participation, project work.</td>
</tr>
<tr>
<td>3. Present results of the applications projects</td>
<td>Lab exercises, class participation, project work.</td>
</tr>
</tbody>
</table>

VI. Course Outline
1. Application Areas for GIS
   1.1 Various GIS application areas
   1.2 Application area needs with GIS
   1.3 Application methodologies

2. Applications Projects
   2.1 Various applications projects in various GIS application areas
   2.2 Project presentation

VII. Suggested Text(s)
Text will be selected by instructor(s).
VIII. Bibliography


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

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

2. Course Prefix  GIS  3. Course Number  A375  4. Previous Course Prefix & Number  Not Applicable  5a. Credits/CEUs  3  5b. Contact Hours  (Lecture + Lab) (2+2)

6. Complete Course Title  GIS and Public Health GIS and Public Health  Abbreviated Title for Transcript (30 character)  GIS and Public Health

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

8. Type of Action:  ☑ Add  ☐ Change  ☐ Delete
If a change, mark appropriate boxes:
- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Other Restrictions
- Class
- College
- Major
- Level
- (please specify)

9. Repeat Status
   9.1 Repeat Status No  
   9.2 # of Repeats  
   9.3 Max Credits  

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

11. Implementation Date  semester/year
   From: Fall/2011  To: /9999

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

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tr>
<td>2. Bachelor of Science, Geomatics</td>
<td>232</td>
<td>3/11/2011</td>
<td>N.W.J. Hazelton</td>
</tr>
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</table>

Initiator Name (typed):  N.W.J. Hazelton  Initiator Signed Initials:  __________  Date:  __________

13b. Coordination Email  Date: 4/16/2011
    submitted to Faculty Listserv:  (uaa-faculty@lists.ualaska.edu)

13c. Coordination with Library Liaison  Date: 3/23/2011

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

15. Course Description  (suggested length 20 to 50 words)
This course examines the use of geographical information systems (GIS) in the analysis of public health data. Students will develop GIS and cartographic skills through lectures, class work, and case studies, and specifically learn GIS operations that are essential in public health investigations and research.

16a. Course Prerequisite(s)  (list prefix and number)
    A grade of C or higher in GIS A268 or instructor approval

16b. Test Score(s)  

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

16d. Other Restriction(s)
    ☐ College  ☐ Major  ☐ Class  ☐ Level

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

17. ☑ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Course has been re-written as GIS A371. This course is no longer required and the faculty who taught it have left UAA.

Initiator (faculty only)  N.W.J. Hazelton  Date  __________
Initiator (TYPE NAME)

☐ Approved  ☐ Disapproved

Dean/Director of School/College  Date

Undergraduate/Graduate Academic  Date

Provost or Designee  Date

Department Chairperson  Date

Board Chairperson  Date

Curriculum Committee Chairperson  Date

476
1a. School or College
EN SOENGR

1b. Division
No Division Code

1c. Department
Geomatics

2. Course Prefix
GIS

3. Course Number
A433

4. Previous Course Prefix & Number
Not Applicable

5a. Credits/CEUs
3

5b. Contact Hours
(Lecture + Lab)
(2+2)

6. Complete Course Title
Coastal Mapping
Coastal Mapping

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

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

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

9. Repeat Status No
# of Repeats
Max Credits

10. Grading Basis
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date
Semester/year
From: Fall/2011
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.

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</table>

Initiator Name (typed): N.W.J. Hazelton
Initiator Signed Initials: _________
Date: __________________

13b. Coordination Email
Date: 3/23/2011
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 3/23/2011

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)
Applying spatial reasoning and information to coastal mapping projects. Supporting engineering and decision making in the coastal zone with GIS and mapping tools. Joining upland and bathymetric data sets. Resolving datum issues.

16a. Course Prerequisite(s) (list prefix and number)
GIS A366 with a minimum grade of C

16b. Test Score(s)

16c. Co-requisite(s) (concurrent enrollment required)
Prerequisites may be waived by instructor based on student’s prior experience.

16d. Other Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

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

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Modifications and updates to the course to reflect changes in program, faculty and the discipline.

Initiator (faculty only)
N.W.J. Hazelton

Initiator (TYPE NAME) ________________________

Approved ☐ Disapproved ☐

Dean/Director of School/College Date

Undergraduate/Graduate Academic Board Chairperson Date

Provost or Designee Date
I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

College/School: EN – School of Engineering

Department: Geomatics

Course Prefix: GIS

Course Number: A433

Title: Coastal Mapping

Credits: 3

Contact Hours: 2 hours lecture and 2 hours lab per week for 15 weeks = 60 hours per semester. (2+2)

Grading Basis: A–F

Implementation Date: Fall, 2011

Course Description: Applying spatial reasoning and information to coastal mapping projects. Supporting engineering and decision making in the coastal zone with GIS and mapping tools. Joining upland and bathymetric data sets. Resolving datum issues.

Course Prerequisites(s): GIS A366 with a minimum grade of C

Test Scores(s): N/A

Corequisite(s) N/A

Registration Restrictions: Prerequisites may be waived by instructor based on student’s prior experience.

Course Fee: ☑ Yes ☐ No
III. Course Level Justification
This course requires significant surface analysis operations and understanding, and so is dependent upon GIS A366. It develops the basic theory and practice covered in GIS A366 into new application areas, adding significant additional material.

IV. Instructional Goals
The instructor will:

1. Discuss public databases of coastal zone spatial information
2. Explain how to use relevant data in GIS packages
3. Demonstrate how to generate decision support product for coastal zone management and projects
4. Explain and demonstrate using various GIS extensions for coastal analysis and mapping
5. Explain the use of spatial information for engineering support in coastal environments
6. Help arrange student interaction with two commercial businesses in the field
7. Explain how to analyze data layers over time for change detection in the coastal zone

V. Student Outcomes and Assessment Procedures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
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</thead>
<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td></td>
</tr>
<tr>
<td>This outcome will be assessed by one or more of the following:</td>
<td></td>
</tr>
<tr>
<td>1. Demonstrate proficiency in the technical skills required for using specialist applications</td>
<td>Projects, labs, assignments and exams</td>
</tr>
<tr>
<td>2. Use correct representations for horizontal and vertical representations</td>
<td>Projects, labs, assignments and exams</td>
</tr>
<tr>
<td>3. Discuss the concepts, challenges and applications in coastal zone mapping</td>
<td>Projects, labs, assignments and exams</td>
</tr>
<tr>
<td>4. Estimate time and cost for developing a coastal mapping product</td>
<td>Projects, labs, assignments and exams</td>
</tr>
<tr>
<td>5. Discuss accuracy and uncertainty in data and derived products</td>
<td>Projects, labs, assignments and exams</td>
</tr>
</tbody>
</table>
VI. Course Outline

1. Challenges of the Coastal Zone
   1.1 Public databases
   1.2 Existing data and tools
   1.3 Products from Google Earth vs ArcGIS and equivalent
   1.4 Joining datasets at the shoreline
   1.5 Datums, horizontal and vertical

2. Application of GIS Layers
   2.1 Surface representations and hydrography
   2.2 Bathymetry
   2.3 Topography
   2.4 Infrastructure

3. Modeling
   3.1 Watershed analysis
   3.2 Coastal erosion
   3.3 Change detection
   3.4 Accuracy and uncertainty
   3.5 Surface modeling and analysis
   3.6 Representations

4. Practical Application 1
   4.1 Building a coastal map
   4.2 Designing and engineering mapping products
   4.3 Water levels, waves, currents and sea level rise
   4.4 Other environmental parameters

5. Practical Application 2
   5.1 Data collection and design supporting a coastal engineering project
   5.2 Cross-sections and surface models

6. Practical Application 3
   6.1 Permit map for National Environmental Policy Act (NEPA) compliance

7. Support Tools
   7.1 Cost estimating
   7.2 Project planning

VII. Suggested Text(s)
Texts may vary by instructor.
VIII. Bibliography


IX. Additional Information
Students will be required to visit two commercial businesses in the hydrographic field to ascertain how they tackle practical problems. Reports will be required following visits. Visits may be made as a class.
### Course Action Request
#### University of Alaska Anchorage

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN SOENGR</td>
<td>No Division Code</td>
<td>Geomatics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS</td>
<td>A458</td>
<td>Not Applic</td>
<td>3</td>
<td>(2+2)</td>
</tr>
</tbody>
</table>

**6. Complete Course Title**

**Design and Management of Spatial Information**
**Design & Man. of Spatial Info**

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

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

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

If a change, mark appropriate boxes:
- [ ] Prefix
- [ ] Credits
- [x] Title
- [ ] Grading Basis
- [ ] Course Description
- [ ] Test Score Prerequisites
- [x] Co-requisites
- [x] Other Restrictions
  - [ ] Class
  - [ ] Level
  - [ ] College
  - [ ] Major
- [ ] Other (please specify)

**9. Repeat Status No**

<table>
<thead>
<tr>
<th># of Repeats</th>
<th>Max Credits</th>
</tr>
</thead>
</table>

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

**11. Implementation Date**

<table>
<thead>
<tr>
<th>semester/year</th>
<th>To:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall/2011</td>
<td>/999</td>
</tr>
</tbody>
</table>

**12. Cross Listed with**

- [ ] Stacked with

**Cross Listed Coordination Signature**

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Science, Geomatics</td>
<td>232</td>
<td>3/11/2011</td>
<td>N.W.J. Hazelton</td>
</tr>
</tbody>
</table>

**Initiator Name (typed):** N.W.J. Hazelton
**Initiator Signed Initials:**

**13b. Coordination Email** submitted to Faculty Listserv:

(uaa-faculty@lists.uaa.alaska.edu)

**13c. Coordination with Library Liaison**

**Date:** 3/23/2011

**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)**

Spatial database system philosophy and concepts including decision making criteria, design, planning, implementation, and management. Discussion of spatial data standards, legal issues, and national spatial data policies. Project implementation and management. GIS in organizational contexts. Human-computer interactions and GIS.

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

GIS A366 with a minimum grade of C

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

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

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

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

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

**17. Mark if course has fees**

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

**19. Justification for Action**

Update content and course description.

---

**Initiator (faculty only) Date**

N.W.J. Hazelton (TYPE NAME)

**Initiator (faculty only) 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
School of Engineering
Department of Geomatics

I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

College/School: EN School of Engineering

Department: Geomatics

Course Prefix: GIS

Course Number: A458

Title: Design and Management of Spatial Information

Credits: 3

Contact Hours: 2 hours per week lecture, 2 hours per week lab. = 3,600 contact minutes per semester = 60 contact hours per semester. (2+2)

Grading Basis: A–F

Implementation Date: Fall, 2011

Course Description: Spatial database system philosophy and concepts including decision making criteria, design, planning, implementation, and management. Discussion of spatial data standards, legal issues, and national spatial data policies. Project implementation and management. GIS in organizational contexts. Human-computer interactions and GIS.

Course Prerequisites(s): GIS A366 with a minimum grade of C.

Test Scores(s): N/A

Corequisite(s): N/A

Registration Restrictions: N/A

Course Fee: ☒ Yes ☐ No
III. **Course Level Justification**

The course provides students with advanced GIS design and implementation techniques, including connecting GIS implementations to the rest of the organization, society and the users. It builds upon the technical foundations of GIS A366 Spatial Information Analysis and Modeling.

IV. **Instructional Goals**

The instructor will:

1. Demonstrate and explain how to design spatial databases
2. Explain how to organize and manage GIS projects
3. Explain how to make GIS projects interoperable
4. Help students develop an ability to work as a project team
5. Explain how GIS work in organizational contexts
6. Discuss human-computer interactions in GIS
7. Explain various standards for spatial data

V. **Student Outcomes and Assessment Measures**

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Outcomes</strong></td>
<td><strong>Assessment Measures</strong></td>
</tr>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Design and implement GIS</td>
<td>Class participation, lab exercises, exams</td>
</tr>
<tr>
<td>2. Organize and manage GIS projects</td>
<td>Class participation, lab exercises, exams</td>
</tr>
<tr>
<td>3. Work as a GIS team member</td>
<td>Class participation, lab exercises, exams</td>
</tr>
<tr>
<td>4. Discuss GIS in organizational contexts</td>
<td>Class participation, lab exercises, exams</td>
</tr>
<tr>
<td>5. Discuss human-computer interactions in GIS</td>
<td>Class participation, lab exercises, exams</td>
</tr>
<tr>
<td>6. Discuss common spatial data standards</td>
<td>Class participation, lab exercises, exams</td>
</tr>
</tbody>
</table>
VI. Course Outline
1. Spatial database design
   1.1 Data acquisition procedures
   1.2 Data quality assessment
   1.3 Database design and implementation
   1.4 GIS management
   1.5 Case studies

2. GIS projects and their management
   2.1 Data standards
   2.2 Interchange standards
   2.3 Legal issues
   2.4 National Spatial Data Infrastructure
   2.5 Project management

3. GIS in Organizations
   3.1 Organizational structures
   3.2 GIS roles in organizations

4. Human-computer interactions and GIS
   4.1 Human-computer interactions (HCI)
   4.2 HCI modeling
   4.3 HCI and GIS

VII. Suggested Text(s)


VIII. Bibliography


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

1a. School or College
EN SOENGR

1b. Division
No Division Code

1c. Department
Geomatics

2. Course Prefix
GIS

3. Course Number
A468

4. Previous Course Prefix & Number
Not Applicable

5a. Credits/CEUs
3

5b. Contact Hours
(Lecture + Lab)
(2+2)

6. Complete Course Title
Integration of Geomatics Technologies
Integration Geom 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  ☒ Course Number  ☒ Contact Hours  ☐ Repeat Status
☐ Title  ☐ Grading Basis  ☘ Cross-Listed/Stacked  ☘ Course Prerequisites  ☘ Co-requisites
☒ Course Description  ☘ Test Score Prerequisites  ☘ Registration Restrictions
☐ Other Restrictions  ☐ College  ☐ Major  ☐ Level
☐ Other (please specify)

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

10. Grading Basis
☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date
From: Fall/2011  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.ualaska.edu/governance](http://www.ualaska.edu/governance).

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<td>231</td>
<td>3/11/2011</td>
<td>N.W.J. Hazelton</td>
</tr>
</tbody>
</table>

Initiator Name (typed): N.W.J. Hazelton  Initiator Signed Initials: _________ Date: __________

13b. Coordination Email
Date: 3/23/2011 submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 3/23/2011

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)
Integration of GPS, INS, GIS, photogrammetry, remote sensing, terrestrial surveying and related technology and techniques. Scripting and development in various geo-spatial packages. Data translation/transfer techniques. Web-based approaches to spatial information management and dissemination. Mobile and server technologies for spatial information.

16a. Course Prerequisite(s) (list prefix and number) [GIS A268 and GEO A359 and GEO A365] all with a minimum grade of C

16b. Test Score(s)

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

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

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

17. ☑ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Revision of existing course to bring it up to date and better integrated into the Geomatics program.

Initiator (faculty only)
N.W.J. Hazelton

Initiator (TYPE NAME)

☐ 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  
School of Engineering  
Department of Geomatics

I. Date Initiated: 7th March, 2011

II. Information for the Course Action Request

College/School: EN – School of Engineering

Department: Geomatics

Course Prefix: GIS

Course Number: A468

Title: Integration of Geomatics Technologies

Credits: 3

Contact Hours: 2 hours per week lecture, 2 hours per week lab. = 3,600 contact minutes per semester = 60 contact hours per semester. (2+2)

Grading Basis: A–F

Implementation Date: Fall 2011

Course Description: Integration of GPS, INS, GIS, photogrammetry, remote sensing, terrestrial surveying and related technology and techniques. Scripting and development in various geo-spatial packages. Data translation/transfer techniques. Web-based approaches to spatial information management and dissemination. Mobile and server technologies for spatial information.

Course Prerequisites(s): [GIS A268 and GEO A359 and GEO A365] all with a minimum grade of C

Test Scores(s): N/A

Corequisite(s): N/A

Registration Restrictions: N/A
III. Course Level Justification
This course builds upon the introductory GIS material in GIS A268, and assumes a significant foundation across the wider geomatics discipline.

IV. Instructional Goals
The instructor will:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Explain how to apply various scripting languages to a range of geospatial packages</td>
</tr>
<tr>
<td>2.</td>
<td>Present the fundamentals of server-side applications for distributed and mobile geospatial technologies</td>
</tr>
<tr>
<td>3.</td>
<td>Present the fundamentals of connection and data movement between mobile and distributed geospatial technologies, and servers</td>
</tr>
<tr>
<td>4.</td>
<td>Explain how to develop integrated data flow between different geospatial technologies</td>
</tr>
<tr>
<td>5.</td>
<td>Present the fundamental concepts in GNSS/INS/instrument integration and data analysis</td>
</tr>
<tr>
<td>6.</td>
<td>Present the basics of incorporating volunteer/amateur geospatial data into professional geomatics information systems</td>
</tr>
</tbody>
</table>

B. Student Outcomes/Assessment Procedures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Demonstrate scripting methods in various packages</td>
<td>Class participation, practical exercises, lab work, exam, project work</td>
</tr>
<tr>
<td>2. Demonstrate server-side applications in distributed geospatial information systems</td>
<td>Class participation, practical exercises, lab work, exam, project work</td>
</tr>
<tr>
<td>3. Demonstrated integrated data flow between different geospatial information systems</td>
<td>Class participation, practical exercises, lab work, exam, project work</td>
</tr>
<tr>
<td>4. Demonstrate GNSS/INS/instrument integration and data analysis</td>
<td>Class participation, practical exercises, lab work, project work</td>
</tr>
<tr>
<td>5. Work in teams across geomatics sub-discipline areas to integrate a range of technologies</td>
<td>Class participation, practical exercises, lab work, project work</td>
</tr>
</tbody>
</table>
VI. Course Outline

1. Overview of customization and development tools for geospatial packages
   1.1 ArcObjects
   1.2 Python
   1.3 VBA
   1.4 Application tools
   1.5 Other tools

2. Distributed geospatial information systems
   2.1 Mobile and distributed systems
   2.2 Cloud computing
   2.3 Peripheral devices, connections and integration
   2.4 Networking implications
   2.5 GIS Servers
   2.6 Web GIS
   2.7 Distribution of geospatial information

3. Geospatial sensor integration
   3.1 Fundamental concepts
   3.2 GNSS/INS/sensor integration
   3.3 QA/QC methods and procedures

4. Geospatial data integration and conflation
   4.1 Data sources: professional
   4.2 Data sources: volunteer/amateur
   4.3 Data integration
   4.4 Fundamentals of data conflation

5. Integration projects across geomatics sub-disciplines

VII. Suggested Text(s)


VIII. Bibliography


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

1a. School or College
EN SOENGR

1b. Division
No Division Code

1c. Department
Geomatics

2. Course Prefix
GIS

3. Course Number
A470

4. Previous Course Prefix & Number

5a. Credits/CEUs
3

5b. Contact Hours
(Lecture + Lab)
(2+2)

6. Complete Course Title
GIS for Facility Management

Abbreviated Title for Transcript (30 character)

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

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

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

9. Repeat Status No  # of Repeats Max Credits

10. Grading Basis
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date
From: Fall/2011 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  Catalog Page(s) Impacted  Date of Coordination  Chair/Coordinator Contacted
2. Bachelor of Science, Geomatics  232  3/11/2011  N.W.J. Hazelton

Initiator Name (typed): N.W.J. Hazelton  Initiator Signed Initials: _________ Date:____________

13b. Coordination Email
Date: 4/16/2011
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  Date: 3/23/2011

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)
Load and corridor analyses, dispatching, inventory, and facility maintenance. System design for industry. Data collection techniques and integration. GIS facility management applications including utilities (water, waste water, electricity, gas, telephone), airports, military installations, transportation systems, property and building systems.

16a. Course Prerequisite(s) (list prefix and number)
A grade of C or higher in GIS A366

16b. Test Score(s)

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

16d. Other Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

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

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Course has not been run in many years and the faculty who taught it left UAA. This course is to be replaced with GIS A471.

Initiator Name (faculty only) Date
N.W.J. Hazelton  Dean/Director of School/College Date

Initiator (TYPE NAME)

Approved ☐ Disapproved ☐

Approved ☐ Disapproved ☐

Approved ☐ Disapproved ☐

Approved ☐ Disapproved ☐

Approved ☐ Disapproved ☐

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1a. School or College
EN SOENGR

1b. Division
No Division Code

1c. Department
Geomatics

2. Course Prefix
GIS

3. Course Number
A471

4. Previous Course Prefix & Number
Not Applicable

5a. Credits/CEUs
4

5b. Contact Hours
(Lecture + Lab)
(1+6)

6. Complete Course Title
GIS Applications II

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

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

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

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

10. Grading Basis
☐ A-F ☐ P/NP ☐ NG

11. Implementation Date
From: Fall/2011 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.

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<td>232</td>
<td>3/11/2011</td>
<td>N.W.J. Hazelton</td>
</tr>
</tbody>
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Initiator Name (typed): N.W.J. Hazelton
Initiator Signed Initials: _________ Date:________________

13b. Coordination Email
Date: 4/16/2011
submitted to Faculty Listserv: (uaa-faculty@lists.aaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 3/23/2011

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 investigation of advanced application areas of GIS. Topics may include socio-economic, decision-support, web-based, archaeological, justice, temporal, agricultural, land parcel, business, logistics and natural resources applications. Students will complete several application projects during the semester.

16a. Course Prerequisite(s) (list prefix and number)
GIS A366 with a minimum grade of C

16b. Test Score(s)

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

16d. Other Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

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

17. ☑ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Second applications course in GIS, covering more advanced material than GIS A371. Uses the spatial analysis material from GIS A366.

Initiator (faculty only) N.W.J. Hazelton
Initiator (TYPE NAME)

☐ Approved ☐ Disapproved
Date

Dean/Director of School/College Date

Undergraduate/Graduate Academic Date

Board Chairperson Date

Provost or Designee Date

493
Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Geomatics

I. Date Initiated: 7th March, 2011.

II. Information for the Course Action Request

College/School: EN – School of Engineering

Department: Geomatics

Course Prefix: GIS

Course Number: A471

Title: GIS Applications II

Credits: 4

Contact Hours: 1 hour per week lecture, 6 hours per week lab. = 105 contact hours per semester. (1+6)

Grading Basis: A–F

Implementation Date: Fall, 2011

Course Description: Detailed investigation of advanced application areas of GIS. Topics may include socio-economic, decision-support, web-based, archaeological, justice, temporal, agricultural, land parcel, business, logistics and natural resources applications. Students will complete several application projects during the semester.

Course Prerequisites(s): GIS A366 with a minimum grade of C

Test Scores(s): N/A

Corequisite(s) N/A

Registration Restrictions: N/A

Course Fee: ☒ Yes ☐ No
III. Course Level Justification
This course builds upon the spatial analysis foundation established in GIS A366 Spatial Information Analysis and Modeling. Will explore more advanced applications than GIS A371.

IV. Instructional Goals
The instructor will:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Discuss advanced applications in GIS</td>
</tr>
<tr>
<td>2.</td>
<td>Explain how to develop specific application approaches using GIS</td>
</tr>
<tr>
<td>3.</td>
<td>Guide students to complete several applications projects in GIS</td>
</tr>
</tbody>
</table>

V. Student Outcomes and Assessment Procedures

<table>
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<tr>
<th>Student Outcomes</th>
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<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>This outcome will be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Demonstrate various applications and discuss their needs in GIS</td>
<td>Lab exercises, class participation, project work.</td>
</tr>
<tr>
<td>2. Develop several applications in GIS</td>
<td>Lab exercises, class participation, project work.</td>
</tr>
<tr>
<td>3. Present results of the applications projects</td>
<td>Lab exercises, class participation, project work.</td>
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VI. Course Outline
1. Advanced Application Areas for GIS
   1.1 Various GIS advanced application areas
   1.2 Application area needs with GIS

2. Advanced Applications Projects
   2.1 Various advanced applications projects in various GIS application areas
   2.2 Project presentation

VII. Suggested Text(s)
Text will be selected by instructor(s).
VIII. Bibliography


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

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### 2. Complete Program Title/Prefix
- General Engineering, Minor

### 3. Type of Program
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- [ ] Undergrad Certificate
- [ ] AA/AAS
- [x] Baccalaureate
- [x] Minor
- [ ] Post Baccalaureate Certificate
- [ ] Graduate
- [ ] Graduate Certificate
- [ ] Doctoral
- [ ] Specialty

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

### 5. Implementation Date (semester/year)
- From: Fall/2011
- To: 9999

### 6a. Coordination with Affected Units
- Department, School, or College: none
- Initiator Name (typed): __________
- Initiator Signed Initials: __________
- Date: __________

### 6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)
- Date: 4/16/2011

### 6c. Coordination with Library Liaison
- Date: 3/23/2011

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

### 8. Justification for Action
- Updating curriculum in response to changes in requirements

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SCHOOL OF ENGINEERING

Engineering embraces the wide range of cultural and technical subjects related to the planning, design and manufacture, technology, or construction of objects necessary for civilization. An engineer is an innovator, a builder, and a problem solver. Engineers turn scientific knowledge into useful goods and services and are responsible to society for their engineering design decisions. They are interested in working with people often as team members in positions of leadership. Engineers are concerned about people and ways to provide society with improved living standards.

The School of Engineering offers areas of study at the undergraduate level:

- A four-year program leading to a Bachelor of Science in Civil Engineering;
- A four-year program leading to a Bachelor of Science in Engineering with three specialty tracks:
  - Computer Systems Engineering;
  - Electrical Engineering;
  - Mechanical Engineering;
- A four-year program leading to a Bachelor of Science in Geomatics;
- A two-year program leading to an Associate of Applied Science in Geomatics;
- An Undergraduate Certificate in Geographic Information Systems (GIS); and

The School of Engineering also offers several graduate degrees and graduate certificates including: Arctic Engineering, Civil Engineering, Engineering Management, Science Management, Applied Environmental Science and Technology, and Project Management. Detailed information about the graduate programs is in Chapter 12.

