I. Roll
( ) Dave Fitzgerald (CBPP) ( ) Ira Ortega (COE) ( ) Christina Stuive (SA) ( ) Adjunct vacancy
( ) Paola Banchero (CAS) ( ) Jeffrey Callahan (CTC) ( ) Francisco Miranda (FS CAS) ( ) USUAA vacancy
( ) Mari Ippolitio (CAS) ( ) Utpal Dutta (SOE) ( ) Alberta Harder (FSAL) Ex-Officio Members:
( ) Paola Banchero (CAS) ( ) Jeffrey Callahan (CTC) ( ) Francisco Miranda (FS CAS)
( ) Barbara Harville (CAS) ( ) Michael Hawfield (KPC) ( ) Soren Orley (FSAL)
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( ) Lynn Senette (COH) ( ) Joan O’Leary (Mat-su) ( ) Kathryn Hollis Buchanan(Kodiak)
( ) Eileen Weatherby (COH) ( ) Vacant (Adjunct)

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

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

IV. Administrative Report
A. Vice Provost for Undergraduate Academic Affairs Susan Kalina

B. University Registrar Lora Volden

V. Chair’s Report
A. UAB Chair- Dave Fitzgerald

B. GERC

VI. Program/Course Action Request- Second Readings
Chg AAS, Medical Laboratory Technology (pg. 7)
Chg OEC, Clincal Assistant (pg. 8)
Chg OEC, Phlebotomist (pg. 9)

VII. Program/Course Action Request- First Readings
Chg BA A315 Property Management and Marketing (3 cr)(3+0)(pg. 10-13)
Chg BA A325 Corporate Finance (3 cr)(3+0)(pg. 14-18)
Chg BA A380 Investment Management (3 cr)(3+0)(pg. 19-22)
Chg BA A385 Intermediate Financial Management (3 cr)(3+0)(pg. 23-26)
Chg BA A431 Real Estate Appraisal (3 cr)(3+0)(pg. 27-30)
Chg BA A432 Real Estate Law (3 cr)(3+0)(pg. 31-34)
Chg BA A452 Financial Derivatives (3 cr)(3+0)(pg. 35-38)
Chg BA A453 Bond Market Analysis (3 cr)(3+0)(pg. 39-42)
Add CE A451 Advanced Structural Analysis (Stacked with CE A651)(3 cr)(3+0)(pg. 43-50)
Chg JUST A374 The Courts (3 cr)(3+0)(pg. 51-56)
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<td>Chg</td>
<td>Bachelor of Arts, Justice (pg. 67-74)</td>
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<td>Chg</td>
<td>BS, Social Work (pg. 75-87)</td>
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<td>FIRE A190 Selected Topics in Fire and Emergency Services (3 cr)(0-3+0-9)</td>
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<td>FIRE A220 Legal Aspects of Emergency Services (3 cr)(3+0)</td>
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<td>AAS, Fire and Emergency Services Technology (pg. 163-172)</td>
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<td>CSCE A450 Robotics (3 cr)(3+0)</td>
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Add CSCE A460  Advanced Database Systems (3 cr)(3+0)(pg. 196-199)
Add CSCE A462  Data Mining (3 cr)(3+0)(pg. 200-203)
Add CSCE A485  Computer Machine Vision (3 cr)(3+0)(pg. 204-208)
Chg  Minor, Computer Systems Engineering (pg. 209-211)
Chg  Minor, Computer Science (pg. 212-214)
Chg  BA, Computer Science (pg. 215-222)
Chg  BS, Computer Science (pg. 223-228)
Add EE A307  Introduction to Power Systems (3 cr)(3+0)(pg. 229-232)
Add EE A333  Electronic Devices (3 cr)(3+0)(pg. 233-236)
Chg  Minor, Electrical Engineering (pg. 237-239)
Chg  BS, Engineering (pg. 240-253)
Chg  ENGR A151  Introduction to Engineering (1 cr)(1+0)(pg. 254-255)

VIII. Old Business
A. Second Reading of Purge Lists (pg. 256-259)
B. Second Reading of GER Curriculum Handbook Changes (pg. 260-264)

IX. New Business

X. Informational Items and Adjournment
A. Election Membership (pg. 265)
B. Programs whose Program Student Learning Outcomes (PSLO’s) have been recently reviewed by the AAC:
   - Languages – BA
   - Math – BA, BS
   - Sociology – BA, BS, Minor

C. Programs whose assessment plans have been recently reviewed by the AAC:
   - Refrigeration and Heating Technology – AAS
Undergraduate Academic Board
Summary

March 8, 2013
2:00-5:00
ADM 204

I. Roll
(x) Dave Fitzgerald (CBPP) (x) Ira Ortega (COE) (x) Christina Stuive (SA) ( ) Adjunct vacancy
( ) Paola Banchero (CAS) (x) Jeffrey Callahan (CTC) (x) Francisco Miranda (FS CAS) ( ) USUAA vacancy
(x) Mari Ippolito (CAS) (x) Utpal Dutta (SOE) (x) Alberta Harder (FSAL) Ex-Officio Members:
(x) Barbara Harville (CAS) (x) Michael Hawfield (KPC) (x) Soren Orley (FSAL) (x) Susan Kalina
(x) Len Smiley (CAS) (x) Kevin Keating (LIB) ( ) FS at large vacancy (x) Lora Volden
(x) Lynn Senette (COH) (e) Joan O’Leary (Mat-su) (x) Kathryn Hollis Buchanan (Kodiak) (x) S&P
(x) Eileen Weatherby (COH) ( ) Vacant (Adjunct)

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

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

IV. Administrative Report
A. Vice Provost for Undergraduate Academic Affairs Susan Kalina
No Report
Jeff Callahan will present language for reviewing courses at the next meeting

B. University Registrar Lora Volden
If students want their name in the commencement program, then graduation applications are due by April 1st
Fall registration opens April 1st

V. Chair’s Report
A. UAB Chair- Dave Fitzgerald

B. GERC
Presented Curriculum Handbook changes to the board

VI. Program/Course Action Request- Second Readings
Chg CSCE A470 Computer Science and Engineering Capstone Project (3 cr)(3+0)(pg. 6-11)
Unanimously Approved

Chg BS, Nursing Science (pg. 12-34)
Unanimously Approved

Chg Associate of Arts (pg. 35-48)
Unanimously Approved

Chg AAS, General Business (pg. 49-57)
Unanimously Approved

VII. Program/Course Action Request- First Readings
Chg DH A222 Adjunctive Techniques for Dental Hygiene (3 cr)(2+3)(pg. 58-63)
Chg DH A292D Clinical Seminar I (1 cr)(0+3)(pg. 64-68)
Add DH A302 Advanced Instrumentation for Dental Hygienists (1 cr)(0+2)(pg. 69-72)
Del DH A312 Advanced Techniques for Dental Hygienists (3 cr)(1+4)(pg. 73)
Del DH A350 Basic Restorative Techniques (3 cr)(1+6)(pg. 74)
Add DH A360 Restorative Techniques for Dental Auxiliaries (5 cr)(1+12)(pg. 75-81)
Chg DH A392C Clinical Seminar II (1 cr)(0+3)(pg. 82-85)
Chg DH A392D Clinical Seminar III (1 cr)(0+3)(pg. 86-89)
Del DH A450 Advanced Restorative Techniques (1 cr)(0+3)(pg. 90)
Del DH A495C Restorative Clinical Practicum (1 cr)(0+3)(pg. 91)
Chg AAS, Dental Hygiene (pg. 92-93)
Chg BS, Dental Hygiene (pg. 94-108)

All DH courses and programs are waived for first reading and approved for second

Add BA A215 Introduction to Property Management (3 cr)(3+0)(pg. 109-113)
Waive first reading, approve for second

Add BA A225 Leasing Property Management (3 cr)(3+0)(pg. 114-118)
Waive first reading, approve for second

Add BA A302 Maintenance in Property Management (3 cr)(3+0)(pg. 119-123)
Waive first reading, approve for second

Add BA A303 Property Management Finance (3 cr)(3+0)(pg. 124-128)
Waive first reading, approve for second

Chg BA A395 Property Management Internship (3 cr)(0+6)(pg. 129-133)
Waive first reading, approve for second

Add BA A421 Property Management Capstone (3 cr)(3+0)(pg. 134-137)
Waive first reading, approve for second

Chg BBA Management: Property Management and Real Estate Concentration
Accepted for first reading

Chg BA A131 Personal Finance (3 cr)(3+0)(pg. 150-154)
Waive first reading, approve for second

Chg BA A233 Survey of Finance (3 cr)(3+0)(pg. 155-158)
Waive first reading, approve for second

Chg BA A343 Principles of Marketing (3 cr)(3+0)(pg. 159-163)
Waive first reading, approve for second

Chg BA A426 Financial Institutions (3 cr)(3+0)(pg. 164-167)
Waive first reading, approve for second

Chg AAS, Small Business Administration (pg 168-180.)
Waive first reading, approve for second

Chg BS, Medical Laboratory Science/MEDT (pg. 181-195)
Waive first reading, approve for second

VIII.  Old Business

IX.  New Business

X.  Informational Items and Adjournment
A.  Election Membership (pg. 196)
B.  Programs whose Program Student Learning Outcomes (PSLO’s) have been recently reviewed by the AAC:
C. Programs whose assessment plans have been recently reviewed by the AAC:

- Refrigeration and Heating Technology – AAS
1a. School or College
CH College of Health

1b. Department
Medical Laboratory Science

2. Complete Program Title/Prefix
AAS: Medical Laboratory Technology/MEDT

3. Type of Program
Choose one from the appropriate drop down menu: Undergraduate: or Graduate: Associate of Applied Science

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

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

PREFIX
☐ Add
☐ Change
☐ Inactivate

5. Implementation Date (semester/year)
From: Fall 2013 To: 9999

6a. Coordination with Affected Units
Department, School, or College:
Initiator Name (typed): Heidi Mannion
Initiator Signed Initials: __________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)
Date: 02/4/2013

6c. Coordination with Library Liaison
Date: 02/04/2013

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

8. Justification for Action
General admission requirements for all students entering programs offered by the Medical Laboratory Science Department have been revised to include changes to immunizations required by clinical affiliates.

Heidi Mannion
Initiator (TYPE NAME)

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

☑ Approved ☐ Disapproved
Undergraduate/Graduate Academic Board Chair
Date

☑ Approved ☐ Disapproved
Provost or Designee
Date
# 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. Department</th>
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<tr>
<td>CH College of Health</td>
<td>Medical Laboratory Science</td>
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<tr>
<th>2. Complete Program Title/Prefix</th>
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<tr>
<td>OEC: Clinical Assistant/MEDT</td>
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<th>3. Type of Program</th>
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<td>Undergraduate: or Graduate: Occupational Endorsement Certificate</td>
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<th>4. Type of Action:</th>
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<td>PROGRAM</td>
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<td>☒ Change</td>
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<td>☐ Add</td>
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<td>☐ Change</td>
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<th>5. Implementation Date (semester/year)</th>
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<tr>
<td>Initiator Name (typed): Heidi Mannion</td>
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<tr>
<td>Date: 02/04/2013</td>
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<td>Initiator Signed Initials:</td>
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<td>☐ Cover Memo</td>
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<td>☒ Catalog Copy in Word using the track changes function</td>
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<td>General admission requirements for all students entering programs offered by the Medical Laboratory Science Department have been revised to include changes to immunizations required by clinical affiliates.</td>
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<tr>
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<tr>
<td>Date</td>
</tr>
<tr>
<td>☐ Approved</td>
</tr>
<tr>
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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

1a. School or College  
CH College of Health  

1b. Department  
Medical Laboratory Science  

2. Complete Program Title/Prefix  
OEC: Phlebotomist/MEDT  

3. Type of Program  
Choose one from the appropriate drop down menu: Undergraduate: or Graduate:  
Occupational Endorsement Certificate  
CHOOSE ONE  

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

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

PREFIX  
☐ Add  
☐ Change  
☐ Inactivate  

5. Implementation Date (semester/year)  
From: Fall/2013  
To: /9999  

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

6b. Coordination Email submitted to Faculty Listserv (uua-faculty@lists.uaa.alaska.edu)  
Date: 02/4/2013  

6c. Coordination with Library Liaison  
Date: 02/04/2013  

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

8. Justification for Action  
General admission requirements for all students entering programs offered by the Medical Laboratory Science Department have been revised to include changes to immunizations required by clinical affiliates.  

Initiator (faculty only)  
Heidi Mannion  
Initiator (TYPE NAME)  

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

☑ Approved  
☐ Disapproved  
Undergraduate/Graduate Academic Board Chair  
Date  

☑ Approved  
☐ Disapproved  
Provost or Designee  
Date  

☑ Approved  
☐ Disapproved  
Department Chair  
Date  

☑ Approved  
☐ Disapproved  
College/School Curriculum Committee Chair  
Date  

☑ Approved  
☐ Disapproved  

**Course Action Request**

**University of Alaska Anchorage**

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

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<th>CB CBPP</th>
<th>1b. Division</th>
<th>ADBP Division of Business Programs</th>
<th>1c. Department</th>
<th>BA</th>
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<td>(Lecture + Lab)</td>
<td>(3+0)</td>
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6. Complete Course Title

**Property Management and Marketing**

*Property Mgt. and Mktg.*

**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
- [ ] Grade
- [ ] Repeat Status
- [ ] Course Cancellation
- [ ] Cross-Listed/Stacked
- [ ] Course Prerequisites
- [ ] Co-requisites
- [ ] Test Score Prerequisites
- [ ] Requisites
- [ ] 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/2013

To: 9/999

12. [ ] Cross Listed with

- [ ] Stackable

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

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

<table>
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<th>Impacted Program/Course</th>
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<th>Chair/Coordinator Contacted</th>
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<td>Finance: Real Estate and Property Management</td>
<td>140</td>
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<td>Ed Forrest</td>
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<tr>
<td>Minor in Finance, BBA</td>
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<td>02/22/2013</td>
<td>Ed Forrest</td>
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</table>

Initiator Name (typed): Clayton Trotter

Initiator Signed Initials: ___________

Date: ___________

13b. Coordination Email

Date: 03/01/2013

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

13c. Coordination with Library Liaison

Date: 03/01/2013

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)

Surveys all aspects of property management and marketing. Topics covered are: residential management, shopping center management, office building management, leases, maintenance, landlord-tenant laws, real estate sales, and marketing.

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 Requirement(s) (non-codable)

College of Business & Public Policy majors must be admitted to upper-division standing.

17. [ ] Mark if course has fees Standard CBPP computer lab fee

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

19. Justification for Action

Update textbooks and instructional goals

Initiator (faculty only) Clayton Trotter

Initiator Signed Initials: ___________

Date: ___________

[ ] Approved

[ ] Disapproved

Dean/Director of School/College Date

[ ] Approved

[ ] Disapproved

Undergraduate/Graduate Academic Board Chairperson Date

[ ] Approved

[ ] Disapproved

Provost or Designee Date
I. Date Initiated: February 28, 2013

II. Course Information

   College/School: College of Business and Public Policy
   Department: Business Administration
   Program: Bachelor of Business Administration in Finance: Real Estate and Property Management Concentration
            Bachelor of Business Administration: Minor in Finance
   Course Title: Property Management and Marketing
   Course Number: BA A315
   Credits: 3
   Contact Hours: 3 per week x 15 weeks = 45 hours
                  0 lab hours
                  6 hours outside of class per week x 15 weeks = 90 hours
   Grading Basis: A - F

   Course Description: Course surveys all aspects of property management and marketing. Topics covered are: residential management, shopping center management, office building management, leases, maintenance, landlord-tenant laws, real estate sales, and marketing.

   Course Prerequisites: N/A

   Registration Restrictions: College of Business & Public Policy majors must be admitted to upper-division standing.

   Fees: Standard CBPP computer lab fee

III. Course Activities

   A. Lectures
   B. Discussions
   C. Guest lectures by industry professionals
   D. Multimedia presentations

IV. Course Level Justification

   This is a junior-level class that analyzes various aspects of the property management and marketing. This course requires reasonable algebraic skills, research capabilities, and writing skills.
V. Outline

A. Objectives of Property Management and Marketing
B. Residential Property Management
C. Shopping Center and Office Building Management
D. Leases and Landlord-Tenant Laws
E. Property Maintenance and Human Relations
F. Advertising and the Communication Process
G. Sales and Marketing

VI. Suggested Texts


VII. Bibliography

Textbooks are supplemented by readings from current professional publications available in UAA consortium library and Loussac Library. Useful information on real estate industry is available on following websites:

http://www.alta.org
http://www.appraisalinstitute.org
http://www.apt.com
http://www.caci.com
http://www.apt.com
http://www.ccim.com
http://www.fha-home-loans.com
http://www.fhfb.gov
http://www.frbservices.org
http://www.housingzone.com
http://www.hud.gov
http://www.ired.com
http://www.irem.org
http://www.jchs.harvard.edu
http://www.mbaa.org
http://www.nmhc.org
http://www.rerc.com
http://www.reri.org
http://www.shoppingcenters.com
VIII. Instructional Goals and Student Learning Outcomes

A. Instructional Goals
   The instructor will:
   1. Present an overview of property management and marketing
   2. Discuss the management of residential properties
   3. Discuss the management of shopping centers and office buildings
   4. Explain different types of leases and landlord-tenant laws
   5. Discuss property marketing and sales
   6. Discuss property maintenance and human resource management
   7. Analyze advertising and communication options

B. Student Learning Outcomes
   Students will be able to:
<table>
<thead>
<tr>
<th>Students will be able to:</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Evaluate the management of residential properties</td>
<td>Homework or exam</td>
</tr>
<tr>
<td>2. Evaluate the management of shopping centers and office buildings</td>
<td>Homework or exam</td>
</tr>
<tr>
<td>3. Develop an understanding of property leases and landlord-tenant laws</td>
<td>Homework or exam</td>
</tr>
<tr>
<td>4. Develop an understanding of property maintenance and human resource management</td>
<td>Homework or exam</td>
</tr>
<tr>
<td>5. Design a marketing, advertising, and sales campaign</td>
<td>Project</td>
</tr>
<tr>
<td>6. Evaluate the performance of a property manager</td>
<td>Project or exam</td>
</tr>
</tbody>
</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>CB CBPP</td>
<td>ADBP Division of Business Programs</td>
<td>BA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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</thead>
<tbody>
<tr>
<td>BA</td>
<td>A325</td>
<td>N/A</td>
<td>3</td>
<td>(3+0)</td>
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</table>

**6. Complete Course Title**  
Corporate Finance  
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 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/2013  
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](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></td>
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<td>01/22/2013</td>
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<td>01/22/2013</td>
<td></td>
</tr>
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</table>

Initiator Name (typed): Suresh Srivastava  
Initiator Signed Initials: Date:__________

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

**13c. Coordination with Library Liaison**  
Date: 2/25/2013

**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)*  
Surveys the practice of corporate finance. Topics covered are: financial statements analysis, valuation of securities, capital budgeting, risk and return, cost of capital, capital structure, and working capital management.

**16a. Course Prerequisite(s) (list prefix and number)**  
BA A273 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)**  
College of Business & Public Policy majors must be admitted to upper-division standing.

**17. Mark if course has fees**  
Standard CBPP computer lab fees

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

**19. Justification for Action**  
ACCT A202 and ECON A202 were removed from the course prerequisites. Updated text

Initiator (faculty only)  
Suresh Srivastava  
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  
[ ] Disapproved  
Provost or Designee  
Date
13a. Impacted courses or programs BA A325

<table>
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<tr>
<th>Impacted program/course</th>
<th>Date of coordination</th>
<th>Chair/ Coordinator contacted</th>
</tr>
</thead>
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<td>01/22/2013</td>
<td>C. Patrick Fort</td>
</tr>
<tr>
<td>Economics, BBA</td>
<td>01/22/2013</td>
<td>Paul Johnson</td>
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<tr>
<td>Finance, BBA</td>
<td>01/22/2013</td>
<td>Ed Forrest</td>
</tr>
<tr>
<td>Management, BBA</td>
<td>01/22/2013</td>
<td>Ed Forrest</td>
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<tr>
<td>Global Logistics and Supply Chain Management, BBA</td>
<td>01/22/2013</td>
<td>Darren Prokop</td>
</tr>
<tr>
<td>Marketing, BBA</td>
<td>01/22/2013</td>
<td>Ed Forrest</td>
</tr>
<tr>
<td>Management Information Systems, BBA</td>
<td>01/22/2013</td>
<td>Minnie Yen</td>
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<td>BA A320</td>
<td>01/22/2013</td>
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<td>BA A380</td>
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<td>BA A385</td>
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I. Date Initiated
January 25, 2013

II. Course Information

College/School: College of Business and Public Policy
Department: Business Administration
Program: Bachelor of Business Administration, Accounting, Economics, Finance, Management, Global Logistics and Supply Chain Management, Marketing, Management Information Systems
Course Title: Corporate Finance
Course Number: BA A325
Credits: 3
Contact Hours: 3 per week x 15 weeks = 45 hours
0 lab hours
6 hours outside of class per week x 15 weeks = 90 hours
Grading Basis: A - F

Course Description: Surveys the practice of corporate finance. Topics covered are: financial statements analysis, valuation of securities, capital budgeting, risk and return, cost of capital, capital structure, and working capital management.

Course Prerequisites: BA A273 with a minimum grade of C

Registration Restrictions: College of Business & Public Policy majors must be admitted to upper-division standing.

Fees: Standard CBPP computer lab fee

III. Course Activities

A. Lectures
B. Discussions
C. Mini-case analyses
D. Multimedia presentations

IV. Course Level Justification

This is a junior-level class that analyzes various aspects of the financial management of a corporation. Builds upon previous coursework and requires familiarity with the concepts, methods, and vocabulary of the discipline.
V. **Outline**

A. An Introduction to Financial Management  
B. Financial Statements, Taxes, and Cash Flows  
C. Financial Markets, Institutions, and Interest Rates  
D. Time Value and Security Valuation  
E. Risk and Rate of Return  
F. Capital Budgeting Decisions  
G. Sources and Costs of Long-Term Financing  
H. Global Financial Management  

VI. **Suggested Text**


VII. **Bibliography**

Textbooks are supplemented by readings from current professional publications available in UAA consortium library and Loussac Library. Useful information on corporate finance is available on following websites.

http://news.ft.com/home/us  
http://online.barrons.com/public/us  
http://online.wsj.com/public/us  
http://www.amex.com  
http://www.businessweek.com  
http://www.cbt.com  
http://www.federalreserve.gov  
http://www.forbes.com  
http://www.fortune.com/fortune  
http://www.nasdaq.com  
http://www.nyse.com  
http://www.sec.gov
### VIII. Instructional Goals and Student Learning Outcomes

#### A. Instructional Goals
The instructor will:

1. Present an overview of financial management
2. Discuss the use of financial statement analysis in assessing the strength and weakness of a firm
3. Discuss the workings of the financial markets and its participants
4. Explain the concept of compounding, present value and future value of a cash flow sequence
5. Discuss the issuance and valuation of corporate securities
6. Discuss risk-return trade-off and the portfolio risk
7. Analyze a capital project
8. Discuss the global dimensions of financial decisions

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

<table>
<thead>
<tr>
<th>Students will be able to:</th>
<th>Assessment Method</th>
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<tbody>
<tr>
<td>1. Assess alternate forms of business organizations</td>
<td>Quiz, homework, or exam</td>
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<tr>
<td>2. Evaluate financial statements as they relate to business profitability and cash flows</td>
<td>Quiz, homework, or exam</td>
</tr>
<tr>
<td>3. Demonstrate an understanding of financial markets, institutions and interest rates</td>
<td>Quiz, homework, or exam</td>
</tr>
<tr>
<td>4. Discuss the risk-return trade-off relationships</td>
<td>Quiz, homework, or exam</td>
</tr>
<tr>
<td>5. Determine the intrinsic value of common stocks, bonds, and hybrid securities</td>
<td>Quiz, homework, or exam</td>
</tr>
<tr>
<td>6. Evaluate capital projects and sources of financing</td>
<td>Case, homework, or exam</td>
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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>
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<tbody>
<tr>
<td>CB CBPP</td>
<td>ADBP Division of Business Programs</td>
<td>BA</td>
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</tbody>
</table>

<table>
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<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours</th>
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<td>BA</td>
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<th>6. Complete Course Title</th>
<th>Investment Management</th>
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<th>7. Type of Course</th>
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<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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<tr>
<td>Professional Development</td>
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<tr>
<th>8. Type of Action: Add</th>
<th>Change</th>
<th>Delete</th>
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If a change, mark appropriate boxes:
- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Co-requisites
- Other Restrictions
- Class
- Level
- College
- Major
- Other Update CCG (please specify)

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<tr>
<td>NG</td>
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<td>To: /9999</td>
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<tr>
<td>Stacked</td>
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<tr>
<td>Cross-Listed Coordination Signature</td>
</tr>
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</table>

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 | Catalog Page(s) | Impacted | Date of Coordination | Chair/Coordinator Contacted |
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<th></th>
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<tbody>
<tr>
<td>1. Finance, Investment Concentration, BBA</td>
<td>138</td>
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<td>Ed Forrest</td>
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<td>2. BA A451</td>
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<td>Ed Forrest</td>
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<td>3. BA A491A</td>
<td>352</td>
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Initiator Name (typed): Suresh Srivastava  
Initiator Signed Initials: _________  
Date: __________________

13b. Coordination Email |  
<table>
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<td>Date: 03/01/2013</td>
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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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13c. Coordination with Library Liaison |  
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<tbody>
<tr>
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<tr>
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14. General Education Requirement |  
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<tr>
<td>Mark appropriate box:</td>
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<td>Oral Communication</td>
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<td>Written Communication</td>
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<tr>
<td>Quantitative Skills</td>
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<tr>
<td>Humanities</td>
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<td>Fine Arts</td>
</tr>
<tr>
<td>Social Sciences</td>
</tr>
<tr>
<td>Natural Sciences</td>
</tr>
<tr>
<td>Integrative Capstone</td>
</tr>
</tbody>
</table>

15. Course Description (suggested length 20 to 50 words)  
Introductory course in investment management covering valuations and techniques of investment in financial securities. Evaluates investment choices including: common stock, preferred stock, bonds, convertibles, mutual funds, closed end funds, hedge funds, and private equity.

16a. Course Prerequisite(s) (list prefix and number) |  
<table>
<thead>
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<tbody>
<tr>
<td>BA A325 with a minimum grade of C</td>
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16b. Test Score(s) |  
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16c. Co-requisite(s) (concurrent enrollment required) |  
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<th></th>
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16d. Other Restriction(s) |  
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<td>Major</td>
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<td>Class</td>
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<tr>
<td>Level</td>
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16e. Registration Restriction(s) (non-codable) |  
<table>
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</thead>
<tbody>
<tr>
<td>College of Business &amp; Public Policy majors must be admitted to upper-division standing.</td>
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17. Mark if course has fees |  
<table>
<thead>
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<th></th>
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<tbody>
<tr>
<td>Standard CBPP computer lab fee</td>
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18. Mark if course is a selected topic course |  
<table>
<thead>
<tr>
<th></th>
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19. Justification for Action |  
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Update prerequisite, textbook, and instructional goals</td>
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Initiator (faculty only) |  
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<th></th>
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</thead>
<tbody>
<tr>
<td>Date</td>
</tr>
</tbody>
</table>

Suresh Srivastava  
Initiator (TYPE NAME) |  
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
</tr>
</tbody>
</table>

|  
|------------------------|  
| Approved |  
| Disapproved |  
| Date |

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| Approved |  
| Disapproved |  
| Date |

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| Approved |  
| Disapproved |  
| Date |

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| Approved |  
| Disapproved |  
| Date |

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|------------------------|  
| Approved |  
| Disapproved |  
| Date |

|  
|------------------------|  
| Approved |  
| Disapproved |  
| Date |

|  
|------------------------|  
| Approved |  
| Disapproved |  
| Date |
I. Date Initiated: February 27, 2013

II. Course Information
- College/School: College of Business and Public Policy
- Department: Business Administration
- Program: Bachelor of Business Administration, Finance: Investment Concentration
- Course Title: Investment Management
- Course Number: BA A380
- Credits: 3
- Contact Hours: 3 per week x 15 weeks = 45 hours
  0 lab hours
  6 hours outside of class per week x 15 weeks = 90 hours
- Grading Basis: A – F
- Course Description: Introductory course in investment management covering valuations and techniques of investment in financial securities. Evaluates investment choices including: common stock, preferred stock, bonds, convertibles, mutual funds, closed end funds, hedge funds, and private equity.
- Prerequisites: BA A325 with a minimum grade of C
- Registration Restrictions: College of Business & Public Policy majors must be admitted to upper-division standing.
- Fees: Standard CBPP computer lab fee

III. Course Activities
- A. Lectures
- B. Discussions
- C. Occasional guest lectures
- D. Spreadsheet exercises

IV. Course Level Justification
The course surveys investment theories, choices, and valuation models. Students have to apply previous course work and need familiarity with the concepts, methods, and vocabulary gained in lower-division courses.

V. Outline
- A. Financial Security and Trading
- B. Mutual Funds and Investment Companies
- C. Risk-return Trade-off
- D. Efficient Market Hypothesis
- E. Capital Asset Pricing and Arbitrage Pricing Theory (APT)
- F. Stock and Bond Valuation
- G. International Investing
VI. Suggested Text

VII. Bibliography
Textbooks are supplemented by readings from current professional publications available in UAA consortium library and Loussac Library. Useful information on investment is available on following websites.

http://news.ft.com/home/us
http://online.barrons.com/public/us
http://online.wsj.com/public/us
http://www.amex.com
http://www.businessweek.com
http://www.cbt.com
http://www.federalreserve.gov
http://www.forbes.com
http://www.fortune.com/fortune
http://www.nasdaq.com
http://www.nyse.com
http://www.sec.gov

VIII. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructor will:</td>
</tr>
<tr>
<td>1. Survey financial securities and their trading</td>
</tr>
<tr>
<td>2. Discuss the workings of investment companies and their products</td>
</tr>
<tr>
<td>3. Analyze risk-return trade-off opportunities</td>
</tr>
<tr>
<td>4. Describe Efficient Market Hypothesis and implication for investors</td>
</tr>
<tr>
<td>5. Discuss alternate pricing models and their usage and limitations</td>
</tr>
<tr>
<td>6. Explain stock and bond valuation models and portfolio formation</td>
</tr>
<tr>
<td>7. Discuss the advantages and disadvantages of international investment</td>
</tr>
</tbody>
</table>
### B. Student Learning Outcomes.

**Students will be able to:**

<table>
<thead>
<tr>
<th></th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Demonstrate understanding of security trading</td>
</tr>
<tr>
<td>2.</td>
<td>Differentiate between different products offered by mutual funds and investment companies</td>
</tr>
<tr>
<td>3.</td>
<td>Analyze risk-return trade-off</td>
</tr>
<tr>
<td>4.</td>
<td>Explore market inefficiencies and arbitrage profits</td>
</tr>
<tr>
<td>5.</td>
<td>Demonstrate understanding of asset pricing models and their application</td>
</tr>
<tr>
<td>6.</td>
<td>Value stocks, bonds, and hybrid securities</td>
</tr>
<tr>
<td>7.</td>
<td>Analyze the benefits of international investing</td>
</tr>
</tbody>
</table>
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College
CB CBPP

1b. Division
ADBP Division of Business Programs

1c. Department
BA

2. Course Prefix
BA

3. Course Number
A385

4. Previous Course Prefix & Number
N/A

5a. Credits/CEUs
3

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

6. Complete Course Title
Intermediate Financial 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  [ ] Course Number  [ ] Contact Hours  [ ] Repeat Status
[ ] Title  [ ] Repeat Status
[ ] Grading Basis  [ ] Cross-Listed/Stacked
[ ] Course Description  [ ] Course Prerequisites
[ ] 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: Fall/2013  To: 9999

12. [ ] Cross Listed with
[ ] Stacked with

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

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance, Investment Concentration, BBA</td>
<td>140</td>
<td>02/22/2013</td>
<td>Ed Forrest</td>
</tr>
<tr>
<td>Finance, Real Estate and Property Management Concentration, BBA</td>
<td>140</td>
<td>02/22/2013</td>
<td>Ed Forrest</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Initiator Name (typed): Suresh Srivastava  Initiator Signed Initials: _________  Date:___________

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

Date: 03/01/2013

13c. Coordination with Library Liaison
Date: 03/01/2013

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

15. Course Description (suggested length 20 to 50 words)
Intermediate course in corporate finance presenting advanced analytical techniques and concepts. Includes multifactor asset pricing models, free cash flow and corporate valuation, capital budgeting risk analysis and real options, capital structure theory, mergers, and corporate bankruptcies.

16a. Course Prerequisite(s) (list prefix and number) BA A325 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)
College of Business & Public Policy majors must be admitted to upper-division standing.