Accreditation

All Bachelor of Science programs are accredited by ABET (Accreditation Board for Engineering and Technology) and include the following:

1. Civil Engineering
2. Computer Systems Engineering
3. Electrical Engineering
4. Geomatics
5. Mechanical Engineering

Civil Engineering

The UAA School of Engineering offers a Bachelor of Science in Civil Engineering to prepare students for the profession. Knowledge of mathematical and physical sciences gained by study, experience and practice is applied with judgment to develop ways to utilize materials and forces of nature for the progressive well-being of humanity. Students are prepared for improving and protecting the environment; providing facilities for community living, industry and transportation; and providing structures for the use of humanity.

Engineering: Computer Systems Engineering, Electrical Engineering, Mechanical Engineering

The UAA School of Engineering offers a Bachelor of Science in Engineering (BSE) with specializations in Computer Systems Engineering, Electrical Engineering, and Mechanical Engineering. Graduates with a BSE have a broad range of engineering skills that are necessary when serving the infrastructure needs of urban societies and remote rural areas typical of many Alaskan communities. The program emphasizes fundamental engineering principles as a basis for interdisciplinary design, teamwork, and lifelong learning. Graduates are in a position to take advantage of a wide variety of professional opportunities and are well-prepared for an engineering career in a technologically changing world.

Geomatics
Geomatics embraces the traditional disciplines of land surveying, mapping, geodesy, photogrammetry, and hydrography, together with the newer disciplines of remote sensing, digital photogrammetry, and spatial or geographic information systems (GIS). Geomatics professionals help design, map and manage the natural and the man-made resources of the earth. Their skills and efforts are important in project development and environmental protection. They gather, analyze, and manipulate data; map results; and help design new developments. The disciplines used in geomatics are based on advancing technologies and use an integrated approach to the acquisition, analysis, storage, distribution, management, and application of spatially referenced data.

**Minors in the School of Engineering**

To meet a variety of student needs, the School of Engineering offers several minors. There are three types of minors available. The General Engineering Minor is for non-engineering baccalaureate students. The Engineering Specialty Minors are for engineering students who wish to extend their studies into other engineering disciplines and are available in all the engineering specialties offered by the School. The Geographic Information Systems Minor is for students from a variety of discipline areas who are seeking strong GIS knowledge and skills to enhance their specialty and enhance their professional career.

<< End of first part of School of Engineering materials, on page 223 >>
Minors in the School of Engineering

To meet a variety of student needs, the School of Engineering offers several minors. There are three types of minors available.

The first type is the General Engineering Minor, which is specifically designed for non-engineering students. This minor offers foundation coursework in core engineering topics.

The second type comprises the Engineering Specialty Minors, which are designed for engineering students who wish to broaden their engineering foundation by focusing on a second engineering specialty. These students will have already completed the core engineering coursework in their chosen engineering discipline, which will generally cover the prerequisites for the minor’s coursework. Students may choose to pursue an Engineering Specialty Minor in Civil Engineering, Computer Systems Engineering, Electrical Engineering, or Mechanical Engineering. All course prerequisites must be satisfied for the chosen minor.

Note that the courses in the Engineering Specialty Minors can have significant prerequisite requirements and may not be suited for students who have not completed a significant number of core engineering courses. Non-engineering students, such as those in the sciences and mathematics, would generally be better positioned to take the General Engineering Minor.

The third type of minor is the Geographic Information Systems (GIS) Minor. This is offered for students who are majoring in a baccalaureate degree in a variety of disciplines and who are seeking strong GIS knowledge and skills to enhance their specialty and enhance their professional career.

Course Requirements for Minors

A minor of study must consist of a minimum of 18 credit hours. At least 6 credits must be upper division. Students must earn a cumulative GPA of at least 2.00 (C) in the minor. A minor may only be issued simultaneously with a baccalaureate degree. For general information about minor requirements, see the minors section at the beginning of this chapter. The course requirements for each of the minors are listed below. In cases where students have unique backgrounds or interests, course selection may be adapted accordingly through consultation with the School of Engineering faculty advisors.

A. General Engineering, Minor

The following courses are required:

- ENGR A151 Engineering Practices I (3)
- ENGR A161 Engineering Practices II (3)
- ES A208 Engineering Mechanics (4)

In addition, at least three courses must be selected from the following list:

- EE/ME A308 Instrumentation and Measurement (3)
- ES A309 * Elements of Electrical Engineering (3)
- ES A331 Mechanics of Materials (3)
- ES A341 * Fluids Mechanics (3)
- ES A346 * Basic Thermodynamics (3)
- ESM A450 Economic Analysis and Operations (3)
- ME A334 Elements of Material Science (3)

B. Engineering Specialty Minors

<< Text for Engineering Specialty Minors and GIS Minor, pages 232 and 233 >>
<< See individual programs catalog text for details, if any >>
Note #1: MATH A200, MATH A201, MATH A202, MATH A302, PHYS A211, PHYS A212, CHEM A105, and CHEM A106 are prerequisites for most of the Engineering minor listed. Students should plan and review the requirements for their specific minor to determine exactly what prerequisites will be required.

Note #2: An “*” indicates a recommended set of courses for the minor.

Note #3: BSE or CE majors may pursue a BSE Engineering Specialty minor but may not pursue the BSE General Engineering minor.

Collaborative Programs With Other UA Campuses

Two-Year (2+2) Programs of Electrical or Mechanical Engineering with UAF
The School of Engineering offers a program that allows the completion of the first two years of a four-year program leading to the Bachelor of Science in Electrical Engineering or a Bachelor of Science in Mechanical Engineering. The program is coordinated with the University of Alaska Fairbanks (UAF) College of Engineering and Mines so that students may transfer from UAF to UAA, or from UAA to UAF, with little or no loss of credit. For more information, please contact the UAA School of Engineering at (907) 786-1900.

One-Year (1+3) Engineering Program with UAS
The University of Alaska Southeast in Juneau offers a 1+3 engineering program. Juneau students earn a Pre-Engineering Certificate while completing the first-year of an engineering degree at UAA. The programs at UAA and UAS are coordinated so that students may transfer to UAA with no loss of credit. For more information, please contact the UAA School of Engineering at (907) 786-1900.

<< End of School of Engineering catalog text, ending on page 233 >>
SCHOOL OF ENGINEERING

Engineering embraces the wide range of cultural and technical subjects related to the planning, design and manufacture, technology, or construction of objects necessary for civilization. An engineer is an innovator, a builder, and a problem solver. Engineers turn scientific knowledge into useful goods and services and are responsible to society for their engineering design decisions. They are interested in working with people often as team members in positions of leadership. Engineers are concerned about people and ways to provide society with improved living standards.

The School of Engineering offers areas of study at the undergraduate level:

- A four-year program leading to a Bachelor of Science in Civil Engineering;
- A four-year program leading to a Bachelor of Science in Engineering with three speciality tracks:
  - Computer Systems Engineering;
  - Electrical Engineering;
  - Mechanical Engineering;
- A four-year program leading to a Bachelor of Science in Geomatics;
- A two-year program leading to an Associate of Applied Science in Geomatics;
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Civil Engineering

The UAA School of Engineering offers a Bachelor of Science in Civil Engineering to prepare students for the profession. Knowledge of mathematical and physical sciences gained by study, experience and practice is applied with judgment to develop ways to utilize materials and forces of nature for the progressive well-being of humanity. Students are prepared for improving and protecting the environment; providing facilities for community living, industry and transportation; and providing structures for the use of humanity.

Engineering: Computer Systems Engineering, Electrical Engineering, Mechanical Engineering

The UAA School of Engineering offers a Bachelor of Science in Engineering (BSE) with specializations in Computer Systems Engineering, Electrical Engineering, and Mechanical Engineering. Graduates with a BSE have a broad range of engineering skills that are necessary when serving the infrastructure needs of urban societies and remote rural areas typical of many Alaskan communities. The program emphasizes fundamental engineering principles as a basis for interdisciplinary design, teamwork, and lifelong learning. Graduates are in a position to take advantage of a wide variety of professional opportunities and are well-prepared for an engineering career in a technologically changing world.
**Geomatics**

Geomatics embraces the traditional disciplines of land surveying, mapping, geodesy, photogrammetry, and hydrography, together with the newer disciplines of remote sensing, digital photogrammetry, and spatial or geographic information systems (GIS). Geomatics professionals help design, map and manage the natural and the man-made resources of the earth. Their skills and efforts are important in project development and environmental protection. They gather, analyze, and manipulate data; map results; and help design new developments. The disciplines used in geomatics are based on advancing technologies and use an integrated approach to the acquisition, analysis, storage, distribution, management, and application of spatially referenced data.

**Minors in the School of Engineering**

To meet a variety of student needs, the School of Engineering offers several minors. There are three types of minors available. The General Engineering Minor is for non-engineering baccalaureate students. The Engineering Specialty Minors are for engineering students who wish to extend their studies into other engineering disciplines and are available in all the engineering specialties offered by the School. The Geographic Information Systems Minor is for students from a variety of discipline areas who are seeking strong GIS knowledge and skills to enhance their specialty and enhance their professional career.

To meet a variety of student needs, the School of Engineering offers several minors. A choice of two types of Engineering minors are offered. The first is a minor in General Engineering which is designed for students who are majoring in a non-engineering baccalaureate degree. The second is an Engineering Specialty minor program which is designed for students majoring in an engineering baccalaureate degree who, therefore, have completed much of the coursework in the Bachelor of Science in Engineering (BSE) or Civil Engineering (CE) programs. Engineering Specialty minors are in Civil Engineering, Computer Systems Engineering, Electrical Engineering, or Mechanical Engineering. Additionally, a minor in Geographic Information Systems (GIS) is offered for students who are majoring in baccalaureate degrees in a variety of disciplines and seeking strong GIS knowledge and skills to enhance their specialty and support a sustainable professional career.

<< End of first part of School of Engineering materials, on page 223 >>
Minors in the School of Engineering

To meet a variety of student needs, the School of Engineering offers several minors. There are three types of minors available.

The first type is the General Engineering Minor, which is specifically designed for non-engineering students. This minor offers foundation coursework in core engineering topics.

The second type comprises the Engineering Specialty Minors, which are designed for engineering students who wish to broaden their engineering foundation by focusing on a second engineering specialty. These students will have already completed the core engineering coursework in their chosen engineering discipline, which will generally cover the prerequisites for the minor's coursework. Students may choose to pursue an Engineering Specialty Minor in Civil Engineering, Computer Systems Engineering, Electrical Engineering, or Mechanical Engineering. All course prerequisites must be satisfied for the chosen minor.

Note that the courses in the Engineering Specialty Minors can have significant prerequisite requirements and may not be suited for students who have not completed a significant number of core engineering courses. Non-engineering students, such as those in the sciences and mathematics, would generally be better positioned to take the General Engineering Minor.

The third type of minor is the Geographic Information Systems (GIS) Minor. This is offered for students who are majoring in a baccalaureate degree in a variety of disciplines and who are seeking strong GIS knowledge and skills to enhance their specialty and enhance their professional career.

Course Requirements for Minors

A minor of study must consist of a minimum of 18 credit hours. At least 6 credits must be upper division. Students must earn a cumulative GPA of at least 2.00 (C) in the minor. A minor may only be issued simultaneously with a baccalaureate degree. For general information about minor requirements, see the minors section at the beginning of this chapter. The course requirements for each of the minors are listed below. In cases where students have unique backgrounds or interests, course selection may be adapted accordingly through consultation with the School of Engineering faculty advisors.

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<td>ENGR A161</td>
<td>Engineering Practices II</td>
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<td>ES A208</td>
<td>Engineering Mechanics</td>
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In addition, at least three courses must be selected from the following list:

<table>
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<th>Course</th>
<th>Title</th>
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<tr>
<td>EE/ME A308</td>
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### B. Engineering Specialty Minors

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**Note #1:** MATH A200, MATH A201, MATH A202, MATH A302, PHYS A211, PHYS A212, CHEM A105, and CHEM A106 are prerequisites for most of the Engineering minor listed. Students should plan and review the requirements for their specific minor to determine exactly what prerequisites will be required.

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### Collaborative Programs With Other UA Campuses

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### Program/PREFIX Action Request

**University of Alaska Anchorage**

Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

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<td>Updating program to maintain correspondence to, and ease of transfer into, the BS in Geomatics degree.</td>
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**Initiator (faculty only) | Date**

N.W.J. Hazelton  
Initiator (TYPE NAME)

**Initiator (faculty only) | Date**

Approved  
Disapproved  
Dean/Director of School/College  
Date

**Initiator (faculty only) | Date**

Approved  
Disapproved  
Undergraduate/Graduate Academic  
Board Chairperson  
Date

**Initiator (faculty only) | Date**

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**University of Alaska Anchorage**

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2. Complete Program Title/PREFIX

Bachelor of Science, Geomatics

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5. Implementation Date (semester/year)

From: Fall/2011 To: /9999

6a. Coordination with Affected Units

Department, School, or College: none

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

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6c. Coordination with Library Liaison Date: 3/23/2011

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 curriculum and structure in response to ABET accreditation requirements, and to account for changes in the discipline.

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<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Board Chairperson</td>
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<thead>
<tr>
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<th>Date</th>
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Program/Prefix Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tr>
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<table>
<thead>
<tr>
<th>2. Complete Program Title/Prefix</th>
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<td>Undergraduate Certificate, Geographic Information Systems (GIS)</td>
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<th>3. Type of Program</th>
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<td>Initiator Signed Initials:</td>
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<th>8. Justification for Action</th>
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<tr>
<td>Revision of elective courses, owing to changes in those courses in the catalog.</td>
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<tr>
<td>N.W.J. Hazelton</td>
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<table>
<thead>
<tr>
<th>Curriculum Committee Chairperson</th>
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</table>

<table>
<thead>
<tr>
<th>Dean/Director of School/College</th>
<th>Date</th>
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<tbody>
<tr>
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<td>Board Chairperson</td>
<td></td>
</tr>
<tr>
<td>Provost or Designee</td>
<td>Date</td>
</tr>
</tbody>
</table>
GEOMATICS
Engineering Building (ENGR), Room 213, (907) 786-1972 www.engr.uaa.alaska.edu

The Department of Geomatics offers a two-year Associate of Applied Science in Geomatics, a four-year Bachelor of Science in Geomatics, a minor in Geographic Information Systems (GIS), and an Undergraduate Certificate in Geographic Information Systems (GIS). Students seeking the baccalaureate degree may graduate in one of two emphasis areas: Surveying or GIS. Students seeking continuing education for technical or professional enhancement or a concentrated area of study in GIS should consider either the minor in GIS or the Undergraduate Certificate in GIS. The Geomatics program is science-based and includes:

- Land surveying using global positioning systems and conventional techniques
- Automated mapping
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- Principles of boundary law
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- Digital photogrammetry
- Remote sensing and image analysis.

The wide diversity in the profession creates a similar diversity of employment opportunities. The Undergraduate Certificate in GIS educates students with a broad base of concepts and theory, provides them with hands-on training in real world problems that are relevant to Alaska’s environment, and allows them to explore several thematic areas in GIS applications, such as facilities management, transportation, marine environments, and natural resources.

The minor in GIS is designed for students to enhance their knowledge of GIS and remote sensing to complement a major baccalaureate degree in a variety of disciplines including science, art, business management and engineering, GIS, as a part of geospatial science and information technologies, is widely used in many industries important to Alaska (e.g. oil, gas), governance and administrations (municipalities and the state), statewide and federal agencies and departments (transportation, natural resources, land management, parks and recreation, etc.), research (sustainability, biodiversity, ecology, geology, anthropology, socioeconomics, etc.), homeland security, military applications and non-profit organizations.

The Associate of Applied Science in Geomatics prepares students for technician-level employment as land survey technicians or as automated mapping technicians. Those working as survey technicians frequently work outdoors, travel to various job locations, and enjoy an independent lifestyle. Automated mapping technicians work with the latest cartographic techniques and equipment and easily transfer skills learned in geomatics courses to other disciplines.

The Bachelor of Science prepares students for a wide variety of professional level opportunities. Since Alaska poses unique geomatics challenges, the curriculum emphasizes northern principles and practices. UAA graduates are highly employable in the Alaska marketplace and worldwide. Employment opportunities are found in private industry, government, and municipal agencies. Geomatics graduates working at the professional level enjoy responsibility and a choice of indoor and outdoor employment with many opportunities for advancement and diversification.

The new high-tech fields open employment in GIS, photogrammetry, remote sensing, land surveying, automated mapping, land design and planning, survey engineering, and resource management positions. In Alaska, geomatics professionals work on state and Native land claims, mining claims, fishing leases, petroleum reserves, forest selections, transportation corridors, private developments, and government and military projects. In Alaska and elsewhere, geomatics professionals work in land surveying, land development and design, mapping and tax assessment, the defense industry, environmental engineering assessment and management, public safety and welfare, medicine, transportation, agriculture, business, and natural sciences.

Professional predictors indicate that employment opportunities will be strong for the various geomatics specialties in Alaska and the Pacific Rim well into the 21st century. While enrolled in the program, students are eligible for cooperative employment programs with government agencies and with private industry during the summer and for intern programs during the school year.
The Department of Geomatics accommodates a wide variety of student objectives from entry level to professional preparation and encourages the nontraditional student to return for training in current practices and principles.

Students seeking professional licensing as registered land surveyors and those who are interested in specializing in surveying or geographic information systems should enroll in the Bachelor of Science program. For the most effective planning, bachelor’s degree candidates should declare their intent by the second semester of their geomatics studies.

Accreditation
The Bachelor of Science, Geomatics program at UAA is accredited by the Applied Science Accreditation Commission (ASAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202.

Program Educational Objectives and Program Outcomes

Program Educational Objectives
The UAA Bachelor of Science, Geomatics program has the following Program Educational Objectives.

Within five years of graduation, graduates of the Geomatics program will have achieved the following objectives.
1. Graduates who are pursuing careers in the surveying area will have attempted the AELS Board’s Fundamentals of Surveying examination, and their overall pass rate will be at least 80%.
2. At least 60% of graduates who are pursuing careers in non-surveying areas will have attempted equivalent professional certification or registration, e.g., CP, GISP, as appropriate for their career path.
3. At least 60% of graduates will be members of professional organizations relevant to their career of choice.
4. At least 80% of graduates will have found employment in the fields within the geomatics disciplines, including: surveying of various types, mapping and cartography, GIS/LIS, remote sensing, geodesy, photogrammetry or hydrographic surveying.
5. At least 80% of graduates will have completed at least one professional development course or session, or completed one higher education course.
6. At least 50% of graduates will have taught at least one workshop or training session, made one conference presentation, or published one article relevant to their career.

Program Outcomes
In keeping with the program educational objectives, it is expected that graduates of the UAA Geomatics program will have:

1. An ability to apply knowledge of mathematics, statistics, and general physics;
2. An ability to collect, analyze and interpret data in all of the recognized surveying and mapping areas;
3. An ability to identify, formulate, and design a geomatics system, component or process to meet desired needs;
4. An ability to function on multidisciplinary as well as on interdisciplinary teams;
5. An ability to think critically and to solve geomatics problems creatively and constructively;
6. An understanding of professional and ethical responsibility;
7. An ability to communicate effectively;
8. The broad education necessary to understand the impact of geomatics solutions in a global and societal context;
9. A recognition of the need for, and ability to engage in, lifelong learning;
10. A knowledge of contemporary issues in professional practice;
11. An ability to use the techniques, skills and modern geomatics tools necessary for geomatics practice; and
12. An ability to apply knowledge in all six areas of surveying and mapping:
   i. Field surveying and methods;
   ii. Photogrammetric mapping, image interpretation and remote sensing;
   iii. Surveying calculation and data adjustment;
   iv. Geodetic coordinates and astronomy;
   v. Cartographic representation, projections, and map production;
   vi. Computer-based multipurpose cadastre, geographic information systems.

Mission Statement
The Department of Geomatics’ mission is to contribute to the wider body of knowledge in the geospatial sciences, and to disseminate this to society. By advancing our theoretical, professional, technical and educational capabilities, we will develop and maintain a community dedicated to the highest standards of scholarship. Within a student-centered environment, we are committed
to the theoretical, professional and technical advancement of all our students, so that they may contribute to the advancement of their profession, their society, and their world, throughout their lives.

**Honors in Geomatics**

Undergraduate students may be recognized for exceptional performance by earning Departmental Honors in Geomatics. In order to receive honors in Geomatics, a student must meet each of the following requirements:

1. Complete all requirements for a BS in Geomatics.
2. Be an active member for at least one year of both a national and an on-campus student chapter of a professional geomatics society that addresses issues relevant to the geomatics profession.
3. Have a GPA of 3.50 or higher in their Geomatics and Geographic Information System courses of their catalog year. Have a GPA of 3.30 or higher for their overall cumulative GPA.
4. Pass the Fundamentals of Surveying Examination prior to the completion of the first semester of their senior year.
5. Document a minimum of eight weeks work experience while a student at the University of Alaska in a geomatics or geomatics related position.

**Advising**

All undergraduate students are encouraged to meet with their academic advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise. Students are encouraged to consult the faculty in the Department of Geomatics for assistance in designing their course of study to ensure that all prerequisites have been met and that university and major degree requirements are understood and followed.

**Preparation**

The university offers courses to help students without this preparation to meet the skill level required in the Geomatics program. Insufficient preparation will increase the number of semesters required to complete either degree. Students seeking the Undergraduate Certificate in Geographic Information Systems, the Associate of Applied Science or Bachelor of Science in Geomatics should prepare for entrance into the program by completing the following high school courses:

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Algebra II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trigonometry</td>
</tr>
<tr>
<td>Science</td>
<td>Physics</td>
</tr>
<tr>
<td>English Composition</td>
<td>Skill level as demonstrated by ACT, SAT or approved placement test to qualify for enrollment in ENGL A111</td>
</tr>
</tbody>
</table>

**Undergraduate Certificate, Geographic Information Systems (GIS)**

**Admission Requirements**

Satisfy the Admission to Certificate and Associate’s Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.

**Course Requirements**

Certain courses require prerequisites or faculty permission. Call (907) 786-1972 for further information.

**Major Requirements**

In order to receive an Undergraduate Certificate in GIS, students must achieve a grade of C or higher in all courses applied to the certificate.

1. Complete the following required courses (23 credits):
   - GEO A137 Principles of Mapping 3
   - GEO A167 Remote Sensing and Image Analysis 4
   - GIS A268 Elements of Geographic Information Systems (GIS) 4
   - GIS A366 Spatial Information Analysis and Modeling 3
GIS A367  GIS and Remote Sensing  3
GIS A458  Design and Management of Spatial Data  3
GEO A460  Geomatics Design Project  3

2. Complete 9 credits from the following elective courses:
   GEO A490  Selected Advanced Topics in Geomatics (3)
   GIS A295  Internship in Geographic Information Systems I (3)
   or
   GIS A495  Internship in Geographic Information Systems II (3)
   GIS A369  Land Information Systems (3)
   GIS A370  GIS and Remote Sensing for Natural Resources (3)
   GIS A371  GIS Applications I (3)
   GIS A433  Coastal Mapping (3)
   GIS A468  Integration of Geomatics Technologies (3)
   GIS A471  GIS Applications II (4)
   GIS A490  Selected Advanced Topics in GIS (3)

3. A maximum of 3 credits of Internship (GIS A295 or GIS A495) and 3 credits of Advanced Topics in Geomatics (GEO A490) or Advanced Topics in GIS (GIS A490) can be counted toward the Certificate in GIS. Faculty approval of the GEO A490 or GIS A490 topic is necessary for application of the course to the certificate program.

4. A total of 32 credits is required for the Certificate in GIS.
Associate of Applied Science, Geomatics

Admission Requirements
Satisfy the Admission to Undergraduate Certificate and Associate’s Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.

General University Requirements
Complete the Associate of Applied Science General Degree Requirements located at the beginning of this chapter. Some of the major requirements will also fulfill Associate of Applied Science degree general requirements. Students should coordinate choices carefully with their academic advisor in the Department of Geomatics.

Academic Progress
A student who is unable to earn a satisfactory grade in the major requirement courses during their initial enrollment may attempt to earn a satisfactory grade one additional time, on a space-available basis. ‘Satisfactory grade’ means a grade of C or better, as this is the usual requirement for pre-requisites in Geomatics courses (GEO and GIS). Failure to earn a grade of C or better on the second attempt may result in removal from the Geomatics program.

Major Requirements
1. Complete 4 credits in Physics: 4
   PHYS A123 Basic Physics I (3)
   PHYS A123L Basic Physics I Laboratory (1)
   or
   PHYS A211 General Physics I (3)
   PHYS A211L General Physics I Laboratory (1)

2. Complete the following required courses (50 credits):
   CSE A102 Introduction to Computer Systems 1
   ENGL A212 Technical Writing 3
   ENGR A161 Engineering Practices II 3
   GEO A137 Principles of Mapping 3
   GEO A146 Surveying Computations 3
   GEO A155 Fundamentals of Surveying 3
   GEO A157 Analytical and Digital Cartography 3
   GEO A158 Geomatics Computer Fundamentals 1
   GEO A167 Remote Sensing and Image Analysis 4
   GEO A248 Digital Terrain Cartography 3
   GEO A256 Municipal and Civil Geomatics 3
   GEO A257 Elements of Photogrammetry 3
   GEO A266 Advanced Surveying 3
   GEO A267 Boundary Law I 4
   GIS A268 Elements of Geographic Information Systems (GIS) 4
   MATH A109 Precalculus † 6

3. Electives to total of 63 credits.

† MATH A107 College Algebra and MATH A108 Trigonometry (both courses) may be substituted for MATH A109 Precalculus.
Bachelor of Science, Geomatics

Admission Requirements
Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements
A. General University Requirements
Complete the General University Requirements for all Baccalaureate Degrees at the beginning of this chapter.

B. General Education Requirements
Complete the General Education Requirements for Baccalaureate Degrees at the beginning of this chapter.

Academic Progress
A student who is unable to earn a satisfactory grade in the major requirement courses during their initial enrollment may attempt to earn a satisfactory grade one additional time, on a space-available basis. ‘Satisfactory grade’ means a grade of C or better, as this is the usual requirement for pre-requisites in Geomatics courses (GEO and GIS). Failure to earn a grade of C or better on the second attempt may result in removal from the Geomatics program.