17. [ ] Mark if course has fees Standard CBPP computer lab fee

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

19. Justification for Action
Change course title and description. Update textbook and instructional goals.

Initiator (faculty only)
Suresh Srivastava
Initiator (TYPE NAME)

Approved  Date
Disapproved  Date

Dean/Director of School/College  Date
Undergraduate/Graduate Academic  Date
Board Chairperson  Date
Provost or Designee  Date
COURSE CONTENT GUIDE
UNIVERSITY OF ALASKA ANCHORAGE
COLLEGE OF BUSINESS AND PUBLIC POLICY

I. Date Initiated February 28, 2013

II. Course Information
College/School: College of Business and Public Policy
Department: Business Administration
Program: Bachelor of Business Administration, Finance: Investment Concentration
Bachelor of Business Administration, Finance: Real Estate and Property Management Concentration
Course Title: Intermediate Financial Management
Course Number: BA A385
Credits: 3
Contact Hours: 3 per week x 15 weeks = 45 hours
0 lab hours
6 hours outside of class per week x 15 weeks = 90 hours
Grading Basis: A – F
Course Description: Intermediate course in corporate finance presenting advanced analytical techniques and concepts. Includes multifactor asset pricing models, free cash flow and corporate valuation, capital budgeting risk analysis and real options, capital structure theory, mergers, and corporate bankruptcies.
Prerequisites: BA A325 with a minimum grade of C
Registration Restrictions: College of Business & Public Policy majors must be admitted to upper-division standing
Fees: Standard CBPP computer lab fee

III. Course Activities
A. Lectures
B. Discussions
C. Guest lecturers
D. Valuation project

IV. Course Level Justification
This is an advanced course in corporate finance that requires integration of knowledge acquired in 200-level accounting, economics, and introductory corporate finance courses.
V. Outline
   A. Multifactor Asset Pricing Model
   B. Free Cash Flow and Corporate Valuation
   C. Risk Analysis in Capital Budgeting
   D. Real Options
   E. Capital Structure Theories
   F. Financing with Convertible Securities
   G. Mergers and Acquisitions
   H. Corporate Bankruptcies

VI. Suggested Text

VII. Bibliography
   Textbooks are supplemented by readings from current professional publications available in UAA consortium library and Loussac Library. Useful information on corporate finance is available on following websites.
   
   http://news.ft.com/home/us
   http://online.barrons.com/public/us
   http://online.wsj.com/public/us
   http://www.amex.com
   http://www.businessweek.com
   http://www.cbt.com
   http://www.federalreserve.gov
   http://www.forbes.com
   http://www.fortune.com/fortune
   http://www.nasdaq.com
   http://www.nyse.com
   http://www.sec.gov
VIII. Instructional Goals and Student Learning Outcomes

A. Instructional Goals
   The instructor will:

   1. Present multifactor asset pricing models
   2. Discuss free cash and corporate valuation
   3. Discuss risk analysis in capital budgeting
   4. Discuss real options
   5. Present capital structure theories
   6. Discuss financing with convertible and hybrid securities
   7. Explain how to analyze mergers and acquisitions
   8. Discuss corporate bankruptcy

B. Student Learning Outcomes
   Students will be able to:

<table>
<thead>
<tr>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam, homework, or quiz</td>
</tr>
<tr>
<td>Spreadsheet exercises</td>
</tr>
<tr>
<td>Exam, homework, or quiz</td>
</tr>
<tr>
<td>Exam, homework, or quiz</td>
</tr>
<tr>
<td>Exam, homework, and quiz</td>
</tr>
<tr>
<td>Spreadsheet exercises</td>
</tr>
<tr>
<td>Exam, homework, and quiz</td>
</tr>
<tr>
<td>Exam, homework, and quiz</td>
</tr>
</tbody>
</table>
## Course Action Request

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

### 1. School or College  
CB CBPP

### 2. Course Prefix  
BA

### 3. Course Number  
A431

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

### 5. Credits/CEUs  
3

### 6. Contact Hours  
(Lecture + Lab) (3+0)

### 7. Complete Course Title  
Real Estate Appraisal

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

#### 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)

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

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

### 11. Implementation Date  
From: Fall/2013  
To: 9999

### 12. Cross Listed with  
Stacked with

### 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) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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</thead>
<tbody>
<tr>
<td>Finance, Real Estate and Property Management Concentration, BBA</td>
<td>139</td>
<td>02/22/2013</td>
<td>Ed Forrest</td>
</tr>
<tr>
<td>Minor in Real Estate, BBA</td>
<td>141</td>
<td>02/22/2013</td>
<td>Ed Forrest</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Initiator Name (typed): Clayton Trotter  
Initiator Signed Initials: ___________________  
Date: __________________

### 13b. Coordination Email  
Date: 03/01/2013  
submitted to Faculty Listserv: (uua-faculty@lists.uaa.alaska.edu)

### 13c. Coordination with Library Liaison  
Date: 03/01/2013

### 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)

Surveys all aspects of the real estate appraisal. Topics covered are: appraisal process, real estate economics, property inspection, sales comparison approach, cost approach, income approach, reporting appraisal opinion, and the professional appraiser.

### 16a. Course Prerequisite(s) (list prefix and number)  
BA A306 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)  
College of Business & Public Policy majors must be admitted to upper-division standing.

### 17. Mark if course has fees  
Standard CBPP computer lab fee

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

### 19. Justification for Action  
Update prerequisite, textbook, and instructional goals

Initiator (faculty only)  
Date  
Clayton Trotter  
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
   February 27, 2013

II. Course Information
    College/School: College of Business and Public Policy
    Department: Business Administration
    Program: Bachelor of Business Administration, Finance:
             Concentration in Real Estate and Property Management
             Bachelor of Business Administration, Minor in Real Estate
    Course Title: Real Estate Appraisal
    Course Number: BA A431
    Credits: 3
    Contact Hours: 3 per week x 15 weeks = 45 hours
                   0 lab hours
                   6 hours outside of class per week x 15 weeks = 90 hours
    Grading Basis: A - F
    Course Description: Surveys all aspects of the real estate appraisal. Topics
                       covered are: appraisal process, real estate economics, property inspection, sales
                       comparison approach, cost approach, income approach, reporting appraisal
                       opinion, and the professional appraiser.
    Course Prerequisites: BA A306 with a minimum grade of C
    Registration Restrictions: College of Business & Public Policy majors must be
                             admitted to upper-division standing.
    Fees: Standard CBPP computer lab fee

III. Course Activities
    A. Lectures
    B. Discussions
    C. Guest lectures by industry professionals
    D. Multimedia presentations

IV. Guidelines for Evaluation
    A. Exam
    B. Project
    C. Homework

V. Course Level Justification
   This is a senior-level class that analyzes various aspects of the real estate appraisal.
   This course requires advanced analytical skills, research capabilities, and writing skills.
VI. Outline
A. Formal Appraisal Process
B. Real Estate Economics and Property Valuation
C. Property Inspection
D. Sales Comparison Approach
E. Income and Cost Approach
F. Reporting Appraisal Opinion
G. Professional Appraiser

VII. Suggested Text

VIII. Bibliography
Textbooks are supplemented by readings from current professional publications available in UAA consortium library and Loussac Library. Useful information on real estate industry is available on following websites:
http://www.alta.org
http://www.appraisalinstitute.org
http://www.apt.com
http://www.caci.com
http://www.ccim.com
http://www.fha-home-loans.com
http://www.fhfb.gov
http://www.frbservices.org
http://www.housingzone.com
http://www.hud.gov
http://www.ired.com
http://www.irem.org
http://www.jchs.harvard.edu
http://www.mbaa.org
http://www.nmhc.org
http://www.rerc.com
http://www.reri.org
http://www.shoppingcenters.com
# IX. Instructional Goals and Student Learning Outcomes

## A. Instructional Goals

The instructor will:

1. Present an overview of formal appraisal process
2. Discuss real estate economics and property valuation
3. Explain different elements of property inspection
4. Analyze sales comparison approach
5. Analyze cost and income capitalization
6. Examine the process of reporting appraisal opinions
7. Discuss the role of a professional appraiser

## B. Student Learning Outcomes

<table>
<thead>
<tr>
<th>Students will be able to:</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Develop an understanding of formal appraisal process</td>
<td>Homework or exam</td>
</tr>
<tr>
<td>2. Analyze real estate economics and property valuation</td>
<td>Homework or exam</td>
</tr>
<tr>
<td>3. Analyze different elements of property inspection</td>
<td>Homework or exam</td>
</tr>
<tr>
<td>4. Analyze the sales comparison, cost, and income capitalization approach</td>
<td>Project</td>
</tr>
<tr>
<td>5. Prepare an appraisal opinions on a property</td>
<td>Project</td>
</tr>
<tr>
<td>6. Evaluate the role of a professional appraiser</td>
<td>Homework or exam</td>
</tr>
</tbody>
</table>
**Proposal to Initiate, Add, Change, or Delete a Course**

**Course Action Request**

**University of Alaska Anchorage**

**Real Estate Law**

**Initiator Name (typed): Clayton Trotter**

**Initiator Signed Initials: _________**

**Department Chairperson**

**Provost or Designee**

**Board Chairperson**

**Date:**

---

### 1a. School or College

CB CBPP

### 1b. Division

ADBP Division of Business Programs

### 1c. Department

BA

### 2. Course Prefix

BA

### 3. Course Number

A432

### 4. Previous Course Prefix & Number

N/A

### 5a. Credits/CEUs

3

### 5b. Contact Hours

(Lecture + Lab)

---

### 6. Complete Course Title

Real Estate 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
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major
- [ ] Other Update CCG (please specify)

---

### 9. Repeat Status No

- [ ] 0
- [ ] 1
- [ ] 2
- [ ] 3

**# of Repeats**

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

### 10. Grading Basis

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

### 11. Implementation Date

- [ ] semester/year

**From: Fall/2013**

**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).

**Impacted Program/Course**

<table>
<thead>
<tr>
<th>#</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>
<td>140</td>
<td></td>
<td>02/22/2013</td>
<td>Ed Forrest</td>
</tr>
<tr>
<td>2</td>
<td>141</td>
<td></td>
<td>02/22/2013</td>
<td>Ed Forrest</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Initiator Name (typed): Clayton Trotter**

**Initiator Signed Initials: _________**

**Date:__________**

---

### 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)*

Surveys all aspects of the real estate law. Topics covered are: legal system; scope of real property; types of ownership; real estate contracts; title and insurance; financing, closing and taxation; landlord and tenants; and environmental law and regulation.

### 16a. Course Prerequisite(s)

(list prefix and number) [BA A241 or JUST A241] 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

**College of Business & Public Policy majors must be admitted to upper-division standing.**

### 17. Mark if course has fees

- [ ] Standard CBPP computer lab fee

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

---

### 19. Justification for Action

- [ ] Update the course prerequisite, textbook, and instructional goals

---

**Initiator (faculty only)**

**Clayton Trotter**

**Initiator (TYPE NAME):**

- [ ] Approved
- [ ] Disapproved

**Department Chairperson**

- [ ] Approved
- [ ] Disapproved

**Curriculum Committee Chairperson**

- [ ] Approved
- [ ] Disapproved

**Dean/Director of School/College**

- [ ] Approved
- [ ] Disapproved

**Undergraduate/Graduate Academic**

- [ ] Approved
- [ ] Disapproved

**Provost or Designee**

- [ ] Approved
- [ ] Disapproved
I. Date Initiated
   February 28, 2013

II. Course Information
   College/School: College of Business and Public Policy
   Department: Business Administration
   Program: Bachelor of Business Administration, Finance:
            Concentration in Real Estate and Property Management
            Bachelor of Business Administration, Minor in Real Estate
   Course Title: Real Estate Law
   Course Number: BA A432
   Credits: 3
   Contact Hours: 3 per week x 15 weeks = 45 hours
                  0 lab hours
                  6 hours outside of class per week x 15 weeks = 90 hours
   Grading Basis: A - F
   Course Description: Surveys all aspects of the real estate law. Topics covered
                      are: legal system; scope of real property; types of ownership; real estate contracts;
                      title and insurance; financing, closing and taxation; landlord and tenants; and
                      environmental law and regulation.
   Course Prerequisites: [BA A241 or JUST A241] with a minimum grade of C
   Registration Restrictions: College of Business & Public Policy majors must be
                             admitted to upper-division standing.
   Fees: Standard CBPP computer lab fee

III. Course Activities
   A. Lectures
   B. Discussions
   C. Guest lectures by industry professionals
   D. Multimedia presentations

IV. Course Level Justification
   This is a senior-level class that analyzes various aspects of the real estate law. This course requires advanced analytical skills, research capabilities, and writing skills.
V. Outline
A. Legal System and Nature of Property
B. Scope of Real Property
C. Types of Ownership
D. Real Estate Contract
E. Title and Insurance
F. Financing, Closing, and Taxation
G. Landlord and Tenant
H. Environmental Law and Regulation

VI. Suggested Text

VII. Bibliography
Textbooks are supplemented by readings from current professional publications available in UAA consortium library and Loussac Library. Useful information on real estate industry is available on following websites:

http://www.alta.org
http://www.appraisalinstitute.org
http://www.apts.com
http://www.caci.com
http://www.ccim.com
http://www.fha-home-loans.com
http://www.fhfb.gov
http://www.frbservices.org
http://www.housingzone.com
http://www.hud.gov
http://www.ired.com
http://www.irem.org
http://www.jchs.harvard.edu
http://www.mbaa.org
http://www.nmhc.org
http://www.rerc.com
http://www.reri.org
http://www.shoppingcenters.com
VIII. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructor will:</td>
<td></td>
</tr>
<tr>
<td>1. Present an overview of the legal system</td>
<td></td>
</tr>
<tr>
<td>2. Discuss scope of real property and types of ownership</td>
<td></td>
</tr>
<tr>
<td>3. Explain real estate contracts</td>
<td></td>
</tr>
<tr>
<td>4. Discuss title and insurance regulations</td>
<td></td>
</tr>
<tr>
<td>5. Explain legal aspects of financing, closing, and taxation</td>
<td></td>
</tr>
<tr>
<td>6. Review landlord and tenant regulations</td>
<td></td>
</tr>
<tr>
<td>7. Discuss environmental laws and regulations</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Student Learning Outcomes</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will be able to:</td>
<td></td>
</tr>
<tr>
<td>1. Develop an understanding of the legal system</td>
<td>Homework or exam</td>
</tr>
<tr>
<td>2. Analyze the scope of real property and types of ownership</td>
<td>Homework or exam</td>
</tr>
<tr>
<td>3. Analyze real estate contracts, title, and insurance regulations</td>
<td>Case or exam</td>
</tr>
<tr>
<td>4. Analyze the legal aspects of financing, closing, and taxation</td>
<td>Homework or exam</td>
</tr>
<tr>
<td>5. Analyze landlord and tenant regulations</td>
<td>Case or homework</td>
</tr>
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<td>Case or exam</td>
</tr>
</tbody>
</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>CB CBPP</td>
<td>ADBP Division of Business Programs</td>
<td>BA</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>BA</td>
<td>A452</td>
<td>N/A</td>
<td>3</td>
<td>(3+0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Complete Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Derivatives</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abbreviated Title for Transcript (30 character)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Derivatives</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Type of Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Academic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. Type of Action:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Add</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ A-F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. Implementation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>From: Fall/2013</td>
</tr>
<tr>
<td>To: 9999</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12. Cross Listed with</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Stacked with</td>
</tr>
</tbody>
</table>

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) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance, Investment Concentration, BBA</td>
<td>140</td>
<td>02/22/2013</td>
<td>Ed Forrest</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>

<table>
<thead>
<tr>
<th>Initiator Name (typed): Suresh Srivastava</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiator Signed Initials:_______ Date:_______</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13b. Coordination Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: 03/01/2013</td>
</tr>
</tbody>
</table>

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

13c. Coordination with Library Liaison
Date: 03/01/2013

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)
BA 325 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)
College of Business & Public Policy majors must be admitted to upper-division standing.

17. ☑ Mark if course has fees Standard CBPP computer lab fee

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Update prerequisite, textbook, and instructional goals.

<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suresh Srivastava</td>
<td>Date</td>
</tr>
</tbody>
</table>

| ☑ Approved |
| Disapproved |

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

<table>
<thead>
<tr>
<th>Undergraduate/Graduate Academic</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Board Chairperson</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Provost or Designee</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td></td>
</tr>
<tr>
<td>Disapproved</td>
<td></td>
</tr>
</tbody>
</table>
COURSE CONTENT GUIDE
UNIVERSITY OF ALASKA ANCHORAGE
COLLEGE OF BUSINESS AND PUBLIC POLICY

I. Date Initiated February 28, 2013

II. Course Information
College/School: College of Business and Public Policy
Department: Business Administration
Program: Bachelor of Business Administration: Finance, Investment Concentration
Course Title: Financial Derivatives
Course Number: BA A452
Credits: 3
Contact Hours: 3 per week x 15 weeks = 45 hours
0 lab hours
6 hours outside of class per week x 15 weeks = 90 hours
Grading Basis: A – F
Course Description: Advanced course in investment management on financial derivatives. Covers options, futures, options on futures, swap markets, and their use in managing interest rate risk and foreign exchange risk.
Prerequisites: BA A325 with a minimum grade of C.
Registration Restrictions: College of Business & Public Policy majors must be admitted to upper-division standing.
Fees: Standard CBPP computer lab fee

III. Course Activities
A. Lectures
B. Discussions
C. Guest speakers
D. Spreadsheet exercises

IV. Course Level Justification
This is an advanced course in financial investment and risk management. The course requires that students integrate knowledge acquired in 300-level finance courses.

V. Outline
A. Introduction to Financial Derivatives
B. Options, Futures, and Swaps Markets
C. Valuation of Options, Futures, and Swaps
D. Interest Rate Futures, Options, and Options on Futures
E. Stock Index Futures, Options, and Options on Futures
F. Currency Futures and Options
G. Exotic Options, Swaps, and Financial Engineering
H. Use Of Derivative in Risk Management
VI. Suggested Text

VII. Bibliography
Textbooks are supplemented by readings from current professional publications available in UAA consortium library and Loussac Library. Other useful information on investment is available on following websites:

http://news.ft.com/home/us  
http://online.barrons.com/public/us  
http://online.wsj.com/public/us  
http://www.amex.com  
http://www.businessweek.com  
http://www.cbt.com  
http://www.federalreserve.gov  
http://www.forbes.com  
http://www.fortune.com/fortune  
http://www.nasdaq.com  
http://www.nyse.com  
http://www.sec.gov

VIII. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals.</th>
<th>The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Explain financial derivatives</td>
<td></td>
</tr>
<tr>
<td>2. Discuss options, futures, options on futures, and swaps markets</td>
<td></td>
</tr>
<tr>
<td>3. Explain interest rate risk and its management</td>
<td></td>
</tr>
<tr>
<td>4. Describe valuation of financial derivatives</td>
<td></td>
</tr>
<tr>
<td>5. Discuss equity market risk management and portfolio insurance</td>
<td></td>
</tr>
<tr>
<td>6. Explain financial engineering and analyze exotic options</td>
<td></td>
</tr>
</tbody>
</table>
**B. Student Learning Outcomes.**

**Students will be able to:**

<table>
<thead>
<tr>
<th></th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Demonstrate understanding of financial derivatives and their markets</td>
</tr>
<tr>
<td>2.</td>
<td>Calculate the value of an option using Black-Scholes model</td>
</tr>
<tr>
<td>3.</td>
<td>Calculate the value of an option using the risk neutral Binomial Model</td>
</tr>
<tr>
<td>4.</td>
<td>Hedge a stock portfolio using stock index derivatives</td>
</tr>
<tr>
<td>5.</td>
<td>Hedge foreign currency denominated cash flows</td>
</tr>
<tr>
<td>6.</td>
<td>Demonstrate an understanding of exotic derivatives</td>
</tr>
</tbody>
</table>
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College
CB CBPP
1b. Division
ADBP Division of Business Programs
1c. Department
BA

2. Course Prefix
BA
3. Course Number
A453
4. Previous Course Prefix & Number
N/A
5a. Credits/CEUs
3
5b. Contact Hours
(Lecture + Lab)
(3+0)

6. Complete Course Title
Bond Market Analysis
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 ☐ Simple/Stacked
☐ Course Description ☐ Course Prerequisites
☐ 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: Fall/2013 To: /9999

12. Cross Listed with
☒ Stacked with
☐ Cross-Listed/Stacked Coordinate 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>Finance: Investment Concentration, BBA</td>
<td>140</td>
<td>02/22/2013</td>
<td>Ed Forrest</td>
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<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Initiator Name (typed): Suresh Srivastava
Initiator Signed Initials: _________ Date:__________

Initiator Coordination Email
Date: 03/01/2013
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13b. Coordination Email
Date: 03/01/2013

13c. Coordination with Library Liaison
Date: 03/01/2013

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)
Advanced course in investment management covering fixed income securities. Covers bond fundamental, types of debt instruments, term structure of interest rates, interest rate risks and its management, bond portfolio management, indexing, and performance evaluation.

16a. Course Prerequisite(s) (list prefix and number)
BA A325 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)
College of Business & Public Policy majors must be admitted to upper-division standing.

16f. Mark if course has fees
Standard CBPP computer lab fee

17. ☒ Mark if course is a selected topic course

18. Mark if course is a selected topic course

19. Justification for Action
Update course prerequisite, textbook, and instructional goals.

Initiator (faculty only)
Suresh Srivastava
Initiator (TYPE NAME)

Initiator Coordination Email
Date: 03/01/2013

Dean/Director of School/College
Date:__________

Undergraduate/Graduate Academic
Date:__________

Board Chairperson
Date:__________

Provost or Designee
Date:__________
I. Date Initiated  February 28, 2013

II. Course Information
College/School: College of Business and Public Policy
Department: Business Administration
Program: Bachelor of Business Administration, Finance: Investment Concentration
Course Title: Bond Market Analysis
Course Number: BA A453
Credits: 3
Contact Hours: 3 per week x 15 weeks = 45 hours
0 lab hours
6 hours outside of class per week x 15 weeks = 90 hours
Grading Basis: A – F
Course Description: Advanced course in investment management covering fixed income securities. Covers bond fundamental, types of debt instruments, term structure of interest rates, interest rate risks and its management, bond portfolio management, indexing, and performance evaluation.
Prerequisites: BA A325 with a minimum grade of C
Registration Restrictions: College of Business & Public Policy majors must be admitted to upper-division standing.
Fees: Standard CBPP computer lab fee

III. Course Activities
A. Lectures
B. Discussions
C. Guest speakers
D. Bond portfolio project using Bloomberg© database

IV. Course Level Justification
This is an advanced course in bond investment and analysis that requires integration of knowledge acquired in 300-level finance courses. The course includes a project on bond portfolio analysis.

V. Outline
A. Introduction to Fixed Income Investment
B. Bond Fundamentals
C. Term Structure of Interest Rates
D. Types of Debt Instruments
E. Bond Portfolio Management
F. Indexing
G. Liability Funding Strategies
H. Performance Measurement and Evaluation

VI. Suggested Text


VII. Bibliography

Textbooks are supplemented by readings from current professional publications available in UAA consortium library and Loussac Library. Use the Bloomberg© database available at a local money management firm. Other useful information on investment is available on following websites:

http://news.ft.com/home/us
http://online.barrons.com/public/us
http://online.wsj.com/public/us
http://www.amex.com
http://www.businessweek.com
http://www.cbt.com
http://www.federalreserve.gov
http://www.forbes.com
http://www.fortune.com/fortune
http://www.nasdaq.com
http://www.nyse.com
http://www.sec.gov

VIII. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructor will:</td>
</tr>
<tr>
<td>1. Present an overview of fixed income investment</td>
</tr>
<tr>
<td>2. Discuss the role of bond investment in an investor’s portfolio</td>
</tr>
<tr>
<td>3. Explain passive and active investment strategies</td>
</tr>
<tr>
<td>4. Discuss different investor groups and their investment objectives</td>
</tr>
<tr>
<td>5. Explain risk-return trade-off, portfolio risk, and rebalancing</td>
</tr>
<tr>
<td>6. Discuss various bond portfolio evaluation techniques and indexing</td>
</tr>
<tr>
<td>7. Present an analysis of fixed income portfolios</td>
</tr>
</tbody>
</table>
## B. Student Learning Outcomes.

**Students will be able to:** | **Assessment Method**
---|---
1. Assess the role of fixed income investment in asset allocation | Exam, homework, or quiz
2. Evaluate different types of bonds and related products | Exam, homework, or quiz
3. Demonstrate understanding of bonds and related product valuations | Exam, homework, or quiz
4. Evaluate interest rate risk associated with different types of bonds | Exam, homework, or quiz
5. Evaluate different techniques of interest rate risk management | Exam, homework, and quiz
6. Construct a bond portfolio and select an appropriate index for comparison | Portfolio project
7. Analyze the performance of the bond portfolio | Portfolio project
Initiator Name (typed): **Scott Hamel**
Initiator Signed Initials: _________ Date: __________

### 11. Implementation Date
- From: Fall/2013
- To: 99/9999

### 12. Cross Listed with
- Stacked with CE A651
- Cross-Listed Coordination

### 15. Course Description (suggested length 20 to 50 words)
Introduction of the Direct Stiffness Method (matrix method) with computer solutions for two-dimensional and three-dimensional linear-elastic frame and truss structures. Topics include shear deformations, elastic supports and connections, support settlements, thermal loads, and energy formulations of force-displacement relationships.

### 16a. Course Prerequisite(s)
- CE A431 with a minimum grade of C

### 16b. Test Score(s)

### 16c. Co-requisite(s) (concurrent enrollment required)
- MATH A314 is recommended

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

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

### 19. Justification for Action
A technical elective for civil engineering undergraduate students covering advanced topics in structural analysis that rounds out the typical offerings of contemporary structural engineering programs.

---

### 1a. School or College
**EN SOENGR**

### 2. Course Prefix
- CE

### 3. Course Number
- A451

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

### 5. Credits/CEUs
- 3

### 6. Complete Course Title
**Advanced Structural Analysis**

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

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

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

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

### 11. Coordination with Library Liaison
Date: 02/28/2013

Initiator Name (typed): **Scott Hamel**
Initiator Signed Initials: _________ Date: __________

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

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

### 16c. Co-requisite(s) (concurrent enrollment required)
- MATH A314 is recommended

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

---

### Footer
43
Date: February 27, 2013
Course Title: Advanced Structural Analysis
Course Number: CE A451
Program: Civil Engineering
Credits: 3.0

I. Course Description
Introduction of the Direct Stiffness Method (matrix method) with computer solutions for two-dimensional and three-dimensional linear-elastic frame and truss structures. Topics include shear deformations, elastic supports and connections, support settlements, thermal loads, and energy formulations of force-displacement relationships.

II. Course Design
A. Course Intent: To give civil engineering undergraduate students knowledge in advanced structural analysis. The course is designed for students who have a solid knowledge of structural analysis and linear algebra.
B. Course Credits: Three (3.0) semester hours
C. Total Time of Student Involvement:
   a. Lecture hours per week: 3
   b. Average laboratory hours per week: none
   c. Total time of work expected outside class: 5 to 8 hours per week
D. Degree Program Status: Technical elective for undergraduate civil engineering students, course to be stacked with CE A651
E. Grading: A-F
F. Fees: Yes, standard SOE.
G. Previous Course: New Course.
H. Time Frame: Standard Semester
I. Coordination With Other Schools or Colleges: SOE and list serve
J. Prerequisites: CE A431 with a minimum grade of C, MATH A314 is recommended.
K. Course Activities: Class sessions consist of lectures. Assignments are made to allow students to learn by application the principles taught in this course. Exams are administered to assess the abilities of the students to apply principles taught in the course.

III. Course Level Justification
This course requires students to apply principles learned in other fundamental engineering courses to problems in the discipline of structural engineering. Students are expected to understand the concepts presented in Structural Analysis and Mechanics of Materials.

IV. Course Outline
A. Introduction to coordinate systems, elements, and support types
B. Timoshenko beam theory
C. Introduction to structural analysis and computational Software
D. Manual and Direct Stiffness Methods for trusses
E. Boundary condition methods
F. Coordinate transformations
G. Manual and Direct Stiffness Method for beams and frames  
H. End releases  
I. Slope deflection  
J. Spring and elastic supports  
K. Temperature changes  
L. Nonlinear structural analysis  

V. Instructional Goals, Student Outcomes, and Assessment Methods  
A. Instructional Goals:  
The objectives of this course are to help students to: understand the Direct Stiffness Method of structural analysis; know the limitations of 1st order linear elastic structural analysis; understand how structural analysis programs operate and their limitations; be able to choose and construct appropriate elements to model a structure; learn which characteristics of your structure can be ignored and which are important; and be able to identify errors in structural models.  

B. Student Learning Outcomes and Assessment Methods:  
<table>
<thead>
<tr>
<th>Upon successful completion of this course, students will be able to:</th>
<th>Assessment Methods:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Apply the Direct Stiffness Method (matrix analysis) to analyze the structure of a truss, beam or frame.</td>
<td>Homework Assignments, Exams, and Final Project</td>
</tr>
<tr>
<td>2. Utilize computer programming to apply the Direct Stiffness Method</td>
<td>Homework Assignments and Final Project</td>
</tr>
<tr>
<td>3. Apply force loads, thermal loads, and joint displacements to a frame in the appropriate format for matrix analysis</td>
<td>Homework Assignments, Exams, and Final Project</td>
</tr>
<tr>
<td>4. Use the slope-deflection method to analyze a structure</td>
<td>Homework Assignments, Exams, and Final Project</td>
</tr>
<tr>
<td>5. Employ structural analysis software to solve realistic problems and identify errors in the results of computer models</td>
<td>Homework Assignments and Final Project</td>
</tr>
</tbody>
</table>

VI. Suggested Texts  

VII. References/Bibliography  

*Classic text*
# 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>Civil Engineering</th>
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<tbody>
<tr>
<td>2. Course Prefix</td>
<td>CE</td>
<td>3. Course Number</td>
<td>A651</td>
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<tr>
<td>5a. Credits/CEUs</td>
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<td>5b. Contact Hours</td>
<td>(Lecture + Lab)</td>
<td>(3+0)</td>
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</table>

## 6. Complete Course Title

**Advanced Structural Analysis**

**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
- [ ] 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

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

## 11. Implementation Date

**semester/year**

- From: Fall/2013
- To: 99/9999

## 12. Cross Listed with

- [x] Stacked with CE A451

### 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

<table>
<thead>
<tr>
<th>Catalog Page(s)</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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### Impacted Program/Course

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<tr>
<th>1. Civil Engineering</th>
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<th>02/28/2013</th>
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<tbody>
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<td>2.</td>
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<tr>
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</table>

### Initiator Name (typed): Scott Hamel

**Initiator Signed Initials:**

**Date:**

## 13b. Coordination Email

**Date: 02/28/2013**

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

## 13c. Coordination with Library Liaison

**Date: 02/28/2013**

## 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 of the Direct Stiffness Method (matrix method) with computer solutions for two-dimensional and three-dimensional linear-elastic frame and truss structures. Topics include shear deformations, elastic supports and connections, support settlements, thermal loads, and energy formulations of force-displacement relationships.

## 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 or instructor approval

## 17. Mark if course has fees

**Do not mark any boxes**

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

**Do not mark any boxes**

## 19. Justification for Action

A new course for civil engineering graduate students covering advanced topics in structural analysis that rounds out the typical offerings of contemporary structural engineering programs.

**Initiator (faculty only)**

**Scott Hamel**

**Initiator (TYPE NAME)**

**Date**

- [x] Approved
- [ ] Disapproved

**Dean/Director of School/College**

**Date**

- [x] Approved
- [ ] Disapproved

**Undergraduate/Graduate Academic**

**Board Chairperson**

**Date**

- [x] Approved
- [ ] Disapproved

**Provost or Designee**

**Date**

47
I. Course Description
Introduction of the Direct Stiffness Method (matrix method) with computer solutions for two-dimensional and three-dimensional linear-elastic frame and truss structures. Topics include shear deformations, elastic supports and connections, support settlements, thermal loads, and energy formulations of force-displacement relationships.

II. Course Design
A. Course Intent: To give civil engineering graduate students knowledge in advanced structural analysis. The course is designed for students who have a solid knowledge of structural analysis and linear algebra.
B. Course Credits: Three (3.0)
C. Total Time of Student Involvement:
   1. Lecture hours per week: 3
   2. Average laboratory hours per week: none
   3. Total time of work expected outside class: 5 to 8 hours per week
D. Degree Program Status: Graduate civil engineering students (MCE and MSCE), course to be stacked with CE A451
E. Grading: A-F
F. Fees: Standard SOE
G. Previous Course: New Course
H. Time Frame: Standard Semester
I. Coordination With Other Schools Or Colleges: SOE and list serve
J. Prerequisites: None
K. Course Activities: Class sessions consist of lectures. Assignments are made to allow students to learn by application the principles taught in this course. Exams are administered to assess the abilities of the students to apply principles taught in the course.

III. Course Level Justification
Requires students to apply principles learned in other fundamental engineering courses to problems in the discipline of structural engineering. Students are expected to understand the concepts presented in advanced mathematics and Structural Analysis and apply these concepts to graduate level solutions.

IV. Course Outline
A. Introduction to coordinate systems, elements, and support types
B. Timoshenko beam theory
C. Introduction to structural analysis and computational Software
D. Manual and Direct Stiffness Methods for trusses
E. Boundary condition methods
V. Instructional Goals, Student Outcomes, and Assessment Methods

A. Instructional Goals:

The objectives of this course are to help students to: understand the Direct Stiffness Method of structural analysis; know the limitations of 1st order linear elastic structural analysis; understand how structural analysis programs operate and their limitations; be able to choose and construct appropriate elements to model a structure; learn which characteristics of your structure can be ignored and which are important; and be able to identify errors in structural models.

B. Student Learning Outcomes and Assessment Methods:

<table>
<thead>
<tr>
<th>Upon successful completion of this course, students will be able to:</th>
<th>Assessment Methods:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Apply the Direct Stiffness Method (matrix analysis) to analyze the structure of a truss, beam or frame</td>
<td>Homework Assignments, Exams, and Final Project</td>
</tr>
<tr>
<td>2. Utilize computer programming to apply the Direct Stiffness Method</td>
<td>Homework Assignments and Final Project</td>
</tr>
<tr>
<td>3. Apply force loads, thermal loads, and joint displacements to a frame in the appropriate format for matrix analysis</td>
<td>Homework Assignments, Exams, and Final Project</td>
</tr>
<tr>
<td>4. Use the slope-deflection method to analyze a structure</td>
<td>Homework Assignments, Exams, and Final Project</td>
</tr>
<tr>
<td>5. Employ structural analysis software to solve realistic problems and identify errors in the results of computer models</td>
<td>Homework Assignments and Final Project</td>
</tr>
<tr>
<td>6. Use structural analysis software to analyze complex structures</td>
<td>Final Project</td>
</tr>
</tbody>
</table>

VI. Suggested Texts


VII. References/Bibliography


*Classic text*
### 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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<th>4. Previous Course Prefix &amp; Number</th>
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<th>8. Type of Action: Add or Change or Delete</th>
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<th>10. Grading Basis</th>
<th>11. Implementation Date</th>
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<tr>
<td>A-F</td>
<td>semester/year</td>
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<table>
<thead>
<tr>
<th>12. Cross Listed with</th>
<th>13a. Impacted Courses or Programs: List any programs or college requirements that require this course.</th>
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<tbody>
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<td>N/A</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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<tr>
<th>14. General Education Requirement</th>
<th>15. Course Description (suggested length 20 to 50 words)</th>
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<tbody>
<tr>
<td>Mark appropriate box:</td>
<td>Examine the basic components of the U.S. courts with particular emphasis on case processing through the court system and the roles of court actors. Covers the history as well as the current structure and function of the court system and assesses the gap between the ideals and the realities of court processes and practices.</td>
</tr>
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</table>

<table>
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<th>16b. Test Score(s)</th>
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<table>
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<tr>
<th>17. Mark if course has fees</th>
<th>18. Mark if course is a selected topic course</th>
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<tbody>
<tr>
<td>This prerequisite change reflects the faculty approved restructuring of course prerequisites.</td>
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</tr>
</tbody>
</table>

---

**Cory Lepage**

Initiator (faculty only)

Initiator Signed Initials: _________ Date:________________

---

**Dean/Director of School/College**

Approved Disapproved Date

**Department Chairperson**

Approved Disapproved Date

**Board Chairperson**

Approved Disapproved Date

**Provost or Designee**

Approved Disapproved Date
I. Date of Initiation: February 2013

II. Curriculum Action Request
   A. School: College of Health
   B. Course Subject: JUST
   C. Course Number: A374
   D. Number of Credits: 3
   E. Contact Hours: 3+0
   F. Course Program: Bachelor of Arts, Justice
   G. Course Title: The Courts
   H. Grading Basis: A-F
   I. Implementation Date: Fall/2013
   J. Cross-listed/Stacked: N/A
   K. Course Description: Examines the basic components of the U.S. courts with particular emphasis on case processing through the court system and the roles of court actors. Covers the history as well as the current structure and function of the court system and assesses the gap between the ideals and the realities of court processes and practices.
   L. Course Prerequisites: [(JUST A110 and JUST A200 and JUST A201) or LEGL A101] with a minimum grade of D.
   M. Course Co-requisites: N/A
   N. Other Restrictions: N/A
   O. Registration Restrictions: N/A
   P. Course Fees: No
   Q. Course Attributes: N/A

III. Instructional Goals and Student Learning Outcomes
   A. The instructor will:
      1. Describe the historical development of the modern court system with emphasis on the European historical roots.
      2. Review the evolution and the current state of the legal theoretical paradigms.
      3. Present the institutional structure and processes of the American court system.
      4. Identify the actors in the court setting and discuss their authority and roles.
      5. Discuss the differences between theory and practice in the operation of the court system.
B. Upon completion of this course, the student will be able to:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Evaluate effect of history on current court policies and practices.</td>
<td>Examinations.</td>
</tr>
<tr>
<td>2. Compare the theoretical paradigms with the current policies and practices in the courts.</td>
<td>Examinations, writing assignments, faculty directed discussions.</td>
</tr>
<tr>
<td>3. Distinguish among the sources, types, and socio-political influences on formation of law and judicial processes.</td>
<td>Examinations.</td>
</tr>
<tr>
<td>4. Categorize the different actors in the court and examine the power differences between those actors.</td>
<td>Examinations, writing assignments.</td>
</tr>
<tr>
<td>5. Review contemporary scholarship on court policies.</td>
<td>Written assignments, faculty directed discussions, presentations.</td>
</tr>
<tr>
<td>6. Conclude how court policies and procedures have varying effects on different segments of the population.</td>
<td>Group exercises, written assignments, presentations.</td>
</tr>
</tbody>
</table>

IV. Course Level Justification

*The Courts* provides an in-depth coverage of the empirical and methodological issues present in the study of the courts.