C. Major Requirements
1. Complete 4 credits in Physics from one of the following course pairs:  
   PHYS A123  Basic Physics I (3)  
   PHYS A123L  Basic Physics I Laboratory (1)  
   or  
   PHYS A211  General Physics I (3)  
   PHYS A211L  General Physics I Laboratory (1)

2. Complete the following (21 credits):
   CSE A102  Introduction to Computer Systems 1  
   ENGL A212  Technical Writing 3  
   ENGR A161  Engineering Practices II 3  
   GEO A158  Geomatics Computer Fundamentals 1  
   MATH A109  Precalculus † 6  
   MATH A272  Applied Calculus ◊ 3  
   STAT A253  Applied Statistics for the Sciences 4

† MATH A107 College Algebra and MATH A108 Trigonometry (both) may be substituted for MATH A109 Precalculus.  
◊ MATH A200 Calculus I may be substituted for MATH A272 Applied Calculus.

3. Complete all of the following (71 credits):
   BA/JUST A241  Business Law I 3  
   GEO A137  Principles of Mapping 3  
   GEO A146  Surveying Computations 3  
   GEO A155  Fundamentals of Surveying 3  
   GEO A157  Analytical and Digital Cartography 3  
   GEO A167  Remote Sensing and Image Analysis 4  
   GEO A248  Digital Terrain Cartography 3  
   GEO A256  Municipal and Civil Geomatics 3  
   GEO A257  Elements of Photogrammetry 3  
   GEO A266  Advanced Surveying 3  
   GEO A267  Boundary Law I 4  
   GEO A301  Geomatics Professional Development I 1  
   GEO A302  Geomatics Professional Development II 1  
   GEO A303  Geomatics Professional Development III 1  
   GEO A355  Land Development and Design 3  
   GEO A359  Geodesy and Map Projections 3
GEO A365  Geomatics Adjustment and Analysis  4
GEO A457  Boundary Law II  4
GEO A460  Geomatics Design Project  3
GEO A466  Geopositioning  3
GIS A268  Elements of Geographic Information Systems (GIS)  4
GIS A366  Spatial Information Analysis and Modeling  3
GIS A468  Integration of Geomatics Technologies  3
PHIL A405  Professional Ethics  3

4. Complete at least 11 credits in one of the emphasis areas.
Surveying Emphasis

a. Complete the following (4 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GEO A433</td>
<td>Hydrographic Surveying</td>
<td>3</td>
</tr>
<tr>
<td>PEP A110</td>
<td>Remote First Aid (1)</td>
<td>1</td>
</tr>
<tr>
<td>or</td>
<td>PEP A112 First Aid and CPR for Professionals (1)</td>
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b. Complete 7 credits from the following:

<table>
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<th>Credits</th>
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<td>GEO A354</td>
<td>City and Regional Planning (3)</td>
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<tr>
<td>GEO A358</td>
<td>Programming for Digital Cartography (3)</td>
<td></td>
</tr>
<tr>
<td>GEO A459</td>
<td>Geodetic Geomatics (3)</td>
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</tr>
<tr>
<td>GEO A467</td>
<td>Analytical and Digital Photogrammetry (3)</td>
<td></td>
</tr>
<tr>
<td>GEO A490</td>
<td>Selected Advanced Topics in Geomatics (1-6)</td>
<td></td>
</tr>
<tr>
<td>GIS A369</td>
<td>Land Information Systems (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A371</td>
<td>GIS Applications I (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A433</td>
<td>Coastal Mapping (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A471</td>
<td>GIS Applications II (4)</td>
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Geographic Information Systems (GIS) Emphasis

a. Complete the following (3 credits):

<table>
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<tr>
<td>GIS A458</td>
<td>Design and Management of Spatial Data</td>
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</table>

b. Complete 8 credits from the following:

<table>
<thead>
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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>GIS A367</td>
<td>GIS and Remote Sensing (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A369</td>
<td>Land Information Systems (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A370</td>
<td>GIS and Remote Sensing for Natural Resources (3)</td>
<td>3</td>
</tr>
<tr>
<td>GIS A371</td>
<td>GIS Applications I (3)</td>
<td></td>
</tr>
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<td></td>
</tr>
<tr>
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<td>GIS Applications II (4)</td>
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<td>Selected Advanced Topics in GIS (1-6)</td>
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<tr>
<td>or</td>
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<td>1</td>
</tr>
</tbody>
</table>

5. A total of 131 credits is required for the degree, of which 42 must be upper division.

FACULTY
John Bean, Associate Professor, AFB2@uaa.alaska.edu
Don Davis Jr., Professor/Chair, AFDD@uaa.alaska.edu
Gennady Gienko, Associate Professor, AFGG@uaa.alaska.edu
Bill Hazelton, Associate Professor, AFBH3@uaa.alaska.edu

<< Geomatics catalog copy, ending page 232. >>
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The Associate of Applied Science in Geomatics prepares students for technician-level employment as land survey technicians or as automated mapping technicians. Those working as survey technicians frequently work outdoors, travel to various job locations, and enjoy an independent lifestyle. Automated mapping technicians work with the latest cartographic techniques and equipment and easily transfer skills learned in geomatics courses to other disciplines.

The Bachelor of Science prepares students for a wide variety of professional level opportunities. Since Alaska poses unique geomatics challenges, the curriculum emphasizes northern principles and practices. UAA graduates are highly employable in the Alaska marketplace and worldwide. Employment opportunities are found in private industry, government, and municipal agencies. Geomaticians working at the professional level enjoy responsibility and a choice of indoor and outdoor employment with many opportunities for advancement and diversification.

The new high-tech fields open employment in GIS, photogrammetry, remote sensing, land surveying, automated mapping, land design and planning, survey engineering, and resource management positions. In Alaska, geomaticians work on state and Native land claims, mining claims, fishing leases, petroleum reserves, forest selections, transportation corridors, private developments, and government and military projects. In Alaska and elsewhere, geomaticians work in land surveying, land development and design, mapping and tax assessment, the defense industry, environmental engineering assessment and management, public safety and welfare, medicine, transportation, agriculture, business, and natural sciences.

Professional predictors indicate that employment opportunities will be strong for the various geomatics specialties in Alaska and the Pacific Rim well into the 21st century. While enrolled in the program, students are eligible for cooperative employment programs with government agencies and with private industry during the summer and for intern programs during the school year.
The Department of Geomatics accommodates a wide variety of student objectives from entry level to professional preparation and encourages the nontraditional student to return for training in current practices and principles.

Students seeking professional licensing as registered land surveyors and those who are interested in specializing in surveying or geographic information systems should enroll in the Bachelor of Science program. For the most effective planning, bachelor’s degree candidates should declare their intent by the second semester of their geomatics studies.

Accreditation

The Bachelor of Science program in Geomatics at UAA is accredited by the Applied Science Accreditation Commission (ASAC) of ABET, 111 Market Place, Suite 100, Baltimore, MD 21202.

Program Educational Objectives and Program Outcomes

Program Educational Objectives

The curriculum of the UAA Bachelor of Science, Geomatics program is designed to produce graduates who:

1. Have a basic knowledge of the principles and skills relating to the geomatics disciplines of land surveying, surveying boundary law, surveying computations and adjustments, mapping, geodesy, and photogrammetry, together with the newer discipline of remote sensing, digital photogrammetry, global positioning systems (GPS), and spatial or geographic information systems (GIS). Graduates who are pursuing careers in the surveying area will have attempted the AELS Board’s Fundamentals of Surveying examination, and their overall pass rate will be at least 80%.
2. Have an understanding of the principles related to project delivery. At least 60% of graduates who are pursuing careers in non-surveying areas will have attempted equivalent professional certification or registration, e.g., CP, GISP, as appropriate for their career path.
3. Have sufficient technical competence to obtain employment as an entry-level geomatics professional and to be able to progress professionally within the discipline, and to be prepared for advanced studies. At least 60% of graduates will be members of professional organizations relevant to their career of choice.
4. At least 80% of graduates will have found employment in the fields within the geomatics disciplines, including: surveying of various types, mapping and cartography, GIS/LIS, remote sensing, geodesy, photogrammetry or hydrographic surveying.
5. At least 80% of graduates will have completed at least one professional development course or session, or completed one higher education course.
6. Have a fundamental understanding of the issues relating to geomatics practice in GIS.
7. Are able to communicate their ideas. At least 50% of graduates will have taught at least one workshop or training session, made one conference presentation, or published one article relevant to their career.
8. Are able to work within a team environment; and
9. Are prepared for and understand the need for continued professional development throughout their careers.

Program Outcomes

In keeping with the program educational objectives, it is expected that graduates of the UAA Geomatics program will have:

1. An ability to apply knowledge of mathematics through calculus III and either linear algebra or differential equations or probability and statistics, and general physics;
2. An ability to collect, analyze and interpret data in all of the recognized surveying and mapping areas;
3. An ability to identify, formulate, and design a geomatics system, component or process to meet desired needs;
4. An ability to function on multidisciplinary as well as on interdisciplinary teams;
5. An ability to think critically and to creatively solve geomatics problems creatively and constructively;
6. An understanding of professional and ethical responsibility;
7. An ability to communicate effectively;
8. The broad education necessary to understand the impact of geomatics solutions in a global and societal context;
9. A recognition of the need for, and ability to engage in, lifelong learning;
10. A knowledge of contemporary issues in professional practice;
11. An ability to use the techniques, skills and modern geomatics tools necessary for geomatics practice; and
12. An ability to apply knowledge in all six areas of surveying and mapping:
   i. Field surveying and methods;
   ii. Photogrammetric mapping and image interpretation and remote sensing;
iii. Surveying calculation and data adjustment;
iv. Geodetic coordinates and astronomy;
v. Cartographic representation, projections, and map production;
vii. Computer-based multipurpose cadastral, geographic information systems.

**Mission Statement**
The Department of Geomatics’ mission is to contribute to the wider body of knowledge in the geospatial sciences, and to disseminate this to society. By advancing our theoretical, professional, technical and educational capabilities, we will develop and maintain a community dedicated to the highest standards of scholarship. Within a student-centered environment, we are committed to the theoretical, professional and technical advancement of all our students, so that they may contribute to the advancement of their profession, their society, and their world, throughout their lives.

**Honors in Geomatics**
Undergraduate students may be recognized for exceptional performance by earning Departmental Honors in Geomatics. In order to receive honors in Geomatics, a student must meet each of the following requirements:

1. Complete all requirements for a BS in Geomatics.
2. Be an active member for at least one year of both a national and an on-campus student chapter of a professional geomatics society that addresses issues relevant to the geomatics profession.
3. Have a GPA of 3.50 or higher in their Geomatics and Geographic Information System courses of their catalog year. Have a GPA of 3.30 or higher for their overall cumulative GPA.
4. Pass the Fundamentals of Surveying Examination prior to the completion of the first semester of their senior year.
5. Document a minimum of eight weeks work experience while a student at the University of Alaska in a geomatics or geomatics related position.

**Advising**
All undergraduate students are encouraged to meet with their academic advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise. Students are encouraged to consult the faculty in the Department of Geomatics for assistance in designing their course of study to ensure that all prerequisites have been met and that university and major degree requirements are understood and followed.

**Prerequisites**
All prerequisites for geomatics courses must be completed with a grade of C or higher.

**Preparation**
The university offers courses to help students without this preparation to meet the skill level required in the Geomatics program. Insufficient preparation will increase the number of semesters required to complete either degree. Students seeking the Undergraduate Certificate in Geographic Information Systems, the Associate of Applied Science or Bachelor of Science in Geomatics should prepare for entrance into the program by completing the following high school courses:

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Algebra II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trigonometry</td>
</tr>
<tr>
<td>Science</td>
<td>Physics</td>
</tr>
<tr>
<td>English Composition</td>
<td>Skill level as demonstrated by ACT, SAT or approved placement test to qualify for enrollment in ENGL A111</td>
</tr>
</tbody>
</table>

**Undergraduate Certificate, Geographic Information Systems (GIS)**

**Admission Requirements**
Satisfy the Admission to Certificate and Associate’s Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.

**Course Requirements**

Certain courses require prerequisites or faculty permission. Call (907) 786-1972 for further information.

**Major Requirements**

In order to receive an Undergraduate Certificate in GIS, students must achieve a grade of C or higher in all courses applied to the certificate.

1. Complete the following required courses (23 credits):
   - GEO A137  Principles of Mapping  3
   - GEO A167  Remote Sensing and Image Analysis  4
   - GIS A266  Elements of Geographic Information Systems (GIS)  4
   - GIS A366  Spatial Information Analysis and Modeling  3
   - GIS A367  GIS and Remote Sensing  3
   - GIS A438  Design and Management of Spatial Data  3
   - GEO A460  Geomatics Design Project  3

2. Complete 9 credits from the following elective courses:  9
   - GEO A490  Selected Advanced Topics in Geomatics (3)
   - GIS A295  Internship in Geographic Information Systems I (3)
   or
   - GIS A495  Internship in Geographic Information Systems II (3)
   - GIS A369  Land Information Systems (3)
   - GIS A370  GIS and Remote Sensing for Natural Resources (3)
   - GIS A371  GIS and Public Health Applications I (3)
   - GIS A433  GIS and the Marine Environment (3)
   - GIS A448  Integration of Geomatics Technologies (3)
   - GIS A471  GIS for Facility Management and Transportation Systems Applications I (4)
   - GIS A490  Selected Advanced Topics in GIS (3)

3. A maximum of 3 credits of Internship (GIS A295 or GIS A495) and 3 credits of Advanced Topics in Geomatics (GEO A490) or Advanced Topics in GIS (GIS A490) can be counted toward the Certificate in GIS. Faculty approval of the GEO A490 or GIS A490 topic is necessary for application of the course to the certificate program.

4. A total of 32 credits is required for the Certificate in GIS.
Associate of Applied Science, Geomatics

Admission Requirements
Satisfy the Admission to Undergraduate Certificate and Associate's Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.

General University Requirements
Complete the Associate of Applied Science General Degree Requirements located at the beginning of this chapter. Some of the major requirements will also fulfill Associate of Applied Science degree general requirements. Students should coordinate choices carefully with their academic advisor in the Department of Geomatics.

Academic Progress
Students must complete all major requirement courses with a grade of C or higher. A student who is unable to earn a satisfactory grade in the major requirement courses during their initial enrollment may attempt to earn a satisfactory grade one additional time, on a space-available basis. ‘Satisfactory grade’ means a grade of C or better, as this is the usual requirement for pre-requisites in Geomatics courses (GEO and GIS). Failure to earn a grade of C or better on the second attempt will result in removal from the Geomatics program.

Major Requirements
1. Complete 4 credits in Physics:
   - PHYS A123  Basic Physics I (3)
   - PHYS A123L  Basic Physics I Laboratory (1)
   - PHYS A211  General Physics I (3)
   - PHYS A211L  General Physics I Laboratory (1)
2. Complete the following required courses (48–50 credits):
   - CSE A102  Introduction to Computer Systems  1
   - ENGL A212  Technical Writing  3
   - ENGR A161  Engineering Practices II  3
   - GEO A137  Principles of Mapping  3
   - GEO A146  Surveying Computations  3
   - GEO A155  Fundamentals of Surveying  3
   - GEO A157  Analytical and Digital Cartography  3
   - GEO A158  Geomatics Computer Fundamentals  3
   - GEO A166  Advanced Surveying  4
   - GEO A167  Remote Sensing and Image Analysis  4
   - GEO A248  Digital Terrain Cartography  3
   - GEO A256  Municipal and Civil Geomatics  4
   - GEO A257  Elements of Photogrammetry  3
   - GEO A266  Advanced Surveying  3
   - GEO A267  Boundary Law I  4
   - GIS A268  Elements of Geographic Information Systems (GIS)  4
   - MATH A109  Precalculus†  4
3. Electives to total of 63 credits.

† MATH A107 College Algebra and MATH A108 Trigonometry (both courses) may be substituted for MATH A109 Precalculus.
Bachelor of Science, Geomatics

Admission Requirements
Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements
A. General University Requirements
Complete the General University Requirements for all Baccalaureate Degrees at the beginning of this chapter.

B. General Education Requirements
Complete the General Education Requirements for Baccalaureate Degrees at the beginning of this chapter.

Academic Progress

Students must complete all courses under major requirements with a grade of C or higher. A student who is unable to earn a satisfactory grade in the major requirement courses during their initial enrollment may attempt to earn a satisfactory grade one additional time, on a space-available basis. 'Satisfactory grade' means a grade of C or better, as this is the usual requirement for prerequisites in Geomatics courses (GEO and GIS). Failure to earn a grade of C or better on the second attempt may result in removal from the Geomatics program.

C. Major Requirements
1. Complete 4 credits in Physics from one of the following course pairs:
   - PHYS A123 Basic Physics I (3)
   - PHYS A123L Basic Physics I Laboratory (1)
   - PHYS A124 Basic Physics II (3)
   - PHYS A124L Basic Physics II Laboratory (1)
   or
   - PHYS A211 General Physics I (3)
   - PHYS A211L General Physics I Laboratory (1)
   - PHYS A212 General Physics II (3)
   - PHYS A212L General Physics II Laboratory (1)
   These credits must be in addition to the 7 Natural Sciences credits taken to complete the General Education Requirement.

2. Complete the following (21 credits):
   - CSE A102 Introduction to Computer Systems 1
   - ENGL A212 Technical Writing 3
   - ENGR A161 Engineering Practices II 3
   - GEO A158 Geomatics Computer Fundamentals 3
   - MATH A109 Precalculus I 4
   - MATH A272 Applied Calculus II 4
   - MATH A200 Calculus I 4
   - MATH A272 Applied Calculus II 4

3. Complete one of the following:
   - MATH A202 Ordinary Differential Equations 3
   - MATH A214 Linear Algebra I 3
   - STAT A307 Probability 3

4. Complete all of the following (21 credits):
   - GEO A137 Principles of Mapping 3
   - GEO A146 Surveying Computations 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO A155</td>
<td>Fundamentals of Surveying</td>
<td>3</td>
</tr>
<tr>
<td>GEO A157</td>
<td>Analytical and Digital Cartography</td>
<td>3</td>
</tr>
<tr>
<td>GEO A166</td>
<td>Advanced Surveying</td>
<td>4</td>
</tr>
<tr>
<td>GEO A167</td>
<td>Remote Sensing and Image Analysis</td>
<td>4</td>
</tr>
<tr>
<td>GEO A248</td>
<td>Digital Terrain Cartography</td>
<td>3</td>
</tr>
<tr>
<td>GEO A256</td>
<td>Municipal and Civil Geomatics</td>
<td>4</td>
</tr>
<tr>
<td>GEO A257</td>
<td>Elements of Photogrammetry</td>
<td>3</td>
</tr>
<tr>
<td>GEO A266</td>
<td>Advanced Surveying</td>
<td>3</td>
</tr>
<tr>
<td>GEO A267</td>
<td>Boundary Law I</td>
<td>4</td>
</tr>
<tr>
<td>GEO A301</td>
<td>Geomatics Professional Development I</td>
<td>1</td>
</tr>
<tr>
<td>GEO A302</td>
<td>Geomatics Professional Development II</td>
<td>1</td>
</tr>
<tr>
<td>GEO A303</td>
<td>Geomatics Professional Development III</td>
<td>1</td>
</tr>
<tr>
<td>GEO A355</td>
<td>Land Development and Design</td>
<td>3</td>
</tr>
<tr>
<td>GEO A359</td>
<td>Geodesy and Map Projections</td>
<td>3</td>
</tr>
<tr>
<td>GEO A365</td>
<td>Geomatics Adjustment and Analysis</td>
<td>4</td>
</tr>
<tr>
<td>GEO A457</td>
<td>Boundary Law II</td>
<td>4</td>
</tr>
<tr>
<td>GEO A460</td>
<td>Geomatics Design Project</td>
<td>3</td>
</tr>
<tr>
<td>GEO A466</td>
<td>Geopositioning</td>
<td>4</td>
</tr>
<tr>
<td>GIS A268</td>
<td>Elements of Geographic Information Systems (GIS)</td>
<td>4</td>
</tr>
<tr>
<td>GIS A366</td>
<td>Spatial Information Analysis and Modeling</td>
<td>3</td>
</tr>
<tr>
<td>GIS A468</td>
<td>Integration of Geomatics Technologies</td>
<td>3</td>
</tr>
<tr>
<td>PHIL A405</td>
<td>Professional Ethics</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete at least 12 credits in one of the emphasis areas.
### Surveying Emphasis

**a.** Complete the following (6 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO A358</td>
<td>Programming for Digital Cartography</td>
<td>3</td>
</tr>
<tr>
<td>GEO A433</td>
<td>Hydrographic Surveying</td>
<td>3</td>
</tr>
<tr>
<td>PEP A110</td>
<td>Remote First Aid (1)</td>
<td></td>
</tr>
<tr>
<td>PEP A112</td>
<td>First Aid and CPR for Professionals (1)</td>
<td></td>
</tr>
</tbody>
</table>

**b.** Complete 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO A354</td>
<td>City and Regional Planning (2)</td>
<td></td>
</tr>
<tr>
<td>GEO A358</td>
<td>Programming for Digital Cartography (2)</td>
<td></td>
</tr>
<tr>
<td>GEO A356</td>
<td>Geomatics and Civil Design (3)</td>
<td></td>
</tr>
<tr>
<td>GEO A459</td>
<td>Geodetic Geomatics (3)</td>
<td></td>
</tr>
<tr>
<td>GEO A467</td>
<td>Analytical and Digital Photogrammetry (3)</td>
<td></td>
</tr>
<tr>
<td>GEO A490</td>
<td>Selected Advanced Topics in Geomatics (1-6)</td>
<td></td>
</tr>
<tr>
<td>GIS A369</td>
<td>Land Information Systems (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A371</td>
<td>GIS Applications I (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A433</td>
<td>Coastal Mapping (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A471</td>
<td>GIS Applications II (4)</td>
<td></td>
</tr>
</tbody>
</table>

### Geographic Information Systems (GIS) Emphasis

**a.** Complete the following (3 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS A458</td>
<td>Design and Management of Spatial Data</td>
<td>3</td>
</tr>
</tbody>
</table>

**b.** Complete 9 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS A367</td>
<td>GIS and Remote Sensing (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A369</td>
<td>Land Information Systems (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A370</td>
<td>GIS and Remote Sensing for Natural Resources (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A371</td>
<td>GIS Applications I (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A433</td>
<td>GIS and the Marine Environment/Coastal Mapping (3)</td>
<td></td>
</tr>
<tr>
<td>GIS A459</td>
<td>Integration of Geomatics and Technological Applications (2)</td>
<td></td>
</tr>
<tr>
<td>GIS A471</td>
<td>GIS for Facility Management and Transportation Systems/GIS Applications II (4)</td>
<td></td>
</tr>
<tr>
<td>GIS A490</td>
<td>Selected Advanced Topics in GIS (1-6)</td>
<td></td>
</tr>
<tr>
<td>PEP A110</td>
<td>Remote First Aid (1)</td>
<td></td>
</tr>
<tr>
<td>PEP A112</td>
<td>First Aid and CPR for Professionals (1)</td>
<td></td>
</tr>
</tbody>
</table>

A total of 131 credits is required for the degree, of which 42 must be upper division.

### FACULTY

John Bean, Associate Professor, 
Don Davis Jr., Professor/Chair, 
Gennady Gienko, Associate Professor, 
Bill Hazelton, Associate Professor,
Program/Prefix Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Program of Study or Prefix

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN SOENGR</td>
<td>No Division Code</td>
<td>Geomatics</td>
</tr>
</tbody>
</table>

2. Complete Program Title/Prefix  
Geographic Information Systems, Minor

3. Type of Program  
- [ ] OEC  
- [ ] Undergrad Certificate  
- [ ] AA/AAS  
- [ ] Baccalaureate  
- [ ] Minor  
- [ ] Post Baccalaureate Certificate  
- [ ] Graduate  
- [ ] Graduate Certificate  
- [ ] Doctoral  
- [ ] Specialty

4. Type of Action:  
- [ ] PROGRAM  
- [ ] PREFIX  
- [ ] Add  
- [ ] Change  
- [ ] Delete  
- [ ] Inactivate

5. Implementation Date (semester/year)  
From: Fall/2011  
To: /9999

6a. Coordination with Affected Units  
Department, School, or College: none  
Initiator Name (typed):  
Initiator Signed Initials:  
Date:

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)  
Date: 3/23/2011

6c. Coordination with Library Liaison  
Date: 4/16/2011

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

8. Justification for Action  
Revision of elective courses, owing to changes in those courses in the catalog.

<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
<th>Approve</th>
<th>Disapprove</th>
<th>Dean/Director of School/College</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.W.J. Hazelton</td>
<td></td>
<td></td>
<td></td>
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</table>

Initiator (TYPE NAME)

<table>
<thead>
<tr>
<th>Approve</th>
<th>Disapprove</th>
<th>Date</th>
<th>Approve</th>
<th>Disapprove</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Chairperson</td>
<td></td>
<td></td>
<td>Undergraduate/Graduate Academic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Board Chairperson</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Provost or Designee</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approve</th>
<th>Disapprove</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Committee Chairperson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Date |

| Date |

| Date |
C. Geographic Information Systems (GIS), Minor

A minimum of 18 credits must be selected from:

- GEO A167 * Remote Sensing and Image Analysis (4)
- GIS A268 * Elements of Geographic Information Systems (GIS) (4)
- GIS A366 * Spatial Information Analysis and Modeling (3)
- GIS A367 GIS and Remote Sensing (3)
- GIS A369 Land Information Systems (3)
- GIS A370 GIS and Remote Sensing for Natural Resources (3)
- GIS A371 GIS Applications I (3)
- GIS A433 Coastal Mapping (3)
- GIS A458 Design and Management of Spatial Data (3)
- GIS A468 Integration of Geomatics Technologies (3)
- GIS A471 GIS Applications II (4)
- GIS A490 Selected Advanced Topics in GIS (1-6)
C. Geographic Information Systems (GIS), Minor

A minimum of 18 credits must be selected from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO A167</td>
<td>Remote Sensing and Image Analysis</td>
<td>4</td>
</tr>
<tr>
<td>GIS A268</td>
<td>Elements of Geographic Information Systems (GIS)</td>
<td>4</td>
</tr>
<tr>
<td>GIS A366</td>
<td>Spatial Information Analysis and Modeling</td>
<td>3</td>
</tr>
<tr>
<td>GIS A367</td>
<td>GIS and Remote Sensing</td>
<td>3</td>
</tr>
<tr>
<td>GIS A369</td>
<td>Land Information Systems</td>
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</tr>
<tr>
<td>GIS A370</td>
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</tr>
<tr>
<td>GIS A371</td>
<td>GIS and Public Health Applications I</td>
<td>3</td>
</tr>
<tr>
<td>GIS A433</td>
<td>GIS and the Marine Environment Coastal Mapping</td>
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13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

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<thead>
<tr>
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Initiator Name (typed): N.W.J. Hazelton
Initiator Signed Initials: ______
Date: __________

13b. Coordination Email | Date: 3/23/2011 | Coordinator Email submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison | Date: 3/23/2011 |

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) | Introduction to hardware, operating systems, networking, security, storage, maintenance and related topics in computer systems. This course prepares students for applications across a wide range of computer systems for use in Geomatics and GIS courses, as well as basic system management in field situations for Geomatics/GIS applications. |
| 16a. Course Prerequisite(s) (list prefix and number) | 16b. Test Score(s) | 16c. Co-requisite(s) (concurrent enrollment required) |
| 16d. Other Restriction(s) | | |
| ☐ College | ☐ Major | ☐ Class | ☐ Level |
| 16e. Registration Restriction(s) (non-codable) | | |
| 17. ☒ Mark if course has fees | 18. ☐ Mark if course is a selected topic course |

19. Justification for Action | This is an introductory course for Geomatics students. |

Initiator (faculty only) | N.W.J. Hazelton
Initiator (TYPE NAME) | Date | Dean/Director of School/College | Date |
| | | | | |
| ☐ Approved | ☐ Disapproved | | |
| | | | | |
| ☐ Approved | ☐ Disapproved | Department Chairperson | Date |
| | | | | |
| ☐ Approved | ☐ Disapproved | Undergraduate/Graduate Academic Board Chairperson | Date |
| | | | | |
| ☐ Approved | ☐ Disapproved | | |
| | | | | |
| ☐ Approved | ☐ Disapproved | Provost or Designee | Date |

529
Course Content Guide  
University of Alaska Anchorage, School of Engineering  

CSE A102  
Introduction to Computer Systems  

Date: March 25, 2011  

Course Number: CSE A102  
Course Title: Introduction to Computer Systems  
Credits: 1 (1+0)  

I. Course Description  
Introduction to hardware, operating systems, networking, security, storage,  
maintenance and related topics in computer systems. This course prepares students  
for applications across a wide range of computer systems for use in Geomatics and  
GIS courses, as well as basic system management in small office and field  
situations.  