V. Topical Course Outline

1. Historical roots and evolution of legal systems
   1.1. Medieval legal systems
   1.2. European legal systems
   1.3. American legal systems
2. Nature of law
   2.1. Definition of law
   2.2. Law and judicial function
3. Sources of law
   3.1. Natural law
   3.2. Common law
   3.3. Statutes
   3.4. Constitutional rights
   3.5. The Bill of Rights
4. Legal systems
   4.1. Civil law
   4.2. Criminal law
5. Theories of law
   5.1. Classical theories
   5.2. Contemporary theories
6. Court organization and structure
6.1. Federal courts
6.2. State courts
6.3. Local courts
6.4. Tribal courts
6.5. Overview of case-flow and processing

7. Authority and power of the actors in the courtroom workgroup
   7.1. Power of the prosecutor and ethical issues
   7.2. Limits on power of defense and ethical guidelines
   7.3. Judicial limits and responsibilities
   7.4. Role of the jury

8. Criminal proceedings and impacts on defendants
   8.1. Pretrial processes
   8.2. The trial proceedings
   8.3. Sentencing
   8.4. The appellate process

9. Civil proceedings
   9.1. Nature of civil litigation
   9.2. Civil procedure
   9.3. Alternative dispute resolution

10. Specialized courts
    10.1. History of specialized courts
    10.2. Types of specialized courts

11. Tribal courts
    11.1. Structure and authority
    11.2. Contemporary issues

12. Contemporary problems in:
    12.1. Abuse of prosecutorial discretion
    12.2. Bias in the courtroom
    12.3. Access to justice
    12.4. Judicial/prosecutorial independence

VI. Suggested Texts


VII. Bibliography


*denotes classic/seminal text.
1a. School or College  
CH College of Health  
1b. Division  
AJUS Division of Justice  
1c. Department  
Justice Center

2. Course Prefix  
JUST

3. Course Number  
A400

4. Previous Course Prefix & Number  
N/A

5. Credits/CEUs  
3

6. Complete Course Title  
Advanced Research Methods in Justice  
Adv. Research Methods Justice

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

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

9. Repeat Status No  
# of Repeats  
Max Credits

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

11. Implementation Date  
semester/year

From:  Fall/2013  
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>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>Bachelor of Arts, Justice</td>
<td>1/18/2013</td>
<td>Marny Rivera, Justice Undergraduate Program Coordinator</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
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Initiator Name (typed): Troy Payne  
Initiator Signed Initials:  
Date:

13b. Coordination Email  
Date: 2/15/2013  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 2/15/2013

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

15. Course Description  
(suggested length 20 to 50 words)  
Focuses on specific sampling (e.g., cluster and stratified) and data collection strategies (e.g., focus groups and telephone surveys) commonly used in Justice studies. Evaluates the potential use of official statistics such as police and census data. Applies research methods including selection of appropriate samples and creation of appropriate data collection instruments and protocols.

16a. Course Prerequisite(s)  
(list prefix and number or test code and score)  
(JUST A110 and JUST A200 and JUST A201) with a minimum grade of B

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

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

16d. Registration Restriction(s)  
(non-codable)  
N/A

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

19. Justification for Action  
Restructuring the Justice Research Honors has obviated the need for this course.

Initiator (faculty only)  
Troy Payne  
Initiator (TYPE NAME)  

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

Undergraduate/Graduate Academic Board Chair  
Date

Provost or Designee  
Date

Disapproved  
Approved

Department Chair  
Date

Approved  
Disapproved

College/School Curriculum Committee Chair  
Date

Disapproved  
Approved
**Course Action Request**

**University of Alaska Anchorage**

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

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<th>5b. Contact Hours (Lecture + Lab)</th>
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**6. Complete Course Title**

Inferential Data Analysis in Justice

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

**7. Type of Course**

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

**8. Type of Action:**

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

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

**10. Grading Basis**

- [X] A-F
- [ ] P/NO
- [ ] NG

**11. Implementation Date (semester/year)**

From: Fall/2013 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).

**Impacted Program/Course**

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<tbody>
<tr>
<td>1/18/2013</td>
<td>Marny Rivera, Justice Undergraduate Program Coordinator</td>
</tr>
</tbody>
</table>

**Initiator Name (typed): Troy Payne**

**Initiator Signed Initials:** ____________ **Date:** ____________

**13b. Coordination Email Date: 2/15/2013**

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

**13c. Coordination with Library Liaison Date: 2/15/2013**

**14. General Education Requirement**

Mark appropriate box:

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

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

Explores the logic and application of advanced inferential techniques, particularly of multivariate models, for applications in Justice. Presents how to formulate an analysis plan, analyze real Justice data, and outline theoretical and practical implications. Special Note: Recommended completion of GER Quantitative Skills requirement.

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

(JUST A110 and JUST A200 and JUST A201) with a minimum grade of B

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

N/A

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

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

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

N/A

**17. Mark if course has fees**

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

**19. Justification for Action**

Restructuring the Justice Research Honors has obviated the need for this course.

**Initiator (faculty only) Date**

Troy Payne

**Initiator (TYPE NAME) Date**

- [ ] Approved
- [ ] Disapproved

**Dean/Director of School/College Date**

- [ ] Approved
- [ ] Disapproved

**Undergraduate/Graduate Academic Board Chair Date**

- [ ] Approved
- [ ] Disapproved

**Provost or Designee Date**

- [ ] Approved
- [ ] Disapproved
## Course Action Request

**University of Alaska Anchorage**

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

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### 6. Contact Hours (Lecture + Lab)

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### 7. Complete Course Title

**Justice in Crisis**

Abbreviated Title for Transcript (30 character)

### 8. Type of Course

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

### 9. Type of Action:

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

If a change, mark appropriate boxes:

- [ ] Prefix
- [ ] Course Number
- [ ] Credits
- [ ] Contact Hours
- [ ] Title
- [ ] Repeat Status
- [ ] Grading Basis
- [ ] Cross-Listed/Stacked
- [ ] Course Description
- [ ] Course Prerequisites
- [ ] Test Score Prerequisites
- [ ] Co-requisites
- [ ] Registration Restrictions
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major
- [ ] Other Update CCG (please specify)

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### 11. Grading Basis

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

### 12. Implementation Date

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### 13. Cross Listed with

- [ ] N/A

### 14. Stacked with

- [ ] N/A

### 15. Course Description

Critically examines various perspectives on justice and the ability of a society to maintain the ideal of justice. Compares conditions in different countries and investigates different social and historical conditions when justice was challenged. Analyzes the influence of culture, race/ethnicity and socioeconomic inequality on the operation of the American Justice System.

### 16. Course Prerequisite(s)

- ((JUST A110 and JUST A200 and JUST A201) and (JUST A251 or SOC A251)) with a minimum grade of D.

### 17. Mark if course has fees

- [ ]

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

- [ ]

### 19. Justification for Action

Updated prerequisites as part of Justice program curriculum revisions.

### Initiator Name (typed): Ronald Everett

Initiator Signed Initials: __________ Date: __________

### 13a. Impacted Courses or Programs

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</table>

### 13b. Coordination Email

Date: 2/13/2012

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

### 13c. Coordination with Library Liaison

Date: 2/20/2012

### 14. General Education Requirement

Mark appropriate box:

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

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

Critically examines various perspectives on justice and the ability of a society to maintain the ideal of justice. Compares conditions in different countries and investigates different social and historical conditions when justice was challenged. Analyzes the influence of culture, race/ethnicity and socioeconomic inequality on the operation of the American Justice System.

### 16a. Course Prerequisite(s) ([list prefix and number])

((JUST A110 and JUST A200 and JUST A201) and (JUST A251 or SOC A251)) with a minimum grade of D.

### 16b. Test Score(s)

- [ ] N/A

### 16c. Co-requisite(s) ([concurren enrollment required])

- [ ] N/A

### 16d. Other Restriction(s)

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

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

Completion of all GER Tier 1 (Basic College-Level Skills) courses and Senior Standing.

### 17. Mark if course has fees

- [ ]

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

- [ ]

### 19. Justification for Action

Updated prerequisites as part of Justice program curriculum revisions.

Initiator (faculty only) Ronald Everett

Initiator (TYPE NAME) __________ Date __________

[Approved] Dean/Director of School/College

[Disapproved] Date __________

[Approved] Undergraduate/Graduate Academic

[Disapproved] Date __________

[Approved] Provost or Designee

[Disapproved] Date __________
I. Date of Initiation: April 2012

II. Curriculum Action Request

A. School: College of Health
B. Course Subject: JUST
C. Course Number: A460
D. Number of Credits: 3
E. Contact Hours: 3+0
F. Course Program: Bachelor of Arts, Justice
G. Course Title: Justice in Crisis
H. Grading Basis: A-F
I. Implementation Date: Fall/2013
J. Cross-listed/Stacked: N/A
K. Course Description: Critically examines various perspectives on justice and the ability of a society to maintain the ideal of justice. Compares conditions in different countries and investigates different social and historical conditions when justice was challenged. Analyzes the influence of culture, race/ethnicity and socioeconomic inequality on the operation of the American Justice System.

L. Course Prerequisites: [(JUST A110 and JUST A200 and JUST A201) and (JUST A251 or SOC A251)] with a minimum grade of D.

M. Course Co-requisites: N/A
N. Other Restrictions: Class
O. Registration Restrictions: Completion of all GER Tier 1 (Basic College-Level Skills) courses and Senior Standing.

P. Course Fees: N/A
Q. Course Attributes: General Education Requirement, Integrative Capstone

III. Instructional Goals and Student Learning Outcomes:

A. The instructor will:
   1. Present and critically review different perspectives on justice.
   2. Direct and guide students to develop an appreciation and understanding of the operation of systems of justice.
   3. Illustrate the strengths and weaknesses of different systems of justice.
   4. Review and critique different strategies for achieving justice.
   5. Identify and consider the role of historical events, information and social science literature on the operation of justice.
   6. Assess the relationship between the operation of contemporary criminal law and justice.
7. Analyze and critique the operation of the contemporary criminal justice process.
8. Appraise and critique the influence of socioeconomic inequality and racial/ethnic bias on the criminal justice system.
9. Review and critique differing sources of academic literature, research reports, and statistical information and the impact of such material on justice policy.

B. Upon completion of this course, the student will be able to:

<table>
<thead>
<tr>
<th>Student Learning Outcomes and Assessment Measures</th>
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<tbody>
<tr>
<td>Student Learning Outcomes</td>
</tr>
<tr>
<td>----------------------------</td>
</tr>
<tr>
<td>1. Demonstrate a critical understanding of different perspectives on justice.</td>
</tr>
<tr>
<td>2. Evaluate different systems of justice.</td>
</tr>
<tr>
<td>3. Analyze the qualities of different systems of justice.</td>
</tr>
<tr>
<td>4. Evaluate different strategies for achieving justice.</td>
</tr>
<tr>
<td>5. Examine the role of historical events and information on justice systems.</td>
</tr>
<tr>
<td>6. Analyze the operation of contemporary criminal law and its ability to achieve justice.</td>
</tr>
<tr>
<td>7. Evaluate the influence of social and economic forces on the criminal justice process.</td>
</tr>
<tr>
<td>8. Appreciate and assess the enduring influence of racial/ethnic bias and socioeconomic inequality on the operation of the criminal justice system.</td>
</tr>
<tr>
<td>9. Assess and evaluate appropriateness and quality of academic literature, research reports, and statistical information and the effect of such material on justice policy development.</td>
</tr>
</tbody>
</table>

### IV. Course Level Justification
This course is designed to fulfill the Integrative Capstone course requirement. The structure and substantive content of the course requires students to generate artifacts demonstrating complex knowledge integration, effective communication, critical thinking, and information literacy.

### V. Topical Course Outline
In this course the legal systems offered as comparative examples and contemporary justice issues and historical events selected as examples of justice in crisis are at the discretion of the instructor and may vary depending on current events and instructor desires.

1. What is justice?
   1.1. Religion as justice
   1.2. Justice and philosophy
2. Justice and the state
   2.1. The social contract
   2.2. Liberty, equality and justice
   2.3. Criminal justice
3. Social justice
   3.1. Human rights
   3.2. Justice and economics
   3.3. Environmental justice
4. Formal systems of justice
   4.1. Common law systems
      4.1.1. History
      4.1.2. Characteristics
      4.1.3. Modern structure of the legal system
   4.2. Civil law systems
      4.2.1. History
      4.2.2. Characteristics
      4.2.3. Modern structure of the legal system
   4.3. Islamic law systems
      4.3.1. Sources of Islamic law
      4.3.2. Crime and punishment
      4.3.3. Criminal procedure
   4.4. Justice American style
      4.4.1. Efficiency and inefficiency and justice
      4.4.2. Criminal justice process
      4.4.3. Distinguish justice and crime
      4.4.4. Disciplinary views of justice studies
      4.4.5. Theoretical approaches to law and criminal justice
      4.4.6. Critical issues
5. Strategies for achieving justice
   5.1. Individual strategies
   5.2. Organizational strategies
   5.3. Global strategies
6. Investigations of justice in crisis – history
   6.1. Hitler’s justice: courts of the Third Reich
      6.1.1. Role of judges
      6.1.2. Enforcement of conformity
   6.2. General legal system (1933 – 1945)
      6.2.1. Treason and treachery: political opposition and the courts
      6.2.2. Creation of the concentration camps
      6.2.3. Arbitrary decisions in everyday life
      6.2.4. Resistance from the bench
   6.3. Collapse and reconstruction of the legal system
      6.3.1. Restoration
      6.3.2. Coming to terms with the past
      6.3.3. Injustice confirmed
      6.3.4. An attempt at an explanation
7. Investigations of justice in crisis – the death penalty
   7.1. When justice goes wrong (death penalty and wrongful convictions)
7.1.1. Actual innocence
7.1.2. DNA
7.2. Recent empirical research on the death penalty
7.3. Recent debates on punishment rationales for the death penalty
7.4. Characteristics and common elements of wrongful convictions
  7.4.1. Seeing things and false identification
  7.4.2. False confessions
  7.4.3. Faulty science
  7.4.4. Lawyers
7.5. Lessons
7.6. Current debates and the future of the death penalty
8. Investigations of justice in crisis - race, poverty, drugs and corruption
  8.1. Tulia: race, cocaine, and corruption in a small Texas town
    8.1.1. Police and community
    8.1.2. Race and legal representation
  8.2. Empirical research on police corruption
  8.3. Undercover police investigations
    8.3.1. Discretion and race
    8.3.2. Race and power
    8.3.3. Selective enforcement
  8.4. Prosecutorial discretion: power and privilege
  8.5. Social and political theories of plea bargaining
  8.6. The power of plea bargaining
  8.7. Prosecutorial misconduct: the abuse of power and discretion
  8.8. Prosecutorial ethics
  8.9. Court process and issues of race
    8.9.1. Evidence and convictions
    8.9.2. Juries and beyond a reasonable doubt
    8.9.3. Media attention
  8.10. Questions and doubt
    8.10.1. Legal review
    8.10.2. Appeals
  8.11. Negotiations
    8.11.1. Release and pardons
    8.11.2. Prosecution of police corruption
    8.11.3. Prosecutorial misconduct
    8.11.4. Prosecutorial accountability
  8.12. Race, poverty and the justice process

VI. Suggested Texts


VII. Bibliography

**Manuscripts and Edited Volumes:**


*most recent edition of text*

**Journals:**

*American Sociological Review*
*American Journal of Sociology*
*Criminology*
*Justice Quarterly*
*Law and Policy*
*Law and Society*
*Punishment and Society*
*Social Problems*
The Justice Center is revising its departmental honors from Justice Research Honors to Justice Honors. In doing so we have increased the major GPA requirement, added an honor grade requirement in the Justice capstone, and removed the requirement of three advanced research courses. These changes to our departmental honors will allow us to recognize outstanding student achievement in Justice without limiting our recognition to students who engage in research.

Since the revised requirements for Justice Honors no longer include JUST 400 Advanced Research Methods in Justice and JUST 401 Inferential Data Analysis in Justice we are also seeking to delete these courses. These courses have not generated sufficient interest and when offered have had to be cancelled due to low enrollment.
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. Department</th>
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<td>Justice Center</td>
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<td>Initiator Name (typed): Marny Rivera</td>
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<tr>
<td>Initiator Signed Initials: _________</td>
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<td>Date:________________</td>
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| 6b. Coordination Email submitted to Faculty Listserv (uua-faculty@lists.uaa.alaska.edu) Date: 2/15/2013 |

| 6c. Coordination with Library Liaison Date: 2/15/2013 |

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

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<td>Justice Research Honors has been restructured in response to low demand.</td>
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<td>Initiator (TYPE NAME)</td>
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68
The UAA Justice Center, established by the Alaska Legislature in 1975, has a mandate to provide statewide justice-related education, research, and service. The Justice Center is an interdisciplinary unit that provides undergraduate, graduate, and professional education; conducts research in the areas of crime, law, and justice; and provides service to government units, justice agencies, and community organizations throughout urban and rural Alaska to promote a safe, healthy, and just society.

In furtherance of its academic mission, the Justice Center offers the following:
- Bachelor of Arts in Justice
- Minor in Justice
- Criminal Justice Emphasis for the Master of Public Administration
- Justice Honors
- Justice Club
- Alpha Phi Sigma National Criminal Justice Honor Society

In addition, the Justice Center also offers the following programs in Legal Studies:
- Bachelor of Arts in Legal Studies
- Minor in Legal Studies
- Associate of Applied Science in Paralegal Studies
- Legal Nurse Consulting Paralegal Undergraduate Certificate
- Post-Baccalaureate Certificate in Paralegal Studies
- Pre-Law Advising for UAA students

Justice faculty have professional research and service obligations beyond classroom teaching. Undergraduate students who major in Justice have opportunities to work with faculty members on Justice Center research and service projects.

Students are encouraged to contact the Justice Center to speak with an academic advisor. More information about programs and advising is available on the Justice Center website at http://justice.uaa.alaska.edu.

**JUSTICE HONORS**

The Justice Center awards departmental honors for outstanding achievement in the study of justice. Students majoring in Justice are eligible to graduate with Justice Honors upon satisfactory completion of all of the following requirements:
1. Meet the requirements for a Bachelor of Arts degree in Justice.
2. Earn a 3.20 or above cumulative GPA, and a 3.50 or above Justice major GPA.
3. Complete a Justice capstone course with an honor grade (A).
4. Students intending to graduate with Justice Honors must notify the Justice Undergraduate Program Coordinator, in writing, on or before the date they submit their Application for Graduation.

**BACHELOR OF ARTS, JUSTICE**

The Bachelor of Arts in Justice is an interdisciplinary program that prepares students for engaged citizenship; scholarship; justice careers in private and public organizations; and advanced studies in criminology, law, criminal justice, social research, and public administration. Those graduates with records of high achievement in the Justice undergraduate program are prepared to pursue advanced education in graduate, law, and professional degree programs at the University of Alaska Anchorage and other universities. Graduates who receive a Bachelor of Arts in Justice have the specialized knowledge and skills required for the evaluation, administration and improvement of police, court, and correctional policies and organizations.

**PROGRAM STUDENT LEARNING OUTCOMES**

Upon completion of this program, graduates will be able to:
1. Explain the essential principles of justice research and evaluate the results of social science research.
2. Assess and critique the different theoretical perspectives in criminology.
3. Evaluate the historical and contemporary philosophies of justice.
4. Describe processes of justice policy development and the requirements of evidence-based policymaking.
5. Synthesize the history and development of the institutions of government forming the sources of American law and the social, economic and cultural forces that influence the development of law.

ADMISSION REQUIREMENTS
1. Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.
2. Complete JUST A110, JUST A200, and JUST A201 with a minimum grade of D.

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. MAJOR REQUIREMENTS
1. Complete the following required core courses (21 credits):
   JUST A110  Introduction to Justice            3
   JUST A200  Introduction to Research Methods in Justice            3
   JUST A201  Justice Data Analysis            3
   JUST/SOC A251  Crime and Delinquency            3
   JUST A315  Development of Law            3
   JUST A330  Justice and Society            3
   JUST A360  Justice Theory and Policy Analysis            3
2. Complete two of the following three courses           6
   JUST A334  Police & Society (3)
   JUST A374  The Courts (3)
   JUST A384  Contemporary Corrections (3)
3. Complete 18 credits of electives in Justice or Legal Studies electives;          18
   12 credits must be upper division
   Note: Legal Studies courses fulfill the Justice elective requirements for the Bachelor of Arts in Justice except where the student has elected a Legal Studies Minor or Major; Legal Studies courses cannot be used (counted twice) to meet both the requirements of the Legal Studies Minor or Major and the Bachelor of Arts in Justice.
   Only 6 credits of JUST A490 may be counted toward the Justice electives required for the Bachelor of Arts in Justice.
4. Complete a university-approved minor in another discipline. Specific requirements for minors are listed in the catalog by school or department.      18-21
5. All Justice majors must take the Justice Exit Examination. There is no minimum score required for graduation.
6. A total of 120 credits is required for the degree, of which 42 credits must be upper division.

MINOR, JUSTICE
Students who wish to complement their studies in another discipline with knowledge of crime, law, and justice may declare a Justice minor.

A total of 18 credits is required for the minor, 9 of which must be upper division.
1.  JUST A110  Introduction to Justice            3
2.  JUST/SOC A251  Crime and Delinquency            3
3. Complete 9 credits of upper division electives in Justice or Legal Studies*         9
4. Complete 3 credits of electives in Justice or Legal Studies; any level*            3
   * Note: Legal Studies courses fulfill the Justice elective requirements for the Minor in Justice except where the student has elected a Bachelor of Arts or Minor in Legal Studies; Legal Studies courses cannot be used (counted twice) to meet both the requirements of the Minor in Justice and the Bachelor of Arts or Minor in Legal Studies.

FACULTY
John Angell, Professor Emeritus, AHJEA@uaa.alaska.edu
Allan Barnes, Professor, ARBARNES@uaa.alaska.edu
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**JUSTICE RESEARCH HONORS**

The Justice Center awards departmental honors to recognize those undergraduate students who develop exceptional social science research skills by awarding them Justice Research Honors. Students majoring in Justice are eligible to graduate with Justice Research Honors upon satisfactory completion of all of the following requirements:

1. Meet the requirements for a Bachelor of Arts degree in Justice.
2. Earn a 3.20 or above cumulative GPA, and a 3.50 or above Justice major GPA. Meet the requirements for membership in Alpha Phi Sigma, the national justice honor society (including a 3.20 GPA in UAA Justice courses, 3.20 overall).
3. Complete a Justice capstone course with an honor grade (A) and the following courses with a grade of B or better (6 credits):
   - JUST A400 Advanced Research Methods in Justice 3
   - JUST A401 Inferential Data Analysis in Justice 3
   - JUST A488 Research Practicum 3
4. Students intending to graduate with Justice Research Honors must notify the Justice Undergraduate Program Coordinator in writing, on or before the date they submit their Application for Graduation.

**BACHELOR OF ARTS, JUSTICE**

The Bachelor of Arts in Justice is an interdisciplinary program that prepares students for engaged citizenship; scholarship; justice careers in private and public organizations; and advanced studies in criminology, law, criminal justice, social research, and public administration. Those graduates with records of high achievement in the Justice undergraduate program are prepared to pursue
advanced education in graduate, law, and professional degree programs at the University of Alaska Anchorage and other universities. Graduates who receive a Bachelor of Arts in Justice have the specialized knowledge and skills required for the evaluation, administration and improvement of police, court, and correctional policies and organizations.

PROGRAM STUDENT LEARNING OUTCOMES
Upon completion of this program, graduates will be able to:
1. Explain the essential principles of justice research and evaluate the results of social science research.
2. Assess and critique the different theoretical perspectives in criminology.
3. Evaluate the historical and contemporary philosophies of justice.
4. Describe processes of justice policy development and the requirements of evidence-based policymaking.
5. Synthesize the history and development of the institutions of government forming the sources of American law and the social, economic and cultural forces that influence the development of law.

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

C. MAJOR REQUIREMENTS
1. Complete the following required core courses (21 credits):
   - JUST A110  Introduction to Justice 3
   - JUST A200  Introduction to Research Methods in Justice 3
   - JUST A201  Justice Data Analysis 3
   - JUST/SOC A251  Crime and Delinquency 3
   - JUST A315  Development of Law 3
   - JUST A330  Justice and Society 3
   - JUST A360  Justice Theory and Policy Analysis 3
2. Complete two of the following three courses 6
   - JUST A334  Police & Society (3)
   - JUST A374  The Courts (3)
   - JUST A384  Contemporary Corrections (3)
3. Complete 18 credits of electives in Justice or Legal Studies electives; 18
   12 credits must be upper division
   Note: Legal Studies courses fulfill the Justice elective requirements for the Bachelor of Arts in Justice except where the student has elected a Legal Studies Minor or Major; Legal Studies courses cannot be used (counted twice) to meet both the requirements of the Legal Studies Minor or Major and the Bachelor of Arts in Justice. Only 6 credits of JUST A490 may be counted toward the Justice electives required for the Bachelor of Arts in Justice.
4. Complete a university-approved minor in another discipline. Specific requirements for minors are listed in the catalog by school or department. 18-21
5. All Justice majors must take the Justice Exit Examination. There is no minimum score required for graduation.
6. A total of 120 credits is required for the degree, of which 42 credits must be upper division.

MINOR, JUSTICE
Students who wish to complement their studies in another discipline with knowledge of crime, law, and justice may declare a Justice minor.

A total of 18 credits is required for the minor, 9 of which must be upper division.
1. JUST A110  Introduction to Justice 3
2. JUST/SOC A251  Crime and Delinquency 3
3. Complete 9 credits of upper division electives in Justice or Legal Studies* 9
4. Complete 3 credits of electives in Justice or Legal Studies; any level* 3
* Note: Legal Studies courses fulfill the Justice elective requirements for the Minor in Justice except where the student has elected a Bachelor of Arts or Minor in Legal Studies. Legal Studies courses cannot be used (counted twice) to meet both the requirements of the Minor in Justice and the Bachelor of Arts or Minor in Legal Studies.

**FACULTY**

John Angell, Professor Emeritus, AJJEA@uas.alaska.edu  
Allan Barnes, Professor, ARBARNE@uas.alaska.edu  
Jason Brandeis, Assistant Professor, JBRANDEIS@uas.alaska.edu  
Sharon Chamard, Associate Professor, SECHAMARD@uas.alaska.edu  
Robert Congdon, Professor Emeritus, AFRREC@uas.alaska.edu  
Ronald Everett, Associate Professor, RSEVERET@uas.alaska.edu  
Ryan Fortson, Assistant Professor, HRFORTSON@uas.alaska.edu  
Kris Knudsen, Assistant Professor, KKNUDSEN@uas.alaska.edu  
Cory LePage, Assistant Professor, CRLEPAGE@uas.alaska.edu  
Bradley Myrstol, Associate Professor, RAMYRSTOL@uas.alaska.edu  
Tracy Payne, Assistant Professor, TRPAYNE@uas.alaska.edu  
Deborah Periman, Associate Professor, DKPERIMAN@uas.alaska.edu  
Marny Rivera, Program Coordinator/Associate Professor, MRIVERA1@uas.alaska.edu  
Andre Rosey, Director, ABROSAY@uas.alaska.edu  
Nancy Schaefer, Professor Emeritus, AHNES@uas.alaska.edu
February 21, 2013

To: Governance Office

Thru: Bill Hogan, Dean, College of Health
       College of Health Curriculum Committee

From: Kathi Trawver, Bachelor of Social Work (BSW) Program Coordinator

Re: Revised catalog copy for the BSW Program

Attached are the proposed Program Action Request and catalog copy for the BSW Program. We are submitting a clean copy and a document with the track changes noted. The School of Social Work faculty is proposing the following changes for the Bachelor of Social Work catalog copy:

1. General revisions and edits to the current copy;
2. Changing Program Student Learning Outcomes;
3. Raising GPA requirement from 2.0 to 2.5;
4. Adding language that students can only repeat courses two times and be eligible for admission;
5. Deleting the requirement for the third English course; and
6. Adding three credits of social work electives.

With the exception of point 5 above, the changes do not affect other academic units or programs. Coordination with the English Department has been completed.

Thank you for your assistance in the curriculum review process.
1a. School or College  
CH College of Health

1b. Department  
BSWK  School of Social Work

2. Complete Program Title/Prefix  
Bachelor of Social Work

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

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

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

PREFIX  
☐ Add  ☐ Change  ☐ Inactivate

5. Implementation Date (semester/year)  
From: Fall/2013  To:  9999

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

Initiator Name (typed):  Kathi Trawver  
Initiator Signed Initials:  _________

Date:  ________________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)  
Date:  2/21/13

6c. Coordination with Library Liaison  
Date:  2/21/13

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

8. Justification for Action  
Minor revisions to the program as follows:  
General revision and edits;  
Changing PSLOs to be in line with assessment outcomes;  
Raising GPA from 2.0 to 2.5;  
Adding language that students can only repeat courses two times and be eligible for admission;  
Deleting the requirement for a third English course; and  
Adding 3 credits of social work electives.

Initiator (faculty only)  
Kathi Trawver  
Initiator (TYPE NAME)

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

☐ Approved  ☐ Disapproved  
Undergraduate/Graduate Academic Board Chair  Date

☐ Approved  ☐ Disapproved  
Provost or Designee  Date
The educational purpose of the Bachelor of Social Work (BSW) program at the University of Alaska Anchorage is to prepare graduates for beginning professional social work practice. Preparation for professional practice builds on a broad-based liberal arts education accomplished through completion of General Education and major degree requirements.

Social work is a profession committed to assisting individuals, families, groups, organizations, communities, and society as a whole in the improvement of the quality of life through the amelioration of social problems, equitable distribution of social resources, and client empowerment. Within an overall emphasis on consumer-centered planned change, the Bachelor of Social Work degree program at University of Alaska Anchorage is guided by the following principles:

- Social work practice is based on selective use of knowledge in planned efforts with human systems and social problems.
- Social work practice recognizes human diversity as a strength.
- Social work practice is based on professional values and ethics.
- Social work practice is based on professional relationships.
- Social work practice is based on reciprocal role performance.
- Social work practice is based on a strengths perspective.

Social work education engages the student in carefully planned experiences to achieve the knowledge, skills, and values necessary for beginning professional practice. These experiences take place in the classroom, laboratory, volunteer experience, small seminars, and selected field work practicum placements. The practicum placement is an essential component for completion of the professional degree for the BSW.

The Bachelor of Social Work degree program is accredited by the Council on Social Work Education (CSWE). BSW program admission and curriculum requirements are consistent with BSW licensing requirements for the state of Alaska.

**Bachelor of Social Work**

**Mission and Program Student Learning Outcomes**

The mission of the UAA BSW program is to prepare generalist social workers who enhance human well-being and promote social and economic justice for people of all backgrounds, particularly those in Alaska.

Alaska’s unique and rich multicultural populations, geographic remoteness and frontier status allow the real potential for skilled social work professionals to make a profound impact on social and economic injustice in our state.

Based upon the mission established for the BSW program, the program goals are to prepare generalist social work practitioners who are able to:

1. Demonstrate professional use of self and apply critical thinking skills to professional generalist social work practice.
2. Display use of professional standards, values, and ethics.
3. Be sensitive to the needs of diverse and at-risk populations, and practice without discrimination.
4. Understand the forms and mechanisms of oppression and discrimination and apply strategies of advocacy and social change to advance social and economic justice.
5. Demonstrate knowledge of the history of the social work profession, its current structures, and issues.
6. Apply the knowledge and skills of generalist social work practice planned change process with individuals, families, groups, organizations, and communities.
7. Apply empirically-based theoretical frameworks and knowledge of the bio-psychosocial-spiritual variables that affect
development, behavior, and interactions.
8. Analyze, formulate, and influence social policies.
9. Evaluate research studies and apply research findings to practice.
10. Use communication skills effectively with consumer populations, colleagues, organizations, and communities.
11. Effectively use supervision and consultation.
12. Function within the structure of organizations and service delivery systems, and seek necessary organizational change.

Admission Requirements

When students declare Social Work as their major they are assigned to the current catalog year. Declaration of Social Work as a major does not guarantee admission to the Social Work program. Students must apply for admission to the Social Work program during the fall semester of their junior year. Full admission to the Social Work program is based upon the requirements listed below.

Social work credits earned through other CSWE-accredited social work programs may be transferred to UAA and applied toward the Bachelor of Social Work degree. Approval from the UAA School of Social Work is required for acceptance of social work transfer credits.

Requirements for Full Admission to the Social Work Program

To apply for full admission to the Social Work program, students must have completed the following, prior to entering practicum:
1. General Education Requirements for Baccalaureate Degrees.
2. Specified Liberal Arts Foundation courses (see Major Requirements) with a grade of C or better.
3. The following Social Work courses with a grade of C or better (25 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWK A106</td>
<td>Introduction to Social Welfare</td>
<td>3</td>
</tr>
<tr>
<td>SWK A206</td>
<td>Introduction to Social Work</td>
<td>3</td>
</tr>
<tr>
<td>SWK A243</td>
<td>Cultural Diversity and Community Service Learning</td>
<td>3</td>
</tr>
<tr>
<td>SWK A330</td>
<td>Social Work Practice I</td>
<td>4</td>
</tr>
<tr>
<td>SWK A331</td>
<td>Social Work Practice II: Organizations and Communities</td>
<td>3</td>
</tr>
<tr>
<td>SWK A342</td>
<td>Human Behavior in the Social Environment</td>
<td>3</td>
</tr>
<tr>
<td>SWK A424</td>
<td>Social Work Research</td>
<td>3</td>
</tr>
<tr>
<td>SWK A481</td>
<td>Case Management in Social Work Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Overall Grade Point Average (GPA) of 2.5 or above.

Students must submit the following application materials to the School of Social Work by the last Friday in October prior to intended entry into field work:
1. The School of Social Work Application for Admission to the BSW degree and practicum for fall enrollment.
2. Admissions statement.
3. Social Work faculty advisor’s approval to apply.
4. A Student Practicum Interest sheet.
5. A Change of Major Form indicating change of status from pre-major to full major.

The Admission Committee reserves the right to request additional information if necessary.

Each applicant participates in an admission interview with faculty and community members to assess his or her academic and professional readiness to enter the Social Work program and participate in practicum. The School of Social Work will notify applicants of their admission status by December 20th of each year.
Admission to the Social Work program is based on 1) meeting the aforementioned requirements; 2) beginning competence in client-centered communication and professional skills as demonstrated in SWK A330; and 3) the professional judgment of Social Work faculty.

Most students do not have all required courses completed at the time of application. In this event, the student may be admitted to the BSW program conditionally, and will be required to complete outstanding courses with a grade of C or better prior to the fall semester in which they plan to enter practicum. If the student does not complete the required courses with a C or better prior to the fall of his or her senior year, the student will not be admitted. Students who cannot obtain a course grade of C or better in two (2) attempts will be denied admission.

**Field Practicum**

Placements may become competitive if the number of applicants exceeds the number of spaces. The program and agencies also reserve the right to refuse and/or terminate students who do not meet a minimum standard of performance. Thus, while the School of Social Work makes every effort to find appropriate field placements for students, admittance to the BSW program does not guarantee acceptance by cooperating social services agencies.

Only students eligible to receive Alaska state licensure will be admitted to the BSW degree program. Please contact the School of Social Work for further information.

The BSW program does not grant Social Work course credit for life experience or previous work experience.

**Honors in Social Work**

The Bachelor of Social Work program recognizes exceptional performance by conferring Departmental Honors in Social Work. In order to receive Honors in Social Work, a student must meet the following requirements:

1. Complete all requirements for the BSW degree. A minimum of 30 credits applicable to the BSW degree must be completed at UAA.
2. Have a GPA of 3.75 or higher in upper division (300- and 400-level) Social Work courses.
3. Completion of:
   - SWK A363 Great Books in Social Work
   - SWK A498 Advanced Community-Based Research
4. One course in applied statistics, with a grade of C or better.
5. Notify the BSW program coordinator in writing, on or before the date of submitting the Application for Graduation with the Office of the Registrar, of the intent to graduate with departmental honors.

Successful completion of Departmental Honors in Social Work in the UAA BSW program earns the right to waive a regular review of an admission packet to the foundation curriculum of the Master of Social Work program. Students are responsible for completing a UAA Graduate Application for Admission and a program application for admission to the MSW program. The application packet should be submitted to the MSW Admissions Committee by the application deadline, with request to waive the regular review process. Admission to the full program will be granted if the applicant meets all of the requirements for departmental honors. Students interested in waiving the foundation curriculum must apply for advanced standing with a full review.

**Academic Progress**

Students in the Social Work program must earn a grade of C or better in the required Social Work courses and liberal arts foundation requirements. Adherence to the Code of Ethics established by the National Association of Social Workers is required.

**Course Content Currency Requirement**

All upper division courses with a Social Work subject code (SWK) must be completed within seven years prior to graduation.

**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. Major Requirements
1. Complete the following liberal arts foundation courses, with a grade of C or better:
   - ANTH A200: Natives of Alaska (3)
   - ANTH A202: Cultural Anthropology (3)
   - BA A151: Introduction to Business (3)
   - ECON A201: Principles of Macroeconomics (3)
   - ECON A202: Principles of Microeconomics (3)
   - BIOL A102: Introductory Biology (3)
   - BIOL A111: Human Anatomy and Physiology I (4)
   - BIOL A112: Human Anatomy and Physiology II (4)
   - BIOL A115: Fundamentals of Biology I (4)
   - BIOL A116: Fundamentals of Biology II (4)
   - ENGL A120: Critical Thinking (3)
   - PHIL A101: Introduction to Logic (3)
   - PHIL A201: Introduction to Philosophy (3)
   - PHIL A301: Ethics (3)
   - PHIL A421: Philosophy of the Sciences (3)
   - PSY A150: Life Span Development (3)
   - SOC A101: Introduction to Sociology (3)

2. Complete the following required core courses, with a grade of C or better:
   - SWK/HUMS A106: Introduction to Social Welfare (3)
   - SWK A206: Introduction to Social Work (3)
   - SWK A243: Cultural Diversity and Community Service Learning (3)
   - SWK A330: Social Work Practice I (4)
   - SWK A331: Social Work Practice II: Organizations and Communities (3)
SWK A342  Human Behavior in the Social Environment 3
SWK A406  Social Welfare: Policies and Issues 3
SWK A424  Social Work Research 3
SWK A430  Social Work Practice III: Groups and Families 3
SWK A431  Social Work Practice IV: Integrative Capstone 3
SWK A481  Case Management in Social Work Practice 3
SWK A495A  Social Work Practicum I 6
SWK A495B  Social Work Practicum II 6
Upper division Social Work electives 9*

3. Complete electives to total 120 credits.
4. A total of 120 credits is required for the degree, of which 42 must be upper division.
5. Note: It is recommended that students take one or two 3-credit electives each semester to bring total credits to 120.

**Minor, Social Welfare Studies**

Students majoring in another subject who wish to minor in Social Welfare Studies must complete the following requirements. A total of 18 credits is required for the minor.

<table>
<thead>
<tr>
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<th>Credits</th>
</tr>
</thead>
<tbody>
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</tr>
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<td>3</td>
</tr>
<tr>
<td>SWK A243</td>
<td>Cultural Diversity and Community Service Learning</td>
<td>3</td>
</tr>
<tr>
<td>SWK A342</td>
<td>Human Behavior in the Social Environment</td>
<td>3</td>
</tr>
<tr>
<td>SWK A406</td>
<td>Social Welfare: Policies and Issues</td>
<td>3</td>
</tr>
<tr>
<td>Upper division Social Work electives</td>
<td>9*</td>
<td></td>
</tr>
</tbody>
</table>

**FACULTY**

*Mary Dallas Allen, Associate Professor, mdallen@uaa.alaska.edu*
*Donna Aguina, Assistant Professor, damguinga@uaa.alaska.edu*
*Tracey Burke, Associate Professor, tkburke@uaa.alaska.edu*
*Patrick Cunningham, Associate Professor, AFPMC@uaa.alaska.edu*
*Alexa Filanowicz, Clinical Assistant Professor, afilanowicz@uaa.alaska.edu*
*Eva Kopacz, Professor/MSW Field Coordinator, ekopacz@uaa.alaska.edu*
*Randy Magen, Professor, rhmagen@uaa.alaska.edu*
*Chad Morse, Clinical Professor/MSW Program Coordinator, cemorse@uaa.alaska.edu*
*Elizabeth A. Sirles, Professor/Director, easirles@uaa.alaska.edu*
*Kathi Trawver, Associate Professor/BSW Program Coordinator, krtrawver@uaa.alaska.edu*
The educational purpose of the Bachelor of Social Work (BSW) program at the University of Alaska Anchorage is to prepare graduates for beginning professional social work practice. Preparation for professional practice builds on a broad-based liberal arts education accomplished through completion of General Education and major degree requirements.

Social work is a profession committed to assisting individuals, families, groups, organizations, communities, and society as a whole in the improvement of the quality of life through the amelioration of social problems, equitable distribution of social resources, and client empowerment. Within an overall emphasis on consumer-centered planned change, the Bachelor of Social Work degree program at University of Alaska Anchorage is guided by the following principles:

• Social work practice is based on selective use of knowledge in planned efforts with human systems and social problems.
• Social work practice recognizes human diversity as a strength.
• Social work practice is based on professional values and ethics.
• Social work practice is based on professional relationships.
• Social work practice is based on reciprocal role performance.
• Social work practice is based on a strengths perspective.

Social work education engages the student in carefully planned experiences to achieve the knowledge, skills, and values necessary for beginning professional practice. These experiences take place in the classroom, laboratory, volunteer experience, small seminars, and selected field work practicum placements. The practicum placement is an essential component for completion of the professional degree for the BSW.

The Bachelor of Social Work degree program is accredited by the Council on Social Work Education (CSWE). BSW program admission and curriculum requirements are consistent with BSW licensing requirements for the state of Alaska.

Bachelor of Social Work

Mission and Program Student Learning Outcomes

The mission of the UAA BSW program is to prepare generalist social workers who enhance human well-being and promote social and economic justice for people of all backgrounds, particularly those in Alaska.

Alaska’s unique and rich multicultural populations, geographic remoteness and frontier status allow the real potential for skilled social work professionals to make a profound impact on social and economic injustice in our state.

Based upon the mission established for the BSW program, the program goals are to prepare generalist social work practitioners who are able to:

• Competent in multiple entry-level practice roles across client systems, particularly within the state of Alaska.
• Committed to the enhancement of human well-being.
• Committed to the promotion of social and economic justice for people of all backgrounds, particularly those in Alaska.
• Guided by the values and ethical standards of the social work profession.
• Prepared to enhance the quality of service delivery systems.
• Knowledgeable, skillful, and sensitive with people from diverse backgrounds.
1. Demonstrate professional use of self and apply critical thinking skills to professional generalist social work practice.
2. Display use of professional standards, values, and ethics.
3. Be sensitive to the needs of diverse and at-risk populations, and practice without discrimination.
4. Understand the forms and mechanisms of oppression and discrimination and apply strategies of advocacy and social change to advance social and economic justice.
5. Demonstrate knowledge of the history of the social work profession, its current structures, and issues.
6. Apply the knowledge and skills of generalist social work practice planned change process with individuals, families, groups, organizations, and communities.
7. Apply empirically-based theoretical frameworks and knowledge of the bio-psychosocial-spiritual variables that affect development, behavior, and interactions.
8. Analyze, formulate, and influence social policies.
9. Evaluate research studies and apply research findings to practice.
10. Use communication skills effectively with consumer populations, colleagues, organizations, and communities.
11. Effectively use supervision and consultation.
12. Function within the structure of organizations and service delivery systems, and seek necessary organizational change.

Admission Requirements

When students declare Social Work as their major they are assigned to the current catalog year. Declaration of Social Work as a major does not guarantee admission to the Social Work program. Students must apply for admission to the Social Work program during the fall semester of their junior year. Full admission to the Social Work program is based upon the requirements listed below.

Social work credits earned through other CSWE-accredited social work programs may be transferred to UAA and applied toward the Bachelor of Social Work degree. Approval from the UAA School of Social Work is required for acceptance of social work transfer credits.

Requirements for Full Admission to the Social Work Program

To apply for full admission to the Social Work program, students must have completed the following, prior to entering practicum:

1. General Education Requirements for Baccalaureate Degrees.
2. Specified Liberal Arts Foundation courses (see Major Requirements) with a grade of C or better.
3. The following Social Work courses with a grade of C or better (25 credits):
   - SWK A106 Introduction to Social Welfare 3
   - SWK A206 Introduction to Social Work 3
   - SWK A243 Cultural Diversity and Community Service Learning 3
   - SWK A330 Social Work Practice I 4
   - SWK A351 Social Work Practice II: Organizations and Communities 3
   - SWK A342 Human Behavior in the Social Environment 3
   - SWK A424 Social Work Research 3
   - SWK A481 Case Management in Social Work Practice 3
4. Overall Grade Point Average (GPA) of 2.5 or above.

Students must submit the following application materials to the School of Social Work by the last Friday in October prior to intended entry into field work:

1. The School of Social Work Application for Admission to the BSW degree and practicum for fall enrollment.
2. Admissions statement.
3. Social Work faculty advisor’s approval to apply.
4. A Student Practicum Interest sheet.
5. A Change of Major Form indicating change of status from pre-major to full major.

The Admission Committee reserves the right to request additional information if necessary.

Each applicant student participates in an admission interview with faculty and community members to assess his or her academic and professional readiness to enter the Social Work program and participate in practicum. The School of Social Work will notify applicants of their admission status by December 20th of each year.

Admission to the Social Work program is based on 1) meeting the aforementioned requirements; successful completion of the requirements listed above; 2) beginning competence in client-centered communication and professional skills as demonstrated in SWK A330; and 3) the professional judgment of Social Work faculty.

Most any students do not have all required courses completed at the time of application. In this event, the student may be admitted to the BSW program conditionally, and will be required to complete outstanding the courses with a grade of C or better prior to the fall semester in which they plan to enter practicum. If the student does not complete the required courses with a C or better prior to the fall of his or her senior year, the student will not be admitted. Students who cannot obtain a course grade of C or better in two (2) attempts will be denied admission.

Field Practicum

Placements may become competitive if the number of applicants exceeds the number of spaces. The program and agencies also reserve the right to refuse and/or terminate students who do not meet a minimum standard of performance. Thus, while the School of Social Work makes every effort to find appropriate field placements for students, admittance to the BSW program does not guarantee acceptance by cooperating social services agencies.

Only students eligible to receive Alaska state licensure will be admitted to the BSW degree program. Please contact the School of Social Work for further information.

The BSW program does not grant Social Work course credit for life experience or previous work experience.

Honors in Social Work

The Bachelor of Social Work program recognizes exceptional performance by conferring Departmental Honors in Social Work. In order to receive Honors in Social Work, a student must meet the following requirements:

1. Complete all requirements for the BSW degree. A minimum of 30 credits applicable to the BSW degree must be completed at UAA.
2. Have a GPA of 3.75 or higher in upper division (300- and 400-level) Social Work courses.
3. Completion of:
   SWK A363 Great Books in Social Work
   SWK A498 Advanced Community-Based Research
4. One course in applied statistics, with a grade of C or better.
5. Notify the BSW program coordinator in writing, on or before the date of submitting the Application for Graduation with the Office of the Registrar, of the intent to graduate with departmental honors.

Successful completion of Departmental Honors in Social Work in the UAA BSW program earns the right to waive a regular review of an admission packet to the foundation curriculum of the Master of Social Work program. Students are responsible for completing a UAA Graduate Application for Admission and a program application for admission to the MSW program. The application packet should be submitted to the MSW Admissions Committee by the application deadline, with request to waive the regular review process. Admission to the full program will be granted if the applicant meets all of the requirements for departmental honors. Students interested in waiving the foundation curriculum must apply for advanced standing with a full review.

Academic Progress

Students in the Social Work program must earn a grade of C or better in the required liberal arts and the required Social Work courses and liberal arts foundation requirements. Adherence to the Code of Ethics established by the National Association of Social Workers is required.
Course Content Currency Requirement
All upper division courses with a Social Work subject code (SWK) must be completed within seven years prior to graduation.

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. Major Requirements
   1. Complete the following liberal arts foundation courses, with a grade of C or better:
      
      | Course Code | Course Title                           | Units |
      |-------------|----------------------------------------|-------|
      | ANTH A200   | Natives of Alaska                      | 3     |
      | or          | Cultural Anthropology                  |       |
      | BA A151     | Introduction to Business               | 3     |
      | or          | Principles of Macroeconomics          |       |
      | ECON A201   | Principles of Macroeconomics          | 3     |
      | or          | Principles of Microeconomics          |       |
      | ECON A202   | Principles of Microeconomics          |       |
      | BIOL A102   | Introductory Biology                   | 3-4   |
      | or          | Human Anatomy and Physiology I        |       |
      | or          | Human Anatomy and Physiology II       |       |
      | BIOL A111   | Human Anatomy and Physiology I        |       |
      | or          | Fundamentals of Biology I             |       |
      | BIOL A112   | Human Anatomy and Physiology II       |       |
      | or          | Fundamentals of Biology I             |       |
      | BIOL A115   | Fundamentals of Biology I             |       |
      | or          | Fundamentals of Biology II            |       |
      | ENGL A311   | Advanced Composition                   | 3     |
      | or          | Professional Writing                  |       |
      | or          | Research Writing                      |       |
      | ENGL A120   | Critical Thinking                      | 3     |
      | or          | Introduction to Logic                  |       |
      | or          | Introduction to Philosophy             |       |
      | PHIL A101   | Ethics                                 |       |
      | or          | Philosophy of the Sciences            |       |
      | PSY A150    | Life Span Development                 | 3     |
      | SOC A101    | Introduction to Sociology              | 3     |
2. Complete the following required core courses, with a grade of C or better:

    SWK/HUMS A106  Introduction to Social Welfare  3
    SWK A206  Introduction to Social Work  3
    SWK A243  Cultural Diversity and Community Service Learning  3
    SWK A330  Social Work Practice I  4
    SWK A331  Social Work Practice II: Organizations and Communities  3
    SWK A342  Human Behavior in the Social Environment  3
    SWK A406  Social Welfare: Policies and Issues  3
    SWK A424  Social Work Research  3
    SWK A430  Social Work Practice III: Groups and Families  3
    SWK A431  Social Work Practice IV: Integrative Capstone  3
    SWK A481  Case Management in Social Work Practice  3
    SWK A495A  Social Work Practicum I  6
    SWK A495B  Social Work Practicum II  6
    Upper division Social Work electives  6*

3. Complete electives to total 120 credits.

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

5. Note: It is recommended that students take one or two 3-credit electives each semester to bring total credits to 120.

**Minor, Social Welfare Studies**

Students majoring in another subject who wish to minor in Social Welfare Studies must complete the following requirements. A total of 18 credits is required for the minor.

    SWK/HUMS A106  Introduction to Social Welfare  3
    SWK A206  Introduction to Social Work  3
    SWK A243  Cultural Diversity and Community Service Learning  3
    SWK A342  Human Behavior in the Social Environment  3
    SWK A406  Social Welfare: Policies and Issues  3
    Upper division Social Work electives  6

**FACULTY**

Mary Dallas Allen, Associate Professor, mdallen@uaa.alaska.edu
Donna Ayeingina, Assistant Professor, dmayingina@uaa.alaska.edu
Tracey Burke, Associate Professor, tburke@uaa.alaska.edu
Patrick Cunningham, Associate Professor, AFPM@uaa.alaska.edu
Alina Filanowicz, Clinical Assistant Professor, afilanowicz@uaa.alaska.edu
Janet Eisenman, Clinical Professor/BSW Field Coordinator, janet@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>
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<tbody>
<tr>
<td>CH College of Health</td>
<td>AHLS Division of Health Safety</td>
<td>EMS</td>
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<table>
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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</th>
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<td>A110</td>
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<td>(2+2)</td>
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6. Complete Course Title  
Emergency Trauma Technician

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 CCG (please specify)

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

10. Grading Basis  
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date  
Semester/year   
From: Spring/2014   To: 9999

12. ☐ Cross Listed with N/A  
☐ Stacked with N/A  
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>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<td>2/21/13</td>
<td>Tim Benningfield</td>
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<td>2. FIRE A295</td>
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<td>3. FIRE A117</td>
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Initiator Name (typed): Tim Benningfield  
Initiator Signed Initials: ___________________________  
Date: ___________________________

13b. Coordination Email  
Date: 2/21/13  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 2/21/13

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)  
Alaska State certified basic emergency medical course beyond advanced first aid. Emphasizes prevention, assessment, and care of injury and illness commonly encountered in both urban and rural settings.

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

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

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

16d. Registration Restriction(s) (non-codable)  
Must provide evidence of Cardiopulmonary Resuscitation (CPR) training at the Healthcare Provider or Basic Life Support level prior to course conclusion.

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
Course description, registration restrictions and CCG updated to align course with industry standards based on the National Emergency Medical Service Education Standards and the course objectives for the State of Alaska Emergency Trauma Technician curriculum.

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Initiator (TYPE NAME)  
Date

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University of Alaska Anchorage  
College of Health  
Course Content Guide

I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health  
B. Course Subject: EMT  
C. Course Number: A110  
D. Number of Credits: 3  
E. Number of Contact Hours: (2+2)  
F. Course Program: Fire and Emergency Services Technology  
G. Course Title: Emergency Trauma Technician  
H. Grading Basis: A-F  
I. Implementation Date: Spring 2014  
J. Cross Listing: N/A  
K. Course Description: Alaska State certified basic emergency medical course beyond advanced first aid. Emphasizes prevention, assessment, and care of injury and illness commonly encountered in both urban and rural settings.

L. Course Prerequisite(s): N/A  
M. Test Scores: N/A  
N. Course Co-requisites: N/A  
O. Other Restrictions: N/A  
P. Registration Restrictions: Must provide evidence of Cardiopulmonary Resuscitation (CPR) training at the Healthcare Provider or Basic Life Support level prior to course conclusion.

Q. Course Fees: Yes

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Introduce the knowledge and skills required for the Emergency Trauma Technician-ETT Emergency Medical Responder-EMR and prepare students to sit for the State certification exam.

B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>After successful completion of this course, students will be able to:</td>
<td>To be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Demonstrate knowledge of the Emergency Medical Services (EMS) system, safety/well-being of the Emergency Medical Responder (EMR), and medical/legal issues.</td>
<td>Quizzes Written or Performance Tests</td>
</tr>
<tr>
<td>2. Demonstrate knowledge of the anatomy and function of the upper airway, heart, vessels, blood, lungs, skin, muscles, and bones as relative to emergency care.</td>
<td>Quizzes Written or Performance Tests</td>
</tr>
<tr>
<td>3. Relate knowledge of shock and respiratory compromise in order to respond to life threats.</td>
<td>Quizzes Written or Performance Tests</td>
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<tr>
<td>---</td>
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<tr>
<td>4.</td>
<td>Demonstrate knowledge of the medications that Emergency Medical Responder (EMR) may administer or assist a patient with administration in an emergency.</td>
</tr>
<tr>
<td>5.</td>
<td>Apply knowledge (fundamental depth, foundational breadth) of anatomy and physiology to assure a patient airway, adequate mechanical ventilation, and respiration.</td>
</tr>
<tr>
<td>6.</td>
<td>Manage immediate life threats and injuries within the scope of practice of the Emergency Medical Responder.</td>
</tr>
<tr>
<td>7.</td>
<td>Manage life threats based on assessment findings of a patient with a medical emergency.</td>
</tr>
<tr>
<td>8.</td>
<td>Manage shock, respiratory failure or arrest, and cardiac arrest based on assessment findings.</td>
</tr>
<tr>
<td>9.</td>
<td>Manage life threats based on assessment findings for an acutely injured patient.</td>
</tr>
<tr>
<td>10.</td>
<td>Categorize trauma patients and activate the appropriate trauma system response.</td>
</tr>
<tr>
<td>11.</td>
<td>Manage life threats based on simple assessment findings for a patient with special needs while awaiting additional emergency response.</td>
</tr>
<tr>
<td>12.</td>
<td>Identify operational roles and responsibilities to ensure patient, public, and personnel safety.</td>
</tr>
</tbody>
</table>

### IV. Course Level Justification
This course is an entry level course based on the National Emergency Medical Services (EMS) Education Standards.

### V. Topical Course Outline

#### A. General Safety
1. General Classroom Safety
2. Fire Safety

#### B. Preparatory
1. The Emergency Medical Services (EMS) System
2. Impact of Research on Emergency Medical Responder (EMR) Care
3. Workforce Safety and Wellness
4. Documentation
5. Emergency Medical Service (EMS) System Communication
6. Therapeutic Communication
7. Medical/Legal and Ethics

#### C. Anatomy and Physiology

#### D. Medical Terminology
E. Pathophysiology  
F. Life Span Development  
G. Public Health  
H. Pharmacology  
1. Principles of Pharmacology  
2. Medication Administration  
3. Emergency Medications  
I. Airway Management, Respiration, and Artificial Ventilation  
J. Patient Assessment  
1. Scene Size-Up  
2. Primary Assessment  
3. History-Taking  
4. Secondary Assessment  
5. Reassessment  
K. Medical Emergencies  
1. Medical Overview  
2. Neurology  
3. Abdominal and Gastrointestinal Disorders  
4. Immunology  
5. Infectious Diseases  
6. Endocrine Disorders  
7. Psychiatric  
8. Cardiovascular  
9. Toxicology  
10. Respiratory  
11. Hematology  
12. Genitourinary/Renal  
13. Gynecology  
14. Musculoskeletal Disorders  
15. Eyes, Ears, Nose, and Throat  
L. Shock and Resuscitation  
M. Trauma Emergencies  
1. Trauma Overview  
2. Bleeding  
3. Chest Trauma  
4. Abdominal and Genitourinary Trauma  
5. Orthopedic Trauma  
6. Soft Tissue Trauma  
7. Head, Facial, Neck, and Spine Trauma  
8. Special Considerations  
9. Environmental Emergencies  
10. Multi-System Trauma  
N. Special Patient Populations
1. Obstetrics
2. Neonatal Care
3. Pediatrics
4. Geriatrics
5. Patients with Special Challenges

O. Emergency Medical Service (EMS) Operations
   1. Principles of Safely Operating a Ground Ambulance
   2. Incident Management
   3. Multiple Casualty Incidents
   4. Air Medical
   5. Vehicle Extrication
   6. Hazardous Materials Awareness
   7. Mass Casualty Incidents Due to Terrorism and Disaster

VI. Suggested Text

VII. Bibliography
# Course Action Request

**University of Alaska Anchorage**

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

### 1a. School or College
- CH College of Health

### 1b. Division
- AHLS Division of Health Safety

### 1c. Department
- FES

### 2. Course Prefix
- FIRE

### 3. Course Number
- A101

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

### 5a. Credits/CEUs
- 3

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

### 6. Complete Course Title
- Principles of Emergency Services
- Principles of Emergency Svcs

### Abbreviated Title for Transcript (30 character)

### 7. Type of Course
- Academic

### 8. Type of Action:
- ❑ Add
- ❑ Change
- ❑ Delete

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

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

### 11. Implementation Date
- From: Spring/2014
- To: /9999

### 12. Cross Listed 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](http://www.uaa.alaska.edu/governance).

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### 13b. Coordination Email
- Date: 2/21/13
- submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

### 13c. Coordination with Library Liaison
- Date: 2/21/13

### 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)
- Provides overview of fire protection and Emergency Services (ES). Includes introduction to the history and development of the fire service, as well as careers in fire and emergency service.

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

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

### 16c. Other Restriction(s)
- College
- Major
- Class
- Level

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

### 17. Mark if course has fees

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

### 19. Justification for Action
- Course description and CCG updated to align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

---

Initiator Name (typed): Tim Benningfield

Initiator Signed Initials: ___________

Date: ___________

---

Initiator (faculty only)

Tim Benningfield

(Initiator TYPE NAME)

[Approval Options]

- Approved
- Disapproved

Date: ___________

Dean/Director of School/College

[Approval Options]

- Approved
- Disapproved

Date: ___________

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University of Alaska Anchorage

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

93
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University of Alaska Anchorage  
College of Health  
Course Content Guide

I. Initiation Date: Spring 2013

II. Curriculum Action Request
A. School: College of Health  
B. Course Subject: FIRE  
C. Course Number: A101  
D. Number of Credits: 3  
E. Number of Contact Hours: 3+0  
F. Course Program: Fire and Emergency Services Technology  
G. Course Title: Principles of Emergency Services  
H. Grading Basis: A-F  
I. Implementation Date: Spring 2014  
J. Cross Listing: N/A  
K. Course Description: Provides overview of fire protection and Emergency Services (ES). Includes introduction to the history and development of the fire service, as well as careers in fire and emergency service.

L. Course Prerequisite(s): N/A  
M. Test Scores: N/A  
N. Course Co-requisites: N/A  
O. Other Restrictions: N/A  
P. Registration Restrictions: N/A  
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Illustrate the history of the fire service.
   2. Aid students in describing the components and development of the fire and emergency services.
   3. Aid students in describing careers in fire and emergency services.

B. Student Learning Outcomes and Assessment Measures

<table>
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<th>Outcomes and Assessment Measures</th>
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<tbody>
<tr>
<td><strong>Student Learning Outcomes</strong></td>
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<tr>
<td><em>After successful completion of this course, students will be able to:</em></td>
</tr>
</tbody>
</table>
| 1. Illustrate and explain the history and culture of the fire service. | Quizzes  
Assignments |
<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>2.</td>
<td>Analyze the basic components of fire as a chemical chain reaction, the major phases of fire, and examine the main factors that influence fire spread and fire behavior.</td>
</tr>
<tr>
<td>3.</td>
<td>Differentiate between fire service training and education and explain the value of higher education for the professionalization of the fire service.</td>
</tr>
<tr>
<td>4.</td>
<td>Describe the major organizations that provide emergency response service and illustrate how they interrelate.</td>
</tr>
<tr>
<td>5.</td>
<td>Identify fire protection and emergency-service careers in both the public and private sector.</td>
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<tr>
<td>6.</td>
<td>Define the role of national, state and local support organizations in fire and emergency services.</td>
</tr>
<tr>
<td>7.</td>
<td>Discuss the scope, purpose, and organizational structure of fire and emergency services.</td>
</tr>
<tr>
<td>8.</td>
<td>Describe the common types of fire and emergency service facilities, equipment, and apparatus.</td>
</tr>
<tr>
<td>9.</td>
<td>Compare and contrast effective management concepts for various emergency situations.</td>
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<tr>
<td>10.</td>
<td>Identify the primary responsibilities of fire prevention personnel including code enforcement, public information, and public and private protection systems.</td>
</tr>
<tr>
<td>11.</td>
<td>Recognize the components of career preparation and goal setting.</td>
</tr>
<tr>
<td>12.</td>
<td>Describe the importance of wellness and fitness as it relates to emergency services.</td>
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</table>

### IV. Course Level Justification:
This course is an introductory course in fire and emergency services.

### V. Topical Course Outline:

#### A. General Safety
1. General Classroom Safety
2. Fire Safety

1. Opportunities/Private Industrial, Local, Municipal, State and Federal
   a. Certificates
   b. Degrees
4. Selection Process
C. History
   1. Evolution of Fire Protection
   2. The U.S. Fire Problem: Life and Property

D. Fire Prevention and Public Fire Education
   1. Fire Investigation
   2. Code Enforcement
   3. Public Education

E. Scientific Terminology
   1. Fire Behavior
   2. Flammability and Characteristics of Solids, Liquids and Gases.

F. Building Design and Construction

G. Fire Detection and Suppression Systems

H. The Role of Public and Private Support Organizations
   1. Local
   2. State
   3. Federal and National
   4. International

I. Fire and Emergency Services Equipment and Facilities

J. Management
   1. Emergency Operations
   2. Organizational Structure of Fire and Emergency Services

VI. Suggested Texts

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

<table>
<thead>
<tr>
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<th>1b. Division</th>
<th>AHLS Division of Health Safety</th>
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<td>(Lecture + Lab)</td>
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<td>Signature</td>
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13a. Impacted Courses or Programs: List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<td>2/21/13</td>
<td>Tim Benningfield</td>
</tr>
<tr>
<td>2. FIRE A214</td>
<td>2/21/13</td>
<td>Tim Benningfield</td>
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Initiator Name (typed): Tim Benningfield  
Initiator Signed Initials: __________  
Date: __________

13b. Coordination Email  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)  
Date: 2/21/13

13c. Coordination with Library Liaison  
Date: 2/21/13

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 fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; review of prevention plans; fire inspections; fire and life safety education; and fire investigation.

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

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

16c. Other Restriction(s)  
- College  
- Major  
- Class  
- Level

16d. Registration Restriction(s) (non-codable)  
N/A

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

19. Justification for Action  
Course description and CCG updated to align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

Initiator (faculty only)  
Tim Benningfield  
Initiator (TYPE NAME)

Initiator Name: Tim Benningfield  
Date: __________

[Approval/Disapproval Box for Dean/Director of School/College  
Date: __________]

[Approval/Disapproval Box for Undergraduate/Graduate Academic Board Chair  
Date: __________]

[Approval/Disapproval Box for Provost or Designee  
Date: __________]
I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A105
D. Number of Credits: 3
E. Number of Contact Hours: 3+0
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Fire Prevention
H. Grading Basis: A-F
I. Implementation Date: Spring 2014
J. Cross Listing: N/A
K. Course Description: Provides fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; review of prevention plans; fire inspections; fire and life safety education; and fire investigation.

L. Course Prerequisite(s): N/A
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: N/A
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Provide information relevant to laws, codes, ordinances, and regulations as they relate to fire prevention.
   2. Provide information regarding code enforcement as it impacts life and property loss.

B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>After successful completion of this course, students will be able to:</td>
<td>To be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Define the national fire problem and role of fire prevention.</td>
<td>Quizzes</td>
</tr>
<tr>
<td>2. Identify and describe fire prevention organizations and associations.</td>
<td>Quizzes</td>
</tr>
<tr>
<td>3. Define fire prevention laws, rules, regulations, and codes and identify relevance to the authority having jurisdiction.</td>
<td>Assignments</td>
</tr>
<tr>
<td>4. Define the functions of a fire prevention</td>
<td>Quizzes</td>
</tr>
</tbody>
</table>
IV. **Course Level Justification**

This fire course introduces fundamental knowledge relating to the field of fire prevention.