II. Course Design  
A. Designed for Bachelor of Science and AAS in Geomatics.  
B. One (1) credit course (1 lectures + 0 laboratory)  
C. 1 hour of lecture per week for 15 weeks = 15 hours per semester. (1+0)  
D. Required course for Geomatics majors.  
E. Fees: Yes.  
F. Grading Basis: A - F  
G. This course will be offered in the regular semester timeframe.  
H. This is a new course.  
I. Coordinated with: School of Engineering and faculty list-serve.  

III. Course Prerequisites  
N/A  

IV. Guidelines for Evaluation  
Methods of evaluation may include but are not limited to:  
• Assignments  
• Exams  
• Labs
V. Course Outline

1. Computer Hardware
   1.1 Architecture and components
   1.2 Mass storage
   1.3 Memory
   1.4 Monitors and video cards
   1.5 Connectivity
   1.6 Input and output devices
   1.7 Handhelds, data recorders, calculators

2. Operating Systems
   2.1 Basic concepts
   2.2 Operations
   2.3 Protection methods
   2.4 OS APIs
   2.5 Example OSs

3. Storage
   3.1 Disks and related devices
   3.2 Partitioning
   3.3 Hierarchical and other file systems
   3.4 Fragmentation
   3.5 Protection
   3.6 CD and DVD

4. Networks
   4.1 Protocols and addressing
   4.2 Connections: wired and wireless
   4.3 Topologies
   4.4 Security
   4.5 Applications

5. Security
   5.1 Threats and rationale
   5.2 Firewalls
   5.3 Software protection
   5.4 Protocols and policies

6. Application software
   6.1 Software and firmware
   6.2 Software installation/updating/un-installation
   6.3 Licensing types and methods
7. Computer maintenance
   7.1 Setting up a new computer
   7.2 Routine maintenance, performance and speed optimization
   7.3 Hardware diagnostics and upgrades

8. Other Topics (may include)
   8.1 Cloud computing
   8.2 Web computing
   8.3 HTML, XML and LandXML
   8.4 Mobile computing
   8.5 Trends and the future of information technologies

VI. Instructional Goals, Student Outcomes, and Assessment Measures

A. Instructional Goals
   The instructor will:
   1. Show and explain hardware and software components of a modern computer
   2. Demonstrate how to network computers
   3. Identify computer and network security issues
   4. Explain basic computer maintenance
   5. Install and maintain application software

B. Student Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
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<tbody>
<tr>
<td>Upon successful completion of the course, the student will be able to do the following:</td>
<td>The outcome will be assessed by one or more of the following</td>
</tr>
<tr>
<td>1. Assemble computer components into a working unit</td>
<td>Homework, labs, assignments, projects, exam, tests</td>
</tr>
<tr>
<td>2. Install, uninstall and maintain OS and application software</td>
<td>Homework, labs, assignments, projects, exam, tests</td>
</tr>
<tr>
<td>3. Create wired and wireless networks</td>
<td>Homework, labs, assignments, projects, exam, tests</td>
</tr>
<tr>
<td>4. Implement and maintain basic security systems for a range of computers</td>
<td>Homework, labs, assignments, projects, exam, tests</td>
</tr>
<tr>
<td>5. Provide basic maintenance for modern computers and networks</td>
<td>Homework, labs, assignments, projects, exam, tests</td>
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VII. Suggested Text(s)

VIII. Bibliography

1a. School or College  
EN SOENGR

1b. Division  
No Division Code

1c. Department  
ENGR

2. Course Prefix  
CSE

3. Course Number  
A335

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
3

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

6. Complete Course Title  
Operating Systems Engineering

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

☐ Contact Hours  ☐ Repeat Status  ☐ Cross-Listed/Stacked  ☐ Co-requisites  ☐ Registration Restrictions

☐ Class  ☐ Level  ☐ College  ☐ Major (please specify)

9. Repeat Status  
No

# of Repeats  
#

Max Credits  
N/A

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

11. Implementation Date  
semester/year

From: Fall/2011  
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.aaa.alaska.edu/governance.

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Initiator Name (typed): Sun-il Kim  
Initiator Signed Initials: _________  
Date:________________

13b. Coordination Email  
Date: 3/18/2011  
submitted to Faculty Listserv: (uaa-faculty@lists.aaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 3/29/2011

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)

Introductory course on the inner workings of an operating system from an engineering perspective. Students will create different modules of an operating system, including memory management, threading, networking, and user interface in an environment of engineering applications and designed for hardware in the engineering field and other CSE courses. Students will create components of an operating system designed for hardware in the engineering field and other CSE courses.

16a. Course Prerequisite(s) (list prefix and number)  
CSE A225

16b. Test Score(s)  
N/A

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

16d. Other Restriction(s)  
☐ College  ☐ Major  ☐ Class  ☐ Level

16e. Registration Restriction(s) (non-codable)  
N/A

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
To allow students to develop advanced solutions for engineering design projects, students in CSE A335 need to have the hardware design concepts and low-level programming experience which are covered in CSE A225. This is a part of our continuous improvement process in accordance with ABET accreditation.
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I. Course Description
Introductory course on the inner workings of an operating system from an engineering perspective. Students will create different modules of an operating system, including memory management, threading, networking, and user interface in an environment of engineering applications and designed for hardware in the engineering field and other CSE courses. Students will create components of an operating system designed for hardware in the engineering field and other CSE courses.

II. Course Design
A. Designed for Bachelor of Science in Engineering (BSE) students with emphasis in Computer Systems Engineering (CSE).
B. Three (3) credit course (3 lectures + 0 laboratory)
C. Total time of student participation: 135 hours
   1) Lecture: 45 hours
   2) Lab: 0 hours
   3) Outside of class: 90 hours
D. Required course for BSE majors with emphasis in CSE.
E. Fees: Yes.
F. Grading Basis: A - F
G. This course will be offered in the regular semester timeframe.
H. This is an existing course, with the prerequisite being changed.
I. Coordinated with: School of Engineering and faculty list-serve.

III. Course Prerequisites
CSE A225

IV. Guidelines for Evaluation
Methods of evaluation may include but are not limited to:
- Assignments
- Exams
- Projects
V. Course Outline
1. Processes, Threads
2. Inter-process Communication
3. Thread Synchronization
   • Engineering Application and Design Project 1 – Implementation of multi-threaded programs with ThreadPool for Mobile devices
4. Monitors, Semaphores
5. CPU Scheduling
   • Engineering Application and Design Project 2 – Power-aware Processor Scheduling on Mobile Devices
6. Deadlock
7. Memory Management
8. Virtual Memory
   • Engineering Application and Design Project 3 – Utilizing Solid State Drives or Flash Memory for Virtual Memory Implementation in Embedded Systems
9. Remote Procedure Calls
10. Distributed Operating Systems
   • Engineering Application and Design Project 4 – Accessing Peripheral Devices Connected to Remote Systems
11. Fault Tolerance
12. Operating System Security
   • Engineering Application and Design Project 5 – Implementing Security Protocols via devices such as FPGA (Field-Programmable Gate Array)
13. Engineering applications and design

VI. Instructional Goals and Student Outcomes
A. Instructional Goals
The Instructor will:
1. Provide students with the necessary skills to understand the inner workings of operating systems.
2. Demonstrate by example the use of locks, semaphores, and monitors for synchronization in hardware.
3. Aid students in incorporating pieces of an operating system together to build a working operating system that executes on a device.
4. Introduce students to writing algorithms for multi-threaded processes communicating with peripheral devices.
5. Allow students to implement an operating system by integrating existing algorithms into a larger application.
B. Student Outcomes
Upon completion of this course, students will be able to:

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<th>Outcome</th>
<th>Assessment</th>
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<td>Design and implement multi-processing in an operating system.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
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<tr>
<td>Identify different approaches for implementing locking and virtual memory management in an operating system.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Implement functioning operating system components that communicate with peripheral devices, such as FPGAs.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Implement operating systems components in embedded devices such as mobile phones.</td>
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<tr>
<td>Integrate different pieces of an operating system into an existing codebase as well as create a distributed operating system to solve an engineering problem in groups.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
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VII. Suggested Text

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

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

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Initiator Name (typed): Jeff Miller
Initiator Signed Initials: _______
Date: ___________

13b. Coordination Email Date: 3/18/2011
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 3/29/2011

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)
Analysis of network attack techniques and methods to defend against them, including firewalls, virtual private networks, network intrusion detection, and denial of service.

16a. Course Prerequisite(s) (list prefix and number)
CSE A355

16b. Test Score(s)
N/A

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

16d. Other 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 current prerequisite for this course is a non-existing CSE course (with the label CSE 455). The material needed by the students before taking this course is covered in CSE 355, which includes knowledge of data and communication networks and the hardware device design concepts that are used in various aspects of networking.

Initiator (faculty only) Date
Jeff Miller
Initiator (TYPE NAME) Date

1. Approved
2. Disapproved

Dean/Director of School/College Date

Undergraduate/Graduate Academic Title

Board Chairperson Date

Provost or Designee Date
COURSE CONTENT GUIDE
University of Alaska Anchorage, School of Engineering

CSE A465
Network Security

Date: March 11, 2011

Course Number: CSE A465
Course Title: Network Security
Credits: 3 (3+0)

I. Course Description
Analysis of network attack techniques and methods to defend against them, including firewalls, virtual private networks, network intrusion detection, and denial of service.

II. Course Design
A. Designed for individuals majoring in the Bachelor of Science in Engineering degree.
B. Three (3) credit course (3 lecture + 0 laboratory)
C. Total time of student participation: 135 hours
   1) Lecture: 45 hours
   2) Lab: 0 hours
   3) Outside: 90 hours
D. Elective for the Bachelor of Science in Engineering degree with specializations in Computer Systems Engineering and Electrical Engineering.
E. Fees: Yes
F. Grading Basis: A - F
G. May be scheduled in any time frame but not less than 1 week per credit.
H. This is an existing class, with the prerequisite being updated.
I. Coordinated with: School of Engineering, and faculty list-serve.
J. Course outcomes meet the criteria listed in the Curriculum Handbook for a 400 level course.

III. Course Prerequisites:
CSE A355

IV. Guidelines for Evaluation:
Methods of evaluation may include but are not limited to:
• Assignments
• Exams
V. Course Outline
A. Lecture
1. Network Security Introduction
2. TCP/IP Attacks (Transmission Control Protocol/Internet Protocol)
3. TCP Misbehavior
4. PKI Overview (Public Key Infrastructure)
5. SSL/TLS Security Issues (Secure Socket Layer/Transport Layer Security)
6. Secure Sensor Networks
7. Intrusion Detection
8. NIDS Evasion (Network Intrusion Detection System)
9. DDoS (Distributed Denial of Service)
   a. Attack Tools
   b. IP Traceback and Pushback
   c. PI (Pin Identification)
   d. Shrew Attack and SIFF (Syndication Interchange File Format)
10. TCP and Trusted Hardware (Transmission Control Protocol)
11. Multicast Stream Signatures
12. Key Agreements
13. Routing Protocols
14. Worm Propagation
15. Anonymous Communication
16. Security Administration

VI. Instructional Goals and Student Outcomes
A. Instructional Goals
The instructor will:
1. Provide an understanding of security problems encountered with computer network system.
2. Provide an understanding of the how to prevent network security breaches.
3. Provide a practical level of understanding of how to trace and identify network security threats.
4. Instill the importance of professionalism in the students and in their interaction with others.

B. Student Outcomes
Upon completion of this course, students should be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify potential security problems with computer networking systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Design security network systems resistant to attack.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Determine the source of network security threats.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Demonstrate professionalism in interactions with colleagues, faculty, and staff.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>
VII. Suggested Texts

VIII. Bibliography
## Course Action Request

### University of Alaska Anchorage

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

---

1a. School or College  
EN SOENGR

1b. Division  
No Division Code

1c. Department  
ENGR

2. Course Prefix  
CSE

3. Course Number  
A480

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
3

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

6. Complete Course Title  
Engineering Software/Hardware Systems  
Engr Software/Hardware System

Abbreviated Title for Transcript (30 character)

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

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

If a change, mark appropriate boxes:

- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Other Restrictions
  - Class
  - College
  - Major
- Other

9. Repeat Status No  
# of Repeats  
Max Credits

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

11. Implementation Date  
semester/year  
From: Fall/2011  
To: 9999

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

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

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s)</th>
<th>Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<tr>
<td>3.</td>
<td></td>
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</tbody>
</table>

Initiator Name (typed): Sun-il Kim  
Initiator Signed Initials: ________  
Date: __________

13b. Coordination Email  
Date: 3/18/2011  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 3/29/2011

14. General Education Requirement  
Mark appropriate box:

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

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

Modern systems abstractions and challenges in developing scalable solutions for increasingly complex computing needs from systems software design perspective. Relationships between software and hardware abstractions are studied while focusing on engineering tradeoffs between correctness and performance. Advanced topics including parallel systems and multi-core models.

16a. Course Prerequisite(s) (list prefix and number)  
CSE A215 and CSE A335

16b. Test Score(s)  
N/A

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

16d. Other Restriction(s)  
☑ College  
☐ Major  
☑ Class  
☐ Level

16e. Registration Restriction(s) (non-codable)  
N/A

17. ☑ Mark if course has fees

18. ☑ Mark if course is a selected topic course

19. Justification for Action

This course will be a new upper level CSE course for the Bachelor of Science in Engineering Program, following the ABET accreditation review and continuous improvement process.

Initiator (faculty only)  
Sun-il Kim  
Initiator (TYPE NAME)

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

☐ Approved  
☑ Disapproved  
Undergraduate/Graduate Academic  
Date

☐ Approved  
☑ Disapproved  
Board Chairperson  
Date

☐ Approved  
☐ Disapproved  
Provost or Designee  
Date

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543
COURSE CONTENT GUIDE
University of Alaska Anchorage, School of Engineering

CSE A480
Engineering Software/Hardware Systems

Date: March 11, 2011

Course Number: CSE A480
Course Title: Engineering Software/Hardware Systems
Credits: 3 (3+0)

I. Course Description
Modern systems abstractions and challenges in developing scalable solutions for increasingly complex computing needs from systems software design perspective. Relationships between software and hardware abstractions are studied while focusing on engineering tradeoffs between correctness and performance. Advanced topics including parallel systems and multi-core models.

II. Course Design
A. Designed for Bachelor of Science in Engineering (BSE) students with emphasis in Computer Systems Engineering (CSE).
B. Three (3) credit course (3 lectures + 0 laboratory)
C. Total time of student participation: 135 hours
   1) Lecture: 45 hours
   2) Lab: 0 hours
   3) Outside of class: 90 hours
D. Required course for BSE majors with emphasis in Computer Systems Engineering.
E. Fees: Yes.
F. Grading Basis: A - F
G. This course will be offered in the regular semester timeframe.
H. This is a new course.
I. Coordinated with: School of Engineering and faculty list-serve.

III. Course Prerequisites
CSE A215 and CSE A335

IV. Guidelines for Evaluation
Methods of evaluation may include but are not limited to:
● Assignments
● Exams
● Projects
V. Course Outline
1. Operating systems review
2. Systems design fundamentals: Case study with C/C++ and Linux kernel
    Modular design
    Device and hardware abstractions
    Interrupts and exceptions: systems-level to language level
    Interface abstractions
    Memory management
    Reusability
    Access control
    Virtualization
3. Understanding performance
    Models of abstraction
    Software/hardware performance
    Systems reliability and correctness vs performance goals
    Tools for profiling and tuning
    Systems analysis: Availability, reliability, dependability, scalability and performance
4. Advanced topics in modern trends: Towards parallel systems and its challenges:
    Shared memory and synchronization revisited
    Architectural issues
    Transactional memory: hardware vs software
    Distributed computing environments
    Models for programming parallel systems

VI. Instructional Goals and Student Outcomes
A. Instructional Goals
   The instructor will:
1. Provide students with the necessary skills to understand the inner workings and the design principles behind modern systems and languages.
2. Introduce tools and techniques for quantifying various performance parameters (such as computational efficiency and reliability).
3. Introduce testing and debugging techniques for solving systems-level problems.
4. Introduce the state-of-the-art solutions and current trends related to systems software and hardware design through the use of technical publications from international journals and conferences.

B. Student Outcomes
   Upon completion of this course, students will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitatively reason about the engineering tradeoffs between performance-related parameters.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>
Design and implement or modify various systems software components and related hardware/device abstractions.

Profile, test and debug systems software.

Find and understand new solutions to technical problems related to systems software and hardware engineering (by utilizing technical publications from internationally recognized journals and conferences in computing research), and implement the solution or recreate the experiments.

Assignments, quizzes, exams, discussions, and projects.

Assignments, quizzes, exams, discussions, and projects.

Assignments, quizzes, exams, discussions, and projects.

VII. Suggested Text

VIII. Bibliography
1a. School or College
EN SOENGR

1b. Division
No Division Code

1c. Department
ENGR

2. Course Prefix
ENGR

3. Course Number
A495

4. Previous Course Prefix & Number
ENGR A494A

5a. Credits/CEUs
1

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

6. Complete Course Title
Engineering Internship

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

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

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

9. Repeat Status Yes ☐ # of Repeats 1 ☐ Max Credits 2

10. Grading Basis ☐ A-F ☑ P/NP ☐ NG

11. Implementation Date ☐ semester/year
From: Fall/2011 To: /9999

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

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

13b. Coordination Email Date: 3/18/2011 submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 03/28/2011

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)
Professional work experience designed to provide students with the opportunity to investigate the practical applications of engineering design within engineering organizations. Assignments and projects arranged with cooperating organizations and agencies.

This course is being changed to a permanent course from a temporary course.

Initiator Name (typed): Sun-il Kim Initiator Signed Initials: __________ Date: ___________

16a. Course Prerequisite(s) (list prefix and number) N/A

16b. Test Score(s)

16c. Co-requisite(s) (concurrent enrollment required) Instructor permission N/A

16d. Other Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

16e. Registration Restriction(s) (non-codable) Instructor permission

17. ☑ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
This course is being changed to a permanent course from a temporary course.

Initiator (faculty only) Date
Sun-il Kim
Initiator (TYPE NAME)

Approved ☐ Disapproved Dean/Director of School/College Date

Approved ☐ Disapproved Undergraduate/Graduate Academic Date

Approved ☐ Disapproved Board Chairperson Date

Approved ☐ Disapproved Provost or Designee Date

Approved ☐ Disapproved Department Chairperson Date

Approved ☐ Disapproved Curriculum Committee Chairperson Date
COURSE CONTENT GUIDE
University of Alaska Anchorage, School of Engineering

ENGR A495
Engineering Internship

Date: March 25, 2011

Course Number: ENGR A495
Course Title: Engineering Internship
Credits: 1 (0 + 3)

I. Course Description
Professional work experience designed to provide students with the opportunity to investigate the practical applications of engineering design within engineering organizations. Assignments and projects arranged with cooperating organizations and agencies.

II. Course Design
A. Designed for individuals majoring in the Bachelor of Science in Engineering degree.
B. One (1) credit course (0 hours lecture + 3 hours laboratory)
C. Total time of student participation: 90 hours
   1) Lecture: 0 Hours
   2) Lab: 45 hours
   3) Outside: 45 hours
D. Not required for the Bachelor of Science in Engineering.
E. Fees: Yes
F. Grading Basis: A - F
G. May be scheduled in any time frame but not less than 1 week per credit.
H. This is an existing course becoming a permanent course.
I. Coordinated with: School of Engineering, and UAA list serve.
J. Course needed to enable students to work with companies that require an internship course registration with the university. Course can be taken up to two times (max of 2 credits) for credit toward the degree.

III. Course Prerequisites
Registration restriction.

IV. Guidelines for Evaluation
Methods of evaluation may include but are not limited to:
- Assignments
- Exams
- Laboratory Reports
- Projects
- Presentations
V. Course Outline
Dependent upon agreement with sponsoring organization, agency, or company and may vary.

VI. Instructional Goals and Student Outcomes
A. Instructional Goals
The instructor will present the necessary tools and information that will enable students to:
1. Participate in opportunities to use academic knowledge in a working environment.

B. Student Outcomes
At the end of the course, the student who has mastered the course material will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate the application of academic knowledge in a working environment.</td>
<td>This outcome will be assessed through discussions and other means determined by coordination between the employer and faculty.</td>
</tr>
<tr>
<td>Demonstrate effective written communication skills appropriate for the professional environment.</td>
<td>Final report.</td>
</tr>
<tr>
<td>Practice professional work ethics.</td>
<td>Employer evaluation.</td>
</tr>
</tbody>
</table>

VII. Suggested Texts
Dependent upon agreement with sponsoring organization, agency, or company and may vary.

VIII. Bibliography
Dependent upon agreement with sponsoring organization, agency, or company and may vary.
<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN SOENGR</td>
<td>No Division Code</td>
<td>EE</td>
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</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours</th>
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<tbody>
<tr>
<td>EE</td>
<td>A203</td>
<td>N/A</td>
<td>4</td>
<td>(Lecture + Lab)</td>
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<tr>
<th>6. Complete Course Title</th>
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<tbody>
<tr>
<td>Fundamentals of Electrical Engineering I</td>
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</table>

<table>
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<th>7. Type of Course</th>
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<tbody>
<tr>
<td>Academic</td>
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<table>
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<tr>
<th>8. Type of Action:</th>
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<td>Add</td>
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<table>
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<tr>
<th>9. Repeat Status No</th>
<th># of Repeats</th>
<th>Max Credits</th>
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<tr>
<th>10. Grading Basis</th>
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</thead>
<tbody>
<tr>
<td>A-F</td>
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</table>

<table>
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<tr>
<th>11. Implementation Date</th>
</tr>
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<tbody>
<tr>
<td>From: Fall/2011</td>
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<tr>
<td>To: /9999</td>
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<tr>
<th>12. Cross Listed with</th>
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<tbody>
<tr>
<td>Stacked</td>
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<table>
<thead>
<tr>
<th>13a. Impacted Courses or Programs:</th>
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<tbody>
<tr>
<td>List any programs or college requirements that require this course.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>13b. Coordination Email</th>
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<tbody>
<tr>
<td>Date: 3-20-2011</td>
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<table>
<thead>
<tr>
<th>13c. Coordination with Library Liaison</th>
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</thead>
<tbody>
<tr>
<td>Date: 3-28-2011</td>
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<table>
<thead>
<tr>
<th>14. General Education Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark appropriate box:</td>
</tr>
<tr>
<td>Oral Communication</td>
</tr>
<tr>
<td>Written Communication</td>
</tr>
<tr>
<td>Quantitative Skills</td>
</tr>
<tr>
<td>Humanities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduces components, circuits, and methods of analysis of DC and AC electrical systems. Covers node voltage and mesh current techniques, operation amplifiers, RL/RC/RLC natural and step response, analysis of AC circuits with complex impedance and phasors, and AC Power.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>16a. Course Prerequisite(s) (list prefix and number)</th>
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<tbody>
<tr>
<td>MATH A201</td>
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<table>
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<tr>
<th>16b. Test Score(s)</th>
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<table>
<thead>
<tr>
<th>16c. Co-requisite(s) (concurrent enrollment required)</th>
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<td>N/A</td>
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<table>
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<tr>
<th>16d. Other Restriction(s)</th>
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<td>College</td>
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<table>
<thead>
<tr>
<th>16e. Registration Restriction(s) (non-codable)</th>
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<tbody>
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<td>N/A</td>
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<table>
<thead>
<tr>
<th>17. Mark if course has fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. Mark if course is a selected topic course</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>19. Justification for Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated course content guide and prerequisites to reflect changes in the structure of the BSE/EE program</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Initiator (faculty only):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jens Munk</td>
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<table>
<thead>
<tr>
<th>Initiator Signed Initials:</th>
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<tbody>
<tr>
<td>Jens Munk</td>
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<table>
<thead>
<tr>
<th>20. Approval</th>
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<table>
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<tr>
<th>21. Disapproved</th>
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<tbody>
<tr>
<td>Dean/Director of School/College</td>
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<table>
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<th>22. Date</th>
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<tbody>
<tr>
<td>Jens Munk</td>
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</tbody>
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<table>
<thead>
<tr>
<th>23. Approved</th>
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<tbody>
<tr>
<td>Department Chairperson</td>
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<table>
<thead>
<tr>
<th>24. Disapproved</th>
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<tbody>
<tr>
<td>Undergraduate/Graduate Academic</td>
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<table>
<thead>
<tr>
<th>25. Date</th>
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<tbody>
<tr>
<td>Board Chairperson</td>
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</table>

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<th>26. Approved</th>
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<tbody>
<tr>
<td>Provost or Designee</td>
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<table>
<thead>
<tr>
<th>27. Disapproved</th>
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550
COURSE CONTENT GUIDE
University of Alaska Anchorage, School of Engineering

EE A203
Fundamentals of Electrical Engineering I

Date: 25 March 2011

Course Number: EE A203
Course Title: Fundamentals of Electrical Engineering I
Credits: 4 (3+3)

I. Course Description
Introduces components, circuits, and methods of analysis of DC and AC electrical systems. Covers node voltage and mesh current techniques, operation amplifiers, RL/RC/RLC natural and step response, analysis of AC circuits with complex impedance and phasors, and AC Power.