V. **Topical Course Outline**

A. General safety
   1. General Classroom Safety
   2. Fire Safety

B. National Fire Problem and Role of Fire Prevention
   1. Definition
   2. Historical Overview
   3. Data Analysis/Geographic Information System (GIS)

C. Fire Prevention Organizations and Associations
   1. Public—Federal, State and Local
   2. Private—International, National and Regional

D. Laws, Rules, Regulations and Codes
   1. Definitions
   2. Applicability
   3. Interrelationship
   4. Limitations

E. Fire Prevention Bureau Functions
   1. Data Collection and Analysis
   2. Plans Review
   3. Fire Inspections
   4. Fire and Life Safety Education
   5. Fire Investigations

F. Tools and Equipment

G. Roles and Responsibilities of Fire Prevention Personnel
   1. Data Collection and Analysis
   2. Code Development and Interpretation
   3. Training and Education
   4. Enforcement

<p>| | |</p>
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<tr>
<td>5. Describe inspection practices and procedures.</td>
<td>Projects</td>
</tr>
<tr>
<td>6. Identify and describe the standards for professional qualifications for Fire Marshal, Plans Examiner, Fire Inspector, Fire and Life Safety Educator, and Fire Investigator.</td>
<td>Quizzes Exams</td>
</tr>
<tr>
<td>7. List opportunities in professional development for fire prevention personnel.</td>
<td>Quizzes Exams</td>
</tr>
<tr>
<td>8. Describe the history and philosophy of fire prevention.</td>
<td>Quizzes Exams</td>
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</table>
5. Management

H. Professional Certification
   1. Categories and Levels
   2. Local
   3. State
   4. National

I. Professional Development
   1. National Fire Prevention Development Model
   2. Training and Education
   3. Certification Systems

VI. Suggested Texts

VII. 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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<tr>
<td>Strategy and Tactics of Fire Suppression</td>
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<th>7. Type of Course</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: | 2/21/13 |

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<td>Humanities</td>
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*(suggested length 20 to 50 words)*

Provides the principles of fire ground control through utilization of personnel, equipment, and extinguishing agents.

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<th>16a. Course Prerequisite(s) (list prefix and number or test code and score) N/A</th>
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| 16b. Co-requisite(s) (concurrent enrollment required) N/A |

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

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Course description, course title, course prerequisites and CCG updated to align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

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<td>Date</td>
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I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A107
D. Number of Credits: 3.0 Credits
E. Number of Contact Hours: 3+0
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Strategy and Tactics of Fire Suppression
H. Grading Basis: A-F
I. Implementation Date: Spring 2014
J. Cross Listing: N/A
K. Course Description: Provides the principles of fire ground control through utilization of personnel, equipment, and extinguishing agents.
L. Course Prerequisite(s): FIRE A101 with a minimum grade of C
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: N/A
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Provide information on how to create a strategy and implement appropriate tactics.
   2. Articulates the importance of knowledge and ability related to execution of the Incident Command System (ICS)/National Incident Management System (NIMS) at an emergency scene.

B. Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>After successful completion of this course, students will be able to:</td>
<td>To be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Discuss fire behavior as it relates to strategies and tactics.</td>
<td>Quizzes</td>
</tr>
<tr>
<td></td>
<td>Exams</td>
</tr>
<tr>
<td>2. Explain the main components of pre-fire planning and identify steps needed for a pre-fire plan review.</td>
<td>Projects</td>
</tr>
<tr>
<td></td>
<td>Quizzes</td>
</tr>
<tr>
<td></td>
<td>Exams</td>
</tr>
<tr>
<td>3. Identify the basics of building construction and how they interrelate to pre-fire planning and strategy and tactics.</td>
<td>Quizzes</td>
</tr>
<tr>
<td></td>
<td>Exams</td>
</tr>
<tr>
<td>4. Describe the steps taken during size-up.</td>
<td>Simulations</td>
</tr>
<tr>
<td>5. Examine the significance of fire ground communications.</td>
<td>Quizzes</td>
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<td></td>
<td>Class Participation</td>
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</table>
6. Identify the roles of the National Incident Management System (NIMS) and Incident Management System (ICS) as it relates to strategy and tactics.

7. Demonstrate the various roles and responsibilities in Incident Management System (ICS)/National Incident Management System (NIMS).

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<tbody>
<tr>
<td>Exams</td>
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IV. Course Level Justification
This course introduces the principles of strategy and tactics of fire suppression.

V. Topical Course Outline
A. General Safety
   1. General Classroom Safety
   2. Fire Safety

B. Fire Chemistry Terms and Concepts
   1. Heat Transfer
   2. Principle Fire Characteristics of Materials
   3. Fire Classifications

C. Extinguishing Equipment
   1. Extinguishing Equipment
   2. Fire Apparatus
   3. Personnel Requirement

D. Visual Perception
   1. Pre-Planning
   2. Size-Up

E. Pre-Fire Planning
   1. Concept
   2. Phases
   3. Methods
   4. Format
   5. Occupancy Classifications
   6. Building Types

F. Basic Divisions of Tactics
   1. Size-Up
      a. Facts
      b. Probabilities
      c. Own Situation
      d. Decision
      e. Plan of Operation

G. Rescue
   1. Life Safety Problems of Fire
   2. Determination of Life Hazard
   3. Rescue Resources and Operations
H. Exposures
   1. Principle Contributing Factors
   2. Exposure Protection Operations

I. Confinement
   1. Fire Separations
   2. Fire Loading
   3. Built-In Protection
   4. Operations

J. Ventilation
   1. Relationship to Objectives
   2. Equipment
   3. Roof Types
   4. Methods

K. Salvage
   1. Relationship to Objectives
   2. Equipment
   3. Operations During Fire
   4. Operations After Fire

VI. Suggested Texts

VII. Bibliography
### 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>3. Course Number</th>
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#### 6. Complete Course Title

- **Principles of Fire and Emergency Service Administration**
- **Principles of Fire & ES Admin**

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

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<tr>
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<th>9. Repeat Status No</th>
<th>10. Grading Basis</th>
<th>11. Implementation Date</th>
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<td>Max Credits</td>
<td>P/NP</td>
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<th>Cross-Listed Coordination Signature</th>
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#### 13a. Impacted Courses or Programs:

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

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<td>Tim Benningfield</td>
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Initiator Name (typed): **Tim Benningfield**  
Initiator Signed Initials: _________  
Date: __________

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<th>14. General Education Requirement</th>
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<td>Oral Communication</td>
<td>Written Communication</td>
</tr>
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<td>Fire Arts</td>
<td>Social Sciences</td>
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<th>15. Course Description (suggested length 20 to 50 words):</th>
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Introduces organization and management of a fire and emergency services department and the relationship of government agencies to the fire services. Emphasis is placed on fire and emergency service, ethics, and leadership from the perspective of the company officer.

<table>
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<tr>
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Course description, title, course prerequisites and CCG updated to align program with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

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I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A111
D. Number of Credits: 3
E. Number of Contact Hours: (3+0)
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Principles of Fire and Emergency Service Administration
H. Grading Basis: A-F
I. Implementation Date: Spring 2014
J. Cross Listing: N/A
K. Course Description: Introduces the organization and management of a fire and emergency services department and the relationship of government agencies to the fire services. Emphasis is placed on fire and emergency service, ethics, and leadership from the perspective of the company officer.

L. Course Prerequisite(s): FIRE A101 with a minimum grade of C
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: N/A
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Introduce and explain the basic theories of public sector management.
   2. Introduce the importance of ethics and communication skills.
   3. Articulate the importance of the public policy process, responsibility, and authority.

B. Student Learning Outcomes and Assessment Measures:

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<th>Outcomes and Assessment Measures</th>
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<td><strong>Student Learning Outcomes</strong></td>
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<td>After successful completion of this course, students will be able to:</td>
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<td>2. Recognize the need for effective communication skills both written and verbal.</td>
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<tr>
<td>3. Identify and explain the concepts of span and control, effective delegation, and division of labor.</td>
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4. Select and implement the appropriate disciplinary action based upon an employee’s conduct. | Quizzes | Exams
---|---|---
5. Explain the history of management and supervision methods and procedures. | Quizzes | Exams
6. Discuss the various levels of leadership, roles, and responsibilities within the organization. | Assignments
---|---|---
7. Describe the traits of effective versus ineffective management styles. | Assignments | Quizzes | Exams
8. Identify the importance of ethics as it relates to fire and emergency services. | Assignments
---|---|---
9. Identify the roles of the National Incident Management System (NIMS) and Incident Management System (ICS). | Assignments | Quizzes | Exams

### IV. Course Level Justification
Builds upon FIRE A101 with respect to the National Fire Academy’s Fire and Emergency Services Higher Education (FESHE) Model Curriculum.

### V. Topical Course Outline

#### A. General Safety
1. General Classroom Safety
2. Fire Safety

#### B. New Challenges and Opportunities
1. Duties
2. National Standards
3. Career Opportunities
4. Education and Training

#### C. Communication Process
1. Verbal
2. Written
3. Active Listening Skills

#### D. Management Principles
1. Span of Control
2. Delegation/Division of Labor
3. Unity of Command
4. Chain of Command
5. Organizational Structures

#### E. Tools for Employee Development
1. Evaluation and Appraisal of Employees
2. Rewards and Motivation
3. Progressive System of Discipline
4. Grievance Procedures

#### F. Management and Supervision
1. Theories
2. History

G. Managing Resources for Emergency and Non-Emergency
   1. Equipment
   2. Personnel
   3. Time

H. Leadership
   1. Managers
   2. Leaders
   3. Roles and Responsibilities

I. Supervision and Management
   1. Styles
   2. Traits
   3. Effectiveness

J. Safety Assessment
   1. Non-Emergency
   2. Emergency

K. Ethics
   1. Harassment
   2. Conflict of Interest
   3. Public Trust
   4. Code of Ethics
   5. Diversity
   6. Morality

L. Incident Management System
   1. Duties and Responsibilities
   2. Transfer of Command

M. Records Management
   1. Formal Documentation
   2. Informal Documentation

VI. Suggested Texts

VII. Bibliography
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<th>AHLS Division of Health Safety</th>
<th>1c. Department</th>
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University of Alaska Anchorage
College of Health
Course Content Guide

I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A121
D. Number of Credits: 3.0
E. Number of Contact Hours: 3+0
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Fire Behavior and Combustion
H. Grading Basis: A-F
I. Implementation Date: Spring 2014
J. Cross Listing: N/A
K. Course Description: Explores the theories and fundamentals of how and why fires start, spread, and are controlled.
L. Course Prerequisite(s) MATH 105 or concurrent with a minimum grade of C
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: N/A
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Identify fundamental theories of fire behavior and combustion.
   2. Differentiate between the various types of extinguishing agents.

B. Student Learning Outcomes and Assessment Measures:

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<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
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<tr>
<td>After successful completion of this course, students will be able to:</td>
<td>To be assessed by one or more of the following:</td>
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<td>1. Identify physical properties of the three states of matter.</td>
<td>Exams</td>
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<td>2. Categorize the components of fire.</td>
<td>Written Assignments</td>
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<td>Exams</td>
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<td>3. Explain the physical and chemical properties of fire.</td>
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<td>4. Describe and apply the process of burning.</td>
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<td>5. Define and use basic terms and concepts associated with the chemistry and dynamics of fire.</td>
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6. Discuss various materials and their relationship to fires as fuel. | Presentations
---|---
7. Explain the characteristics of water as a fire suppression agent. | Written Assignments
---|---
8. Articulate other suppression agents and strategies. | Written Assignments
---|---
9. Compare other methods and techniques of fire extinguishments. | Written Assignments
---|---

IV. **Course Level Justification**
This course is an introduction to fire behavior and combustion.

V. **Topical Course Outline:**
A. General Safety
   1. General Classroom Safety
   2. Fire Safety

B. Introduction
   1. Matter and Energy
   2. The Atom and its Parts
   3. Molecules
   4. Energy and Work
   5. Forms of Energy
   6. Transformation of Energy
   7. Laws of Energy

C. Units of Measurements
   1. International Systems of Measurement (SI)
   2. English Units of Measurement

D. Chemical Reactions
   1. Physical States of Matter
   2. Compounds and Mixtures
   3. Solutions and Solvents
   4. Process of Reactions

E. Fire and Physical World
   1. Characteristics of Fire
   2. Characteristics of Solids
   3. Characteristics of Liquids
   4. Characteristics of Gasses

F. Heat and its Effects
   1. Production and Measurement of Heat
   2. Different Kinds of Heat

G. Properties of Solid Materials
   1. Common Combustible Solids
   2. Plastic and Polymers
   3. Combustible Metals
   4. Combustible Dust
H. Common Flammable Liquids and Gases
   1. General Properties of Gases
   2. The Gas Laws
   3. Classification of Gases
   4. Compressed Gases

I. Fire Behavior
   1. Stages of Fire
   2. Fire Phenomena
      a. Flashover
      b. Backdraft
      c. Rollover
      d. Flameover
   3. Fire Plumes

J. Fire Extinguishment
   1. The Combustion Process
   2. The Character of Flame
   3. Fire Extinguishment

K. Extinguishing Agents
   1. Water
   2. Foams and Wetting Agents
   3. Inert Gas Extinguishing Agents
   4. Halogenated Extinguishing Agents
   5. Dry Chemical Extinguishing Agents
   6. Dry Powder Extinguishing Agents

L. Hazards by Classification Types
   1. Explosives
   2. Compressed and Liquefied Gases
   3. Flammable and Combustible Liquids
   4. Flammable Solids
   5. Oxidizing Agents
   6. Poisons
   7. Radioactive Substances
   8. Corrosives

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>
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<td>AHLS Division of Health Safety</td>
<td>FES</td>
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</table>

<table>
<thead>
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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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<tr>
<td>FIRE</td>
<td>A123</td>
<td>N/A</td>
<td>3</td>
<td>(Lecture + Lab) (3+0)</td>
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</table>

### Complete Course Title

**Fire Investigation I**

### Abbreviated Title for Transcript (30 character)

**Fire Investigation I**

### Type of Course

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

### Type of Action:

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

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

- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [ ] Cross-listed/Stacked
- [x] Course Description
- [ ] Course Prerequisites
- [ ] Test Score Prerequisites
- [ ] Co-requisites
- [ ] Other Restrictions
- [ ] Registration Restrictions
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major
- [ ] Other CCG (please specify)

### Repeat Status No

#### # of Repeats

#### Max Credits

### Grading Basis

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

### Implementation Date

From: Spring/2014  
To: 9999

### Cross Listed with

- [ ] N/A

### Stacked with

- [ ] N/A

### Cross-Listed Coordination Signature

#### Date:

2/21/13

### Impacted Courses or Programs:

List any programs or college requirements that require this course.

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire and Emergency Services Technology, AASI</td>
<td>2/21/13</td>
<td>Tim Benningfield</td>
</tr>
<tr>
<td>FIRE A223</td>
<td>2/21/13</td>
<td>Tim Benningfield</td>
</tr>
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</table>

### 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)

Provides the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes.

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

(FIRE A101 and FIRE A121) with a minimum grade of C

### Co-requisite(s) (concurrent enrollment required)

N/A

### Registration Restriction(s) (non-codable)

N/A

### Mark if course has fees

- [ ]

### Mark if course is a selected topic course

- [ ]

### Justification for Action

Course description, course prerequisite and CCG updated to align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

---

**Initiator Name (typed): Tim Benningfield**

**Initiator Signed Initials: _________**

**Date:________________**

**Co-requisites**

- [ ]

**Other Restriction(s)**

- [ ]

**Other CCG (please specify)**

**College**

**Major**

**Class**

**Level**

**Mark if course has fees**

- [ ]

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

- [ ]

**Initiator (faculty only) Only:**

**Dean/Director of School/College:**

**Date:**

**Undergraduate/Graduate Academic Board Chair:**

**Date:**

**Provost or Designee:**

**Date:**

---

*Course Action Request*

*University of Alaska Anchorage*

*Proposal to Initiate, Add, Change, or Delete a Course*
I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A123
D. Number of Credits: 3.0
E. Number of Contact Hours: 3+0
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Fire Investigation I
H. Grading Basis: A-F
I. Implementation Date: Spring 2014
J. Cross Listing: N/A
K. Course Description: Provides the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes.

L. Course Prerequisite(s): (FIRE A101 and FIRE A121) with a minimum grade of C
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: N/A
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Demonstrate the importance of documentation, evidence collection, and scene security process needed for successful resolution.
   2. Present information to ensure understanding and ability to demonstrate the process of conducting fire origin and cause investigation.
   3. Identify the processes of proper documentation.

B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Outcomes and Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Learning Outcomes</strong></td>
</tr>
<tr>
<td>After successful completion of this course, students will be able to:</td>
</tr>
<tr>
<td>1. Identify the responsibilities of a firefighter when responding to the scene of a fire, including scene security and evidence preservation.</td>
</tr>
<tr>
<td>2. Describe the implications of constitutional amendments as they apply to fire investigations.</td>
</tr>
</tbody>
</table>
|   | Identify key case law decisions that have affected fire investigations. | Assignments
Quizzes
Exams |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>Define the common terms used in fire investigations.</td>
<td>Quizzes</td>
</tr>
<tr>
<td>5.</td>
<td>Explain the basic elements of fire dynamics and how they affect cause determination.</td>
<td>Written Assignments</td>
</tr>
<tr>
<td>6.</td>
<td>Compare the types of building construction on fire progression.</td>
<td>Written Assignments</td>
</tr>
<tr>
<td>7.</td>
<td>Describe how the fire progression is affected by fire protection systems and building design.</td>
<td>Exams</td>
</tr>
<tr>
<td>8.</td>
<td>Discuss the basic principles of electricity as an ignition source.</td>
<td>Quizzes</td>
</tr>
</tbody>
</table>
| 9. | Recognize potential health and safety hazards. | Quizzes
Exams
Assignments |
| 10. | Describe the process of conducting investigations using the scientific method. | Projects |
| 11. | Identify cause and origin and differentiate between accidental and incendiary. | Simulations |
| 12. | Explain the procedures used for investigating vehicle fires. | Simulations |
| 13. | Identify the characteristics of an incendiary fire and common motives of the fire setter | Assignments |

### IV. Course Level Justification

This course provides the fundamentals and technical knowledge needed for proper fire scene interpretations.

### V. Topical Course Outline

A. **General Safety**
   1. General Classroom Safety
   2. Fire Safety

B. **Emergency Responder Responsibilities and Observations**
   1. Responsibilities
   2. Observations
   3. Identification of Incendiary Devices

C. **Constitutional Law**
   1. Criminal Law
   2. Constitutional Amendments

D. **Case Studies**

E. **Fire Investigations Terminology**

F. **Basic Elements of Fire Dynamics**
G. Building Construction
H. Fire Protection Systems
I. Basic Principles of Electricity
   1. Basic Electricity
   2. Wiring Systems
   3. Common Electrical Systems
J. Health and Safety
   1. Methods of Identification
   2. Common Causes of Accidents
   3. Common Causes of Injuries
K. Fire Scene Investigations
   1. Examining the Fire Scene
   2. Securing the Fire Scene
   3. Documenting the Fire Scene
   4. Evidence Collection and Preservation
   5. Exterior Examination
L. Determining Point of Origin
   1. Interior Examination
   2. Area of Origin
   3. Fire Patterns
   4. Other Indicators
   5. Scene Reconstruction
   6. Point of Origin
M. Types of Fire Causes
   1. Accidental
   2. Natural
   3. Incendiary
   4. Undetermined
N. Vehicle Fires
O. Fire Setters
   1. Characteristics of Arson
   2. Common Motives

VI. Suggested Texts

VII. Bibliography
<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a. School or College</td>
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<td>FES</td>
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<td>FIRE</td>
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<td>3. Course Number</td>
<td>A170</td>
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<td>4. Previous Course Prefix &amp; Number</td>
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<td>5a. Credits/CEUs</td>
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</tr>
<tr>
<td>5b. Contact Hours</td>
<td>(Lecture + Lab) (3+0)</td>
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<tr>
<td>6. Complete Course Title</td>
<td>Occupational Safety and Health for Emergency Services</td>
</tr>
<tr>
<td>Abbreviated Title for Transcript (30 character)</td>
<td>Occ Safety &amp; Hlth for ES</td>
</tr>
<tr>
<td>7. Type of Course</td>
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</tr>
<tr>
<td>8. Type of Action:</td>
<td>Change</td>
</tr>
<tr>
<td>9. Repeat Status No</td>
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<tr>
<td># of Repeats</td>
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<tr>
<td>Max Credits</td>
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<tr>
<td>10. Grading Basis</td>
<td>A-F</td>
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<td>11. Implementation Date</td>
<td>From: Spring/2014 To: /9999</td>
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<td>12. Cross Listed with</td>
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<td>Stacked with</td>
<td>N/A</td>
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<tr>
<td>Cross-Listed Coordination Signature</td>
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<tr>
<td>13a. Impacted Courses or Programs:</td>
<td>List any programs or college requirements that require this course.</td>
</tr>
<tr>
<td>14. General Education Requirement</td>
<td>Mark appropriate box: Oral Communication Written Communication Quantitative Skills Humanities</td>
</tr>
<tr>
<td>15. Course Description (suggested length 20 to 50 words)</td>
<td>Introduces the basic concepts of occupational health and safety as they relate to emergency service organizations. Topics include risk and hazard evaluation and control procedures for emergency service organizations.</td>
</tr>
<tr>
<td>16a. Course Prerequisite(s) (list prefix and number or test code and score)</td>
<td>N/A</td>
</tr>
<tr>
<td>16b. Co-requisite(s) (concurrent enrollment required)</td>
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</tr>
<tr>
<td>16c. Other Restriction(s)</td>
<td>Mark if course has fees</td>
</tr>
<tr>
<td>16d. Registration Restriction(s) (non-codable)</td>
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</tr>
<tr>
<td>17. Mark if course is a selected topic course</td>
<td>N/A</td>
</tr>
<tr>
<td>18. Mark if course is a selected topic course</td>
<td>N/A</td>
</tr>
<tr>
<td>19. Justification for Action</td>
<td>Course description, title, and CCG updated to align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.</td>
</tr>
</tbody>
</table>

Initiator (faculty only): Tim Benningfield
Initiator Signed Initials: _________ Date: __________________

Initiator (TYPE NAME)

Approval status:
- Approved
- Disapproved

Department Chair

Approval status:
- Approved
- Disapproved

College/School Curriculum Committee Chair

Approval status:
- Approved
- Disapproved

Provost or Designee

Approval status:
- Approved
- Disapproved

120
I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A170
D. Number of Credits: 3
E. Number of Contact Hours: (3+0)
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Occupational Safety and Health for Emergency Services
H. Grading Basis: A-F
I. Implementation Date: Spring 2014
J. Cross Listing: N/A
K. Course Description: This course introduces the basic concepts of occupational health and safety as they relate to emergency service organizations. Topics include risk and hazard evaluation and control procedures for emergency service organizations.

L. Course Prerequisite(s): N/A
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: N/A
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Introduce and explain the significance of occupational health and safety.
   2. Aid the students in analyzing the components of risk identification, risk evaluation, and incident management.

B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Outcomes and Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Learning Outcomes</strong></td>
</tr>
<tr>
<td>After successful completion of this course, students will be able to:</td>
</tr>
<tr>
<td>1. Describe the history of occupational health and safety.</td>
</tr>
<tr>
<td>2. Identify occupational health and safety programs for industry and emergency services today.</td>
</tr>
<tr>
<td>3. Compare the difference between standards and regulations.</td>
</tr>
<tr>
<td>4. Describe the components of risk identification, risk evaluation, and incident management.</td>
</tr>
</tbody>
</table>
5. Describe the relevance for safety in the workplace including the importance of personal protective equipment (PPE).

6. Apply the knowledge of an effective safety plan to pre-incident planning, response, and training activities.

7. Explain the components of an accountability system in emergency service operations.

8. Discuss the need for and the process used for post-incident analysis.

9. Describe the components and value of critical incident management programs.

10. Describe the responsibilities of individual responders, supervisors, safety officers, and incident commanders, safety program managers, safety committees and fire department managers as they relate to health and safety programs.

11. Describe the components of a wellness/fitness plan.

12. Analyze the major causes involved in line-of-duty firefighter deaths related to health, wellness, fitness and vehicle operations.

IV. Course Level Justification
This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations.

V. Topical Course Outline
A. General Safety
   1. General Classroom Safety
   2. Fire Safety

B. Introduction
   1. History of Occupational Safety and Health in Industry
   2. History of Occupational Safety and Health in Emergency Service Organizations

C. Safety-Related Regulations and Standards
   1. Regulations Vs. Standards
   2. Federal Regulations Pertaining to Occupational Safety and Health

D. Risk Management
   1. Risk Evaluation
   2. Risk Control

E. Safety Program Development and Management
F. Employee Fitness/Wellness Program
   1. Hazards Faced
   2. Organizational Development
   3. Employee Acceptance
   4. Medical Examinations
   5. Physical Fitness

G. Pre-Incident Safety
   1. Hazards Faced
   2. Station Safety
   3. Apparatus Safety
   4. Response Safety
   5. Pre-Incident Planning

H. Safety at Fire Emergencies
   1. Hazards Faced
   2. Incident Priorities and Safety
   3. Incident Management Systems
   4. Accountability
   5. Rapid Intervention
   6. Rehabilitation

I. Safety as Emergency Medical Service (EMS) Emergencies
   1. Hazards Faced
   2. Infection Control
   3. Personal Protective Equipment
   4. Incident Management Systems
   5. Scene Safety

J. Safety at Specialized Incidents
   1. Hazards Faced
   2. Safety at Hazards Materials Incidents
   3. Safety at Terrorism Incidents
   4. Safety at Natural Disasters

K. Post-Incident Safety Management
   1. Incident Termination
   2. Post-Incident Analysis
   3. Critical Incident Stress Management

L. Personal Roles

M. Making Safety Happen
   1. Determining, Measuring, and Showcasing the Benefits
   2. Selling Management
   3. Selling Employees

VI. Suggested Texts


VII. Bibliography


### Course Action Request

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

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<th>5b. Contact Hours (Lecture + Lab)</th>
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**6. Complete Course Title**  
Selected Topics in Fire and Emergency Services  
Selected Topics in FEST  
Abbreviated Title for Transcript (30 character)

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<th>8. Type of Action:</th>
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<td>Yes</td>
<td># of Repeats</td>
<td>Varies</td>
<td>Max Credits</td>
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</table>

**10. Grading Basis**  
A-F  
P/NP  
NG  

**11. Implementation Date**  
From: Fall/2013  
To: /9999  

**12. Cross Listed with**  
N/A  

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>Fire and Emergency Services Technology, AAS</td>
<td>2/21/13</td>
<td>Tim Benningfield</td>
</tr>
<tr>
<td>2.</td>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

**Initiator Name (typed):** Tim Benningfield  
Initiator Signed Initials: _______  
Date: __________

**13b. Coordination Email**  
Date: 2/21/13  
submitted to Faculty Listserv:  
(uaa-faculty@lists.uaa.alaska.edu)

**13c. Coordination with Library Liaison**  
Date: 2/21/13

**14. General Education Requirement**  
Mark appropriate box:

<table>
<thead>
<tr>
<th>Oral Communication</th>
<th>Written Communication</th>
<th>Quantitative Skills</th>
<th>Humanities</th>
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</thead>
<tbody>
<tr>
<td>Fine Arts</td>
<td>Social Sciences</td>
<td>Natural Sciences</td>
<td>Integrative Capstone</td>
</tr>
</tbody>
</table>

**15. Course Description**  
*(suggested length 20 to 50 words)*  
Covers various topics in fire and emergency services technology. Course content is determined by student or industry needs.

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

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

**16c. 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 will allow for delivery of selected topics applicable to the emergency responder.

---

**Initiator (faculty only)***  
Tim Benningfield  
Initiator (TYPE NAME)  

**Initiator (faculty only)***  
Tim Benningfield  
Initiator (TYPE NAME)

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved</th>
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<tr>
<td>Dean/Director of School/College</td>
<td>Date</td>
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<td>Undergraduate/Graduate Academic Board Chair</td>
<td>Date</td>
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<th>Disapproved</th>
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<tbody>
<tr>
<td>Provost or Designee</td>
<td>Date</td>
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</tbody>
</table>
I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A190
D. Number of Credits: 1-3
E. Number of Contact Hours: (0-3+0-9)
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Selected Topics in Fire and Emergency Services
H. Grading Basis: P/NP or A-F
I. Implementation Date: Fall 2013
J. Cross Listing: N/A
K. Course Description: Covers various topics in fire and emergency services technology. Course content is determined by student or industry needs.
L. Course Prerequisite(s): Varies based on topic
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: Departmental approval
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   Present various topics. The overall goal is to provide students with information to develop skills needed for emergency planning, response, and mitigation.
B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>After successful completion of course, students will have:</td>
<td>To be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Developed skills in the selected topic area.</td>
<td>Assignments</td>
</tr>
<tr>
<td></td>
<td>Projects</td>
</tr>
<tr>
<td></td>
<td>Exams</td>
</tr>
<tr>
<td></td>
<td>Performance Tests</td>
</tr>
</tbody>
</table>

IV. Course Level Justification
This is an elective course and as such will encourage development of basic skills in fire and emergency services.

V. Course Outline
Course outline will vary according to selected topic.

**Outline Sample for Emergency Medical Technician Refresher**

A. Preparatory
   1. EMS Systems
   2. Research
   3. Workforce Safety & Wellness
   4. Documentation

B. Airway Management
   1. Anatomy & Physiology
   2. Respiration
   3. Ventilation

C. Patient Assessment
   1. Scene Size-Up
   2. History

D. Medical Emergencies
   1. Neurology
   2. Cardiovascular

VI. **Suggested Texts**
Suggested texts will vary with each topic.

**Sample for Emergency Medical Technician Refresher**

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

1a. School or College
   CH College of Health

1b. Division
   AHLS Division of Health Safety

1c. Department
   FES

2. Course Prefix
   FIRE

3. Course Number
   A202

4. Previous Course Prefix & Number
   N/A

5a. Credits/CEUs
   3

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

6. Complete Course Title
   Fire Protection Hydraulics and Water Supply
   Fire Pro Hydraulics & Water Su
   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
   X Cross-Listed/Stacked
   □ Test Score Prerequisites
   □ Co-requisites
   □ Other Restrictions
   □ Class
   □ Level
   □ College
   □ Major
   □ Other CCG (please specify)

9. Repeat Status No
   # of Repeats
   Max Credits

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

11. Implementation Date
    semester/year
    From: Spring/2014
    To: 9999

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

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

    | Impacted Program/Course | Date of Coordination | Chair/Coordinator Contacted |
    |-------------------------|----------------------|-----------------------------|
    | Fire and Emergency Services Technology, AAS | 2/21/13 | Tim Benningfield |
    | 2. | 3. |
    | Initiator Name (typed): Tim Benningfield | Initiator Signed Initials: _________ | Date:________________ |

13b. Coordination Email
    Date: 2/21/13
    submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
    Date: 2/21/13

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 a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to
    apply hydraulic principles to analyze and to solve water supply problems.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
    (FIRE A101 and FIRE A121) with a minimum grade of C

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

16c. Other Restriction(s)
    □ College
    □ Major
    □ Class
    □ Level

16d. Registration Restriction(s) (non-codable)
    N/A

17. □ Mark if course has fees

18. □ Mark if course is a selected topic course

19. Justification for Action
    Course description, course prerequisites and CCG updated to align course with industry standards indicated in the Fire and
    Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

Initiator (faculty only)
Tim Benningfield
Initiator (TYPE NAME)

Approved
Disapproved

Dean/Director of School/College

Date

Undergraduate/Graduate Academic

Date

Board Chair

Date

Provost or Designee

Date

128
University of Alaska Anchorage  
College of Health  
Course Content Guide

I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A202
D. Number of Credits: 3.0
E. Number of Contact Hours: 3+0
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Fire Protection Hydraulics and Water Supply
H. Grading Basis: A-F
I. Implementation Date: Spring 2014
J. Cross Listing: N/A
K. Course Description: Provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.
L. Course Prerequisite(s) (FIRE A101 and FIRE A121) with a minimum grade of C
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: N/A
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Introduce and explain how to apply water hydraulic principles.
   2. Demonstrate how water hydraulics relates to fire protection.

B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>After successful completion of this course, students will be able to:</td>
<td>To be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Apply the application of mathematics and physics to the movement of water in fire suppression activities.</td>
<td>Written Assignments</td>
</tr>
<tr>
<td></td>
<td>Quizzes</td>
</tr>
<tr>
<td></td>
<td>Exams</td>
</tr>
<tr>
<td>2. Identify the design principles of fire service pumping apparatus.</td>
<td>Written Assignments</td>
</tr>
<tr>
<td></td>
<td>Quizzes</td>
</tr>
<tr>
<td></td>
<td>Exams</td>
</tr>
<tr>
<td>3. Analyze community fire flow demand criteria.</td>
<td>Written Assignments</td>
</tr>
<tr>
<td></td>
<td>Projects</td>
</tr>
<tr>
<td>4. Solve mathematical problems involving the principles of forces that affect water both at rest and in motion.</td>
<td>Written Assignments</td>
</tr>
<tr>
<td></td>
<td>Project</td>
</tr>
<tr>
<td></td>
<td>Quizzes</td>
</tr>
<tr>
<td></td>
<td>Exams</td>
</tr>
</tbody>
</table>
5. Describe the various types of water distribution systems.

6. Discuss the various types of fire pumps.

IV. Course Level Justification
This course introduces hydraulics and the use of water in fire protection, building on principles learned in previous courses in the curriculum.

V. Topical Course Outline:
A. General Safety
   1. General Classroom Safety
   2. Fire Safety

B. Water as an Extinguishing Agent
   1. Physical Properties
   2. Terms and Definitions

C. Math Review
   1. Fractions
   2. Ratios, Proportions and Percentage
   3. Powers and Roots

D. Water at Rest
   1. Basic Principles of Hydrostatics
      a. Pressure and Force
      b. Six Principles of Fluid Pressure
      c. Pressure as a Function of Height and Density
      d. Atmospheric Pressure
   2. Measuring Devices for Static Pressure

E. Water in Motion
   1. Basic Principles of Hydrokinetics
   2. Measuring Devices for Measuring Flow
   3. Relationship of Discharge Velocity, Orifice Size, and Flow

F. Water Distribution Systems
   1. Public Water Distribution Systems
   2. Private Water Distribution Systems
   3. Friction Loss in Piping Systems
   4. Fire Hydrants and Flow Testing

G. Fire Pumps
   1. Pump Theory
   2. Pump Classifications
   3. Pump Capacity
   4. Pump Gauges and Control Devices
   5. Testing Fire Pumps
H. Fire Streams
1. Calculating Fire Flow Requirements
2. Effective Horizontal and Vertical Reach
3. Appliances for Nozzles
4. Performance of Smooth-Bore and Combination Nozzles
5. Hand-Held Lines
6. Master Streams
7. Nozzle Pressures and Reaction
8. Water Hammer and Cavitations

I. Friction Loss
1. Factors Affecting Friction Loss
2. Maximum Efficient Flow in Fire Hose
3. Calculating Friction Loss in Fire Hose
4. Friction Loss in Appliances
5. Reducing Friction Loss

J. Engine Pressures
1. Factors Affecting Engine Pressure

K. Standpipe and Sprinkler Systems
1. Standpipe Systems
   a. Classifications
   b. Components
   c. Supplying Standpipe Systems
2. Sprinkler Systems
   a. Classifications
   b. Components
   c. Supplying Sprinkler Systems

VI. Suggested Texts

VII. Bibliography
### Course Action Request

**University of Alaska Anchorage**

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

---

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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</thead>
<tbody>
<tr>
<td>CH College of Health</td>
<td>AHLS Division of Health Safety</td>
<td>FES</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>
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<td>FIRE</td>
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<td>Hazardous Materials Chemistry</td>
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**Abbreviated Title for Transcript (30 character)**

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<th>7. Type of Course</th>
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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>
<td>Provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity, and health hazards encountered by emergency services personnel.</td>
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<table>
<thead>
<tr>
<th>16a. Course Prerequisite(s) (list prefix and number or test code and score)</th>
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<tbody>
<tr>
<td>(FIRE A101 and FIRE A121) with a minimum grade of C</td>
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<th>16b. Co-requisite(s) (concurrent enrollment required)</th>
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<th>16c. Other Restriction(s)</th>
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<th>17. Mark if course has fees</th>
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<th>18. Mark if course is a selected topic course</th>
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<tbody>
<tr>
<td>Course description, course prerequisites and CCG updated to align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.</td>
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<table>
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<tr>
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<tr>
<td>Initiator Signed Initials: T</td>
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<tr>
<td>Date: 2/21/13</td>
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<table>
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<th>13b. Coordination Email</th>
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<tr>
<td>submitted to Faculty Listserv: (<a href="mailto:uaf-faculty@lists.uaa.alaska.edu">uaf-faculty@lists.uaa.alaska.edu</a>)</td>
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| 16b. Co-requisite(s) (concurrent enrollment required) |

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</thead>
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</tr>
</tbody>
</table>

| 17. Mark if course has fees |

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

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**Dean/Director of School/College**

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<th>Initiator (TYPE NAME)</th>
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| Date: 2/21/13 |

**Undergraduate/Graduate Academic Board Chair**

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| Date: 2/21/13 |

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<th>Provost or Designee</th>
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| Date: 2/21/13 |
I. Date of Initiation: Spring 2013

II. Curriculum Action Request
   A. School: College of Health
   B. Course Subject: FIRE
   C. Course Number: A203
   D. Number of Credits: 3.0
   E. Number of Contact Hours: 3+0
   F. Course Program: Fire and Emergency Services Technology
   G. Course Title: Hazardous Materials Chemistry
   H. Grading Basis: A-F
   I. Implementation Date: Spring 2014
   J. Cross Listing: N/A
   K. Course Description: Provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity, and health hazards encountered by emergency services personnel.
   L. Course Prerequisite(s) (FIRE A101 and FIRE A121) with a minimum grade of C
   M. Test Scores: N/A
   N. Course Co-requisites: N/A
   O. Other Restrictions: N/A
   P. Registration Restrictions: N/A
   Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
   A. Instructional Goals: The instructor will:
      1. Demonstrate need for basic understanding of hazardous materials chemistry.
      2. Articulate need for ability to demonstrate proficiency in the use of Department Of Transportation guidebooks.
   B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>After successful completion of this course, students will be able to:</td>
<td>To be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Identify and describe the common elements of the Periodic Table.</td>
<td>Assignments</td>
</tr>
<tr>
<td></td>
<td>Quizzes</td>
</tr>
<tr>
<td></td>
<td>Exams</td>
</tr>
<tr>
<td>2. Distinguish between elements, compounds, and mixtures.</td>
<td>Assignments</td>
</tr>
<tr>
<td></td>
<td>Quizzes</td>
</tr>
<tr>
<td></td>
<td>Exams</td>
</tr>
<tr>
<td>3. Explain the difference between ionic and covalent bonding.</td>
<td>Assignments</td>
</tr>
<tr>
<td></td>
<td>Quizzes</td>
</tr>
<tr>
<td></td>
<td>Exams</td>
</tr>
<tr>
<td>4. Define the basic chemistry involved with common hydrocarbon derivatives.</td>
<td>Assignments</td>
</tr>
<tr>
<td></td>
<td>Quizzes</td>
</tr>
</tbody>
</table>
IV. Course Level Justification
This course provides basic chemistry relating to the categories of hazardous materials and builds upon the principles of FIRE A101 and FIRE A121.

V. Topical Course Outline:
A. General Safety
   1. General Classroom Safety
   2. Fire Safety

B. Introduction
   1. General Characteristics of Hazardous Materials
   2. Hazardous Household Products
   3. Hazardous Substances in the Workplace
   5. Hazardous Materials within Communities
   6. National Fire Protection Administration (NFPA) System of Identifying Potential Hazards

C. Matter and Energy
   1. Matter and Energy Defined
   2. Common Units of Measurement
   3. Temperature, Pressure and Volume Relationships
   4. Heat Transmission
   5. Understanding Fluid Principles

D. Chemical Forms of Matter
   1. Elements and Compounds
   2. Periodic Classification of Elements
   3. The Nature of Chemical Bonding
   4. Writing Chemical Formulas
   5. Naming Ionic and Covalent Compounds

E. Principles of Chemical Reactions
   1. Types of Chemical Reactions
   2. Factors Affecting the Rate of Reaction
   3. Oxidation-Reduction Reactions
   4. Fire Extinguishing Agents

F. Chemistry of Common Elements
G. Flammable Gases and Liquids
   1. Flammability
   2. General Hazards of Compressed Gases
   3. Storage and Transport of Compressed Gases
   4. General Hazards of Flammable Liquids
   5. Storage and Transport of Flammable Liquids
   6. Response to Flammable Gas and Liquid Emergencies

H. Chemistry of Hazardous Organic Compounds

I. Chemistry of Corrosive Materials

J. Chemistry of Water-Reactive Materials

K. U.S. Department of Transportation Hazard Classes and Their Divisions
   1. Container Shape and Size
   2. Transportation Placards
   3. Shipping Documents
   4. Material Safety Data Sheets (MSDS)

L. Hazardous Materials in Fixed Facilities
   1. Location and Occupancy
   2. Container Shape and Size
   3. National Fire Protection Association (NFPA)
   4. Material Safety Data Sheets (MSDS)

M. Response Guidelines
   2. Utilization of National Institute for Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards
   4. Utilization of Bureau of Explosives Emergency Action Guides

VI. Suggested Texts

VII. Bibliography
1. School or College
   CH College of Health
2. Course Prefix
   FIRE
3. Course Number
   A206
4. Previous Course Prefix & Number
   N/A
5a. Credits/CEUs
   3
5b. Contact Hours (Lecture + Lab)
   (3+0)

6. Complete Course Title
   Building Construction for Fire Protection
   Bldg Const for Fire Protection
   Abbreviated Title for Transcript (30 character)

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

8. Type of Action:  ☐ Add  ☑ Change  ☐ Delete
   If a change, mark appropriate boxes:
   ☑ Prefix  ☐ Course Number  ☐ Credits  ☐ Title  ☐ Repeat Status  ☐ Cross-Listed/Stacked  ☐ Course Prerequisites  ☐ Co-requisites  ☐ Registration Restrictions
   ☐ Class  ☐ Level  ☐ College  ☐ Major
   ☑ Other CCG (please specify)

9. Repeat Status No  # of Repeats  Max Credits
   ☐ A-F  ☑ P/NP  ☐ NG

10. Implementation Date  Semester/year
    From: Spring/2014  To: /9999

11. Cross Listed with  N/A
    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.

    | Impacted Program/Course | Date of Coordination | Chair/Coordinator Contacted |
    |-------------------------|----------------------|-----------------------------|
    | Fire and Emergency Services Technology, AAS | 2/21/13 | 2/21/13 |
    | 2. | |
    | 3. | |

    Initiator Name (typed): Tim Benningfield  Initiator Signed Initials: _________ Date:________________

    13b. Coordination Email  Date: 2/21/13
    submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

    13c. Coordination with Library Liaison  Date: 2/21/13

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 components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
    (FIRE A101 and FIRE A121) with a minimum grade of C

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

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

16d. Registration Restriction(s) (non-codable)
    N/A

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
    Course description, course prerequisite and CCG updated to align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

Initiator (faculty only)
Tim Benningfield
Initiator (TYPE NAME)

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

Approved  Date  Disapproved  Date  Undergraduate/Graduate Academic  Date

Approved  Date  Disapproved  Date  Board Chair  Date

Approved  Date  Disapproved  Date  Provost or Designee  Date
I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A206
D. Number of Credits: 3.0
E. Number of Contact Hours: 3+0
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Building Construction for Fire Protection
H. Grading Basis: A-F
I. Implementation Date:: Spring 2014
J. Cross Listing: N/A
K. Course Description: This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies.
L. Course Prerequisite(s): (FIRE A101 and FIRE A121) with a minimum grade of C
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: N/A
Q. Course Fees: No.

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Introduce the various classifications of building construction.
   2. Provide theoretical concepts of how fire impacts major types of building construction.

B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Outcomes and Assessment Measures</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Learning Outcomes</strong></td>
<td>To be assessed by one or more of the following:</td>
</tr>
<tr>
<td>After successful completion of this course, students will be able to:</td>
<td></td>
</tr>
<tr>
<td>1. Describe building construction as it relates to firefighter safety, building codes, fire prevention, code inspection, firefighting strategy, and tactics.</td>
<td>Written Assignments Projects Exams</td>
</tr>
<tr>
<td>2. Classify major types of building construction in accordance with a local/model building code.</td>
<td>Written Assignments Exams</td>
</tr>
<tr>
<td>3. Analyze the hazards and tactical considerations associated with the various types of building construction.</td>
<td>Written Assignments Projects Exams</td>
</tr>
</tbody>
</table>
4. Explain the different loads and stresses that are placed on a building and their interrelationships. | Written Assignments
Exams

5. Identify the function of each principle structural component in typical building design. | Written Assignments
Exams

6. Differentiate between fire resistances, flame spread, and describe the testing procedures used to establish ratings for each. | Written Assignments
Exams

7. Classify occupancy designations of the building code. | Written Assignments
Projects
Exams

8. Identify the indictors of potential structural failure as they relate to firefighter safety. | Written Assignments
Projects

9. Identify the role of GIS as it relates to building construction. | Written Assignments
Projects

IV. **Course Level Justification:**
Course builds upon FIRE A101 and FIRE A121 with respect to the National Fire Academy’s Fire and Emergency Services Higher Education (FESHE) Model Curriculum.

V. **Topical Course Outline:**
A. General Safety
   1. General Classroom Safety
   2. Fire Safety

B. Introduction
   1. History of Building Construction
   2. Governmental Functions
   3. Fire Risks and Fire Protection
   4. Fire Loss Management and Life Safety
   5. Pre-fire Planning and Fire Suppression Strategies

C. Principles of Construction
   1. Terminology and Definitions
   2. Building and Occupancy Classifications
   3. Characteristics of Building Materials
   4. Types and Characteristics of Fire Loads
   5. Effects of Energy Conservation

D. Building Construction
   1. Structural Members
      a. Definitions, Descriptions and Carrying Capacities
      b. Effects of Loads
   2. Structural Design and Construction Methods
   3. System Failures

E. Principles of Fire Resistance
   1. Standards of Construction
   2. Fire Intensity and Duration
   3. Theory versus Reality
F. Fire Behavior versus Building Construction
   1. Flame Spread
   2. Smoke and Fire Containment
      a. Construction and Suppression Systems
      b. Heating, Ventilation and Air Conditioning (HVAC) Systems
      c. Rack Storage
      d. Combustible

G. Wood Construction
   1. Definition and Elements of Construction
   2. Types of Construction
   3. Fire Stopping and Fire Retardants
   4. Modifications/Code Compliance

H. Ordinary Construction
   1. Definitions and Elements of Construction
   2. Structural Stability and Fire Barriers
   3. Modifications/Code Compliance

I. Structural Collapse

J. Ventilation

K. Non-Combustible Construction

L. Steel Construction
   1. Definitions and Elements of Construction
   3. Modifications/Code Compliance

M. Concrete Construction
   1. Definitions and Elements of Construction
   2. Structural Stability and Fire Resistance
   3. Modifications/Code Compliance

N. High Rise Construction
   1. Early versus Modern Construction
   2. Vertical and Horizontal Extension of Fire and Smoke
   3. Fire Protection and Suppression
   4. Elevators
   5. Atriums/Lobbies
   6. Modifications/Code Compliance

VI. Suggested Texts
VII. Bibliography
<table>
<thead>
<tr>
<th>1a. School or College</th>
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<th>1c. Department</th>
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<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<td>FIRE</td>
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<table>
<thead>
<tr>
<th>6. Complete Course Title</th>
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<tbody>
<tr>
<td>Fire Protection Systems</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>7. Type of Course</th>
</tr>
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<td>Academic</td>
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<table>
<thead>
<tr>
<th>8. Type of Action:</th>
<th>Add</th>
<th>Change</th>
<th>Delete</th>
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</table>

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

<table>
<thead>
<tr>
<th>9. Repeat Status No</th>
<th># of Repeats</th>
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<thead>
<tr>
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<thead>
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<th>11. Implementation Date</th>
<th>semester/year</th>
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<tr>
<td>From: Spring/2014</td>
<td>To: /9999</td>
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<table>
<thead>
<tr>
<th>12. Cross Listed with N/A</th>
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</thead>
<tbody>
<tr>
<td>Stacked with N/A</td>
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</tbody>
</table>

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>1.</th>
<th>2.</th>
<th>3.</th>
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<tbody>
<tr>
<td>Initiate Name (typed): Tim Benningfield</td>
<td>Initiator Signed Initials:</td>
<td>Date:</td>
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<table>
<thead>
<tr>
<th>13b. Coordination Email</th>
<th>Date: 2/21/13</th>
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</thead>
<tbody>
<tr>
<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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<thead>
<tr>
<th>13c. Coordination with Library Liaison</th>
<th>Date: 2/21/13</th>
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<table>
<thead>
<tr>
<th>14. General Education Requirement</th>
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<tbody>
<tr>
<td>Mark appropriate box:</td>
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<tr>
<td>Oral Communication</td>
</tr>
<tr>
<td>Fire Arts</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
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</thead>
</table>

Provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection, and portable fire extinguishers.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
(FIRE A101 and FIRE A105 and FIRE A121) with a minimum grade of C

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

16c. Other Restriction(s)

16d. Registration Restriction(s) (non-codable)
N/A

17. Mark if course has fees

18. Mark if course is a selected topic course

19. Justification for Action

Course description, course prerequisites and CCG updated to align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

Initiator (faculty only)

Tim Benningfield
Initiator (TYPE NAME)

[Approval/Disapproval]

Dean/Director of School/College
Date

Undergraduate/Graduate Academic Board Chair
Date

Provost or Designee
Date

141
University of Alaska Anchorage  
College of Health  
Course Content Guide

I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A214
D. Number of Credits: 3.0
E. Number of Contact Hours: 3+0
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Fire Protection Systems
H. Grading Basis: A-F
I. Implementation Date: Spring 2014
J. Cross Listing: N/A
K. Course Description: Provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection, and portable fire extinguishers.
L. Course Prerequisite(s): (FIRE A101 and FIRE A105 and FIRE A121) with a minimum grade of C
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: N/A
Q. Course Fees: No.

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Present various types and uses of fire protection systems.
   2. Articulate basic elements of a public water supply system as it relates to fire protection.

B. Student Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcomes and Assessment Measures</strong></td>
<td><strong>To be assessed by one or more of the following:</strong></td>
</tr>
<tr>
<td>After successful completion of this course, students will be able to:</td>
<td></td>
</tr>
</tbody>
</table>
| 1. Explain the benefits of fire protection systems in various types of structures. | Written Assignments  
Class Participation  
Exams |
| 2. Describe the basic elements of a public water supply system including sources, distribution networks, piping and hydrants. | Written Assignments  
Exams |
| 3. Explain why water is a commonly used extinguishing agent. | Written Assignments  
Class Participation  
Exams |
4. Identify the different types and components of sprinkler, standpipe and foam systems.  
   Written Assignments  
   Field Trip Reports  
   Exams

5. Review residential and commercial sprinkler legislation.  
   Written Assignments  
   Class Participation  
   Exams

6. Identify the different types of non-water based fire suppression systems.  
   Written Assignments  
   Field Trip Reports  
   Exams

7. Explain the basic components of a fire alarm system.  
   Written Assignments  
   Field Trip Reports  
   Exams

8. Identify the different types of detectors and explain how they detect fire.  
   Written Assignments  
   Field Trip Reports  
   Exams

9. Describe the hazards of smoke and list the four factors that can influence smoke movement in a building.  
   Written Assignments  
   Exams

10. Discuss the appropriate application of fire protection systems.  
    Written Assignments  
    Field Trip Reports  
    Exams

11. Explain the operation and appropriate application for the different types of portable fire protection systems.  
    Written Assignments  
    Field Trip Reports  
    Exams

IV. **Course Level Justification:**  
Course builds upon FIRE A101, FIRE A105 and FIRE A121 with respect to the National Fire Academy’s Fire and Emergency Services Higher Education (FESHE) Model Curriculum.

V. **Topical Course Outline:**
A. General Safety  
   1. General Classroom Safety  
   2. Fire Safety

B. Introduction to Fire Protection Systems  
   1. The Role Fire Protection Systems Play in Protecting the Life, Safety and Welfare of the General Public and Firefighters  
   2. Overview of the Different Types of Fire Protection Systems  
   3. The Role of Codes and Standards in Fire Protection System Design

C. Water Supply Systems for Fire Protection Systems  
   1. Sources of Fire Protection Water Supply  
   2. Distribution Networks  
   3. Piping  
   4. Hydrants  
   5. Utility Company Interface with the Fire Department

D. Water-Based Fire Suppression Systems  
   1. Properties of Water  
      a. Water as an Effective Extinguishing Agent
b. How Water Extinguishes Fire
2. Sprinkler Systems
3. Residential Sprinkler Systems
4. Standpipe Systems
   a. Types and Applications
   b. Fire Department Operations in Buildings with Standpipes
5. Foam Systems
6. Water Mist Systems
7. Fire Pumps

E. Non-Water-Based Fire Suppression Systems
1. Carbon Dioxide Systems
2. Halogenated Systems
3. Dry/Wet Chemical Extinguishing Systems

F. Fire Alarm Systems
1. Components
2. Types of Fire Alarm Systems
3. Detectors
   a. Smoke
   b. Heat
   c. Flame
4. Audible/Visual Devices
5. Alarm Monitoring
6. Testing and Maintenance of Fire Alarm Systems

G. Smoke Management Systems

H. Portable Fire Extinguishers

VI. Suggested Texts

VII. Bibliography
## Course Action Request

### University of Alaska Anchorage

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

### Course Details

<table>
<thead>
<tr>
<th>1a. School or College</th>
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<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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</thead>
<tbody>
<tr>
<td>FIRE</td>
<td>A220</td>
<td>N/A</td>
<td>3</td>
<td>(3+0)</td>
</tr>
</tbody>
</table>

### Course Title

**Legal Aspects of Emergency Services**

**Abbreviated Title for Transcript (30 character):** Legal Aspects of ES

### Course Information

<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>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>☐ Add or ☒ Change</td>
<td>☐ No</td>
<td>☒ A-F</td>
</tr>
</tbody>
</table>

### Course Description

Addresses the federal, state, and local laws that regulate emergency services including review of national standards, regulations, and consensus standards.

### Prerequisites

- ENGL A111 or concurrent

### Co-requisites

N/A

### Other Restrictions

<table>
<thead>
<tr>
<th>Class</th>
<th>Level</th>
<th>Major</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

### Registration Restriction(s)

N/A

### Justification for Action

Course description and CCG updated to align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

### Approval Signatures

- **Initiator Name (typed):** Tim Benningfield
- **Initiator Signed Initials:** ________
- **Date:** __________________

- **Coordinator Contacted:** Tim Benningfield
- **Date of Coordination:** 2/21/13

- **Library Liaison Contacted:** Deborah Periman
- **Date of Coordination:** 3/7/13

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

- **Course Prerequisite(s):** (list prefix and number or test code and score)
  - ENGL A111 or concurrent

- **Co-requisite(s):** (concurrent enrollment required)
  - N/A

- **Registration Restriction(s):** (non-codable)
  - N/A

- **Mark if course has fees:**
  - ☐

- **Mark if course is a selected topic course:**
  - ☐

### Coordination with Library Liaison

Date: 2/21/13

### Coordination Email

Date: 2/21/13

### Undergraduate/Graduate Academic Board Chair

Date: __________________

### Provost or Designee

Date: __________________

---

**Initiator (faculty only):** Tim Benningfield

**Initiator (TYPE NAME):**

- ☐ Approved
- ☐ Disapproved

**Date:**

---

**Dean/Director of School/College:**

- ☐ Approved
- ☐ Disapproved

**Date:**

---

**Undergraduate/Graduate Academic Board Chair:**

- ☐ Approved
- ☐ Disapproved

**Date:**

---

**Provost or Designee:**

- ☐ Approved
- ☐ Disapproved

**Date:**

---
University of Alaska Anchorage  
College of Health  
Course Content Guide

I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health  
B. Course Subject: FIRE  
C. Course Number: A220  
D. Number of Credits: 3  
E. Number of Contact Hours: (3+0)  
F. Course Program: Fire and Emergency Services Technology  
G. Course Title: Legal Aspects of Emergency Services  
H. Grading Basis: A-F  
I. Implementation Date: Spring 2014  
J. Cross Listing: N/A  
K. Course Description: Addresses the federal, state, and local laws that regulate emergency services including review of national standards, regulations, and consensus standards.

L. Course Prerequisite(s): ENGL A111 or concurrent  
M. Test Scores: N/A  
N. Course Co-requisites: N/A  
O. Other Restrictions: N/A  
P. Registration Restrictions: N/A  
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   Present information to enable able analysis of federal, state, and local laws and consensus standards as they pertain to the fire service.

B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
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</thead>
<tbody>
<tr>
<td><strong>Student Learning Outcomes</strong></td>
</tr>
<tr>
<td>After successful completion of this course, students will be able to:</td>
</tr>
<tr>
<td>1. Define the different types of laws.</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>2. Discuss federal, state and local laws and liabilities applicable to emergency services.</td>
</tr>
<tr>
<td>3. Explain the purpose of national codes and standards.</td>
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<tr>
<td>4. Recognize the legal issues and concerns affecting emergency services.</td>
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IV. Course Level Justification
Course builds upon knowledge gained in previous curriculum with respect to the National Fire Academy's Fire and Emergency Services Higher Education (FESHE) Model Curriculum.

V. **Topical Course Outline**

A. General Safety
   1. General Classroom Safety
   2. Fire Safety

B. The Legal System of the United States
   1. Foundations
   2. U.S. Constitution

C. Civil Versus Criminal
   1. Differences
   2. Lawsuits
   3. Punishments
   4. Burden of Proof

D. Tort Liability

E. Negligence

F. Judicial System
   1. The Court System
   2. U.S. Supreme Court
   3. Special Courts
   4. Local Courts
   5. Penalties

G. Federal Laws and the Fire Service
   1. Fair Labor Standards Act
   2. Americans with Disabilities Act
   3. Age Discrimination
   4. Civil Rights
   5. Sexual Harassment

H. Employee Relations
   1. Physical Testing – Entrance Requirements
   2. Residency requirements
   3. Grooming Standards
   4. Promotional Testing
   5. Psychological Examinations
   6. Polygraphs

I. Fire Prevention and Fire Codes
   1. Fourth Amendment
   2. Certifications
   4. Civil Versus Criminal

J. Mutual Aid
K. Hazardous Materials

L. Volunteers/Contracts At-Will Doctrine

M. Arson

VI. Suggested Texts

VII. Bibliography
Legal Briefings for Fire Chiefs. Abington, MA: EDM Publishing
# Course Action Request

University of Alaska Anchorage

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

<table>
<thead>
<tr>
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<th>1b. Division</th>
<th>1c. Department</th>
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<td>FIRE A294</td>
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<td>(3+0)</td>
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## 6. Complete Course Title

Principles of Fire and Emergency Services Safety and Survival

Principles of Fire & ES Safety

## 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:

- [x] Prefix
- [ ] Credits
- [ ] Title
- [x] Grading Basis
- [x] Course Description
- [x] Test Score Prerequisites
- [x] Other Restrictions
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major
- [ ] Other

## 9. Repeat Status No

- [ ] # of Repeats
- [ ] Max Credits

## 10. Grading Basis

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

## 11. Implementation Date

- Semester/year

From: Fall/2013
To: 9999

## 12. Cross Listed 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](http://www.uaa.alaska.edu/governance).

### Impacted Program/Course

<table>
<thead>
<tr>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>2/21/13</td>
<td>Tim Benningfield</td>
</tr>
</tbody>
</table>

### Impacted Program/Course

1. Fire and Emergency Services Technology, AAS
2.  
3.  

## 13b. Coordination Email

- Date: 2/21/13
- submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

## 13c. Coordination with Library Liaison

- Date: 2/21/13

## 14. General Education Requirement

Mark appropriate box:

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

## 15. Course Description

(suggested length 20 to 50 words)

Introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavioral change throughout the emergency services.

## 16a.Course Prerequisite(s)

(list prefix and number or test code and score)

(FIRE A101 and FIRE A121) with a minimum grade of C

## 16b. Co-requisite(s)

(concurrent enrollment required)

N/A

## 16c. Other Restriction(s)

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

## 16d. Registration Restriction(s)

(non-codable)

N/A

## 17. Mark if course has fees

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

## 19. Justification for Action

Align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

Initiator (faculty only)

Tim Benningfield

Initiator (TYPE NAME)

Initiator Signed Initials: _________ Date:________________

---

**Course Description**

Introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavioral change throughout the emergency services.

**Course Prerequisite(s)**

(FIRE A101 and FIRE A121) with a minimum grade of C

**Co-requisite(s)**

(concurrent enrollment required)

N/A

**Other Restriction(s)**

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

**Registration Restriction(s)**

(non-codable)

N/A

---

**Justification for Action**

Align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

Initiator (faculty only)

Tim Benningfield

Initiator (TYPE NAME)

Initiator Signed Initials: _________ Date:________________

**Approved**

**Disapproved**

Dean/Director of School/College Date

**Approved**

**Disapproved**

Undergraduate/Graduate Academic Board Chair Date

**Approved**

**Disapproved**

Provost or Designee Date
I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A221
D. Number of Credits: 3
E. Number of Contact Hours: (3+0)
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Principles of Fire and Emergency Services Safety and Survival
H. Grading Basis: A-F
I. Implementation Date: Fall 2013
J. Cross Listing: N/A
K. Course Description: Introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavioral change throughout the emergency services.

L. Course Prerequisite(s): (FIRE A101 and FIRE A121) with a minimum grade of C
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: N/A
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Elaborate on the life safety initiatives created by the National Fallen Firefighters Foundation’s Everyone Goes Home Program.
   2. Introduce the concepts of risk management and mitigation as it pertains to emergency services.
   3. Elaborate on the need for cultural and behavioral change throughout the emergency services.

B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Outcomes and Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Learning Outcomes</td>
</tr>
<tr>
<td><strong>After successful completion of this course, students will be able to:</strong></td>
</tr>
<tr>
<td><strong>Assessment Measures</strong></td>
</tr>
<tr>
<td><strong>To be assessed by one or more of the following:</strong></td>
</tr>
<tr>
<td>1. Describe the need for cultural and behavioral change within the emergency services relating to safety incorporating leadership, supervision, personal responsibility, and organizational accountability.</td>
</tr>
<tr>
<td>Written Assignments, Quizzes</td>
</tr>
<tr>
<td>2. Define how the concepts of risk management affect strategic and tactical</td>
</tr>
<tr>
<td>Class Participation, Exams</td>
</tr>
<tr>
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</table>

IV. **Course Level Justification**

Builds upon FIRE A101 and FIRE A121 with respect to the National Fire Academy’s Fire and Emergency Services Higher Education (FESHE) Model Curriculum.

V. **Topical Course Outline**
A. General Safety
1. General Classroom Safety
2. Fire Safety

B. Introduction
1. History of Fire Service Culture
2. Culture
3. Defining the Nature of the Problem

C. The National Context, Health and Safety
1. National Fire Protection Association (NFPA), Occupational Safety and Health Administration (OSHA)
2. Medical and Fitness Standards
3. Data Collection National Fire Incident Reporting System (NFIRS)
4. Research/Investigation National Institute of Standards and Technology (NIST) National Institute for Occupational Safety and Health (NIOSH)

D. Training, Equipment, Response

E. Organizational Health and Safety Profile

F. Risk management
1. Risk Management Concepts and Practices
2. Unsafe Acts
3. Empowerment Definition

G. Prevention
1. Home Fire Sprinklers
2. Code Enforcement
3. Public Education/Fire and Life Safety
4. Counseling and Psychological Support

VI. Suggested Texts

VII. Bibliography


### Course Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
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<tbody>
<tr>
<td>CH College of Health</td>
<td>AHLS Division of Health Safety</td>
<td>FES</td>
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<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours (Lecture + Lab)</th>
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<tr>
<td>FIRE</td>
<td>A223</td>
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<table>
<thead>
<tr>
<th>6. Complete Course Title</th>
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<tbody>
<tr>
<td>Fire Investigation II</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Abbreviated Title for Transcript (30 character)</th>
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</thead>
</table>

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

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

#### If a change, mark appropriate boxes:
- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [x] Course Description
- [x] Test Score Prerequisites
- [ ] Other Restrictions
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major
- [ ] Other CCG (please specify)

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

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

### Implementation Date
- From: Spring/2014
- To: /9999

### Cross Listed with
- [ ] N/A

### Stacked with
- [ ] N/A

### Cross-Listed/Stacked Coordination Signature

### Impacted Courses or Programs:

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

<table>
<thead>
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<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>Fire and Emergency services Technology, AAS</td>
<td>2/21/13</td>
<td>Tim Benningfield</td>
</tr>
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</table>

#### Initiator Name (typed): Tim Benningfield

Initiator Signed Initials: __________________ Date: ______________

#### Coordination Email
- Date: 2/21/13
  - submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

#### Coordination with Library Liaison
- Date: 2/21/13

### 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)

Provides the advanced technical knowledge on the rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and courtroom testimony.

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

FIRE A123 with a minimum grade of C

### Co-requisite(s) (concurrent enrollment required)

N/A

### Other Restriction(s)
- [ ] Mark if course has fees

### Registration Restriction(s) (non-codable)

N/A

### Mark if course is a selected topic course

[ ]

### Justification for Action

Course description, course prerequisite and CCG updated to align course with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

### Initiator (faculty only)

Tim Benningfield

Initiator (TYPE NAME) __________________ Date: ______________

### Approved
- [ ] Dean/Director of School/College

### Disapproved
- [ ] Date

### Undergraduate/Graduate Academic Board Chair

Approved

Disapproved

Approved

Disapproved

Approved

Disapproved

Approved

Disapproved

Provost or Designee

Date

Date

Date

Date

Date
University of Alaska Anchorage
College of Health
Course Content Guide

I. Date of Initiation: Spring 2013

II. Curriculum Action Request
A. School: College of Health
B. Course Subject: FIRE
C. Course Number: A223
D. Number of Credits: 3.0
E. Number of Contact Hours: 3+0
F. Course Program: Fire and Emergency Services Technology
G. Course Title: Fire Investigation II
H. Grading Basis: A-F
I. Implementation Date: Spring 2014
J. Cross Listing: N/A
K. Course Description: Provides advanced technical knowledge on the rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and courtroom testimony.
L. Course Prerequisite(s) FIRE A123 with a minimum grade of C
M. Test Scores: N/A
N. Course Co-requisites: N/A
O. Other Restrictions: N/A
P. Registration Restrictions: N/A
Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
A. Instructional Goals: The instructor will:
   1. Articulate significance of the rule of law.
   2. Explain how to analyze fire cause.
   3. Present information related to recognition of the different classifications of arson.

B. Student Learning Outcomes and Assessment Measures:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
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</thead>
<tbody>
<tr>
<td>After successful completion of this course, students will be able to:</td>
<td>To be assessed by one or more of the following:</td>
</tr>
<tr>
<td>1. Explain the rule of law as it pertains to arrest, search and seizure.</td>
<td>Written Assignments</td>
</tr>
<tr>
<td>2. Interpret a fire scene.</td>
<td>Quizzes</td>
</tr>
<tr>
<td>3. Describe the chemistry of combustion.</td>
<td>Exams</td>
</tr>
<tr>
<td></td>
<td>Written Assignments</td>
</tr>
<tr>
<td></td>
<td>Quizzes</td>
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<tr>
<td></td>
<td>Exams</td>
</tr>
</tbody>
</table>

155
4. Explain the nature and behavior of fire.

5. Identify the combustion properties of liquid, gaseous, and solid fuels.

6. Analyze electrical causes of fires.

7. List the procedures for fire scene documentation.

8. Evaluate the use of incendiary devices, explosives, and bombs.

9. List the procedures for fire scene documentation.

10. Analyze fire-related deaths and injuries.

11. Discuss interviewing techniques.

12. Explain the role of the fire investigator in courtroom demeanor and testifying.

13. List the sources and technology available for fire investigations.

14. Describe procedures for conducting background investigations.

### IV. Course Level Justification
This course builds upon FIRE A123, Fire Investigation I, to provide advanced technical knowledge of fire investigation.

### V. Topical Course Outline:

**A. General Safety**
1. General Classroom Safety
2. Fire Safety

**B. Rule of the Law**
1. Arrest Procedures
2. Search and Seizure
3. Warrant Searches

**C. Interpretations of Fire Scenes**
1. Structure Fires
2. Vehicle Fires
3. Ship Fires
4. Explosions
5. Wildland Fires
6. Hazardous Materials Fires

D. Chemistry of Combustion
   1. Atoms
   2. Elements
   3. Compounds
   4. Organic Compounds

E. Behavior of Fire
   1. Heat
   2. Flame Plumes
   3. Sequence of a Room Fire
   4. Effects of Environmental Conditions

F. Combustion Properties
   1. Liquids
   2. Gases
   3. Solids

G. Electrical Causes of Fires
   1. Wiring Systems
   2. Ignition Sources
   3. Investigation of Fires

H. Collection of Evidence
   1. Photography Procedures
   2. Sketching Procedures and Techniques
   3. Fingerprint Lifting and Collection Techniques
   4. Preservation of Evidence

I. Incendiary Systems
   1. Basic Incendiary Devices
   2. Explosives
   3. Bombs

J. Documentation of Fire Scene

K. Investigation of Fire-Related Deaths and Injuries
   1. Homicide Fire Investigation
   2. Scene Security
   3. Scene Examination and Search
   4. Scene Documentation
   5. Autopsy Report

L. Interview Techniques

M. Courtroom Demeanor
N. Court Decisions

O. Sources of Information
   1. Local
   2. State
   3. Federal
   4. Website

VI. Suggested Texts

VII. Bibliography
<table>
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<tr>
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<td>A295</td>
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<td>(0+9)</td>
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</table>

**Complete Course Title**
Fire and Emergency Services Practicum
FEST Practicum

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

<table>
<thead>
<tr>
<th>6. Type of Course</th>
<th>7. Type of Action:</th>
<th>8. Type of Action:</th>
<th>9. Repeat Status</th>
<th>10. Grading Basis</th>
<th>11. Implementation Date</th>
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<td>Yes</td>
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<td>☑ P/NP</td>
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</tbody>
</table>

**Course Description (suggested length 20 to 50 words)**
Provides an opportunity to observe, participate, and apply firefighting, emergency medical, or emergency management skills in a structured and supervised organizational setting.