II. Course Design
A. Designed for individuals majoring in the Bachelor of Science in Engineering degree with an Electrical Engineering or Computer Systems Engineering specialization.
B. Four (4) credit course (3 lecture + 3 laboratory)
C. Total time of student participation: 180 hours
   1) Lecture: 45 hours
   2) Lab: 45 hours
   3) Outside: 90 hours
D. Required for the Bachelor of Science in Engineering degree with an Electrical Engineering or Computer Systems Engineering specialization.
E. Fees: Yes
F. Grading Basis: A - F
G. May be scheduled in any time frame but not less than 1 week per credit.
H. This is an update to an existing course at UAA.
I. Coordinated with: UAA list serve.
J. The course requires foundational knowledge in mathematics. It prepares students for more advanced courses in electronic circuits and signals.

III. Course Prerequisites:
MATH A201

IV. Guidelines for Evaluation:
Methods of evaluation may include but are not limited to:
• Assignments
• Quizzes
• Exams
V. Course Outline
A. Lecture
1. Foundational physics
   i. electron charge/mass
   ii. two particle electrostatics
   iii. electric fields/potential
   iv. voltage and current
   v. power and energy
2. Circuit elements
   i. voltage and current sources
   ii. resistance and Ohm’s law
   iii. Kirchhoff’s laws
3. Simple circuits
   i. resistors in series and parallel
   ii. voltage and current divider
   iii. measuring voltage, current, and resistance
   iv. delta-wye transformations
4. Circuit analysis techniques
   i. node voltage
   ii. mesh current
   iii. source transformations
   iv. Thevenin and Norton equivalents
   v. superposition
5. Operational amplifiers
6. Inductance and capacitance
   i. inductors
   ii. capacitors
   iii. series and parallel combinations
   iv. mutual inductance
7. First-order RL and RC circuits
   i. natural response
   ii. step response
   iii. sequential switching
8. Second-order RLC circuits
   i. response forms (overdamped, underdamped, critically-damped)
   ii. parallel RLC
   iii. series RLC
9. Sinusoidal steady-state analysis
i. properties of periodic waveforms
ii. sinusoidal response
iii. impedance
iv. phasors
v. circuit analysis techniques with impedance and phasors

10. Sinusoidal power calculations
   i. instantaneous power
   ii. average power
   iii. RMS voltage and current in power calculations
   iv. complex power calculations
   v. maximum power transfer

B. Laboratory
1. Safety and equipment
2. Voltage and current measurements
3. Kirchhoff’s laws
4. Node voltage and mesh current analysis
5. CAD/Spice circuit construction and analysis
6. Operational amplifiers
7. Inductors and capacitors
8. First order circuits
9. Second order circuits
10. AC circuits
11. Impedance and power factor

VI. Instructional Goals and Student Outcomes
A. Instructional Goals
The Instructor will:
1. Provide an understanding of physical properties of electronic circuits including voltage, current, resistance, and power.
2. Present circuit analysis techniques including voltage divider, current divider, KCL, KVL, node voltage, mesh current, and superposition.
4. Provide an overview of ideal operation amplifiers, analysis techniques, and basic circuit configurations.
5. Present techniques for analyzing the natural and step response of first-order and second-order circuits containing inductors, capacitors, and/or resistors.
6. Provide an understanding of AC steady-state circuits, their analysis with phasors and impedance, and complex power.
7. Provide an understanding of the importance of proper laboratory procedures and safety.
8. Instill the importance of professionalism in the students and in their interaction with others.

B. Student Outcomes
Upon completion of this course, students will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Express mathematically the physical relationships between voltage, current and power in passive circuit elements: resistors, capacitors, inductors, and power supplies.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Apply Kirchhoff’s laws and Ohm’s laws to analyze circuits.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Calculate unknown circuit parameters using common circuit analysis techniques: voltage/current divider, node voltage, mesh current, superposition, and Norton and Thevenin equivalent circuits.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Apply simplifying assumptions and analysis techniques to solve for unknown values in operational amplifier circuits.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Identify the name and function of common operational amplifier circuits: inverting amplifier, non-inverting amplifier, summing amplifier, difference amplifier.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Determine the form, amplitude and time constants for the transient behavior of natural and step response RC, RL and RLC circuits.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Analyze steady-state AC circuits containing resistors, capacitors, and inductors using complex impedances and phasors.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Analyze power supplied to and dissipated by AC circuits.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Operate electronic equipment in a laboratory environment without harm to themselves or damage to the equipment.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Construct circuits using both discrete components and simulation software, analyze the behavior of these circuits and</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>
report their findings in a proper format.

VII. Suggested Texts

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

1a. School or College
EN SOENGR

1b. Division
No Division Code

1c. Department
EE

2. Course Prefix
EE

3. Course Number
A306

4. Previous Course Prefix & Number
N/A

5a. Credits/CEUs
3

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

6. Complete Course Title
Dynamics of Systems

Abbreviated Title for Transcript (30 character)
Dynamics of Systems

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 ☐ Course Number ☐ Contact Hours ☐ Repeat Status
☐ Grading Basis ☐ Title ☐ Cross-Listed/Stacked ☐ Course Description
☐ Test Score Prerequisites ☐ Course Prerequisites ☐ Co-requisites
☐ Other Restrictions ☐ Level ☐ Registration Restrictions
☐ Class ☐ College ☐ Major
☐ Other

9. Repeat Status No
# of Repeats
Max Credits

10. Grading Basis
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date
semester/year
From: Fall/2011 To: /9999

12. ☒ Cross Listed with ME A306

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.

13b. Coordination Email
Date: 03/18/2011

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

13c. Coordination with Library Liaison
Date: 03/28/2011

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

15. Course Description (suggested length 20 to 50 words)
Modeling of mechanical, electrical, fluid, and thermal elements and systems. Study of free and forced response by the Laplace transform, transfer function, and state space models. Time domain and frequency domain responses. Coupled systems, system analogy, sensing, and actuation principles.

16a. Course Prerequisite(s) (list prefix and number)
MATH A302, and [ES A210 or ES A208], and [ES A309 or EE A203]

16b. Test Score(s)
16c. Co-requisite(s) (concurrent enrollment required)
N/A

16d. Other Restriction(s)

☐ College ☐ Major ☐ Class ☐ Level

16e. Registration Restriction(s) (non-codable)
N/A

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
New required course in Mechanical Engineering to enable sequencing with ME A471 and ME A408.

Initiator Name (typed): Jeffrey Hoffman
Initiator Signed Initials: ______________
Date: ______________

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Date: 03/18/2011

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

13c. Coordination with Library Liaison
Date: 03/28/2011

Initiator (faculty only)
Jeffrey Hoffman
Initiator (TYPE NAME)

Approved
Disapproved

Dean/Director of School/College
Date

Undergraduate/Graduate Academic Board Chairperson
Date

Provost or Designee
Date

Initiator (faculty only)
Jeffrey Hoffman
Initiator (TYPE NAME)

Approved
Disapproved

Department Chairperson
Date

Approved
Disapproved

Curriculum Committee Chairperson
Date

Approved
Disapproved
1. **Change Date:** March 2011

2. **Course Information**
   A. **College:** School of Engineering
   B. **Course Prefix:** EE
   C. **Course Number:** A306
   D. **Number of Credits and Contact Hours**
      - Number of Credits: 3
      - Contact Hours: 3 + 0
   E. **Course Title:** Dynamics of Systems
   F. **Grading Basis:** A-F
   G. **Implementation Date:** Fall 2011
   H. **Cross Listing:** ME A306
   I. **Course Description:** Modeling of mechanical, electrical, fluid, and thermal elements and systems. Study of free and forced response by the Laplace transform, transfer function, and state space models. Time domain and frequency domain responses. Coupled systems, system analogy, sensing, and actuation principles.
   J. **Course Prerequisites:** MATH A302, and [ES A210 or ES A208], and [ES A309 or EE A203]
   K. **Course Fee:** Yes

3. **Course Level Justification**
   This course incorporates knowledge from prerequisite courses and utilizes basic concepts characterizing mechanical, electrical, fluid, and thermal elements to derive mathematical models of the corresponding individual systems, as well as of coupled (mixed or combined) systems. The material prepares the student to be able to model, analyze, and design a variety of systems through their dynamic response by employing analytical/numerical procedures and tools available in MATLAB and Simulink.

4. **Instructional Goals and Student Outcomes**

   **Instructional Goals**
   The instructor will:
   1. Present the main engineering systems (mechanical, electrical, fluid, and thermal) by means of similar mathematical models and analysis methods.
   2. Provide an understanding of utilizing the Laplace transform, the transfer function, the state space model, and the complex transfer function in deriving mathematical models of dynamic systems.
   3. Explain the fundamentals and the characteristics of evaluating the response of dynamic systems in the time domain and in the frequency domain.
   4. Introduce modern tools of modeling, analyzing, and designing dynamic systems by using MATLAB and Simulink.
5. Identify the main concepts of coupled systems, sensing, and actuation.
6. Encourage individual problem solving approaches as well as team approaches to designing individual and coupled dynamic systems.

**Student Outcomes**
The student will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
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<tbody>
<tr>
<td>Analyze the individual features as well as the common representations</td>
<td>Assignments, quizzes, exams, discussions, and</td>
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<tr>
<td>of dynamic mechanical, electrical, fluid, and thermal systems.</td>
<td>projects.</td>
</tr>
<tr>
<td>Apply simplifying assumptions to actual engineering systems to</td>
<td>Assignments, quizzes, exams, discussions, and</td>
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<tr>
<td>obtain physical models and mathematical models of individual (mechanical,</td>
<td>projects.</td>
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<tr>
<td>electrical, fluid, and thermal) systems, as well as models of coupled</td>
<td></td>
</tr>
<tr>
<td>systems.</td>
<td></td>
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<tr>
<td>Demonstrate proficiency in using various methods and modern</td>
<td>Assignments, quizzes, exams, discussions, and</td>
</tr>
<tr>
<td>computational tools to model, analyze, and design dynamic systems.</td>
<td>projects.</td>
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<tr>
<td>Apply the principles of coupled systems that govern the behavior of</td>
<td>Assignments, quizzes, exams, discussions, and</td>
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<td>sensors and actuators.</td>
<td>projects.</td>
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<tr>
<td>Demonstrate capabilities of working individually and in a team to</td>
<td>Assignments, quizzes, exams, discussions, and</td>
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<td>solve a complex system dynamics project.</td>
<td>projects.</td>
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<tr>
<td>Interact professionally with colleagues and the instructor in critical</td>
<td>Assignments, quizzes, exams, discussions, and</td>
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<td>analyses of dynamic systems applications.</td>
<td>projects.</td>
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</table>

**Evaluation and Assessment Methods**
Students will be evaluated using a variety of tools at the instructor's discretion including critical discussions/analysis of concepts and applications, class project, in-class presentations, homework assignments, quizzes, midterm exams, and a final/comprehensive exam.

**Topical Course Outline**
A. Mechanical systems
   1. Elements: inertia, stiffness, damping, and forcing
   2. Free and forced responses of basic single degree-of-freedom systems
   3. Free and forced responses of multiple degree-of-freedom systems
B. Electrical systems
   1. Elements: resistor, capacitance, inductor, voltage/current source
   2. Circuits and networks
   3. Operational amplifier circuits
C. Fluid and thermal systems
   1. Liquid elements and systems
   2. Pneumatic elements and systems
   3. Thermal elements and systems

D. The Laplace transform
   1. Direct and inverse Laplace transforms
   2. Solving differential equations and systems related to the mathematical models of dynamic engineering systems

E. Transfer function approach
   1. Transfer function concept
   2. Model formulation
   3. Time response

F. State space model
   1. State space concept
   2. Model formulation
   3. Time response

G. Frequency-domain analysis and design
   1. Complex transfer function
   2. Steady-state response under harmonic input

H. Coupled systems
   1. System analogies
   2. Electro-mechanical coupling
   3. Thermo-mechanical coupling
   4. Electro-thermo-mechanical coupling

7. Suggested Text

8. Bibliography
<table>
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<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<th>3. Course Number</th>
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<td>3</td>
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<td>Dynamics of Systems</td>
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<th>7. Type of Course</th>
<th>8. Type of Action:</th>
<th>9. Repeat Status No</th>
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<tr>
<td>A-F</td>
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<td>EE A306</td>
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<th>13a. Impacted Courses or Programs:</th>
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<tr>
<td>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 <a href="http://www.uaa.alaska.edu/governance">www.uaa.alaska.edu/governance</a>.</td>
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<th>Chair/Coordinator Contacted</th>
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<td><a href="mailto:uaa-faculty@lists.uaa.alaska.edu">uaa-faculty@lists.uaa.alaska.edu</a></td>
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<td>Quantitative Skills</td>
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<td>Humanities</td>
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<td>Fine Arts</td>
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<td>Social Sciences</td>
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<td>Natural Sciences</td>
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<td>Integrative Capstone</td>
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<th>15. Course Description (suggested length 20 to 50 words)</th>
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<tr>
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<th>16a. Course Prerequisite(s) (list prefix and number)</th>
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<th>16b. Test Score(s)</th>
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<th>18. Mark if course is a selected topic course</th>
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<tr>
<th>19. Justification for Action</th>
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<tbody>
<tr>
<td>New required course in Mechanical Engineering to enable sequencing with ME A471 and ME A408.</td>
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<th>Initiator (faculty only)</th>
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<tr>
<td>Jeffrey Hoffman</td>
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<tr>
<th>Department Chairperson</th>
<th>Date</th>
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<th>Board Chairperson</th>
<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
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<th>Provost or Designee</th>
<th>Date</th>
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1. **Change Date:** March 2011

2. **Course Information**
   A. **College:** School of Engineering  
   B. **Course Prefix:** ME  
   C. **Course Number:** A306  
   D. **Number of Credits and Contact Hours**  
      - Number of Credits: 3  
      - Contact Hours: 3 + 0  
   E. **Course Title:** Dynamics of Systems  
   F. **Grading Basis:** A-F  
   G. **Implementation Date:** Fall 2011  
   H. **Cross Listing:** EE A306  
   I. **Course Description:** Modeling of mechanical, electrical, fluid, and thermal elements and systems. Study of free and forced response by the Laplace transform, transfer function, and state space models. Time domain and frequency domain responses. Coupled systems, system analogy, sensing, and actuation principles.  
   J. **Course Prerequisites:** MATH A302, and [ES A210 or ES A208], and [ES A309 or EE A203]  
   K. **Course Fee:** Yes

3. **Course Level Justification**
   This course incorporates knowledge from prerequisite courses and utilizes basic concepts characterizing mechanical, electrical, fluid, and thermal elements to derive mathematical models of the corresponding individual systems, as well as of coupled (mixed or combined) systems. The material prepares the student to be able to model, analyze, and design a variety of systems through their dynamic response by employing analytical/numerical procedures and tools available in MATLAB and Simulink.

4. **Instructional Goals and Student Outcomes**

   **Instructional Goals**
   The instructor will:
   1. Present the main engineering systems (mechanical, electrical, fluid, and thermal) by means of similar mathematical models and analysis methods.  
   2. Provide an understanding of utilizing the Laplace transform, the transfer function, the state space model, and the complex transfer function in deriving mathematical models of dynamic systems.  
   3. Explain the fundamentals and the characteristics of evaluating the response of dynamic systems in the time domain and in the frequency domain.  
   4. Introduce modern tools of modeling, analyzing, and designing dynamic systems by using MATLAB and Simulink.
5. Identify the main concepts of coupled systems, sensing, and actuation.
6. Encourage individual problem solving approaches as well as team approaches to designing individual and coupled dynamic systems.

**Student Outcomes**
The student will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyze the individual features as well as the common representations of dynamic mechanical, electrical, fluid, and thermal systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Apply simplifying assumptions to actual engineering systems to obtain physical models and mathematical models of individual (mechanical, electrical, fluid, and thermal) systems, as well as models of coupled systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Demonstrate proficiency in using various methods and modern computational tools to model, analyze, and design dynamic systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Apply the principles of coupled systems that govern the behavior of sensors and actuators.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Demonstrate capabilities of working individually and in a team to solve a complex system dynamics project.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Interact professionally with colleagues and the instructor in critical analyses of dynamic systems applications.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>

5. **Evaluation and Assessment Methods**
Students will be evaluated using a variety of tools at the instructor's discretion including critical discussions/analysis of concepts and applications, class project, in-class presentations, homework assignments, quizzes, midterm exams, and a final/comprehensive exam.

6. **Topical Course Outline**

A. Mechanical systems
   1. Elements: inertia, stiffness, damping, and forcing
   2. Free and forced responses of basic single degree-of-freedom systems
   3. Free and forced responses of multiple degree-of-freedom systems

B. Electrical systems
   1. Elements: resistor, capacitance, inductor, voltage/current source
   2. Circuits and networks
   3. Operational amplifier circuits
C. Fluid and thermal systems
   1. Liquid elements and systems
   2. Pneumatic elements and systems
   3. Thermal elements and systems

D. The Laplace transform
   1. Direct and inverse Laplace transforms
   2. Solving differential equations and systems related to the mathematical models of dynamic engineering systems

E. Transfer function approach
   1. Transfer function concept
   2. Model formulation
   3. Time response

F. State space model
   1. State space concept
   2. Model formulation
   3. Time response

G. Frequency-domain analysis and design
   1. Complex transfer function
   2. Steady-state response under harmonic input

H. Coupled systems
   1. System analogies
   2. Electro-mechanical coupling
   3. Thermo-mechanical coupling
   4. Electro-thermo-mechanical coupling

7. Suggested Text

8. Bibliography
### Course Action Request

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

<table>
<thead>
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<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<td>Change</td>
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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)

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

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

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

<table>
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<th>Chair/Coordinator Contacted</th>
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Initiator Name (typed): Jens Munk

Initiator Signed Initials: _________

Date: __________

13b. Coordination Email | Date: 3-20-2011

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

13c. Coordination with Library Liaison | Date: 3-28-2011

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)

Analysis of circuit behavior for passive and active filters. Application of Laplace and Fourier techniques to circuit characterization. This course serves as a laboratory component to EE A353.

16a. Course Prerequisite(s) (list prefix and number) | 16d. Other Restriction(s) (concurrent enrollment required) N/A

16b. Test Score(s) | 16e. Registration Restriction(s) (non-codable) N/A

16c. Co-requisite(s) EE A353

17. Mark if course has fees

18. Mark if course is a selected topic course

19. Justification for Action

This course is intended to provide a hands on component to EE A353 Circuit Theory.

Initiator (faculty only) Date

Jens Munk

Initiator (TYPE NAME) Date

Approved

Disapproved

Dean/Director of School/College Date

Approved

Disapproved

Undergraduate/Graduate Academic Board Chairperson Date

Approved

Disapproved

Provost or Designee Date

Approved

Disapproved

Department Chairperson Date

Approved

Disapproved

Curriculum Committee Chairperson Date
COURSE CONTENT GUIDE  
University of Alaska Anchorage, School of Engineering  

EE A353L  
Circuit Theory Lab  

Date: March 21, 2011  

Course Number: EE A353L  
Course Title: Circuit Theory  
Credits: 1 (0+3)  

I. Course Description  
Analysis of circuit behavior for passive and active filters. Application of Laplace and Fourier techniques to circuit characterization. This course serves as a laboratory component to EE A353.  

II. Course Design  
A. Designed for individuals in the BSE program with a specialization in Electrical Engineering.  
B. One (1) credit course (0 lecture + 3 laboratory)  
C. Total time of student participation: 45 hours  
   1) Lecture: 0 hours  
   2) Lab: 45 hours  
   3) Outside: 0 hours  
D. Required for the BSE major for students specializing in Electrical Engineering.  
E. Fees: Yes  
F. Grading Basis: A - F  
G. May be scheduled in any time frame but not less than 1 week per credit.  
H. This is a new course to UAA and offers hands on applications to concepts learned in EE A353.  
I. Coordinated with: BSE and UAA list serve.  
J. Course content and outcomes meet the criteria listed in the Curriculum Handbook for a 300 level course.  

III. Course Co-requisites:  
EE A353  

IV. Guidelines for Evaluation:  
Methods of evaluation may include but are not limited to:  
- Lab reports  
- Assignments  
- Exams
V. Course Outline
1. Frequency selective circuits and the transfer function.
2. Analysis of passive filters including:
   a) High-pass,
   b) Low-pass,
   c) Band-pass, and
   d) Notch filters.
3. Analysis of active filter circuits, including:
   a) High order op-amp filters, and
   b) nth order Butterworth filters.
4. Application of the Fourier series to circuit analysis.
5. Application of the Fourier and Laplace Transformations to circuit analysis.

VI. Instructional Goals and Student Outcomes
A. Instructional Goals
   The instructor will:
   1. Present applications of the Laplace transformation to circuit analysis.
   2. Introduce the concept of the transfer function, and its relationship to the impulse response and the convolution integral.
   3. Examine properties of frequency selective circuits, including both active and passive filters.
   4. Introduce students to the Fourier series and Fourier transformation.

B. Student Outcomes
   Upon completion of this course, students should be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
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<tbody>
<tr>
<td>Apply the Laplace transform in analysis of electric circuits.</td>
<td>Labs, quizzes and assignments.</td>
</tr>
<tr>
<td>Analyze frequency selective circuits through the concept of the transfer function for low-pass, high-pass, band-pass and notch filters.</td>
<td>Labs, quizzes and assignments.</td>
</tr>
<tr>
<td>Analyze active filters, including nth order Butterworth.</td>
<td>Labs, quizzes and assignments.</td>
</tr>
<tr>
<td>Analyze circuit behavior for periodic inputs using the Fourier Series.</td>
<td>Labs, quizzes and assignments.</td>
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<tr>
<td>Analyze circuit behavior for step and impulse functions through application of the Fourier Transform.</td>
<td>Labs, quizzes and assignments.</td>
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VII. Suggested Text
VIII. Bibliography


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

1a. School or College
EN SOENGR

1b. Division
No Division Code

1c. Department
EE

2. Course Prefix
EE

3. Course Number
A407

4. Previous Course Prefix & Number
N/A

5a. Credits/CEUs
3

5b. Contact Hours
(3+0)

6. Complete Course Title
Power Distribution

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

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

If a change, mark appropriate boxes:

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

9. Repeat Status No

10. Grading Basis
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date
From: Fall/2011 To: 9/999

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

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
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13b. Coordination Email
Date: 3-20-2011
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 3-28-2011

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)
Analysis of electrical power distribution and control systems, power flow control, symmetrical faults, power interruption, voltage variations, distributed generation, and economic dispatch with computer-aided analysis.

16a. Course Prerequisite(s) (list prefix and number)
EE A204, and EE A353

16b. Test Score(s)
N/A

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

16d. Other Restriction(s)
☒ College ☐ Major ☐ Class ☐ Level

16e. Registration Restriction(s) (non-codable)
N/A

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Updated course content guide and prerequisites to reflect changes in the structure of the BSE/EE program

Initiator Name (typed): Jens Munk
Initiator Signed Initials: _________  Date:________________

Initiator (faculty only)

Jens Munk

Initiator (TYPE NAME)

Approved

Disapproved

Dean/Director of School/College

Date

Disapproved

Undergraduate/Graduate Academic

Date

Approved

Board Chairperson

Approved

Provost or Designee

Date
COURSE CONTENT GUIDE
University of Alaska Anchorage, School of Engineering

EE A407
Power Distribution

Date: 21 March 2011

Course Number: EE A407
Course Title: Power Distribution
Credits: 3 (3+0)

I. Course Description
Analysis of electrical power distribution and control systems, power flow control, symmetrical faults, power interruption, voltage variations, distributed generation, and economic dispatch with computer-aided analysis.

II. Course Design
A. Designed for individuals majoring in the Bachelor of Science in Engineering.
B. Three (3) credit course (3 lecture + 0 laboratory)
C. Total time of student participation: 135 hours
   1) Lecture: 45 hours
   2) Lab: 0 hours
   3) Outside: 90 hours
D. Elective for the Bachelor of Science in Engineering degree.
E. Fees: Yes
F. Grading Basis: A - F
G. May be scheduled in any time frame but not less than 1 week per credit.
H. Coordinated with: BSE program and UAA list serve.
I. Course outcomes meet the criteria listed in the Curriculum Handbook for a 400 level course.

III. Course Prerequisites:
EE A204, and EE A353

IV. Guidelines for Evaluation:
Methods of evaluation may include but are not limited to:
• Assignments
• Exams
• Projects

V. Course Outline
A. Lecture
   1. Terminology
   2. Power Components
VI. Instructional Goals and Student Outcomes

A. Instructional Goals
The Instructor will:
1. Provide an understanding of design factors in electrical power components.
2. Provide an understanding of design factors in electrical power systems.
3. Provide an ability to design power distribution and power quality control systems.
4. Instill the importance of professionalism in the students and in their interaction with others.

B. Student Outcomes
Upon completion of this course, students will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
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<tbody>
<tr>
<td>Calculate voltage sags and interruptions.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Determine transient over-voltages and their relationship to power distribution.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Apply voltage variation and harmonic indices.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Determine, and apply the concepts of power generation and control in the design of power systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Demonstrate professionalism in interactions with colleagues, faculty, and staff.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
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VII. Suggested Texts

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

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<th>1c. Department</th>
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13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

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<td>Jens Munk</td>
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<td>03/20/2011</td>
<td>Jens Munk</td>
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13b. Coordination Email: 03/18/2011  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison: 03/28/2011

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)  
Response of mechanical systems to internal and external forces. Free and forced vibration, random vibration. Discrete and continuous systems. Vibration parameter measurements and stability criteria.

16a. Course Prerequisite(s) (list prefix and number)  
[ENGR A161 or ES A201] and [ES A208 or ES A210] and MATH A302.

16b. Test Score(s)  
N/A

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

16d. Other Restriction(s)  
[ ] College  [ ] Major  [ ] Class  [ ] Level

16e. Registration Restriction(s) (non-codable)  
N/A

17. [ ] Mark if course has fees

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

19. Justification for Action  
No longer cross listed with ME A408

Initiator Name (typed): Jens Munk  
Initiator Signed Initials: _____________  
Date: __________________

13d. Coordination Email Date: 03/18/2011

13e. Coordination with Library Liaison Date: 03/28/2011

14. General Education Requirement

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

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

16b. Test Score(s)

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

16d. Other Restriction(s)

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

17. Mark if course has fees

18. Mark if course is a selected topic course

19. Justification for Action

No longer cross listed with ME A408

Initiator (faculty only)  
Initiator (TYPE NAME)  
Jens Munk

Initiator (faculty only) Date: _____________

Initiator (TYPE NAME)  
Jens Munk

[ ] Approved  
[ ] Disapproved  
Dean/Director of School/College  
Date: _____________

[ ] Approved  
[ ] Disapproved  
Undergraduate/Graduate Academic  
Date: _____________

[ ] Approved  
[ ] Disapproved  
Board Chairperson  
Date: _____________

[ ] Approved  
[ ] Disapproved  
Provost or Designee  
Date: _____________

571
### Course Action Request

**University of Alaska Anchorage**

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

---

#### 1a. School or College
EN SOENGR

#### 1b. Division
No Division Code

#### 1c. Department
ME

#### 2. Course Prefix
ME

#### 3. Course Number
A408

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

#### 5a. Credits/CEUs
3

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

---

#### 6. Complete Course Title
Mechanical Vibrations

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

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

#### 8. Type of Action:
- Add
- Change
- Delete

**If a change, mark appropriate boxes:**

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

---

#### 9. Repeat Status No

#### 10. Grading Basis
- A-F
- P/np
- NG

---

#### 11. Implementation Date

**From:** Fall/2011
**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](http://www.uaa.alaska.edu/governance).

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<th>Chair/Coordinator Contacted</th>
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<td>3/16/2011</td>
<td>Jeff Hoffman</td>
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#### 13b. Coordination Email
Date: 03/18/2011

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

#### 13c. Coordination with Library Liaison
Date: 03/28/2011

---

#### 14. General Education Requirement
Mark appropriate box:

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

---

#### 15. Course Description
*suggested length 20 to 50 words*

Modeling of vibratory mechanical systems with single and multiple degrees of freedom. Study of free and forced vibrations with or without damping by lumped-parameter methods and finite element analysis. Vibrations of rotor systems and vibration monitoring.

#### 16a. Course Prerequisite(s) (*list prefix and number*)
ME A306 and ES A331

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

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

#### 16d. Other Restriction(s)

- College
- Major
- Class
- Level

#### 16e. Registration Restriction(s) (*non-codable*)
N/A

#### 17. Mark if course has fees

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

---

#### 19. Justification for Action

Course description, contact hours, and prerequisites are updated. This course is being added to the mechanical engineering electives as it is an important topic for those students involved with system dynamics. Specifically, system dynamics consisting of mass, springs and dampers. Cross listing with EE was also dropped as this class content changed into solely mechanical systems.

---

**Initiator Name (typed): Jeffrey Hoffman**

**Initiator Signed Initials:**

**Date:**

---

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

---

**Approved**

Dean/Director of School/College

**Date**

---

**Approved**

Undergraduate/Graduate Academic

Board Chairperson

**Date**

---

**Approved**

Provost or Designee

**Date**

---

**Initiator (faculty only) Jeffrey Hoffman**

**Initiator (TYPE NAME)**

**Approved**

**Disapproved**

**Date**

---

**Approved**

**Disapproved**

**Date**

---

Date 572
1. **Change Date:** March 2011

2. **Course Information**
   A. **College:** School of Engineering
   B. **Course Prefix:** ME
   C. **Course Number:** A408
   D. **Number of Credits and Contact Hours**
      - Number of Credits: 3
      - Contact Hours: 3 + 0
   E. **Course Title:** Mechanical Vibrations
   F. **Grading Basis:** A-F
   G. **Implementation Date:** Fall 2011
   H. **Course Description:** Modeling of vibratory mechanical systems with single and multiple degrees of freedom. Study of free and forced vibrations with or without damping by lumped-parameter methods and finite element analysis. Vibrations of rotor systems and vibration monitoring.
   I. **Course Prerequisites:** ME A306 Dynamics of Systems and ES A331 Mechanics of Materials
   J. **Course Fee:** Yes

3. **Course Level Justification**
   This course integrates concepts of dynamics of rigid bodies and mechanics of materials applied to vibratory mechanical systems. It utilizes basic and more advanced methods of modeling and analyzing the vibrations of mechanical systems. The course introduces the dynamic finite element method and related software to solve practical/industrial vibration applications. The material prepares the student to be able to model, analyze and design vibration systems by utilizing a variety of analytical/numerical procedures and tools.

4. **Instructional Goals and Student Outcomes**

   **Instructional Goals**
   The instructor will:
   1. Provide an understanding of the main concepts governing the vibrations of mechanical systems.
   2. Integrate the necessary notions of dynamics of rigid bodies and mechanics of materials into models of vibratory mechanical systems.
   3. Present the types of vibratory systems, inputs, and outputs (responses), as well as the physical/mathematical procedures for modeling, analysis and design.
   4. Provide an understanding of the utilization and application of computational tools in the analysis of vibratory mechanical systems.
   5. Encourage individual problem solving approaches as well as team approaches to projects involving mechanical vibrations.
### Student Outcomes
The student will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand the simplified lumped-parameter modeling of vibratory mechanical systems consisting of springs, masses, and dampers.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Identify and characterize vibratory mechanical systems with one or with multiple degrees of freedom.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Analyze the natural response, the free damped response, and the forced response of vibratory mechanical systems by using lumped-parameter models.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Understand the basic principles of the dynamic finite element method and apply the related software to solve mechanical vibration problems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Apply modern computational tools to model, analyze, and design mechanical systems undergoing vibrations.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Gain knowledge of the methods and instruments needed to sense, monitor and generate mechanical vibrations.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Acquire capabilities of working individually in problem solving and in a team to analyze and design a complex mechanical vibrations project.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Interact professionally with colleagues and the instructor in critical analyses of mechanical vibration problems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>

5. **Evaluation and Assessment Methods**
Students will be evaluated using a variety of tools at the instructor's discretion including critical discussions/analysis of concepts and applications, class project, in-class presentations, homework assignments, quizzes, midterm exams, and a final/comprehensive exam.

6. **Topical Course Outline**

   A. Kinematics of mechanical vibrations
      1. Harmonic motion and its qualifiers
2. Combination (addition) of harmonic motions
3. Fourier decomposition of non-harmonic motions
4. Degrees of freedom

B. Elements of vibratory mechanical systems
1. Springs
2. Inertia
3. Dampers

C. Free vibrations
1. Free undamped response, natural frequencies, and eigenvectors
2. Free damped response

D. Forced harmonic vibrations

E. General forced vibrations

F. Rotordynamics

G. Finite element analysis of mechanical vibrations
1. Basics of finite element modeling
2. Finite element analysis by commercially-available software

H. Mechanical vibration transduction
1. Sensing, monitoring
2. Actuation

7. Suggested Text

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
<tr>
<td>EN SOENGR</td>
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<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours</th>
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<td>(Lecture + Lab)</td>
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<th>6. Complete Course Title</th>
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<tr>
<td>Integrated Circuit Design</td>
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<tr>
<td>Integrated Circuit Design</td>
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<th>7. Type of Course</th>
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<td>☑ Academic</td>
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<td>☐ Preparatory/Development</td>
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<td>☐ Non-credit</td>
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<tr>
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<td>☐ Delete</td>
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<th>9. Repeat Status No</th>
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<th>Max Credits</th>
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<th>10. Grading Basis</th>
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<tr>
<td>☑ A-F</td>
</tr>
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<td>☐ P/NP</td>
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<th>11. Implementation Date</th>
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<tr>
<td>From: Fall/2011 To: /9999</td>
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<th>13. Co-requisites</th>
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<td>☐ Co-requisite(s)</td>
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<th>13a. Impacted Courses or Programs:</th>
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Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s)</th>
<th>Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<td>Submitted to Faculty Listserv:</td>
<td>(<a href="mailto:uaa-faculty@lists.uaa.alaska.edu">uaa-faculty@lists.uaa.alaska.edu</a>)</td>
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| 13c. Coordination with Library Liaison Date: | 3-28-2011 |

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<th>14. General Education Requirement</th>
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<td>☐ Written Communication</td>
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<td>☐ Quantitative Skills</td>
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<tr>
<td>☐ Natural Sciences</td>
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<td>☐ Humanities</td>
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<table>
<thead>
<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
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<tr>
<td>Develops the design and fabrication of integrated circuits (ICs) used in computer electronics. Describes the material properties, methods of charge transport, energy exchanges, fundamentals of device fabrication, and fabrication process capabilities and limits. Electrical characteristics, timing considerations, heat and power considerations, and reliability of IC devices.</td>
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<th>16b. Test Score(s)</th>
<th>16c. Co-requisite(s) (concurrent enrollment required)</th>
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<th>17. ☑ Mark if course has fees</th>
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| 18. ☑ Mark if course is a selected topic course |

<table>
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<th>19. Justification for Action</th>
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<tr>
<td>Updated course content guide and prerequisites to reflect changes in the structure of the BSE/EE program</td>
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<th>Board Chairperson Date</th>
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<tr>
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</table>
COURSE CONTENT GUIDE
University of Alaska Anchorage, School of Engineering

EE A441
Integrated Circuit Design

Date: March 21, 2011

Course Number: EE A441
Course Title: Integrated Circuit Design
Credits: 3 (3+0)

I. Course Description
Develops the design and fabrication of integrated circuits (ICs) used in computer electronics. Describes the material properties, methods of charge transport, energy exchanges, fundamentals of device fabrication, and fabrication process capabilities and limits. Electrical characteristics, timing considerations, heat and power considerations, and reliability of IC devices.

II. Course Design
A. Designed for individuals in the BSE program with a specialization in Electrical Engineering.
B. One (3) credit course (3 lecture + 0 laboratory)
C. Total time of student participation: 135 hours
   1) Lecture: 45 hours
   2) Lab: 0 hours
   3) Outside: 90 hours
D. Required for the BSE major for students specializing in Electrical Engineering.
E. Fees: Yes
F. Grading Basis: A - F
G. May be scheduled in any time frame but not less than 1 week per credit.
H. Coordinated with: BSE and UAA list serve.
I. Course content and outcomes meet the criteria listed in the Curriculum Handbook for a 400 level course.

III. Course prerequisites:
CHEM A105, and EE A204, and EE A353

IV. Guidelines for Evaluation:
Methods of evaluation may include but are not limited to:
• Assignments
• Exams
V. Course Outline
1. Resistors
2. Conductivity
3. Lithography and diffusion of components
4. Intrinsic and doped materials
5. Electron and hole generation
6. Carrier mobility
7. Energy band model
8. Capacitance and voltage dependence
9. Junction parameters
10. Metal oxide semiconductor capacitors
11. Rectifying diode
12. Device parameters
13. Breakdown phenomena
14. Analog circuits
15. Digital circuits
16. Field effect transistors
17. Bipolar junction transistors
18. Photonic devices
19. Light emitting diodes
20. High frequency devices
21. Failure mechanisms in device reliability

VI. Instructional Goals and Student Outcomes
A. Instructional Goals
   The instructor will:
   1. Present theories and concepts surrounding the fundamentals of solid state physics.
   2. Describe charge transport, pn junctions and transistor concepts.
   3. Present practical applications of solid state electronics in modern systems and engineering.

B. Student Outcomes
   Upon completion of this course, students should be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe the materials and processes used to produce integrated circuits.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Distinguish among the families of IC devices and evaluate their use in creating digital circuits.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Analyze the operations of typical devices and determine their voltage, current, power, and timing parameters.</td>
<td>This outcome will be assessed through assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>
VII. Suggested Text


VIII. Bibliography

## Course Action Request

### University of Alaska Anchorage

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
<tr>
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<td></td>
<td>EE</td>
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</table>

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<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE</td>
<td>A462</td>
<td>N/A</td>
<td>3</td>
<td>(3+0)</td>
</tr>
</tbody>
</table>

### 6. Complete Course Title

**Communication Systems**

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

### 7. Type of Course

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

### 8. Type of Action:

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

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

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

### 10. Grading Basis

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

### 11. Implementation Date

From: Fall/2011 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](http://www.uaa.alaska.edu/governance).

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordinating</th>
<th>Chair/Coordinator Contacted</th>
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<tr>
<td>1. BSE/EE and BSE/CSE Major</td>
<td>228</td>
<td>3-20-2011</td>
<td>Jens Munk</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
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</table>

Initiator Name (typed): Jens Munk

Initiator Signed Initials: _________ Date:________________

### 13b. Coordination Email

Date: 3-20-2011

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

### 13c. Coordination with Library Liaison

Date: 3-28-2011

### 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 behind the design and operation of electronic communication systems. Includes the mathematical representation of signal and system components and their interaction. Covers power spectra, modulation techniques, frequency response of media and components, detection and recovery of information, and the effects of noise.

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

EE A354

### 16b. Test Score(s)

N/A

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

N/A

### 16d. Other Restriction(s)

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

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

N/A

### 17. Mark if course has fees

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

### 19. Justification for Action

Updated course content guide and prerequisites to reflect changes in the structure of the BSE/EE program

Initiator (faculty only) Date

Jens Munk

Initiator (TYPE NAME)

Approved

Disapproved

Dean/Director of School/College Date

Approved

Disapproved

Undergraduate/Graduate Academic Date

Approved

Disapproved

Board Chairperson

Approved

Disapproved

Provost or Designee Date
I. Course Description
Develops the theory behind the design and operation of analog and digital electronic communication systems. Includes the mathematical representation of signal and system components and their interaction. Covers power spectra, modulation techniques, frequency response of media and components, detection and recovery of information, and the effects of noise.

II. Course Design
A. Designed for individuals majoring in the Bachelor of Science in Engineering degree, with a specialization in Electrical Engineering.
B. Three (3) credit course (3 lecture + 0 laboratory)
C. Total time of student participation: 135 hours
   1) Lecture: 45 hours
   2) Lab: 0 hours
   3) Outside: 90 hours
D. Elective for the Bachelor of Science in Engineering degree with specializations in Computer Systems or Electrical Engineering
E. Fees: Yes
F. Grading Basis: A - F
G. May be scheduled in any time frame but not less than 1 week per credit.
H. Coordinated with BSE program and UAA list serve.
I. Course content and outcomes meet the criteria listed in the Curriculum Handbook for a 400 level course.

III. Course Prerequisites:
EE A354

IV. Guidelines for Evaluation:
Methods of evaluation may include but are not limited to:
• Quizzes
• Exams
• Additional Study / Research
V. Course Outline
A. Lecture
   1. Introduction
   2. Signals
   3. Signal Transmission and Analysis
   4. Amplitude Modulation
   5. Angle Modulation
   6. Sampling and Pulse Code Modulation
   7. Digital Transmission
   8. Emerging Technologies

VI. Instructional Goals and Student Outcomes
A. Instructional Goals
   The instructor will:
   1. Develop student independence in engineering study and academics
   2. Expand student knowledge in communications systems and system design
   3. Broaden student knowledge in Signals and Systems course content to include practical communications applications.

B. Student Outcomes
   Upon completion of this course, students will be able to do the following.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
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</thead>
<tbody>
<tr>
<td>Perform critical analysis of modulation</td>
<td>Assignments, quizzes, exams,</td>
</tr>
<tr>
<td>and signaling systems</td>
<td>discussions, and projects.</td>
</tr>
<tr>
<td>Analyze power spectra of communications</td>
<td>Assignments, quizzes, exams,</td>
</tr>
<tr>
<td>channels</td>
<td>discussions, and projects.</td>
</tr>
<tr>
<td>Analyze communications systems block</td>
<td>Assignments, quizzes, exams,</td>
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<tr>
<td>diagrams</td>
<td>discussions, and projects.</td>
</tr>
<tr>
<td>Quantify signal to noise and channel</td>
<td>Assignments, quizzes, exams,</td>
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<tr>
<td>quality parameters</td>
<td>discussions, and projects.</td>
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VII. Suggested Texts

VIII. Bibliography
1a. School or College  
EN SOENGR  
1b. Division  
No Division Code  
1c. Department  
EE  

2. Course Prefix  
EE  
3. Course Number  
A465  
4. Previous Course Prefix & Number  
N/A  
5a. Credits/CEUs  
3  
5b. Contact Hours  
(Lecture + Lab)  
(3+0)  

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

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

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

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

9. Repeat Status No  
# of Repeats  
Max Credits  

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

11. Implementation Date  
semester/year  
From:  Fall/2011  
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.  

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<tr>
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<td>228</td>
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<td>Jens Munk</td>
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<td>4-16-2011</td>
<td>Jens Munk</td>
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Initiator Name (typed): Jens Munk  
Initiator Signed Initials: _________  Date:________________  

13b. Coordination Email  
Date:  3-20-2011  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)  

13c. Coordination with Library Liaison  
Date:  3-28-2011  

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)  
Emphasis in data transmission, guided and wireless transmission, signal encoding, digital data, multiplexing, and circuit and packet switching. Analyze data communications, networking, protocols, and standards.  

16a. Course Prerequisite(s) (list prefix and number)  
EE A354  
16b. Test Score(s)  
16c. Co-requisite(s) (concurrent enrollment required)  
N/A  
16d. Other Restriction(s)  
☐ College  
☐ Major  
☐ Class  
☐ Level  
16e. Registration Restriction(s) (non-codable)  
N/A  

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

19. Justification for Action  
Updated course content guide and prerequisites to reflect changes in the structure of the BSE/EE program  

Initiator (faculty only)  
Jens Munk  
Initiator (TYPE NAME)  

Approved  
Disapproved  
Dean/Director of School/College  
Date  

Approved  
Disapproved  
Undergraduate/Graduate Academic  
Board Chairperson  
Date  

Approved  
Disapproved  
Provost or Designee  
Date  

Approved  
Disapproved  
Department Chairperson  
Date  

Approved  
Disapproved  
Curriculum Committee Chairperson  
Date  

583
COURSE CONTENT GUIDE  
University of Alaska Anchorage, School of Engineering

EE A465  
Telecommunications

Date: 22 March 2011

Course Number: EE A465  
Course Title: Telecommunications  
Credits: 3 (3+0)

I. Course Description  
Emphasis in data transmission, guided and wireless transmission, signal encoding, digital data, multiplexing, and circuit and packet switching. Analyze data communications, networking, protocols, and standards.

II. Course Design  
A. Designed for individuals majoring in the Bachelor of Science in Engineering degree specializing in Electrical Engineering or Computer Systems Engineering.  
B. Three (3) credit course (3 lecture + 0 laboratory)  
C. Total time of student participation: 135 hours  
   1) Lecture: 45 hours  
   2) Lab: 0 hours  
   3) Outside: 90 hours  
D. Required for students in the Bachelor of Science degree with specialization in Electrical Engineering.  
E. Fees: Yes  
F. Grading Basis: A - F  
G. May be scheduled in any time frame but not less than 1 week per credit.  
H. Coordinated with: BSE faculty and UAA list serve.  
I. Course content and outcomes meet the criteria listed in the Curriculum Handbook for a 400 level course.

III. Course Prerequisites:  
EE A354

IV. Guidelines for Evaluation:  
Methods of evaluation may include but are not limited to:  
• Assignments  
• Exams  
• Projects
V. Course Outline
   A. Lecture
      1. Data Transmission
      2. Guided and Wireless Transmission
      3. Signal Encoding Techniques
      4. Digital Data Communication
      5. Data Link Control
      6. Routing Switched Networks
      7. Cellular Wireless Networks
      8. Congestion Control
      9. High-Speed-LANs (Local Area Network)
     10. Wireless LANs

VI. Instructional Goals and Student Outcomes
   A. Instructional Goals
      The instructor will:
      1. Provide an understanding of data transmission.
      2. Provide an understanding of guided and wireless transmission.
      3. Provide an understanding of digital data communication and data links.
      4. Provide an understanding of switched and wireless networks.
      5. Provide an understanding of high speed and wireless LANs.
      6. Instill the importance of professionalism in the students and in their interaction with others.

   B. Student Outcomes
      Upon completion of this course, students will be able to do the following.

      | Outcome                                      | Assessment                                      |
      |---------------------------------------------|------------------------------------------------|
      | Analyze data transmission.                  | Assignments, quizzes, exams, discussions, and projects. |
      | Analyze digital data communication and data links. | Assignments, quizzes, exams, discussions, and projects. |
      | Analyze switched and wireless networks.      | Assignments, quizzes, exams, discussions, and projects. |
      | Analyze high speed and wireless LANs.        | Assignments, quizzes, exams, discussions, and projects. |
      | Practice professionalism in their work and interaction with others. | Assignments, quizzes, exams, discussions, and projects. |
VII. Suggested Texts

VIII. Bibliography
Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>EN SOENGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1b. Division</td>
<td>No Division Code</td>
</tr>
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<td>1c. Department</td>
<td>EE</td>
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<td>2. Course Prefix</td>
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<td>4. Previous Course Prefix &amp; Number</td>
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<td>5b. Contact Hours</td>
<td>(Lecture + Lab) (3+0)</td>
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6. Complete Course Title
Automatic Control
Automatic Control

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  ☐ Co-requisites  ☐ Registration Restrictions
☐ Other Restrictions
☐ Level
☐ College
☐ Major
(please specify)

9. Repeat Status No
# of Repeats
Max Credits

10. Grading Basis
☐ A-F  ☐ P/NP  ☐ NG

11. Implementation Date
semester/year
From: Fall/2011  To:  /9999

12. ☒ Cross Listed with ME A471
☐ Stacked with Cross-Listed Coordination Signature

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

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<td>03/01/2011</td>
<td>Jens Munk</td>
</tr>
<tr>
<td>2. BSE/ME Major</td>
<td>229</td>
<td>03/01/2011</td>
<td>Jeff Hoffman</td>
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<td>3. BSE/ME Minor</td>
<td>233</td>
<td>03/01/2011</td>
<td>Jeff Hoffman</td>
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Initiator Name (typed): Jeff Hoffman  Initiator Signed Initials: _________  Date: _________

13b. Coordination Email
Date: 03/18/2011
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 03/21/2011

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)
Feedback control of linear mechanical and electrical systems by using block diagrams with transfer functions of plants, controllers, sensors, and actuators. Stability analysis with transfer-function and state-space models. Transient, steady-state analysis, frequency-domain analysis, and design of control systems with Bode plots and the Nyquist criterion.

16a. Course Prerequisite(s) (list prefix and number)
MATH A302, and [ES A208 or ES A210], and [EE A353 or ME/EE A306]

16b. Test Score(s)

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

16d. Other Restriction(s)
☐ College  ☐ Major  ☐ Class  ☐ Level

16e. Registration Restriction(s) (non-codable)
N/A

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Course description and prerequisites are updated.

Initiator (faculty only)
Jeff Hoffman

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  Date

☑ Approved  ☐ Disapproved
Provost or Designee  Date

☑ Approved  ☐ Disapproved
Board Chairperson  Date
1. **Change Date:** November 2010

2. **Course Information**
   A. College: School of Engineering
   B. Course Prefix: EE
   C. Course Number: A471
   D. Number of Credits and Contact Hours
      Number of Credits: 3
      Contact Hours: 3 + 0
   E. Course Title: Automatic Control
   F. Grading Basis: A-F
   G. Implementation Date: Fall 2011
   H. Cross Listing: ME A471
   I. Course Description: Feedback control of linear mechanical and electrical systems by using block diagrams with transfer functions of plants, controllers, sensors, and actuators. Stability analysis with transfer-function and state-space models. Transient, steady-state, analysis, frequency-domain analysis, and design of control systems with Bode plots and the Nyquist criterion.
   J. Course Prerequisites: MATH A302, and [ES A208 or ES A210], and [EE A353 or ME/EE A306]
   K. Course Fee: Yes

3. **Course Level Justification**
   This course utilizes knowledge gained from prerequisite courses to model the time and frequency responses of mechanical and electrical feedback control systems. The course is based on the Laplace transform, the related transfer function approach, and the state space model. The material prepares the student to be able to model, analyze, and design simple and complex feedback control systems by means of analytical procedures and numerical tools available in MATLAB and Simulink. The main emphasis areas are stability, transient response and steady-state response of feedback control systems.

4. **Instructional Goals and Student Outcomes**

   **Instructional Goals**
   The instructor will:
   1. Introduce the concepts of linear open-loop and closed-loop (feedback) control systems of mechanical and electrical engineering applications.
   2. Provide an understanding of applying the Laplace transform and deriving transfer functions to model systems (plants), controllers, sensors, and actuators in feedback control systems.
3. Utilize the concepts of coupled systems in modeling sensing and actuation of feedback control systems.
4. Provide an understanding of the actions produced by proportional, derivative, and integrative controllers.
5. Facilitate the understanding of stability, transient response, and steady-state response of feedback control systems.
6. Introduce the students to modern tools for the analytical/numerical modeling, analyzing, and designing of feedback control systems by means of MATLAB and Simulink.
7. Encourage individual problem solving approaches as well as team approaches to designing feedback control systems.