**Course Prerequisite(s)**
(FIRE A101 and (FIRE A121 or FIRE A201 or EMT A110 or EMT A130)) with a minimum grade of C

**Course Prerequisite(s)** (concurrent enrollment required)
N/A

**Other Restriction(s)**

**Mark if course has fees**

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

**Justification for Action**
This course will provide an opportunity for practical application of knowledge, skills, and abilities gained in previous program courses.

**Initiator Name (typed):** Tim Benningfield
Initiator Signed: Tim Benningfield

**Date:**

**Initiator (faculty only):** Tim Benningfield

**Initiator (TYPE NAME):**

**Approved**

**Disapproved**

**Dean/Director of School/College**

**Approved**

**Disapproved**

**Undergraduate/Graduate Academic**

**Approved**

**Disapproved**

**Board Chair**

**Approved**

**Disapproved**

**Provost or Designee**

**Approved**

**Disapproved**

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159
University of Alaska Anchorage  
College of Health  
Course Content Guide

I. Date of Initiation: Spring 2013

II. Curriculum Action Request
   A. School: College of Health  
   B. Course Subject: FIRE  
   C. Course Number: A295  
   D. Number of Credits: 3  
   E. Number of Contact Hours: (0+9)  
   F. Course Program: Fire and Emergency Services Technology  
   G. Course Title: Fire and Emergency Services Practicum  
   H. Grading Basis: P/NP  
   I. Implementation Date: Fall 2013  
   J. Cross Listing: N/A  
   K. Course Description: Provides an opportunity to observe, participate, and apply firefighting, emergency medical, or emergency management skills in a structured and supervised organizational setting.

   L. Course Prerequisite(s): [FIRE A101 and (FIRE A121 or FIRE A201 or EMT A110 or EMT A130)] with a minimum grade of C  
   M. Test Scores: N/A  
   N. Course Co-requisites: N/A  
   O. Other Restrictions: N/A  
   P. Registration Restrictions: Departmental approval  
   Q. Course Fees: No

III. Instructional Goals and Student Learning Outcomes
   A. Instructional Goals: The Instructor will:
      Guide students in the practicum course with goals determined by collaboration of the supervising faculty member, student, and site preceptor. The activities will be dictated by standards of the National Fire Protection Association, Alaska Fire Standards Council, Department of Public Safety, National Highway Transportation Safety Administration, and the Federal Emergency Management Agency, among others.

   B. Student Learning Outcomes and Assessment Measures
      
      | Outcomes and Assessment Measures |
      |---------------------------------|
      | **Student Learning Outcomes**  |
      | *After successful completion of this course, students will be able to:* |
      | **Assessment Measures**        |
      | *To be assessed by one or more of the following:* |
      | 1. Content will be related to previous courses and job performance requirements of the fire and emergency responder. | Signed skill sheets |
      | | Submission of a portfolio. |
      | 2. Outcomes will vary with practicum site and student needs. | Signed skill sheets |
      | | Submission of a portfolio. |
IV. **Course Level Justification**
This course builds upon FIRE A101 and FIRE A121, FIRE A201, EMT A110 or EMT A130 by providing opportunity for practical application.

V. **Topical Course Outline**

**Sample**

A. **General Safety**
   1. Organizational Orientation
   2. Equipment Safety
   3. Fire Safety

B. **Preparatory**
   1. Equipment Maintenance
   2. Impact of Research
   3. Education and Training
   4. Code Enforcement
   5. Organizational Structure of Fire and Emergency Services

C. **Response**
   1. Incident Management
   2. Communication
   3. Roles and Responsibilities
   4. Fire Behavior
   5. Extinguishing Agents

VI. **Suggested Texts**

VII. **Bibliography**
University of Alaska Anchorage  
College of Health  
School of Allied Health  
Fire and Emergency Services Technology Program  
Program Action Request Cover Memo

TO:               United Academic Board  
FROM:            Fire and Emergency Services Technology  
                 Tim Benningfield, Coordinator  
DATE:            3/8/13  
RE:              Program Action Request

University of Alaska’s Fire and Emergency Services Technology program is updating their curriculum to align with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.

Updated courses:
FIRE A101   Principles of Emergency Services  
FIRE A105   Fire Prevention  
FIRE A107   Strategy and Tactics of Fire Suppression  
FIRE A111   Principles of Fire and Emergency Service Administration  
FIRE A121   Fire Investigation I  
FIRE A123   Fire Investigation II  
FIRE A170   Occupational Safety and Health for Emergency Services  
FIRE A202   Fire Protection Hydraulics and Water Supply  
FIRE A203   Hazardous Material Chemistry  
FIRE A206   Building Construction for Fire Protection  
FIRE A214   Fire Protection Systems  
FIRE A220   Legal Aspects of Emergency Services  
FIRE A223   Fire Investigation II

Also updated:
EMT A110   Emergency Trauma Tech

Courses to be added:
FIRE A190   Selected Topics in Fire and Emergency Services  
FIRE A221   Principles of Fire & ES Safety  
FIRE A295   Fire and Emergency Services Practicum

Attached are the current catalog copy with text changes and a clean copy of how the new catalog text will appear.
# Course changes

<table>
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<tr>
<th>Prefix</th>
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<td>Change trial course FIRE A294 to permanent course</td>
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<td>1a. School or College</td>
<td>1b. Department</td>
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</tr>
<tr>
<td>CH College of Health</td>
<td>FES</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>2. Complete Program Title/Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate of Applied Science, Fire and Emergency Services Technology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Type of Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose one from the appropriate drop down menu:</td>
</tr>
<tr>
<td>Undergraduate: or Graduate: Associate of Applied Science</td>
</tr>
</tbody>
</table>

This program is a Gainful Employment Program: □ Yes or □ No

<table>
<thead>
<tr>
<th>4. Type of Action: PROGRAM</th>
<th>PREFIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Add</td>
<td>□ Add</td>
</tr>
<tr>
<td>√ Change</td>
<td>□ Change</td>
</tr>
<tr>
<td>□ Delete</td>
<td>□ Inactivate</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>5. Implementation Date (semester/year)</th>
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</thead>
<tbody>
<tr>
<td>From: Fall/2013 To: 99999</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6a. Coordination with Affected Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department, School, or College: UAF Emergency Services, Paramedical Technology (KPC and MatSu), Justice Center</td>
</tr>
<tr>
<td>Initiator Name (typed): Tim Benningfield</td>
</tr>
<tr>
<td>Initiator Signed Initials: ____________</td>
</tr>
<tr>
<td>Date: ____________________</td>
</tr>
</tbody>
</table>

| 6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) | Date: 2/21/13 |
| 6c. Coordination with Library Liaison | Date: 2/21/13 |

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

<table>
<thead>
<tr>
<th>8. Justification for Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Align program with industry standards indicated in the Fire and Emergency Services Higher Education (FESHE) model curriculum developed by U.S. Fire Administration.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tim Benningfield</td>
<td></td>
</tr>
</tbody>
</table>

| □ Approved | □ Disapproved |
| Dean/Director of School/College Date |

| □ Approved | □ Disapproved |
| Undergraduate/Graduate Academic Board Chair Date |

| □ Approved | □ Disapproved |
| College/School Curriculum Committee Chair Date |

| □ Approved | □ Disapproved |
| Provost or Designee Date |
FIRE AND EMERGENCY SERVICES TECHNOLOGY

Allied Health Science Building (AHS), Room 153, (907) 786-6476
www.uaa.alaska.edu/alliedhealth/academics/fire.cfm

The Fire and Emergency Services Technology program provides entry-level knowledge and skills for students planning a career in emergency services as well as providing for career advancement and professional development of current firefighters.

**Student Learning Outcomes**

Graduates of the Fire and Emergency Services Technology program are prepared to:

- Discuss the history, support organizations, resources, incident management, training, and emergency operations and relate how each plays a role within emergency services.
- Define and use basic terms and concepts associated with the chemistry and dynamics of fire.
- Relate how fire prevention and fire inspections are connected.
- Demonstrate the importance of public education in relation to fire prevention.
- Identify the equipment and systems used in control and extinguishment of fire.
- Identify the types of building construction and their uniqueness under fire conditions and how these components are related to firefighter and life safety.
- Relate how the basic principles and history related to the national firefighter life safety initiatives foster the need for cultural and behavioral change throughout the emergency services.

It may take more than two years to complete the degree. The Associate of Applied Science degree has a technical core which follows the National Fire Academy’s Fire and Emergency Service Higher Education model core curriculum for two-year degree programs. The technical core consists of courses in principles of emergency services, building construction, fire prevention, safety and survival, protection systems, and fire behavior and combustion. Each student must complete the technical core as well as MATH 105 or GER Quantitative Skills course, a natural science with lab, and remaining UAA AAS General Course Requirements (see Chapter 10 for further details). The student also completes courses from a variety of program electives.

For baccalaureate degree options, contact a Fire and Emergency Services Technology advisor.

**Advising**

Upon admission to the program, students are strongly 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.

**Associate of Applied Science, Fire and Emergency Services Technology**

**Admission Requirements**

Satisfy the Admission to Certificate and Associate’s Degree Program Requirements in Chapter 7, Academic Standards and Regulations. Although it is not required, it is highly recommended that students be members of a paid or volunteer fire department prior to or shortly after being admitted to the program.

**Academic Progress**

In order to progress within the Associate of Applied Science Fire and Emergency Services Technology program, students must earn a satisfactory grade (C or higher or P) in all Fire and Emergency Service Technology (FIRE and EMT) courses required for the degree.
Degree Requirements

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

2. Complete the Associate of Applied Science General Course Requirements located at the beginning of this chapter.

3. Complete the Major Requirements listed below with a minimum grade of C.

Major Requirements

1. Complete the following required courses (28 credits):
   - FIRE A101 Principles of Emergency Services 3
   - FIRE A105 Fire Prevention 3
   - FIRE A121 Fire Behavior and Combustion 3
   - FIRE A206 Building Construction for Fire Protection 3
   - FIRE A214 Fire Protection Systems 3
   - FIRE A221 Principles of Fire & ES Safety and Survival 3
   - MATH 105 Intermediate Algebra or GER Quantitative Skills course 3
   - Natural science with lab 4
   - Social science (PS, PSY, or SOC) 3

   Math, natural science, and social science may also meet AAS General Course Requirements.

2. Complete 12 credits from the following courses with a minimum grade of C:
   - EMT A130 Emergency Medical Technician I 6
   - EMT A230 Emergency Medical Technician II 3
   - EMT A231 Emergency Medical Technician III 3
   - FIRE A107 Strategy and Tactics of Fire Suppression 3
   - FIRE A111 Fire Administration I 3
   - FIRE A117 Rescue Practices 3
   - FIRE A123 Fire Investigation I 3
   - FIRE A131 Firefighter I, Series I 3
   - FIRE A133 Firefighter I, Series II 3
   - FIRE A135 Firefighter I, Series III 3
   - FIRE A137 Firefighter I, Series IV 3
   - FIRE A151 Wildland Fire Control I 3
   - FIRE A170 Occupational Safety and Health for Fire Service 3
   - FIRE A190 Selected Topics in Fire and Emergency Services 1-3
   - FIRE A201 Principles of Emergency Management 3
   - FIRE A202 Fire Protection Hydraulics and Water Supply 3
   - FIRE A203 Hazardous Materials Chemistry I 3
   - FIRE A216 Methods of Instruction for Fire and Emergency Service 3
   - FIRE A220 Legal Aspects of Emergency Services 3
   - FIRE A223 Fire Investigation II 3
   - FIRE A230 Fire Department Organizational Theory and Behavior 3
3. Complete an additional 11 credits from FIRE, FSA, or EMT courses from the courses listed above with a minimum grade of C or from the General Education Requirements (GERs) course list.

4. A total of 60 credits is required for the degree.

**PRACTICUM REQUIREMENTS**

Practicum placement requires departmental approval and will require various documentation which may include: background checks, proof of immunizations, release forms, proof of insurance, and others as dictated by individual sites.

**FACULTY**

Tim Benningfield, Assistant Professor/Program Coordinator,

tlbenningfield@uaf.alaska.edu
The Fire and Emergency Services Technology program provides entry-level knowledge and skills for students planning a career in emergency services as well as knowledge and skills for the career firefighter, providing for career advancement and professional development of current firefighters.

Student Learning Outcomes

Graduates of the Fire and Emergency Services Technology program are prepared to:

- Discuss the history, support organizations, resources, incident management, training, and emergency operations and relate how each plays a role within emergency services.
- Define and use basic terms and concepts associated with the chemistry and dynamics of fire.
- Relate how fire prevention and fire inspections are connected.
- Demonstrate the importance of public education in relation to fire prevention.
- Identify the equipment and systems used in control and extinguishment of fire.
- Identify the five types of building construction and their uniqueness under fire conditions and how these components are related to firefighter and life safety.
- Calculate water flow, friction loss, and gallon per minute flow for a given scenario.
- Relate how the basic principles and history related to the national firefighter life safety initiatives foster the need for cultural and behavioral change throughout the emergency services.

The Associate of Applied Science degree has a technical core which follows the National Fire Academy’s Fire and Emergency Service Higher Education’s model core curriculum for two-year degree programs. The technical core consists of courses in principles of emergency services, building construction, fire prevention, fire hydraulics, protection systems, and fire behavior and combustion. Each student must complete the technical core as well as MATH 105 or GER Quantitative Skills course, a natural science with lab, and remaining UAA AAS General Course Requirements (see Chapter 10 for further details). The student also has four options from which to choose: Fire Suppression, Fire Administration, Emergency Medical Services, or Wildland Firefighting. It may take more than two years to complete the degree. For baccalaureate degree options, contact a Fire and Emergency Services Technology advisor.

Advising

All upon admission to the program, students are strongly 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.
Associate of Applied Science, Fire and Emergency Services Technology

Admission Requirements

Satisfy the Admission to Certificate and Associate’s Degree Program Requirements in Chapter 7, Academic Standards and Regulations. Although it is not required, it is highly recommended that students be members of a paid or volunteer fire department prior to or shortly after being admitted to the program.

Academic Progress

In order to progress within the Associate of Applied Science Fire and Emergency Services Technology program, students must earn a satisfactory grade (C or higher or P) in all Fire and Emergency Service Technology (FIRE and EMT) courses required for the degree.

Degree Requirements

1. Complete the General University Requirements for Associate of Applied Science degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Course Requirements located at the beginning of this chapter.
3. Complete the Major Requirements listed below with a minimum grade of C.

Major Requirements

1. Complete the following required courses (28 credits):
   - FIRE A101 Principles of Emergency Services 3
   - FIRE A105 Fire Prevention 3
   - FIRE A121 Fire Behavior and Combustion 3
   - FIRE A202 Fire Protection Hydraulics and Water Supply 3
   - FIRE A206 Building Construction for Fire Protection 3
   - FIRE A206 Building Construction for Fire Protection 3
   - FIRE A214 Fire Protection Systems 3
   - FIRE A221 Principles of Fire & ES Safety and Survival
   - MATH 105 Intermediate Algebra or GER Quantitative Skills course 3
   - Natural science with lab (recommend CHEM 103/L) 4
   - Social science (PS, PSY, or SOC) 3

   Math, natural science, and social science may also meet AAS General Course Requirements.

2. Complete 12 credits in one of the following options from the following courses with a minimum grade of C:
   - EMT A130 Emergency Medical Technician I 6
   - EMT A230 Emergency Medical Technician II 3
   - EMT A231 Emergency Medical Technician III 3
   - FIRE A107 Strategy and Tactics of Fire Suppression 3
   - FIRE A111 Fire Administration I 3
   - FIRE A117 Rescue Practices 3
   - FIRE A123 Fire Investigation I 3
   - FIRE A131 Firefighter I, Series I 3
   - FIRE A133 Firefighter I, Series II 3
   - FIRE A135 Firefighter I, Series III 3
   - FIRE A137 Firefighter I, Series IV 3
   - FIRE A151 Wildland Fire Control I 3
FIRE A170  Occupational Safety and Health for Fire Service  3
FIRE A190  Selected Topics in Fire and Emergency Services 1-3
FIRE A201  Principles of Emergency Management  3
FIRE A202  Fire Protection Hydraulics and Water Supply 3
FIRE A203  Hazardous Materials Chemistry I  3
FIRE A216  Methods of Instruction for Fire and Emergency Service 3
FIRE A220  Legal Aspects of Emergency Services  3
FIRE A222  Fire Investigation II 3
FIRE A230  Fire Department Organizational Theory and Behavior 3
FIRE A295  Fire and Emergency Services Practicum 2

Fire Suppression- Option 1
FIRE A107  Strategy and Tactics  3
FIRE A117  Rescue Practices (3) 3
or
FIRE A151  Wildland Fire Control I (3)
FIRE A173  Fire Investigation I 3
FIRE A202  Hazardous Materials Chemistry I 3

Fire Administration- Option 2
FIRE A111  Fire Administration I 3
FIRE A170  Occupational Safety and Health for Fire Service 3
FIRE A201  Principles of Emergency Management (3) 3
or
FIRE A220  Fire Department Organizational Theory and Behavior (3)
FIRE A220  Legal Aspects of Emergency Services 3

Emergency Medical Services- Option 3
EMT A130  Emergency Medical Technician I  6
EMT A230  Emergency Medical Technician II 3
EMT A231  Emergency Medical Technician III (3) 3
or
FIRE A117  Rescue Practices (3)

Wildland Firefighting- Option 4
FIRE A151  Wildland Fire Control I 3
FIRE A155  Wildland Fire Behavior 3
FIRE A157  Wildland Air Operations and Safety 3
FIRE A159  Wildland Fire Operations Functions 3

3. Complete an additional 11 credits from FIRE, FSA, or EMT courses from the courses listed above with a minimum grade of C or from the General Education Requirements (GERs) course list.
4. A total of 60 credits is required for the degree.

**PRACTICUM REQUIREMENTS**

Practicum placement requires departmental approval and will require various documentation which may include background checks, proof of immunizations, release forms, proof of insurance, and others as dictated by individual sites.

**FACULTY**

James Foster, Tim Benningfield, Assistant Professor/Program Coordinator,
jkfostertlbenningfield@uaa.alaska.edu
## 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
- **HIST**

### 3. Course Number
- **A444**

### 4. Previous Course Prefix & Number
- **HIST A244**

### 5. Credits/CEUs
- **3**

### 6. Contact Hours (Lecture + Lab)
- **(3+0)**

### 7. Complete Course Title
- **Advanced Studies in Film History**

### 8. Type of Course
- **Academic**
- **Preparatory/Development**
- **Non-credit**
- **CEU**
- **Professional Development**

### 9. Type of Action
- **Add**
- **Change**
- **Delete**

### 10. Repeat Status
- **Choose one**
- **# of Repeats**
- **Max Credits**

### 11. Grading Basis
- **A-F**
- **P/NP**
- **NG**

### 12. Implementation Date
- **From:** 9/1/2013
- **To:** 9/9999

### 13. Cross Listed with
- **HIST A244**

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

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

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

### 17. Other Restriction(s)
- **(please specify)**

### 18. Registration Restriction(s)
- **(non-codable)**

### 19. Justification for Action
- Department has removed stacked courses as an option from its program and this course is well-suited for a 200-level community interest course

---

**Initiator Name (typed):**

**Initiator Signed Initials:**

**Date:**

---

**Implementation Date:** semester/year

---

**Cross Listed Coordination:**

---

**Signature:**

---

**Department Chair:**

**Date:**

---

**Dean/Director of School/College:**

**Date:**

---

**Provost or Designee:**

**Date:**
## 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>AMSC Division of Math Science</td>
<td>BIOL</td>
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<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>A373</td>
<td>n/a</td>
<td>3</td>
<td>(3+0)</td>
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<table>
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<tr>
<th>6. Complete Course Title</th>
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<tbody>
<tr>
<td>Conservation Biology</td>
</tr>
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**Abbreviated Title for Transcript (30 character):**

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<tr>
<th>7. Type of Course</th>
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<tbody>
<tr>
<td>☑ Academic</td>
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</table>

| 8. Type of Action: | ☑ Add |

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

- Prefix
- Credits
- Title
- Grading Basis
- Cross-Listed/Stacked
- Course Description
- Test Score Prerequisites
- Other Restrictions
- Class
- College
- Major
- Level
- Other
- Repeat Status
- Course Prerequisites
- Co-requisites
- Registration Restrictions

<table>
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<tr>
<th>9. Repeat Status No</th>
<th># of Repeats</th>
<th>Max Credits</th>
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| 10. Grading Basis | ☑ A-F |

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<th>11. Implementation Date</th>
<th>semester/year</th>
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<tr>
<td>From: Spring/2014</td>
<td>To: 9999/9999</td>
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<table>
<thead>
<tr>
<th>12. Cross Listed with</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Stacked</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Environment &amp; Society</td>
<td>6/2012</td>
<td>Shannon Donovan</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Initiator Name (typed):</th>
<th>Douglas Causey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiator Signed Initials:</td>
<td>___________</td>
</tr>
<tr>
<td>Date:</td>
<td>___________</td>
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<table>
<thead>
<tr>
<th>13b. Coordination Email</th>
<th>Date: 2/26/2013</th>
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<tbody>
<tr>
<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: | ___________ |

<table>
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<tr>
<th>14. General Education Requirement</th>
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<tr>
<td>☑ Oral Communication</td>
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<tr>
<td>☑ Written Communication</td>
</tr>
<tr>
<td>☑ Social Sciences</td>
</tr>
<tr>
<td>☑ Quantitative Skills</td>
</tr>
<tr>
<td>☑ Natural Sciences</td>
</tr>
<tr>
<td>☑ Integrative Capstone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of the human drivers of global environmental change (human population growth and consumption of resources), the consequences of environmental degradation, and application of tools to slow down or reverse environmental change. Special note: This is a service-learning course and includes field work outside of class time.</td>
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<table>
<thead>
<tr>
<th>16a. Course Prerequisite(s) (list prefix and number or test code and score)</th>
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<tbody>
<tr>
<td>[BIOL A271 or ENVI A211] minimum grade of C</td>
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</table>

<table>
<thead>
<tr>
<th>16b. Co-requisite(s) (concurrent enrollment required)</th>
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<table>
<thead>
<tr>
<th>16c. Other Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ College</td>
</tr>
<tr>
<td>☑ Major</td>
</tr>
<tr>
<td>☑ Class</td>
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<tr>
<td>☑ Level</td>
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<table>
<thead>
<tr>
<th>16d. Registration Restriction(s) (non-codable)</th>
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</thead>
<tbody>
<tr>
<td>Completion of all GER Tier 1 and Tier 2 courses is required</td>
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| 17. ☑ Mark if course has fees |

| 18. ☑ Mark if course is a selected topic course |

<table>
<thead>
<tr>
<th>19. Justification for Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>The change in prerequisites will facilitate students in the Environment &amp; Society and Environmental Studies programs to enroll in this course. This course will be designated as a GER Integrative Capstone course.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
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<tbody>
<tr>
<td>Douglas Causey</td>
<td>___________</td>
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<table>
<thead>
<tr>
<th>Initiator (TYPE NAME)</th>
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<tbody>
<tr>
<td>☑ Approved</td>
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<tr>
<td>☑ Disapproved</td>
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<thead>
<tr>
<th>Dean/Director of School/College</th>
<th>Date</th>
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<thead>
<tr>
<th>Undergraduate/Graduate Academic</th>
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<thead>
<tr>
<th>Board Chair</th>
<th>Date</th>
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<table>
<thead>
<tr>
<th>Provost or Designee</th>
<th>Date</th>
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174
I. **Implementation Date:**
Spring, 2014

II. **Course Information**
A. **College:** College of Arts and Sciences  
B. **Course Subject/Number:** BIOL A373  
C. **Course Title:** Conservation Biology  
D. **Course Description:** Review of the human drivers of global environmental change (human population growth and consumption of resources), resulting environmental degradation, and tools to slow down or reverse environmental change. Special Note: This is a service-learning course and includes field work outside of class time.  
E. **Credit Hours:** 3  
F. **Contact Hours:** 3 + 0  
G. **Grading Basis:** A-F  
H. **Status of Course Relative to Degree Program:** Elective in biology, required for B.A. and B.S. degrees in Environment & Society.  
I. **Course Fees (Yes/No):** yes  
J. **Lab Fees (Yes/No):** no  
K. **Coordination:** UAA Faculty Listserv  
L. **Prerequisites/Corequisite:** BIOL A271 or ENVI A211  
M. **Registration Restrictions:** yes

III. **Course Activities:**
This is a lecture course focused on multi-disciplinary problem-solving skills. It is also a service-learning course that requires students to engage in an environmental project to provide technical assistance to the local community (e.g., water quality assessment). As a service-learning course it provide students with an opportunity to learn course content in an applied setting that directly benefits people and the environment in surrounding neighborhoods.

IV. **Evaluation:**
The course is graded A-F. Students will be graded based on their performance on examinations given during the semester (including the final exam), and on their field reports for the service-learning portion of the course. The grade will be based on how well the student masters the subject matter.

V. **Course Level Justification:**
Students are required to learn and integrate information from a variety of scientific disciplines as it relates to conservation biology, to read, to understand, and to apply ideas conveyed by primary scientific literature, to synthesize chemical, geological, ecological and biological knowledge and social considerations; and to apply course materials to this topic.

**GER Integrative Capstone Justification:**
Justifications for designating BIOL A373 Conservation Biology as a GER Integrative Capstone course include:
1. Knowledge Integration/Interrelationships and synergy among GER disciplines: The overall theme of the course is understanding the relationship of biological conservation principles to other natural and social sciences. The course will focus on the interfaces among physical sciences (biochemistry, geological history, mathematics), biological sciences (biology, ecology, conservation, molecular biology, etc.), and the social sciences (particularly human biology, sociology, anthropology).

2. Effective Communication Skills: Course success demands effective communication through essay examinations, individual classroom presentations, brief reports (oral and written) on current controversies surrounding conservation biology, and a final research product.

3. Critical Thinking: Students will not be able to succeed in the course unless they are able to integrate information across disciplines, and critically evaluate the reliability of data and positions presented in lecture, texts, scientific, and popular viewpoints. Student ability to critically evaluate diverse material will be determined based on writing assignments, class presentations, and examinations.

4. Information Literacy: Students are expected to achieve and demonstrate computer and internet skills for acquiring information relevant to current topics in evolutionary biology. This will involve research in the primary scientific literature, and the collection of information from unpublished sources such as popular press and public statements. Students will be required to show that they can critically winnow facts and scientific content from diverse non-scientific sources.

5. Quantitative Perspectives: A critical understanding of basic conservation biology is grounded in many quantitative disciplines, including statistical analysis, applied maths (algebra, calculus, probability and combinatorics, etc.), general and advanced ecology, and quantitative biology. In addition, students must be able to read and interpret scientific data in graphical and tabular form, and to generate appropriate graphical displays of their own results. Exams will specifically test on these skills.

6. Evolving realities of the 21st century: The growing understanding that conservation biology is a dynamic and everpresent component of modern life, particularly in the context of climate change and anthropogenic change, touches many aspects of science, policy, and social attitudes. This course will help students understand the implication of conservation biological process in a changing environment, and provide them with effective means to communicate its important and relevance for individuals and society.

VI. Course Outline

I. Impacts and Drivers
   1. What is Conservation Biology?
   2. Status of Biodiversity
   3. Predicting Biodiversity
   4. Conservation Hotspots
   5. Extinctions and its Consequences
   6. Rarity and small populations
   7. Habitat Change
VII. Instructional Goals and Student Outcomes:

A. The instructor will:
Guide students in understanding the roles of habitat preservation, population integrity, and application of conservation policy to maintain natural ecosystems and biota.
Teach students to analyze conservation problems in a multidisciplinary manner with considerations of economics, law, policy and biological principles.
Teach students to assess environmental degradation using standardized protocols and modern instruments, and analyze resulting data.

B. Student Outcomes:

<table>
<thead>
<tr>
<th>Students will be able to:</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explain the drivers and consequences of environmental problems</td>
<td>Exam</td>
</tr>
<tr>
<td>Report and interpret major environmental problems</td>
<td>Exam</td>
</tr>
<tr>
<td>Explain how problems interact in a synergistic fashion</td>
<td>Exam</td>
</tr>
<tr>
<td>Explain and apply tools for solving environmental problems</td>
<td>Exam, Project</td>
</tr>
</tbody>
</table>

VIII. Suggested Text(s):

IX. Bibliography:


Waltham I and I Sholji. 2001. The demise of the Aral Sea—an environmental disaster. Geology Today 17: 218-224
### 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>Computer Science &amp; Engineering</td>
</tr>
</tbody>
</table>

#### 2. Course Prefix

- **CSCE**

#### 3. Course Number

- A415

#### 4. Previous Course Prefix & Number

- n/a

#### 5a. Credits/CEUs

- 3

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

- (3+0)

#### 6. Complete Course Title

- **Machine Learning**

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

#### 7. Type of Course

- Academic

#### 8. Type of Action: **Add**

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

#### 9. Repeat Status No

- # of Repeats: n/a

#### 10. Grading Basis

- A-F

#### 11. Implementation Date

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

#### 12. Cross Listed with

- Stacked with

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

- **Fine Arts**
- **Social Sciences**
- **Natural Sciences**
- **Integrative Capstone**

#### 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)

In-depth survey of basic and advanced concepts of machine learning. Topics include linear discrimination, supervised, unsupervised, semi-supervised learning, multilayer perceptron, maximum-margin methods, Monte-Carlo and reinforcement learning.

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

- CSCE A311 with a minimum grade of C.

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

- n/a

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

- n/a

#### 16d. Other Restriction(s)

- College
- Major
- Class
- Level

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

- n/a

#### 17. Mark if course has fees Yes, standard SOE fee

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

#### 19. Justification for Action

- New course to expand elective offerings for computer science and computer systems engineering students in the area of computational intelligence.

**Initiator Name (typed): Martin Cenek**

**Initiator Signed Initials: _________**

**Date:________________**

**Initiator (faculty only) Date**

**Martin Cenek**

**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  
Computer Science & Engineering Department

I. Revision Date: December 20, 2012

II. Course Information
   A. College: School of Engineering  
   B. Course Subject/Number: CSCE A415  
   C. Credits: 3  
   D. Contact Hours: (3+0) 45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours  
   E. Course Title: Machine Learning  
   F. Repeat Status: No  
   G. Grading Basis: A-F  
   H. Course Description: In-depth survey of basic and advanced concepts of machine learning. Topics include linear discrimination, supervised, unsupervised, semi-supervised learning, multilayer perceptron, maximum-margin methods, Monte-Carlo and reinforcement learning.  
   I. Course Prerequisites: CSCE A311 with a minimum grade of C.  
   J. Fees: Yes, standard SOE fee

III. Course Level Justification

This course builds on knowledge of data structures, algorithms, and computer programming provided at the 200 and 300 levels. Students will design and analyze machine learning algorithms.

IV. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. The instructor will:

| 1. | Introduce students to basic topics of machine learning algorithms that include: linear discrimination, supervised, unsupervised, semi-supervised learning, multilayer perceptron, maximum-margin methods, Monte-Carlo and reinforcement learning. |
| 2. | Present in-depth material of selected advanced topics such as support vector machines with linear and non-linear kernels, recurrent artificial neural networks, and kernel methods. |
| 3. | Guide students through design, implement, train/test, and evaluate machine learning algorithms that illustrate covered machine learning topics. |
4. Demonstrate implementation and application to several different machine learning approaches to solve problems.

<table>
<thead>
<tr>
<th>B. <strong>Student Learning Outcomes</strong></th>
<th>Assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon successful completion of this course, students will be able to:</td>
<td></td>
</tr>
<tr>
<td>1. Apply machine learning algorithms to solve computational and applied problems.</td>
<td>Exams, Assignments, Project</td>
</tr>
<tr>
<td>2. Design, implement, train/test, and analyze machine learning algorithms.</td>
<td>Exams, Assignments, Project</td>
</tr>
<tr>
<td>3. Prepare oral and written presentation about machine learning.</td>
<td>Project</td>
</tr>
</tbody>
</table>

V. **Guidelines for Evaluation**
A. Exams
B. Project
C. Assignments

VI. **Topical Course Outline**

1. Linear Discrimination
   a. Perceptron
   b. Linear separability
2. Supervised Learning
   a. Regression
   b. Classification
3. Multi-layer Perceptrons
   a. Hierarchical Temporal Memory (HTM)
   b. Artificial neural networks
      1. Feed-forward
      2. Backward error propagation
      3. Recurrent
   c. Hierarchical Model and X (HMAX)
4. Maximum Margin Methods
   a. Maximum margin classifiers
   b. Support vector machines
      1. Weighted
      2. Fuzzy
      3. Semi-supervised
5. Decision Trees
6. Ensemble Learning
7. Probability and Learning
   a. Gaussian mixture
   b. Nearest neighbor
8. Unsupervised Learning
9. K-means
10. Self-Organizing feature Map (SOM)
11. Dimensionality Reduction
   a. Linear discriminant analysis
   b. Principal component analysis
   c. Independent component analysis
12. Evolutionary Learning
   a. Evolution
   b. Co-evolution
   c. Genetic programming
13. Optimization and Search
14. Reinforcement Learning
   a. Hidden Markov models
   b. Markov chains
15. Graphical Models
   a. Bayesian networks
   b. Markov random fields
16. Monte Carlo

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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<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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<td>No Division Code</td>
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<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<tbody>
<tr>
<td>CSCE</td>
<td>A446</td>
<td>n/a</td>
<td>3</td>
<td>(3+0)</td>
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6. Complete Course Title

Digital Media and Interactive Systems
Digital Media & Interactive Sys

Abbreviated Title for Transcript (30 character)

<table>
<thead>
<tr>
<th>7. Type of Course</th>
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<tbody>
<tr>
<td>Academic</td>
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| 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
- Other
- Course Number
- Contact Hours
- Repeat Status
- Cross-Listed/Stacked
- Course Prerequisites
- Co-requisites
- Registration Restrictions

9. Repeat Status No # of Repeats Max Credits

10. Grading Basis

- A-F
- P/NP
- NG

11. Implementation Date

- semester/year

From: Spring/2014 To: 99/9999

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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</table>

Initiator Name (typed): Sam Siewert
Initiator Signed Initials: __________
Date: ______________

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

13c. Coordination with Library Liaison
Date: 12/1/2012

14. General Education Requirement
Mark appropriate box:

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

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

Introduces digital media systems for digital cinema and digital cable/internet media creation, delivery, and interactive systems. Topics covered include digital audio and video encoding and decoding, transport, multiplexing, broadband and baseband transmission, real-time requirements, and interactive on-demand systems for video and video games. Traditional analog audio and video are covered as history and digital cable, web/mobile Internet Protocol Television (IPTV) and media, Advanced Television Systems Committee (ATSC) over-the-air, interactive on-demand digital video, and digital video gaming.