**Student Outcomes**
The student will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
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<tbody>
<tr>
<td>Describe the concepts and main features of linear feedback control as a means to conveniently adjust the dynamic response of mechanical and electrical systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Derive transfer functions by using the Laplace transform for plants, controllers, sensors, and actuators in a variety of mechanical and electrical system applications.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Utilize proportional, derivative, and/or integrative control actions to achieve the desired dynamic behavior of a feedback control system.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Characterize the stability, the transient response, and the steady-state response of feedback control systems in the time domain as well as in the frequency domain.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Demonstrate proficiency in using various solution methods and modern computational tools to model, analyze, and design feedback control systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Work individually in problem solving as well as in teams to complete an engineering control project.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Interact professionally with colleagues and the instructor in analyses of feedback control system applications.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
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</tbody>
</table>
5. **Evaluation and Assessment Methods**
Students will be evaluated using a variety of tools at the instructor's discretion including critical discussions/analysis of concepts and applications, class project, in-class presentations, homework assignments, quizzes, midterm exams, and a final/comprehensive exam.

6. **Topical Course Outline**
   A. Time-domain modeling of open-loop systems
      1. Mechanical and electrical elements; open-loop systems
      2. Laplace transforms and transfer functions
      3. State space modeling
   B. Closed-loop feedback control systems
      1. Controllers: proportional, derivative, integrative
      2. Plants, sensors, and actuators
      3. Block diagrams and transfer functions of basic feedback control systems
   C. Stability of feedback control systems
      1. Routh-Hurwitz criterion
      2. MATLAB stability analysis
      3. State space stability
   D. Transient response of feedback control systems
      1. Poles and zeroes
      2. First-order systems
      3. Second-order systems
   E. Steady-state response and errors
      1. Unity-feedback systems
      2. Nonunity-feedback systems
      3. Errors for systems with disturbances
   F. Root locus method
      1. Sketching the root locus
      2. MATLAB plotting of the root locus
      3. Analysis by the root locus method
      4. Design by the root locus method
   G. Frequency-domain methods
      1. Bode plots
      2. Nyquist criterion
      3. Analysis in the frequency domain
      4. Design in the frequency domain

7. **Suggested Text**

8. **Bibliography**
Proposal to Initiate, Add, Change, or Delete a Course

**Course Action Request**

**University of Alaska Anchorage**

Automatic Control

**Initiator Name (typed):** Jeff Hoffman

**Initiator Signed Initials:**

---

**1a. School or College**
EN SOENGR

**1b. Division**
No Division Code

**1c. Department**
ME

**2. Course Prefix**
ME

**3. Course Number**
A471

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

**5a. Credits/CEUs**
3

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

**6. Complete Course Title**
Automatic Control

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

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

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

**9. Repeat Status No**

**# of Repeats**

**Max Credits**

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

**11. Implementation Date**

**semester/year**

**From:** Fall/2011

**To:** /9999

**12. X Cross Listed with** EE A471

**Cross Listed with**

**Cross-Listed Coordination Signature**

---

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

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

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**Initiator Name (typed): Jeff Hoffman**

**Initiator Signed Initials:**

**Date:**

---

**13b. Coordination Email**
Date: 03/18/2011

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

**13c. Coordination with Library Liaison**
Date: 03/21/2011

---

**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)

Feedback control of linear mechanical and electrical systems by using block diagrams with transfer functions of plants, controllers, sensors, and actuators. Stability analysis with transfer-function and state-space models. Transient, steady-state analysis, frequency-domain analysis, and design of control systems with Bode plots and the Nyquist criterion.

---

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

MATH A302, and [ES A208 or ES A210], and [EE A353 or ME/EE A306]

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

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

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

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

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

N/A

---

**17. X Mark if course has fees**

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

---

**19. Justification for Action**

Course description and prerequisites are updated.

---

**Initiator (faculty only)**
Jeff Hoffman

**Initiator (TYPE NAME)**

<table>
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**Dean/Director of School/College**
Date

**Undergraduate/Graduate Academic**

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**Board Chairperson**
Date

**Provost or Designee**
Date

---

591
1. **Change Date:** November 2010

2. **Course Information**
   A. College: School of Engineering
   B. Course Prefix: ME
   C. Course Number: A471
   D. Number of Credits and Contact Hours
      Number of Credits: 3
      Contact Hours: 3 + 0
   E. Course Title: Automatic Control
   F. Grading Basis: A-F
   G. Implementation Date: Fall 2011
   H. Cross Listing: EE A471
   I. Course Description: Feedback control of linear mechanical and electrical systems by using block diagrams with transfer functions of plants, controllers, sensors, and actuators. Stability analysis with transfer-function and state-space models. Transient, steady-state, analysis, frequency-domain analysis, and design of control systems with Bode plots and the Nyquist criterion.
   J. Course Prerequisites: MATH A302, and [ES A208 or ES A210], and [EE A353 or ME/EE A306]
   K. Course Fee: Yes

3. **Course Level Justification**
   This course utilizes knowledge gained from prerequisite courses to model the time and frequency responses of mechanical and electrical feedback control systems. The course is based on the Laplace transform, the related transfer function approach, and the state space model. The material prepares the student to be able to model, analyze, and design simple and complex feedback control systems by means of analytical procedures and numerical tools available in MATLAB and Simulink. The main emphasis areas are stability, transient response and steady-state response of feedback control systems.

4. **Instructional Goals and Student Outcomes**

   **Instructional Goals**
   The instructor will:
   1. Introduce the concepts of linear open-loop and closed-loop (feedback) control systems of mechanical and electrical engineering applications.
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4. Provide an understanding of the actions produced by proportional, derivative, and integrative controllers.
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<tr>
<td>electrical systems.</td>
<td></td>
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<td>the frequency domain.</td>
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<td>Demonstrate proficiency in using various solution methods and modern</td>
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<td>computational tools to model, analyze, and design feedback control</td>
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6. Topical Course Outline
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   4. Design by the root locus method
G. Frequency-domain methods
   1. Bode plots
   2. Nyquist criterion
   3. Analysis in the frequency domain
   4. Design in the frequency domain

7. Suggested Text

8. Bibliography
This course is an introduction to the use of solid modeling in engineering. The process of creating solid parts, assemblies, and fabrication-ready drawings in addition to kinematics of linkages will be covered. Rapid prototyping technologies such as three dimensional printing will be used as laboratory exercises.

Mark if course is a selected topic course

17. ☑ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action

This new course was created to fulfill a need to teach students solid modeling earlier in the curriculum, thus allowing students to use this emerging approach to engineering in upper level classes for topics such as finite element heat transfer, strength of materials, kinematic analysis of mechanisms, rapid prototyping, and computer numerical control (CNC) manufacturing.

Initiator (TYPE NAME)

Jeffrey Hoffman

Initiator (faculty only)

Date

Dean/Director of School/College

Date

Disapproved

Approved

Disapproved

Department Chairperson

Date

Approved

Undergraduate/Graduate Academic

Date

Disapproved

Board Chairperson

Approved

Provost or Designee

Date

Disapproved

Curriculum Committee Chairperson

Date

Approved

Provost or Designee

Date

Disapproved

Provost or Designee

Date

Approved

Provost or Designee

Date

Disapproved

Provost or Designee

Date

Approved

Provost or Designee

Date
2. Course Information
A. College: School of Engineering
B. Course Prefix: ME
C. Course Number: A280
D. Number of Credits and Contact Hours
   Number of Credits: 3
   Contact Hours: 2 + 2
E. Course Title: Solid Modeling for Engineers
F. Grading Basis: A-F
G. Implementation Date: Fall 2011
H. Cross Listing: none
I. Course Description: This course is an introduction to the use of solid modeling in engineering. The process of creating solid parts, assemblies, and fabrication-ready drawings in addition to kinematics of linkages will be covered. Rapid prototyping technologies such as three dimensional printing will be used as laboratory exercises.
J. Course Prerequisites: ENGR A105A and ENGR A105B and ENGR A105C
K. Course Fee: Yes

3. Course Level Justification
This course assumes proficiency of two dimensional computer aided design software and trigonometry which is the competency of a sophomore level student.

4. Instructional Goals and Student Outcomes

Instructional Goals
The instructor will:
1. Cover the solid modeling software and the techniques commonly used within parametric modeling software packages for creating solid parts, assemblies, and drawings.
2. Introduce the concept of evaluating and designing linkages (and mechanisms) as software based assemblies.
3. Provide instruction on how to tolerance drawings effectively to overcome stack up issues created by manufacturing variability.
4. Explore the use of solid models for creating solid parts through hands on exercises using a three dimensional printer.
5. Encourage creativity of the design process through assignments where the students model unique solutions using the solid modeling software.

Student Outcomes
The student will be able to:
<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface with the solid modeling software showing proficiency in creating unique parts, assemblies, and drawings.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Apply common techniques for designing and evaluating the kinematics of linkages.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Calculate acceptable tolerances required to effectively manufacture parts and their subsequent assemblies considering manufacturing variability.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Apply the abilities of a virtual build of parts and assemblies to provide creatively engineered solutions.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Build solid plastic parts created in the software through the use of a three dimensional printer.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>

5. **Evaluation and Assessment Methods**

Students will be evaluated through homework assignments, midterm exams, lab assignments, projects, and a final comprehensive exam.

6. **Topical Course Outline**

A. Two dimensional Sketching

B. Creation of parts
   1. Extrusions
   2. Revolutions
   3. Sweeps
   4. Lofts
   4. Cuts
   5. Patterns
   6. Sheet metal options
   7. Fillets and Chamfers

C. Assemblies
   1. Mating commands
   2. Kinematic studies of assemblies
   3. Using parametric modeling variables for assemblies
   4. Animation of assemblies

D. Drawings
   1. Creation of drawings
   2. The use of drawing template standards
   3. Detailing drawings for manufacture
   4. Stack up analysis of assemblies for manufacturing
5. Introduction to geometric dimensional and tolerancing schemes.
6. Stack up analysis of assemblies

E. Rapid Prototyping
   1. Three dimensional printing

7. **Suggested Text**

8. **Bibliography**


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

2. Course Prefix  
ME
3. Course Number  
A334
4. Previous Course Prefix & Number  
N/A
5a. Credits/CEUs  
3
5b. Contact Hours  
(Lecture + Lab)  
(2+3)

6. Complete Course Title  
Elements of Materials Science
Abbreviated Title for Transcript (30 character)

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

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

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

9. Repeat Status No  # of Repeats  Max Credits

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

11. Implementation Date  
From: Fall/2011  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](http://www.uaa.alaska.edu/governance).

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>2. General Engineering, Minor</td>
<td>232</td>
<td>3/16/2011</td>
<td>Jeff Hoffman</td>
</tr>
</tbody>
</table>

Initiator Name (typed): Jeff Hoffman  
Initiator Signed Initials: ________  
Date: __________

13b. Coordination Email  
Date: 03/18/2011  
submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 03/28/2011

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

15. Course Description (suggested length 20 to 50 words)  
Investigation and study of crystal structure, defect structure, aspects of metal processing, heat treatment, joining, testing, failure analysis, and phase diagrams for engineering applications and design.

16a. Course Prerequisite(s) (list prefix and number)  
CHEM A106 and PHYS A211

16b. Test Score(s)  
16c. Co-requisite(s) (concurrent enrollment required)  
N/A

16d. Other Restriction(s)  
☐ College  ☐ Major  ☐ Class  ☐ Level

16e. Registration Restriction(s) (non-codable)  
N/A

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
Course title and contact hours are updated.

Initiator (faculty only)  
Jeffrey Hoffman  
Initiator (TYPE NAME)

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

☑ Approved  ☐ Disapproved  Undergraduate/Graduate Academic Board Chairperson  Date

☑ Approved  ☐ Disapproved  Provost or Designee  Date
1. **Change Date:** March 2011

2. **Course Information**
   A. **College:** School of Engineering
   B. **Course Prefix:** ME
   C. **Course Number:** A334
   D. **Number of Credits and Contact Hours**
      - Number of Credits: 3
      - Contact Hours: 2 + 3
   E. **Course Title:** Elements of Materials Science
   F. **Grading Basis:** A-F
   G. **Implementation Date:** Fall 2011
   H. **Course Description:** Investigation and study of crystal structure, defect structure, aspects of metal processing, heat treatment, joining, testing, failure analysis, and phase diagrams for engineering applications and design.
   I. **Course Prerequisites:** CHEM A106 General Chemistry II and PHYS A211 General Physics I
   J. **Course Fee:** Yes

3. **Course Level Justification**
   This course integrates concepts of physics, chemistry, and mathematics to characterize and design engineering materials. It utilizes basic and more advanced methods of modeling and analyzing the material behavior. The laboratory portion of the course introduces the use of modern test equipment for the experimental characterization of materials.

4. **Instructional Goals and Student Outcomes**
   **Instructional Goals**
   The instructor will:
   1. Provide an understanding the atomic structure of metals, ceramics, plastics, and composites.
   2. Provide an understanding of the mechanical properties of metals and the effects of heat treatment and alloying.
   3. Provide an understanding of phase diagrams and their use in developing metal alloys.
   4. Provide an understanding of failure in metals and other materials and the methods of prevention.
   5. Instill the importance of professionalism in the students and in their interaction with others.
**Student Outcomes**

The student will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyze and interpret phase diagrams and apply them to designing metal alloys.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Analyze heat treatments and relate to the properties of metals.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Design metal treatment processes to satisfy material criteria.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Identify crystalline structures and relate to material properties.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Demonstrate professionalism in interactions with colleagues, faculty, and staff.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>

5. **Evaluation and Assessment Methods**

Students will be evaluated using a variety of tools at the instructor's discretion including critical discussions/analysis of concepts and applications, class project, in-class presentations, homework assignments, quizzes, midterm exams, and a final/comprehensive exam.

6. **Topical Course Outline**

1. Introduction
2. Atomic Structure
3. Structure of Crystalline Solids
4. Structure Imperfections
5. Diffusion
6. Mechanical Properties of Metals
7. Dislocations & Strengthening
8. Failure
9. Phase Diagrams
10. Phase Transformations
11. Applications & Processing of Metals
12. Properties of Ceramics, Polymers & Composites

7. **Suggested Text**


8. **Bibliography**


## Course Action Request

### University of Alaska Anchorage

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>EN SOENGR</th>
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</thead>
<tbody>
<tr>
<td>1b. Division</td>
<td>No Division Code</td>
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<tr>
<td>1c. Department</td>
<td>ME</td>
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</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>ME</th>
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</thead>
<tbody>
<tr>
<td>3. Course Number</td>
<td>A414</td>
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<td>4. Previous Course Prefix &amp; Number</td>
<td>N/A</td>
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<tr>
<td>5a. Credits/CEUs</td>
<td>3</td>
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<tr>
<td>5b. Contact Hours</td>
<td>(Lecture + Lab) (2+2)</td>
</tr>
</tbody>
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### 6. Complete Course Title

- **Thermal System Design**
- Abbreviated Title for Transcript (30 character): Thermal System Design

### 7. Type of Course

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

### 8. Type of Action:

- □ Add
- □ Change
- □ Delete

**If a change, mark appropriate boxes:**

- □ Prefix
- □ Credits
- □ Title
- □ Grading Basis
- □ Course Description
- □ Test Score Prerequisites
- □ Other Restrictions
  - □ Class
  - □ Level
  - □ College
  - □ Major
- □ Other

### 9. Repeat Status No

- □ # of Repeats
- □ Max Credits

### 10. Grading Basis

- □ A-F
- □ P/NP
- □ NG

### 11. Implementation Date

- From: Fall/2011
- 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](http://www.uaa.alaska.edu/governance).

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<td>228</td>
<td>3/16/2011</td>
<td>Jeff Hoffman</td>
</tr>
</tbody>
</table>

| 3. | | |

**Initiator Name (typed): Jeff Hoffman**

**Initiator Signed Initials:** __________

**Date:** __________

### 13b. Coordination Email

- Date: 03/18/2011

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

### 13c. Coordination with Library Liaison

- Date: 03/28/2011

### 14. General Education Requirement

**Mark appropriate box:**

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

### 15. Course Description

(suggested length 20 to 50 words)

Introduction to the design of power and space conditioning systems, energy conversion, heating, ventilating, air conditioning, refrigeration, and steady-state simulation of thermal systems including laboratory exercises and team designs of fluid-thermal systems.

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

- ES A341 and ES A346

### 16b. Test Score(s)

N/A

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

N/A

### 16d. Other Restriction(s)

- □ College
- □ Major
- □ Class
- □ Level

### 17. □ Mark if course has fees

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

### 19. Justification for Action

Course description, contact hours, and prerequisites are updated.

**Initiator (faculty only) Only:**

**Jeffrey Hoffman**

**Initiator (TYPE NAME):**

**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, School of Engineering

ME A414
Thermal Systems Design

1. Change Date 16 March 2011

2. Course Information
A. College School of Engineering (EN)
B. Course Prefix ME
C. Course Number A414
D. Number of Credits and Contact Hours
   Number of Credits: 3
   Contact Hours: 2+2
E. Course Title Thermal System Design
F. Grading Basis A-F
G. Implementation Date Fall 2011
H. Course Description Introduction to the design of power and space conditioning systems, energy conversion, heating, ventilating, air conditioning, refrigeration, and steady-state simulation of thermal systems including laboratory exercises and team designs of fluid-thermal systems.
I. Course Prerequisites ES A341 Fluid Mechanics, ES A346 Basic Thermodynamics
J. Course Fee Yes

3. Course Level Justification
This course combines the principles of thermodynamics, heat transfer and fluid mechanics and applies them to thermal system design. The material presented prepares the student to be able to model, analyze, and design a variety of thermal systems. Since engineering practice is system oriented this course demonstrates to the student how individual fundamental concepts are integrated into thermal systems through laboratory exercises and team design projects of fluid-thermal systems.
4. Instructional Goals and Student Outcomes

A. Instructional Goals

The instructor will

1. Provide an understanding of fundamental thermal science principles and perform analysis of thermal/fluids components and whole thermal systems.
2. Provide an understanding that enables the student to choose appropriate tools to implement, solve, and present thermal system models.
3. Provide an understanding of thermal system design through laboratory and design exercises.
4. Enable the students to develop models, including computer-based models, and choose appropriate tools to implement, solve, and present thermal system models.
5. Instill the importance of professionalism in the students and in their interaction with others.

B. Student Outcomes

Upon completion of this course, students should be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use psychrometric equations and charts for a variety of practical applications</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Analyze and calculate heating and cooling loads for thermal systems</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Design low and high pressure ductwork systems including friction losses and fan sizing.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Design refrigeration, water, and steam piping systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Develop simple thermal system steady-state simulations.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Perform experimental measurements on thermal system components and analyze and present experimental data</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Demonstrate professionalism in interactions with colleagues, faculty, and staff.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>

5. Evaluation and Assessment Methods

Students will be evaluated using a variety of tools at the instructor’s discretion including but not limited to homework assignments, projects, midterm exams,
laboratory reports, in-class activities and presentations, and a final/comprehensive exam.

6. Topical Course Outline

1. HVAC Fundamentals
   a) Conservation of Mass
   b) Steady-Flow Energy Equation
   c) Psychrometrics
   e) HVAC Systems and Equipment
2. Refrigeration
   a) Applications of Refrigeration
   b) Thermodynamics and Refrigeration Cycles
   c) Cycle Analysis
3. Heat Exchangers
   a) Heat Exchanger Types
   b) The Overall Heat Transfer Coefficient
   c) Heat Exchanger Analysis
   d) Log Mean Temperature Method
   e) Effectiveness-NTU Method
   f) Design of Heat Exchanger
4. Flow, Pumps, and Piping Design
   a) Fluid Flow Basics
   b) Piping System Fundamentals
   c) Centrifugal Pumps
   d) Combined System and Pump Characteristics
   e) System Design
5. System Simulation
   a) Classes of Simulation
   b) Sequential and Simultaneous Calculations
   c) Successive Substitution and Newton-Raphson
   d) Introduction to Simulation Software
   e) Integration of Simulation and Design

7. Suggested Texts

8. Bibliography

# Course Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>EN SOENGR</th>
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<tbody>
<tr>
<td>1b. Division</td>
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<tr>
<td>1c. Department</td>
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<td>A441</td>
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<td>5a. Credits/CEUs</td>
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<tr>
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## 6. Complete Course Title

**Heat & Mass Transfer**

**Heat & Mass Transfer**

Abbreviated Title for Transcript (30 character)

## 7. Type of Course

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

## 8. Type of Action:

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

If a change, mark appropriate boxes:

- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [x] Course Description
- [ ] Test Score Prerequisites
- [x] Course Prerequisites
- [ ] Co-requisites
- [ ] Registration Restrictions
- [ ] Repeat Status
- [ ] Contact Hours

## 9. Repeat Status No

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## 10. Grading Basis

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

## 11. Implementation Date

- From: Fall/2011
- To: /9999

## 12. Cross Listed with

- [ ] Stacked with

## 13. Impacted Courses or Programs:

List any programs or college requirements that require this course.

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

**Impacted Program/Course** | Catalog Page(s) | Date of Coordination | Chair/Coordinator Contacted |
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<td>Jeff Hoffman</td>
</tr>
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<td>3.</td>
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**Impacted Date of Coordination**

- [ ] 03/16/2011
- [ ] 03/18/2011

**Initiator Name (typed):** Jeff Hoffman

**Initiator Signed Initials:** __________

**Date:** __________

**13b. Coordination Email**

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

**Date:** 3/18/2011

**13c. Coordination with Library Liaison**

**Date:** 03/28/2011

**14. General Education Requirement**

Mark appropriate box:

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

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

Application of heat and mass transfer concepts to engineering problems including steady state and transient conduction, numerical analysis of heat transfer problems, laminar and turbulent free and forced convection, boiling, evaporation and condensation, and black body and real surface radiation.

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

- ES A302 and ES A341 and ES A346

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

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

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<th>(non-codable)</th>
<th>N/A</th>
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</table>

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

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

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

<table>
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</tr>
</thead>
</table>

**17. Mark if course has fees**

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

**19. Justification for Action**

- [ ] Course description is updated.

**Initiator (faculty only) Date**

**Jeffrey Hoffman**

Initiator (TYPE NAME)

**Date**

**20. Approval Process**

- [ ] Approved
- [ ] Disapproved

**Dean/Director of School/College Date**

**21. Approval Process**

- [ ] Approved
- [ ] Disapproved

**Undergraduate/Graduate Academic Board Chairperson Date**

**22. Approval Process**

- [ ] Approved
- [ ] Disapproved

**Provost or Designee Date**

**23. Approval Process**

- [ ] Approved
- [ ] Disapproved

**Curriculum Committee Chairperson Date**

---

**609**
1. Change Date: 16 March 2011

2. Course Information
   A. College: School of Engineering (EN)
   B. Course Prefix: ME
   C. Course Number: A441
   D. Number of Credits and Contact Hours:
      - Number of Credits: 3
      - Contact Hours: 2+2
   E. Course Title: Heat & Mass Transfer
   F. Grading Basis: A-F
   G. Implementation Date: Fall 2011
   H. Course Description:
      Application of heat and mass transfer concepts to engineering problems including steady state and transient conduction, numerical analysis of heat transfer problems, laminar and turbulent free and forced convection, boiling, evaporation and condensation, and black body and real surface radiation.
   I. Course Prerequisites:
      ES A302 Engineering Data Analysis and ES A341 Fluid Mechanics and ES A346 Basic Thermodynamics
   J. Course Fee: Yes

3. Course Level Justification
   This course takes the concepts of energy and mass conservation introduced in ES A346 and ES A341 and applies them to the more advanced study of heat and mass transfer. Because heat and mass are transferred down gradients, the analysis necessarily involves more complex methods, including modeling with ODEs and PDEs. This course introduces principles of numerical analysis, which is
widespread in industrial and research applications, and encourages students to develop both numerical and analytical tools for solving complex problems.

4. Instructional Goals and Student Outcomes

A. Instructional Goals

The instructor will

1. Provide an understanding of the three modes of heat transfer.
2. Provide an applicable understanding of calculus, physics, and differential equations to the design of heat and mass transfer components.
3. Provide an understanding of heat and mass transfer fundamentals to perform design and analysis of heat and mass transfer systems.
4. Enable the students to develop models, including computer-based models, and choose appropriate tools to implement, solve, and present heat and mass transfer models.
5. Instill the importance of professionalism in the students and in their interaction with others.

B. Student Outcomes

Upon completion of this course, students should be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop both a qualitative and quantitative understanding of the three modes of heat transfer.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Derive fundamental integral and differential thermal energy equations for thermal/fluid systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Make appropriate approximations and develop simplified model equations for particular applications.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>From an energy balance, derive the finite difference equations for conduction. Describe numerical solution methods used to solve finite difference equations.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Analyze unsteady one-dimensional conduction problems with surface convection using one-dimensional unsteady conduction analysis in solids and apply the lumped capacitance approximation as appropriate.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>
Set up and solve combined conduction, convection, and radiation heat transfer problems.

Demonstrate professionalism in interactions with colleagues, faculty, and staff.

Assignments, quizzes, exams, discussions, and projects.

5. Evaluation and Assessment Methods

Students will be evaluated using a variety of tools at the instructor’s discretion including but not limited to homework assignments, projects, quizzes, midterm exams, laboratory reports, in-class presentations, and a final/comprehensive exam.

6. Topical Course Outline

1. Elements of Heat Transfer
   a. Conduction and Fourier’s law
   b. Convection and Newton’s law of cooling
   c. Radiation and the Stefan-Boltzman law

2. Steady One-Dimensional Heat Conduction
   a. Thermal resistance elements

3. Multi-Dimensional and Unsteady Conduction
   a. The heat equation
   b. Lumped system method
   c. Spatial effects


5. Convection Fundamentals and Correlations

6. Convection Analysis

7. Thermal Radiation
   a. Surface properties
   b. View factors

8. Condensation, Evaporation, and Boiling

9. Mass Transfer

7. Suggested Texts


8. Bibliography


**Course Action Request**

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>EN SOENGR</th>
<th>1b. Division</th>
<th>No Division Code</th>
<th>1c. Department</th>
<th>ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Course Prefix</td>
<td>ME</td>
<td>3. Course Number</td>
<td>A450</td>
<td>4. Previous Course Prefix &amp; Number</td>
<td>ME A494B</td>
</tr>
<tr>
<td>5a. Credits/CEUs</td>
<td>3</td>
<td>5b. Contact Hours (Lecture + Lab)</td>
<td>(2+2)</td>
<td></td>
<td></td>
</tr>
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</table>

6. Complete Course Title

**Manufacturing Design**

Abbreviated Title for Transcript (30 character)

<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>☑ Academic</th>
<th>☐ Preparatory/Development</th>
<th>☐ Non-credit</th>
<th>☐ CEU</th>
<th>☐ Professional Development</th>
</tr>
</thead>
</table>

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

9. Repeat Status No  # of Repeats  Max Credits

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

11. Implementation Date  semester/year

From:  Fall/2011  To:  /9999

12.  ☐ Cross Listed with

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

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

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<tbody>
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<td></td>
</tr>
</tbody>
</table>

Initiator Name (typed): Jeffrey Hoffman  Initiator Signed Initials: __________  Date: __________

13b. Coordination Email  Date: 3/18/2011

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

13c. Coordination with Library Liaison  Date: 03/28/2011

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 course that focuses on 3-D applied engineering applications and design. Part design for machining, molding, casting, and sheet metal operations. Methods of applied design for manufacturing and assembly are introduced. Pro/Engineer 3-D part, composite, sheet metal and assembly modules are used to practice variety of engineering design applications.

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

ENGR A105A, ENGR A105B, ENGR A105C, ENGR A151, ENGR A161, ME A280 and ME A302

16b. Test Score(s)

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

N/A

16d. Other Restriction(s)

- ☐ College
- ☐ Major
- ☐ Class
- ☐ Level

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

N/A

17. ☑ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action

The course has already been offered as temporary (elective) course for two terms and needs to be added as a permanent elective course to the course catalog

Initiator (faculty only)  Jeffrey Hoffman  Initiator (TYPE NAME)  __________  Date

Initiator (faculty only)  Jeffrey Hoffman  Initiator (TYPE NAME)

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

- ☑ Approved  Undergraduate/Graduate Academic  Date
- ☐ Disapproved  Undergraduate/Graduate Academic  Date

- ☑ Approved  Board Chairperson  Date
- ☐ Disapproved  Board Chairperson  Date

- ☑ Approved  Provost or Designee  Date
- ☐ Disapproved  Provost or Designee  Date
COURSE CONTENT GUIDE
University of Alaska Anchorage, School of Engineering

ME A450
Design for Manufacturing

Date: 3 March 2011

Course Number: ME A450
Course Title: Design for Manufacturing
Credits: 3 (2.0+2.0)

I. Course Description
Advanced course that focuses on 3-D applied engineering applications and design. Part
design for machining, molding, casting, and sheet metal operations. Methods of applied
design for manufacturing and assembly are introduced. Pro/Engineer 3-D part,
composite, sheet metal and assembly modules are used to practice variety of engineering
design applications.

II. Course Design
A. Designed for individuals majoring in the Bachelor of Science in Engineering
degree.
B. Three (3.0) credit course (2.0 lecture + 2.0 laboratory)
C. Total time of student participation: 135 hours
   1) Lecture: 22.5 hours
   2) Lab: 45 hours
   3) Outside: 67.5 hours
D. Required for the Bachelor of Science in Engineering degree with a specialization
   in Mechanical Engineering
E. Fees: Yes
F. Grading Basis: A - F
G. May be scheduled in any time frame.
H. This course will be offered as an elective course.
I. Coordinated with: School of Engineering.
J. Engineering companies in the state of Alaska are in need of well trained
   engineers. This class will provide students with the skills necessary to provide this
   need to engineering firms. Course will be an elective course for BSE students and
   helps to satisfy accreditation requirements.

III. Course Prerequisites:
ENGR A151, ENGR A161, ENGR A105A, ENGR A105B, ENGR A105C, ME A280,
and ME A302

IV. Guidelines for Evaluation:
Methods of evaluation may include but are not limited to:

- Assignments
- Exams
- Engineering design and application projects

V. Course Outline

1. Design for machining
   a. Machining using single-point cutting tools
   b. Determination of optimum speed and feed
   c. Machining using multipoint tools
   d. Machining using Abrasive wheels
   e. Standardization, choice of work material
   f. Modeling
      i. Pro-Engineer part module
         1. Basic geometry construction
         2. Introduction to Sketcher
         3. Construction of datum features
   g. Engineering application and design project 1: Machinable bracket
   h. Effect of shape of work material on machining
   i. Assembly of components
   j. Modeling
      i. Creating features in Pro-Engineer
         1. Sketching on a part
         2. Extrude
         3. Revolve
         4. Sweep
         5. Protrusions
         6. Holes
   k. Engineering application and design project 2: Machinable blind holes

2. Design for injection molding
   a. Injection molding materials
   b. The molding cycle
   c. Injection molding systems
   d. Modeling
      i. Creating features in Pro-Engineer
         1. Blend
         2. Protrusions
         3. Slots and cuts
         4. Shafts
         5. Chamfers
         6. Drafts
         7. Offset
         8. Cosmetic features
   e. Engineering application and design project 3: Clamping plate
   f. Injection molds
   g. Molding machine size
h. Molding cycle time
i. Modeling
   i. Creating surface features in Pro-Engineer
      1. Quilts
      2. Flat quilts
      3. Fillet quilts
      4. Blended surfaces
      5. Merge & Transformation of quilts
      6. Free form manipulation
      7. Patterning
      8. Parametric tables and design optimization
j. Engineering application and design project 4: Cavities, cores and support plates
k. Mold cost estimation
l. Mold cost point system
m. Estimation of the optimum number of cavities
n. Insert molding
o. Design guidelines
p. Modeling
   i. Modify commands in Pro-Engineer
      1. Copying features
      2. Regeneration
      3. Parametric modification
      4. Part queries
3. Engineering application and design project 5: Heater core cover
4. Design for sheet metal working
   a. Dedicated dies and pressworking
   b. Profile shearing
   c. Piercing operations

VI. Instructional Goals and Student Outcomes
A. Instructional Goals
   1. Provide an understanding of the basic principles used in product design for manufacturing and assembly
   2. Introduce the basic skills needed in parametric and featured based 3-D design modeling
   3. Enable the application of manufacturing and assembly techniques in concurrent and simultaneous engineering design

B. Student Outcomes
   Upon completion of this course, students will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select appropriate material and manufacturing process</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Design optimum shaped parts for cost effective machining operations</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Generate M and G codes for numerically controlled turning and milling centers</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Design components for expedited assembly lines</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Create injection molding tool and die designs for economical manufacturing</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Create pressure die-casting tool and die designs for economical manufacture</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Design sheet metals with minimum number of forming operations</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>

VII. **Suggested Texts**
Pro-Engineer User’s Manual, Wildfire 5.0, PTC, 2009

VIII. **Bibliography**
1. School or College  
EN SOENGR

2. Course Prefix  
ME

3. Course Number  
A453

4. Previous Course Prefix & Number  
ME A494C

5. Credits/CEUs  
3

6. Complete Course Title  
Renewable Energy Systems Engineering

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

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

If a change, mark appropriate boxes:
☑ Prefix  ☐ Credits  ☐ Title  ☐ Grading Basis  ☐ Course Description  ☐ Test Score Prerequisites  ☐ Other Restrictions  ☐ Class  Level  College  Major  ☐ Other

9. Repeat Status No  
# of Repeats  Max Credits

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

11. Implementation Date  
From: Fall/2011  To: /9999

12. Cross Listed with  
☑ Stacked with

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

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

<table>
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<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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</thead>
<tbody>
<tr>
<td>Mechanical Engineering</td>
<td>3/21/2011</td>
<td>Jeff Hoffman</td>
<td></td>
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<tr>
<td>2.</td>
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<tr>
<td>3.</td>
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</tr>
</tbody>
</table>

Initiator Name (typed): Jeff Hoffman  
Initiator Signed Initials: _______  Date: __________________

13b. Coordination Email  
Date: 3/18/2011  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 03/28/2011

14. General Education Requirement

Mark appropriate box:
☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities
☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

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

The study and design of renewable energy systems from a technical engineering standpoint. Solar, hydrokinetic, conventional hydroelectric, wind, geothermal, and biological energy systems will be examined. Additional topics include feasibility analysis and energy storage techniques.

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

ES A341 and ES A346

16b. Test Score(s)

N/A

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

N/A

16d. Other Restriction(s)

☐ College  ☐ Major  ☐ Class  ☐ Level

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

N/A

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action

New technical elective course in Mechanical Engineering to offer specialization in the field of renewable energy systems.
I. Course Description
The study and design of renewable energy systems from a technical engineering standpoint. Solar, hydrokinetic, conventional hydroelectric, wind, geothermal, and biological energy systems will be examined. Additional topics include feasibility analysis and energy storage techniques.

II. Course Design
A. Designed for Bachelor of Science in Engineering students.
B. Three (3) credit course (3 lecture + 0 laboratory)
C. Total time of student participation per semester: 135 hours
   1) Lecture: 45 hours
   2) Outside of class: 90 hours
D. Advanced engineering elective for Bachelor of Science in Engineering students.
E. Fees: Yes.
F. Grading Basis: A - F
G. May be scheduled in any time frame.
H. This course has been taught for 2 years with a temporary course number. The proposed action provides the course with a permanent course number.
I. Coordinated with: School of Engineering and faculty list-serve.

III. Course Prerequisites
ES A341 and ES A346

IV. Guidelines for Evaluation
Methods of evaluation may include but are not limited to:
- Assignments
- Exams
- Quizzes
- Projects
V. Course Outline

1. Global energy trends and socioeconomic considerations
   - Energy forecasting
   - Socioeconomic factors
     - Isolated, diesel-fueled grids

2. Solar energy systems
   - Solar tracking systems
   - Irradiance models
   - Active thermal
     - Concentrating collectors
       - Parabolic trough, dish, and central receiver systems
     - Flat plate collectors
     - Salt ponds
   - Photovoltaic (PV)
     - The p-n junction
     - Model circuit calculations
   - Passive thermal
     - Trombe walls
     - Solar chimneys

3. Water-based energy systems
   - Conventional hydroelectric
     - Impoundment, run-of-the river, and pumped storage
     - Turbine design, analysis, and optimization
       - Francis
       - Kaplan
       - Pelton
       - Turgo
       - Crossflow
       - Archimedes’ screw
     - Fluid losses
     - Turbine selection criteria
   - Ocean
     - Ocean Thermal Energy Conversion (OTEC)
     - Wave energy systems
     - Tidal energy systems
     - In-stream (hydrokinetic) turbines

4. Wind energy systems
   - Wind patterns (geostrophic, boundary layer, topographically influenced)
   - Boundary layer wind speed models
   - Aerodynamic considerations (blade design)
• Betz limit
• Blade element momentum (BEM) theory
  o Blade optimization
  o Tower stresses
• Gearbox design
• Generator / grid interface fundamentals
• Resource evaluation
  o The Weibull distribution
• Ice detection and de/anti-icing technology

5. Geothermal energy systems
• Geothermal system design and thermodynamic analysis
  o Vapor-dominated
  o Liquid-dominated
  o Ground source heat pumps (GSHP)
  o Geopressurized
  o Enhanced Geothermal Systems (EGS)
  o Magma
  o Direct use
• Reservoir monitoring and management

6. Biofuels and biomass energy systems
• Fundamental chemical analysis and system design
  o Ethanol
  o Methanol
  o Biodiesel
  o Gasification (synthesis gas, producer gas)
  o Anaerobic Digestion (bio gas)
  o Pyrolysis (pyrolysis liquids)
• Economic analysis

7. Grid integration and energy storage
• Electrical power systems
  o Power factor (real and reactive power)
  o Power fundamentals (grid stability, reliability, controls, etc.)
• Energy storage systems
  o Chemical
    ▪ Hydrogen
    ▪ Biofuels
  o Electrochemical
    ▪ Conventional batteries
    ▪ Flow batteries
    ▪ Fuel cells
• Electrical
  o Capacitors
  o Super conducting magnetic energy storage (SMES)

• Mechanical
  o Flywheels
  o Compressed air
  o Pumped storage (hydro)
  o Spring/mass energy storage

• Thermal
  o Ice
  o Molten salts
  o Auxiliary boiler
  o Thermal mass

8. Resource evaluation
  • Evaluating site-specific renewable resources
  • Statistical analysis
  • Economic analysis (present value)

VI. Instructional Goals and Student Outcomes
A. Instructional Goals
The instructor will:
1. Evaluate global energy trends and examine the socioeconomic impact of renewable energy.
2. Examine the fundamental engineering principles which govern renewable energy systems.
3. Introduce the technical vocabulary associated with renewable energy systems.
4. Describe the operational characteristics of renewable energy systems and introduce quantitative methods for evaluating performance parameters.
5. Establish design methodologies for renewable energy systems.
6. Establish analytical processes for the assessment of renewable resources.

B. Student Outcomes
Upon completion of this course, students will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate global energy trends and identify the technical and socioeconomic factors which influence renewable energy system implementation.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Describe the merits and limitations of different renewable energy systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Explain the physical principles of harvesting</td>
<td>Assignments, quizzes, exams,</td>
</tr>
<tr>
<td>renewable energy.</td>
<td>discussions, and projects.</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Perform basic design calculations for renewable energy systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Quantitatively evaluate the performance of existing renewable energy systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Describe techniques for assessing renewable energy resources and perform feasibility analyses given site-specific data.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Utilize the broad array of references and sources of information on renewable energy systems currently available.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>

VII. Suggested Texts

VIII. Bibliography
## Course Action Request

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

### 1. School or College
EN SOENGR

### 1b. Division
No Division Code

### 1c. Department
ME

### 2. Course Prefix
ME

### 3. Course Number
A455

### 4. Previous Course Prefix & Number
ME A494E

### 5a. Credits/CEUs
3

### 5b. Contact Hours
(Lecture + Lab) (2+2)

### 6. Complete Course Title
HVAC Systems Optimization

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

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

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

### 9. Repeat Status No

#### # of Repeats

#### Max Credits

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

### 11. Implementation Date

#### semester/year

From: Fall/2011  
To: 9999

### 12. Cross Listed with

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

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

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Initiator Name (typed): **Jeff Hoffman**  
Initiator Signed Initials: _________  
Date:________________

### 13b. Coordination Email

**Date:** 03/18/2011

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

### 13c. Coordination with Library Liaison

**Date:** 03/28/2011

### 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**

Design of thermal and HVAC (HVAC: heating, ventilation, and air-conditioning) systems with emphasis on economic considerations and optimization. Thermodynamics, fluid mechanics, and heat transfer culminating in a semester-long project based on economic and technical considerations.

### 16a. Course Prerequisite(s)

**List prefix and number**

- ES A341 and ES A346

### 16b. Test Score(s)

### 16c. Co-requisite(s)

**Concurrent enrollment required**

- N/A

### 16d. Other Restriction(s)

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

### 16e. Registration Restriction(s)

**Non-codable**

- N/A

### 17. Mark if course has fees

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

### 19. Justification for Action

New technical elective course in Mechanical Engineering to offer specialization in HVAC in combination with ME A414. This course was initially taught as ME A494E.

---

Initiator (faculty only)  
**Jeffrey Hoffman**  
Initiator (TYPE NAME)  

Approved  
[ ] Disapproved  

dated  

Dean/Director of School/College  

Approved  
[ ] Disapproved  

dated  

Undergraduate/Graduate Academic  

Approved  
[ ] Disapproved  

dated  

Board Chairperson

Approved  
[ ] Disapproved  

dated  

Provost or Designee  

Approved  
[ ] Disapproved  

dated  

Department Chairperson  

Approved  
[ ] Disapproved  

dated  

Curriculum Committee Chairperson  

Approved  
[ ] Disapproved  

dated  

---

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

---

625
COURSE CONTENT GUIDE
University of Alaska Anchorage, School of Engineering

ME A455
HVAC Systems Optimization

1. Change Date 16 March 2011

2. Course Information
   A. College School of Engineering (EN)
   B. Course Prefix ME
   C. Course Number A455
   D. Number of Credits and Contact Hours
      Number of Credits: 3
      Contact Hours: 3+2
   E. Course Title HVAC Systems Optimization
   F. Grading Basis A-F
   G. Implementation Date Fall 2011
   H. Course Description Design of thermal and HVAC (HVAC: heating, ventilation, and air-conditioning) systems with emphasis on economic considerations and optimization. Thermodynamics, fluid mechanics, and heat transfer culminating in a semester-long project based on economic and technical considerations.
   I. Course Prerequisites ES A341 Fluid Mechanics and ES A346 Basic Thermodynamics
   J. Course Fee No

3. Course Level Justification
   This course emphasizes economic considerations and optimization of thermal systems. The material presented will prepare the student to be able to model, analyze, design and optimize a variety of thermal systems. A semester long design project will give the students the opportunity to optimize their design by implementing theory learned in the lecture.

4. Instructional Goals and Student Outcomes
A. Instructional Goals

The instructor will

1. Direct, supervise, and provide guidance to students and student teams to successfully complete a semester long HVAC design project.

2. Provide an understanding that enables the student to choose appropriate tools, including computer-based models, to implement, solve, and optimize thermal system models.

3. Provide an understanding of how economic and technical considerations relate to the optimization of thermal system design.

4. Instill an applicable level of knowledge required for HVAC system simulation.

5. Instill the importance of professionalism in the students and in their interaction with others.

B. Student Outcomes

Upon completion of this course, students should be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
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</thead>
<tbody>
<tr>
<td>Analyze and model thermal system components and complex thermal systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Understand the application and implications of engineering economics in thermal system design and operation.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Use standard computer simulation tools to implement thermal models and characterize system behavior.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
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<tr>
<td>Understand basic optimization methods and their application to thermal systems.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Develop simple HVAC system steady-state simulations.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
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<tr>
<td>Design and optimize a thermal system.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
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<tr>
<td>Work professionally on a team project.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
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</tbody>
</table>

5. Evaluation and Assessment Methods

Students will be evaluated using a variety of tools at the instructor’s discretion including but not limited to homework assignments, projects, midterm exams,
laboratory reports, in-class activities and presentations, and a final/comprehensive exam.

6. Topical Course Outline

1. Economic considerations in thermal system engineering design
2. Applications of Engineering Equation Solver (EES)
3. Component simulation
4. System simulation
5. Thermal design optimization
6. Semester long design project

7. Suggested Texts


8. Bibliography

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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</thead>
<tbody>
<tr>
<td>EN SOENGR</td>
<td>No Division Code</td>
<td>ME</td>
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<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours</th>
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<tr>
<td>ME</td>
<td>A459</td>
<td>N/A</td>
<td>3</td>
<td>(Lecture + Lab) (3+0)</td>
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<tr>
<th>6. Complete Course Title</th>
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<tbody>
<tr>
<td>Fracture Mechanics</td>
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<tr>
<th>7. Type of Course</th>
<th>8. Type of Action:</th>
<th>9. Repeat Status No</th>
<th>10. Grading Basis</th>
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<tr>
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<thead>
<tr>
<th>11. Implementation Date</th>
<th>semester/year</th>
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<tr>
<td>From: Fall/2011</td>
<td>To: /9999</td>
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<tr>
<th>12. Cross Listed with</th>
<th>13a. Impacted Courses or Programs:</th>
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<tbody>
<tr>
<td></td>
<td>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 <a href="http://www.aaa.alaska.edu/governance">www.aaa.alaska.edu/governance</a>.</td>
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<tr>
<td></td>
<td>Impacted Program/Course</td>
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<thead>
<tr>
<th>Initiator Name (typed): Jeff Hoffman</th>
<th>Initiator Signed Initials:</th>
<th>Date:</th>
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<table>
<thead>
<tr>
<th>13b. Coordination Email</th>
<th>13c. Coordination with Library Liaison</th>
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<td>Date: 3/18/2011</td>
<td>Date: 03/28/2011</td>
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<tr>
<th>14. General Education Requirement</th>
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<tr>
<td>Mark appropriate box:</td>
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<tr>
<td>Oral Communication</td>
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<tr>
<td>Fine Arts</td>
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<tr>
<td>Natural Sciences</td>
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<table>
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<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
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<tr>
<td>Theoretical, experimental, and applied fracture of solids, structures, and machines, subcritical crack growth including fatigue, creep, and corrosion, embrittlement, safety, and life cycle design and analysis will be presented. Case studies will be used to illustrate the course topics.</td>
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<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
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<tbody>
<tr>
<td>Jeffrey Hoffman</td>
<td></td>
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<table>
<thead>
<tr>
<th>16a. Course Prerequisite(s) (list prefix and number)</th>
<th>16b. Test Score(s)</th>
<th>16c. Co-requisite(s) (concurrent enrollment required)</th>
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<td>ES A331</td>
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<th>16d. Other Restriction(s)</th>
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<th>17. Mark if course has fees</th>
<th>18. Mark if course is a selected topic course</th>
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<th>19. Justification for Action</th>
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<tbody>
<tr>
<td>New technical elective course in Mechanical Engineering.</td>
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<td>Disapproved</td>
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<th>20. Dean/Director of School/College</th>
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<th>21. Undergraduate/Graduate Academic</th>
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<th>22. Board Chairperson</th>
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<th>23. Provost or Designee</th>
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629
1. Change Date: March 2011

2. Course Information
   A. College: School of Engineering
   B. Course Prefix: ME
   C. Course Number: A459
   D. Number of Credits and Contact Hours
      Number of Credits: 3
      Contact Hours: 3 + 0
   E. Course Title: Fracture Mechanics
   F. Grading Basis: A-F
   G. Implementation Date: Fall 2011
   H. Course Description: The topics of theoretical, experimental, and applied fracture of solids, structures, and machines, subcritical crack growth including fatigue, creep, and corrosion, embrittlement, safety, and life cycle design and analysis will be presented. Case studies will be used to illustrate the course topics.
   I. Course Prerequisites: ES A331 Mechanics of Materials
   J. Course Fee: Yes

3. Course Level Justification
   This course applies the concepts of mechanics of materials and materials science, as well as mathematics, to fracture mechanics. Basic and advanced methods of modeling crack growth in and fracture of solid materials, structures and machines are utilized. The course relates the application of fracture mechanics to the analysis and design of structures and machines. Advanced experimental techniques and their theoretical foundation are presented. Case studies are used to give a historical view and practical application of fracture mechanics. The 600-level course is stacked with the 400-level course appropriate for senior-level undergraduates. Graduate-level students taking this course will be expected to complete extra work, including but not limited to research papers and projects, to fulfill the student objective that they are prepared to conduct research in the area of fracture mechanics.

4. Instructional Goals and Student Outcomes

   Instructional Goals
   The instructor will:
   1. Present fracture mechanics theory.
   2. Present methods of fracture mechanics application.
   4. Present relevant case studies to illustrate fracture mechanics application.
5. Present fracture mechanics theory, application, and design content consistent with professionals in the field.

Student Outcomes
The student will be able to:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
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<tbody>
<tr>
<td>Understand the principles of fracture mechanics.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
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<tr>
<td>Apply fracture mechanics theory in the analysis of existing systems or components.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Apply fracture mechanics to the design of new systems or components.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Interpret and apply relevant fracture mechanics codes and standards for experiments and design.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Apply fracture mechanics to piping, pressure vessels, and other structures and machines.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Apply fracture mechanics in the optimization of design and life cycle.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Read and interpret the fracture mechanics literature and embark on a journey of lifelong learning.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>Converse professionally with experienced members of the fracture mechanics field.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
<tr>
<td>For the ME A659 Fracture Mechanics, understand the recent literature in the field of fracture mechanics.</td>
<td>Assignments, quizzes, exams, discussions, and projects.</td>
</tr>
</tbody>
</table>

5. Evaluation and Assessment Methods
Students will be evaluated using a variety of tools at the instructor's discretion including critical discussions/analysis of concepts and applications, class project, in-class presentations, homework assignments, quizzes, midterm exams, and a final/comprehensive exam. For ME A659 Fracture Mechanics, the students will be required to complete additional homework assignment(s), quiz or exam question(s), research paper(s), and/or research project(s) that cover fracture mechanics theory and application of greater depth.

6. Topical Course Outline
1. Fatigue and fracture mechanics overview
2. Linear-elastic fracture mechanics
3. Elastic-plastic fracture mechanics
4. Dynamic fracture
5. Fracture mechanisms  
6. Experimental fracture mechanics  
7. Fatigue crack growth  
8. Environmental effects on fatigue and fracture  
9. Creep crack growth  
10. Applications of fracture mechanics to piping, pressure vessels, and other structures  
11. Fracture considerations for design and safety  
12. Life cycle engineering and management  
13. Case studies  

7. **Suggested Text**  

8. **Bibliography**  
Date: April 11, 2011
From: Hilary Davies
Subj: Topics for discussion at UAB

Faculty Grading Issues
• At present, the deadline for faculty to submit grades is 3 business days after the last day of final exams. This information is currently posted in the Academic Calendar. Do we need a Policy?

Instructions for Program Catalog Copy
• All Schools/Colleges have several/many programs. When a program is being modified, each program catalog copy (clean and track changed) must be presented with a PAR and a memo explaining the change. Do we need guidelines for multiple changes to a program during one academic year?

CAR Signature Lines recommendation:
• Initiator (Faculty only), Department Chair, College/School Curriculum Committee Chair, Dean/Director/Designee of School/College, UAB/GAB Chair, Provost or Designee

Clarification on Updating Courses
• Is a course considered to be updated if it does not pass through the regular approval process of Faculty Initiator, Department Chair, School/College Curriculum Committee Chair, Dean/Director of School/College, UAB/GAB Chair, Provost or Designee?

Samples of well written CCGs
• I recommend that we select some recent well written CCGs from various schools and colleges.

Catalog Issues
• Incomplete (I) grade (BOR question). Can be taken off the list of issues.
• Grading system: + and – grades (in the 2010-2011 catalogs, UAS and UAF have + and - grades, UAA does not). Can be taken off the list of issues.
• International course work (90 credits-no degree, 120 credits-degree) – Under discussion in OAA (Tom Miller).
• Update UAA email information to reflect current practice (currently with General Counsel).
• Transfer grades of C-. Clarification of policy needed.
• Faculty listing in program catalog copy. Should the listing only include faculty who teach on a regular basis?
• Compressibility policy.