16a. Course Prerequisite(s) (list prefix and number) (CSCE A320 and CSCE A365) with a minimum grade of C.

16b. Test Score(s)
n/a

16c. Co-requisite(s) (concurrent enrollment required)
n/a

16d. Other Restriction(s)

- College
- Major
- Class
- Level

16e. Registration Restriction(s) (non-codable)
n/a

17. Mark if course has fees Yes, standard SOE fee

18. Mark if course is a selected topic course

19. Justification for Action
New course to expand offerings for computer science and computer systems engineering students in the area of digital media.
<table>
<thead>
<tr>
<th>Initiative (faculty only)</th>
<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>Sam Siewert</td>
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<tr>
<th>Initiator (TYPE NAME)</th>
<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
<th>Undergraduate/Graduate Academic Board Chairperson</th>
<th>Date</th>
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<tr>
<th>Department Chairperson</th>
<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
<th>Provost or Designee</th>
<th>Date</th>
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<tr>
<th>Curriculum Committee Chairperson</th>
<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
<th>Provost or Designee</th>
<th>Date</th>
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</tbody>
</table>
I. Initiation Date: December 2012

II. Course Information
A. College/School: School of Engineering
B. Course Title: Digital Media and Interactive Systems
C. Course Subject/Number: CSCE A446
D. Credit Hours: 3.0 Credits
E. Contact Time: 3+0 Contact Time
F. Grading Information: A-F
G. Course Description: Introduces digital media systems for digital cinema and digital cable/Internet media creation, delivery, and interactive systems. Topics covered include digital audio and video encoding and decoding, transport, multiplexing, broadband and baseband transmission, real-time requirements, and interactive on-demand systems for video and video games. Traditional analog audio and video are covered as history and digital cable, web/mobile Internet Protocol Television (IPTV) and media, Advanced Television Systems Committee (ATSC) over-the-air, interactive on-demand digital video, and digital video gaming.

H. Lab Fees: Yes, standard SOE fee
I. Coordination: SOE and Faculty Listserv
J. Course Prerequisites: (CSCE A320 and CSCE A365) with a minimum grade of C.

III. Evaluation
Grades are based on written examination, class assignments, and projects.

IV. Course Level Justification
This course allows students to apply programming skills, network, computing, and storage skills taught at the 300 level to digital media application and system development relevant to digital cable, Internet content distribution, and digital Radio Frequency (RF) transmission of media.

V. Outline
A. Lecture
1. Analog Video and Audio Transmission
   a. Brief history
   b. Advantage of digital video
   c. Future challenges for mobile and on-demand
2. Fundamental Digital Video and Audio Encoding
   a. Pulse Code Modulation (PCM) audio sampling
   b. Multi-channel audio
   c. Pixel and still image encoding
   d. Moving picture encoding concepts
e. Elementary streams
f. Program streams
g. Transport streams – single and multi-program

3. Transmission and Transport Fundamentals
   a. Baseband packet switched networks (Motion Picture Experts Group (MPEG) – in User Datagram Protocol (UDP) or Real-Time Protocol (RTP))
   b. Broadband digital cable – Quadrature Phase-Shift Keying (QPSK) and Quadrature Amplitude Modulation (QAM)
   c. Over-the-air digital transmission – Vestigial Sideband Modulation (VSB) for ATSC
   d. Digital packet switched network Quality of Service (QoS)

4. Video Encoding from Bottom Up
   a. Pixel and color encoding
   b. Frames and macro blocks
   c. Discrete Cosine Transform (DCT)
   d. Quantization
   e. Huffman and Run-Length Encoding (RLE)
   f. Motion vector quantization and change only data
   g. Intra, predictive, and bi-directional frames
   h. Packet multiplexing of audio and video elementary streams

5. Real-time Processing
   a. Dynamic priority preemptive scheduling
   b. I/O scheduling
   c. QoS networks
   d. Latency, buffering, bandwidth-delay product
   e. Performance

6. Post Production
   a. Capture form digital cameras
   b. Computer Graphic (CG) rendering of frames
   c. Editing content, color, and selection of encoding quality
   d. Bit rates, resolutions, aspect ratios
   e. Post workflows and I/O processing pipelines

7. Post Production Architecture and Performance
   a. Single Instruction, Multiple Data (SIMD) Graphics Processing Unit (GPU) software
   b. Redundant Array of Independent Disk (RAID) systems for storage and I/O scaling
   c. Clusters and networking
   d. CG and Digital Video Transformation

8. Mobile and End-User Systems
   a. Decoders
   b. Players
   c. Down-conversion and color enhancement

9. Interactive and On-Demand Systems
   a. On-demand digital video and trick play
b. Digital video game concepts
c. Physics and game engines
c. Interactive graphics and animation basics
d. Augmented reality

B. Example Projects (MPEG encoders/decoders – on Linux and/or Windows)
1. MPEG audio and video elementary stream parsing and analysis
2. Portable BitMap (PBM), Portable GreyMap (PGM), Portable PixMap (PPM) frames and encoding for compression
3. Packet switched digital video streaming and performance
4. Simple construction of a digital video encoder for compression
5. Scheduling theory and run-time analysis of threads
6. Work with encoders/decoders to produce short movies from digital images produced using ray tracing and RenderMan or OpenGL Optix real-time ray tracing
7. Post production pipeline speed-up with Compute Unified Device Architecture (CUDA)/OpenCL using GPUs

VI. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. The instructor will:

1. Explain the principles of digital media encoding/decoding, transport, quality of service, and system performance.
2. Explain digital media transport over-the-air, over coaxial cable, and over the Internet.
3. Instruct students on the use of MPEG tools, Linux software development for digital media processing, storage and networking applied to digital media.

B. Student Learning Outcomes. Upon successful completion of this course, students will be able to:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Explain the methods of encoding and decoding digital video and audio</td>
<td>Exams, quizzes, assignments, projects</td>
</tr>
<tr>
<td>2. Demonstrate methodologies used in the design of digital media systems</td>
<td>Exams, quizzes, assignments, projects</td>
</tr>
<tr>
<td>3. Demonstrate methodologies used to transport digital media with quality of service (latency control)</td>
<td>Exams, quizzes, assignments, projects</td>
</tr>
<tr>
<td>4. Develop the necessary code to complete the course projects.</td>
<td>Exams, quizzes, assignments, projects</td>
</tr>
<tr>
<td>5. Implement course projects, test their operation, and report their findings to the instructor and colleagues.</td>
<td>Projects</td>
</tr>
<tr>
<td>6. Demonstrate recognition of the engineering tradeoffs necessary in the design of production CG imagery and interactive 3D graphics</td>
<td>Exams, quizzes, assignments, projects</td>
</tr>
</tbody>
</table>
VII. Suggested Texts


VIII. Bibliography and Resources


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

## 1. School or College
EN SOENGR

## 1b. Division
No Division Code

## 1c. Department
Computer Science and Engineering

### 2. Course Prefix
CSCE

### 3. Course Number
A450

### 4. Previous Course Prefix & Number
n/a

### 5a. Credits/CEUs
3

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

### 6. Complete Course Title
Robotics

**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
- [ ] Repeat Status
- [ ] Grading Basis
- [ ] Course Prerequisites
- [ ] Co-requisites
- [ ] Registration Restrictions
- [ ] Other Restrictions

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

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

### 11. Implementation Date
- From: Spring/2014
- To: 99/9999

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

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

<table>
<thead>
<tr>
<th>Impacted Program</th>
<th>Catalog Page(s)</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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</table>

**Initiator Name (typed): Jeffrey Miller**

**Initiator Signed Initials:** __________

**Date:** ________________

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

### 13c. Coordination with Library Liaison
Date: 12-10-12

### 14. General Education Requirement

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

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

Introduces robotics with embedded systems. Controlling mobile robots, sensors, and motors with autonomous and user-controlled operations. Different types of robots, including aerial, underwater, and automotive robots. Real-time image processing and neural networks including genetic algorithms will be covered.

### 16a. Course Prerequisite(s)
(CSCE A241 and CSCE A311 and CSCE A365) with a minimum grade of C.

### 16b. Test Score(s)
n/a

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

### 16d. Other Restriction(s)
- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

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

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

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

### 19. Justification for Action

New course to add robotics to the curriculum as an elective for computer science and computer systems engineering majors. Robotics is now commonly taught at the high school level, is typically offered in computer engineering programs, and robotic systems are commonly used in industry.
<table>
<thead>
<tr>
<th>Initiative (faculty only)</th>
<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
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<tbody>
<tr>
<td>Jeffrey Miller</td>
<td></td>
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Initiator (TYPE NAME)

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Course Content Guide  
University of Alaska Anchorage  
School of Engineering  
Department of Computer Science and Engineering

I. **Revision Date**: November 13, 2012

II. **Course Information**  
A. **College**: Engineering  
B. **Course Subject/Number**: CSCE A450  
C. **Credits**: 3  
D. **Contact Hours**: (3+0) 45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours  
E. **Course Title**: Robotics  
F. **Repeat Status**: No  
G. **Grading Basis**: A-F  
H. **Course Description**: Introduces robotics with embedded systems. Controlling mobile robots, sensors, and motors with autonomous and user-controlled operations. Different types of robots, including aerial, underwater, and automotive robots. Real-time image processing and neural networks including genetic algorithms will be covered.  
I. **Course Prerequisites**: (CSCE A241 and CSCE A311 and CSCE A365) with a minimum grade of C.  
J. **Fees**: Yes, standard SOE fee

III. **Course Level Justification**  
This course builds upon concepts taught at the 200 and 300 level to design and develop robotic systems.

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

<table>
<thead>
<tr>
<th>A. <strong>Instructional Goals.</strong> The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Present the basic principles behind mobile robots.</td>
</tr>
<tr>
<td>2. Describe electronic sensors and what sensors are needed for different operations.</td>
</tr>
<tr>
<td>3. Describe the different types of autonomous robots.</td>
</tr>
<tr>
<td>4. Describe the importance of localization, navigation, and real-time processing of data to develop robotic systems.</td>
</tr>
</tbody>
</table>
B. **Student Learning Outcomes.** Upon successful completion of this course, students will be able to:

<table>
<thead>
<tr>
<th>Assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Create a robot with appropriate sensors to perform dedicated tasks</td>
</tr>
<tr>
<td>2. Write code to control a robot by a user with a computer or handheld device</td>
</tr>
<tr>
<td>3. Write code to allow a robot to autonomously perform tasks</td>
</tr>
<tr>
<td>4. Write a program to allow a robot to learn using neural networks and artificial intelligence principles.</td>
</tr>
</tbody>
</table>

V. **Guidelines for Evaluation**
A. Assignments  
B. Exams  
C. Project

VI. **Topical Course Outline**
1. Introduction, Embedded Systems  
2. Mobile Robots, Operating Systems  
3. Analog and Digital Sensors  
4. Actuators, Motors, Servos  
5. Controllers  
6. Multitasking, Synchronization, Scheduling  
7. Wireless Communication, Remote Control  
8. Driving and Omnidirectional Robots  
9. Balanced and Walking Robots  
10. Autonomous Aerial and Underwater Vehicles  
11. Robotic Simulators  
12. Localization and Navigation  
13. Maze Exploration and Map Generation  
14. Real-Time Image Processing  
15. Neural Networks  
16. Genetic Algorithms and Programming  
17. Automotive Systems
VII. **Suggested Texts**


VIII. **Bibliography**


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>1c. Department</th>
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<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours (Lecture + Lab)</th>
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<tr>
<td>CSCE</td>
<td>A460</td>
<td>n/a</td>
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<td>(3+0)</td>
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6. Complete Course Title
Advanced Database Systems

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 Max Credits n/a

10. Grading Basis
☒ A-F ☐ P/NP ☐ NG

11. Implementation Date
   From: Spring/2014 To: 99/9999

12. ☐ Cross Listed with

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

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Initiator Name (typed): Kirk Scott  
Initiator Signed Initials: __________  
Date: __________

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

13c. Coordination with Library Liaison
Date: 12-10-12

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)
In-depth treatment of relational theory, non-relational database models, transaction processing, concurrency control, and administration of databases in practice. Course includes an applied project of significant scope.

16a. Course Prerequisite(s) (list prefix and number or test code and score)
CSCE A360 with a minimum grade of C.

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

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

16d. Registration Restriction(s) (non-codable)
n/a

17. ☒ Mark if course has fees Yes, standard SOE fee

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Industry demand. This is a subject requested by Anchorage IT professionals as a result of a survey conducted in late 2012 by the Computer Science & Engineering Advisory Board.

Initiator (faculty only)  
Kirk Scott

Initiator (TYPE NAME)

Approved Disapproved
☐ Dean/Director of School/College Date

Approved Disapproved
☐ Undergraduate/Graduate Academic Board Chair Date

Approved Disapproved
☐ Provost or Designee Date
Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Computer Science and Engineering

I. Revision Date: November 15th, 2012

II. Course Information
A. College: School of Engineering
B. Course Subject/Number: CSCE A460
C. Credits: 3
D. Contact Hours: (3+0) 45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours
E. Course Title: Advanced Database Systems
F. Repeat Status: No
G. Grading Basis: A-F
H. Course Description: In-depth treatment of relational theory, non-relational database models, transaction processing, concurrency control, and administration of databases in practice. Course includes an applied project of significant scope.
I. Course Prerequisites: CSCE A360 with a minimum grade of C.
J. Fees: Yes, standard SOE fee

III. Course Level Justification

This course is typically taught at the upper division level and depends on an understanding of the concepts of database management systems taught at the 300 level.

IV. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals.</th>
<th>The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Provide a thorough treatment of the theoretical foundations of relational database management systems.</td>
</tr>
<tr>
<td>2.</td>
<td>Indicate how the theoretical foundations are applied in practice.</td>
</tr>
<tr>
<td>3.</td>
<td>Present information on the concerns and tasks involved in administering a database.</td>
</tr>
<tr>
<td>4.</td>
<td>Discuss database management systems that may be wholly or partially different from traditional relational systems.</td>
</tr>
</tbody>
</table>
B. **Student Learning Outcomes.** Upon successful completion of this course students will be able to:

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Answer questions about the theory and practice of database management systems.</td>
</tr>
<tr>
<td>2.</td>
<td>Install, configure, and administer a database management system.</td>
</tr>
<tr>
<td>3.</td>
<td>Design a database and write queries for it.</td>
</tr>
<tr>
<td>4.</td>
<td>Implement a system that correctly and successfully supports secure, concurrent transactions in a multi-user environment.</td>
</tr>
</tbody>
</table>

V. **Guidelines for Evaluation**

A. Assignments
B. Exams
C. Project

VI. **Topical Course Outline**

1. The Relational Model
   - Tuples and relations
   - Relational algebra
   - Relational calculus
2. Relational Design
   - Functional dependencies
   - Normalization
   - Semantic modeling
3. Query Processing
   - Simple queries
   - Embedded Structured Query Language (SQL)
   - Java Database Connectivity (JDBC)
   - Transaction processing
4. Database Administration
   - File systems and physical design
   - Concurrency control
   - Transaction rollback and recovery
   - Security
   - Optimization
5. Types of Databases
   - Spatial and temporal databases
   - Distributed databases
   - Web databases
   - Extensible Markup Language (XML) and databases
   - Logic-based databases
6. Object-Orientation and Databases
   a. Relations and classes
   b. Object databases
   c. Object-relational databases

VII. Suggested Texts

   Wesley, Boston, MA, 2011.
Welling, L. and Thomson, L.  PHP and MySQL Web Development, Addison Wesley,
   Boston, MA, 2009.

VIII. Bibliography

## Course Action Request

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

### 1. School or College  
EN SOENGR

### 2. Course Prefix  
CSCE

### 3. Course Number  
A462

### 5a. Credits/CEUs  
3

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

### 6. Complete Course Title  
Data Mining

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

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

### 9. Repeat Status No  
☐ Yes  
☐ No  
# of Repeats:  
☐ Max Credits:  
☐ n/a

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

### 11. Implementation Date  
Semester/year  
From: Spring/2014  
To: 99/9999

### 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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Initiator Name (typed): Kirk Scott  
Initiator Signed Initials: __________  
Date: __________

13b. Coordination Email  
Date: 12/10/2012  
submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 12/10/2012

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)  
Application of rule-based, tree-based, and statistical techniques for data classification, clustering, and association. Evaluation and analysis of data mining results.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
CSCE A360 with a minimum grade of C.

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

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

16d. Registration Restriction(s) (non-codable)  
n/a

17. ☑ Mark if course has fees Yes, standard SOE fee

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
Industry demand. This is a subject requested by Anchorage IT professionals as a result of a survey conducted in late 2012 by the Computer Science & Engineering Advisory Board.

Initiator (faculty only)  
Kirk Scott  
Initiator (TYPE NAME)  
☐ Approved  
☐ Disapproved  
Date: __________  
Dean/Director of School/College

☐ Approved  
☐ Disapproved  
Date: __________  
Undergraduate/Graduate Academic Board Chair

☐ Approved  
☐ Disapproved  
Date: __________  
Provost or Designee

Date: __________

200
Course Content Guide
University of Alaska Anchorage
School of Engineering
Department Computer Science and Engineering

I. Revision Date: November 15th, 2012.

II. Course Information
   A. College: School of Engineering
   B. Course Subject/Number: CSCE A462
   C. Credits: 3
   D. Contact Hours: (3+0) 45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours
   E. Course Title: Data Mining
   F. Repeat Status: No
   G. Grading Basis: A-F
   H. Course Description: Application of rule-based, tree-based, and statistical techniques for data classification, clustering, and association. Evaluation and analysis of data mining results.
   I. Course Prerequisites: CSCE A360 with a minimum grade of C.
   J. Fees: Yes, standard SOE fee

III. Course Level Justification

   This course is typically taught at the upper division level and depends on an understanding of basic concepts of data organization and algorithmic thinking provided in 300 level courses.

IV. Instructional Goals and Student Learning Outcomes

   A. Instructional Goals. The instructor will:

   1. Present an array of common, well-understood data mining algorithms with examples of their application, including classification, clustering, and association rule mining.
   2. Discuss the theoretical and practical basis for the implementation of covering and divide and conquer approaches resulting in rule sets, trees, and other representations of knowledge.
   3. Present a survey of typical approaches to evaluating the results of data mining.
   4. Demonstrate the application of a data mining software package to a data set.
**B. Student Learning Outcomes.** Upon successful completion of this course students will be able to:

<table>
<thead>
<tr>
<th>Assessment method</th>
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<tbody>
<tr>
<td>1. Answer questions and present information, both verbal and statistical, on the types of data mining algorithms, how they work, their theoretical basis, their evaluation and comparison, and practical aspects of their use.</td>
</tr>
<tr>
<td>Paper, project, homework, exams</td>
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<tr>
<td>2. Find relevant literature about data mining techniques using library or web resources and summarize the results in written form.</td>
</tr>
<tr>
<td>Research paper</td>
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<tr>
<td>3. Apply multiple data mining techniques to a data set using data mining tools, analyze the results, and summarize the results in an oral presentation.</td>
</tr>
</tbody>
</table>

V. **Guidelines for Evaluation**

A. Research Paper  
B. Project  
C. Homework  
D. Exams

VI. **Topical Course Outline**

1. Knowledge Representation  
   a. Tables  
   b. Linear models  
   c. Trees  
   d. Rules  
2. Data Mining Algorithms  
   a. Decision trees  
   b. Classification rules  
   c. Association rules  
   d. Linear models  
   e. Instance based methods  
   f. Numeric prediction  
   g. Bayesian approaches  
   h. Simple and hierarchical clustering  
   i. Semi-supervised techniques  
   j. Multi-instance techniques  
3. Evaluating Results  
   a. Training vs. testing  
   b. Cross-validation and other validation techniques  
   c. Comparing different data mining schemes  
   d. Statistical methods
e. Information theoretic methods
f. Including costs and benefits in evaluation

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>5b. Contact Hours (Lecture + Lab)</th>
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6. **Complete Course Title**

Computer and Machine Vision

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

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
- [ ] Course Number
- [ ] Contact Hours
- [ ] Repeat Status
- [ ] Cross-Listed/Stacked
- [ ] Course Prerequisites
- [ ] Co-requisites
- [ ] Registration Restrictions

9. **Repeat Status**

- [ ] No
- [x] # of Repeats: n/a
- [ ] Max Credits: n/a

10. **Grading Basis**

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

11. **Implementation Date**

From: Spring/2014
To: 99/9999

12. Cross Listed with

- [ ] Stacked with

Cross-Listed Coordination Signature

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

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

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Initiator Name (typed): Sam Siewert

Initiator Signed Initials: __________

Date: __________

13b. **Coordination Email**

Date: 12/10/2012

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

13c. **Coordination with Library Liaison**

Date: 12/10/2012

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)*

Introduces computer vision and machine vision. Topics covered include difference between computer and machine vision, image capture and processing, filtering, thresholding, edge detection, shape analysis, shape detection, pattern matching, digital image stabilization, stereo ranging, 3D models from images, real-time vision systems, and recognition of targets. Applications include inspection, surveillance, search and rescue, and machine vision navigation.

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

- (PHYS A124 or PHYS A212) and CSCE A320 [with a minimum grade of C.]

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

- [x] 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**

- [x] Yes, standard SOE fee

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

19. **Justification for Action**

New course to establish an elective for computer science and computer systems engineering students in the topic of machine and computer vision.
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<th>Date</th>
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<tr>
<td><strong>Sam Siewert</strong></td>
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I. Initiation Date: December 2012

II. Course Information
A. College/School: School of Engineering
B. Course Title: Computer and Machine Vision
C. Course Subject/Number: CSCE A485
D. Credit Hours: 3.0 Credits
E. Contact Time: 3+0 Contact Time
F. Grading Information: A-F
G. Course Description: Introduces computer vision and machine vision. Topics covered include difference between computer and machine vision, image capture and processing, filtering, thresholding, edge detection, shape analysis, shape detection, pattern matching, digital image stabilization, stereo ranging, 3D models from images, real-time vision systems, and recognition of targets. Applications include inspection, surveillance, search and rescue, and machine vision navigation.
H. Lab Fees: Yes, standard SOE fee
I. Course Prerequisites: {(PHYS A124 or PHYS A212) and CSCE A320} with a minimum grade of C.
J. Registration Restrictions: None

III. Evaluation
Grades are based on written examination, assignments, and projects.

IV. Course Level Justification
This course allows students to apply programming skills, mathematics, and digital signal processing and image processing skills learned at the 300 level to develop more advanced applications in computer and machine vision.

V. Outline
A. Lecture
   1. Computer and Machine Vision History
      a. Brief history
      b. Purpose of computer vision (to model human vision)
      c. Purpose of machine vision (to automate with photometers and radiometers)
      d. Difference
   2. Image Capture and Processing
      a. Basic encoding
      b. Convolutions and transformation
      c. Filtering
      d. Thresholds
   3. Edge Detection
      a. Differential gradient
b. Sobel operator
c. Canny operator
d. Performance
4. Shape Analysis and Detection
   a. Binary shape and boundary analysis
   b. Hough transform for line and circle detection
   c. Pattern patching
   d. Keypoint and Scale Invariant Feature Transform / Speeded Up Robust Feature (SIFT/SURF) algorithms
5. Extracting 3D Models from Scenes
   a. 3D models
   b. Stereo and laser ranging
   c. Perspective and image transformation
6. Real-time Pattern Recognition
   a. Pixel motion
   b. Inspection systems
   c. Surveillance
   d. Optical navigation systems
7. Computer Vision Fundamentals
   a. Human color perception, tri-stimulus and models
   b. Human vision system basics
   c. Models for human vision system and scene perception
   d. Artificial Neural Network (ANN) models
   e. 3D perception and proprioception
   f. Challenges
8. Interactive Applications
   a. Gesture recognition
   b. Vision prosthetics
   c. Instrumentation – photometers, hyper-spectral, radiometers

B. Example Projects – MATLAB® and Linux Open Computer Vision (OpenCV)
   1. Basic image processing – transformations and convolution for enhancement
   2. Edge Detection
   3. Shape, Boundary Analysis and Classification
   4. Skeletal Models
   5. Target recognition and tracking
   6. Facial and other biometric recognition applications
   7. Image stabilization

VI. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. The instructor will:

1. Describe principles of machine and computer vision, clearly defining the differences between the two.
2. Instruct students on the design, implementation and use of computer and machine vision algorithms.
3. Instruct students on the use of design tools such as OpenCV and MATLAB® for vision systems.

<table>
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<tr>
<th>Student Learning Outcomes. Upon successful completion of this course, students will be able to:</th>
<th>Assessment Methods</th>
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<tbody>
<tr>
<td>1. Explain the implementation and use of machine and computer vision for automation and interaction.</td>
<td>Exams, quizzes, assignments, class projects</td>
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<tr>
<td>2. Demonstrate methodologies used in the design of machine and computer vision systems</td>
<td>Exams, quizzes, assignments, class projects</td>
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<tr>
<td>3. Construct the hardware and software components for computer and machine vision systems, test their operation, and report results.</td>
<td>Class projects</td>
</tr>
<tr>
<td>4. Demonstrate recognition of the engineering tradeoffs necessary in the design of production machine vision systems.</td>
<td>Exams, quizzes, assignments, class projects</td>
</tr>
</tbody>
</table>

VII. Suggested Texts


VIII. Bibliography and Resources

1a. School or College
EN SOENGR

1b. Department
Computer Science & Engineering

2. Complete Program Title/Prefix
Minor, Computer Systems Engineering

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

Minor

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

4. Type of Action:

PROGRAM
☐ Add
☑ Change
☐ Delete

PREFIX
☐ Add
☐ Change
☐ Inactivate

5. Implementation Date (semester/year)
From: Fall/2013 To: 99/9999

6a. Coordination with Affected Units
Department, School, or College: SOE
Initiator Name (typed): Kenrick Mock
Initiator Signed Initials: _________

Date:________________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu) Date: 12-10-12

6c. Coordination with Library Liaison Date: 12-10-12

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 CSE minor is being updated to reflect the new CSCE prefix, cover core concepts in Computer Systems Engineering, remove a large number of hidden prerequisites, and share courses with the Computer Science program.

Initiator (faculty only) Kenrick Mock
Initiator (TYPE NAME)

☑ Approved
☐ Disapproved

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☐ Disapproved

☐ Approved
☐ Disapproved

Dean/Director of School/College Date
Undergraduate/Graduate Academic Board Chair Date
Provost or Designee Date

Department Chair
Date
College/School Curriculum Committee Chair Date
Minor, Computer Systems Engineering

Students majoring in another subject who wish to minor in Computer Systems Engineering must complete the following requirements.

1. Complete the five required courses (18 credits):
   - CSCE A201 Computer Programming I 4
   - CSCE A211 Computer Programming II 4
   - CSCE/EE A241 Computer Hardware Concepts 4
   - CSCE A248 Computer Organization and Assembly Language Programming 3
   - CSCE A311 Data Structures and Algorithms 3

2. Complete 6 credits of additional upper division CSCE-prefixed courses.

3. A total of 24 credits are required for the minor.
Minor, Computer Systems Engineering

Students majoring in another subject who wish to minor in Computer Systems Engineering must complete the following requirements. An * indicates a recommended set of courses for the minor.

1. Complete the five required courses (18 credits):
   - CSCE A201 Computer Programming I 4
   - CSCE A211 Computer Programming II 4
   - CSCE/EE A241 Computer Hardware Concepts 4
   - CSCE A248 Computer Organization and Assembly Language Programming 3
   - CSCE A311 Data Structures and Algorithms 3

2. Complete 6 credits of additional upper division CSCE-prefixed courses.

3. A total of 24 credits are required for the minor.

---

1. A minimum of 18 credits must be selected from:
   - CS A330 Algorithms and Data Structures (3)
   - CS A331 Programming Language Concepts (3)
   - CS A401 Software Engineering (3)
   - CS A405 Artificial Intelligence (3)
   - CSE A335* Operating Systems Engineering (3)
   - CSE A342 Digital Circuits Design (3)
   - CSE A355* Computer Networking for Engineers (3)
   - CSE A447 VLSI Circuit Design (3)
   - CSE A445* Computer Design and Interfacing (4)
   - CSE A465* Network Security (3)
   - CSE A481 Engineering Software/Hardware Systems (3)
   - EE A451* Digital Signal Processing (3)
# Program/Prefix Action Request

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Department</th>
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<td>EN SOENGR</td>
<td>Computer Science &amp; Engineering</td>
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<tr>
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<td>Choose one from the appropriate drop down menu: Undergraduate: or Graduate:</td>
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<td>Minor</td>
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This program is a Gainful Employment Program:  
☐ Yes  or  ☑ No

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<tr>
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<tr>
<td>Initiator Name (typed): Kenrick Mock</td>
<td>Initiator Signed Initials: _________</td>
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<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>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>The CS minor is being updated to reflect the new CSCE prefix and reflect shared courses between the CS and CSE programs.</td>
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<td>Date</td>
<td>Dean/Director of School/College</td>
<td>Date</td>
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<tr>
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<td>Undergraduate/Graduate Academic</td>
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<tbody>
<tr>
<td>College/School Curriculum Committee Chair</td>
<td>Date</td>
<td>Provost or Designee</td>
<td>Date</td>
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**Minor, Computer Science**

Students majoring in another subject who wish to minor in Computer Science must complete the following requirements:

1. Complete the five required courses (17 credits):
   - CSCE A201 Computer Programming I 4
   - CSCE A202 Object-Oriented Programming 3
   - CSCE A211 Computer Programming II 4
   - CSCE A311 Data Structures and Algorithms 3
   - MATH A231 Introduction to Discrete Mathematics 3

2. Complete 9 credits of additional CSCE-prefixed courses, 3 credits of which may be lower division.

3. A total of 26 credits are required for the minor.
Minor, Computer Science

Students majoring in another subject who wish to minor in Computer Science must complete the following requirements:

1. Complete the five required courses (18 credits):
   - CSCE A201 Computer Programming I 4
   - CSCE A202 Object-Oriented Programming 3
   - CSCE A211 Computer Programming II 4
   - CSCE A311 Data Structures and Algorithms 3
   - CS A201 Programming Concepts I 3
   - CS A202 Programming Concepts II 3
   - CS A221 Computer Organization and Assembly Programming 3
   - CS A330 Algorithms and Data Structures 3
   - MATH A231 Introduction to Discrete Mathematics 3

2. Complete 9 credits of additional Computer Science CSCE-prefixed courses, 3 credits of which may be lower division.

3. A total of 24 credits are required for the minor.
1a. School or College  
EN SOENGR  

1b. Department  
Computer Science & Engineering  

2. Complete Program Title/Prefix  
Bachelor of Arts, Computer Science  

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

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

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

5. Implementation Date (semester/year)  
From: Fall/2013  To: 99/9999  

6a. Coordination with Affected Units  
Department, School, or College: SOE  
Initiator Name (typed): Kenrick Mock  
Initiator Signed Initials: _________  
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Date: 12-10-12  

6c. Coordination with Library Liaison  
Date: 12-10-12  

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 program revision shares core courses with the Computer Systems Engineering program and updates the curriculum. The Student Learning Outcomes for the program were updated to match ABET's outcomes for accreditation.  

Initiator (faculty only)  
Kenrick Mock  
Initiator (TYPE NAME)  

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

☐ Approved  ☐ Disapproved  
Date  Undergraduate/Graduate Academic Board Chair  Date  

☐ Approved  ☐ Disapproved  
Date  Provost or Designee  Date  

☐ Approved  ☐ Disapproved  
Date  Department Chair  Date  

☐ Approved  ☐ Disapproved  
Date  College/School Curriculum Committee Chair  Date
The Department of Computer Science and Engineering offers courses covering the major areas of computer science. These courses constitute the basis for an undergraduate major that prepares students for a variety of professional and technical careers in business, industry and government, or for graduate work leading to advanced degrees. In addition, the department offers courses for students from other fields that will use computer science as a tool in their own areas.

The department offers two degrees in computer science: the Bachelor of Arts in Computer Science and the Bachelor of Science in Computer Science. The BA gives the student the opportunity to obtain a liberal arts background while the BS program gives the student the opportunity to pursue a sciences background. The BS is recommended for those seeking to pursue a graduate degree in computer science.

Both degrees prepare the student to pursue a professional career in the computing field and are based on the 2012-13 computing curriculum guidelines developed by the Accreditation Board for Engineering and Technology (ABET). The core of both degrees emphasizes broad fundamental principles of computer science and teaches the student the necessary skills to develop solutions using current or future technology. The core topics include computer programming, systems organization, software engineering, databases and theory. Upon completion of the core topics, the student may select electives that explore specific areas of computer science, such as computer graphics, architecture or intelligent systems.

**Accreditation**

The Bachelor of Science in Computer Science program is accredited by the Computing Accreditation Commission of ABET, www.abet.org.

**Program Objectives**

The Computer Science program has adopted the following educational program objectives for the Bachelor of Arts and the Bachelor of Science degrees in Computer Science. Graduates with these degrees will achieve some or all of these objectives within five years of graduation:

1. Make contributions to the computing profession and apply computational solutions to solve real-world problems.
2. Successfully adapt to changes in the field of computer science.
3. Meet or exceed the expectations of their employers and professional mentors as computer science professionals and advance in their career.
4. Be admitted to and successfully complete advanced degree programs.
5. Contribute to the Alaska economy through their professional accomplishments in computing.

**Student Learning Outcomes**

Upon completion of the Bachelor of Arts or Bachelor of Science program in Computer Science, graduates will be able to:

1. Apply knowledge of computing and mathematics appropriate to the discipline.
2. Analyze a problem, and identify and define the computing requirements appropriate to its solution.
3. Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
4. Function effectively on teams to accomplish a common goal.
5. Demonstrate an understanding of professional, ethical, legal, security and social issues and responsibilities.
6. Communicate effectively with a range of audiences, including technical and non-technical audiences for business, end-user, client, and computing contexts.
7. Analyze the local and global impact of computing on individuals, organizations, and society.
8. Recognize the need for and an ability to engage in continuing professional development.
9. Use current techniques, skills, and tools necessary for computing practice.
10. Apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
11. Apply design and development principles in the construction of software systems of varying complexity.

Honors in Computer Science
Students majoring in Computer Science are eligible to graduate with departmental honors if they satisfy the following requirements:
1. Meet the requirements for Graduation with Honors as listed in Chapter 7 of this catalog.
2. Meet the requirements for a BA/BS degree in Computer Science.
3. Earn a grade point average of 3.50 or above in the major requirements.
4. Complete a minimum of 12 upper division credits required for the major in residence.

Bachelor of Arts, Computer 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. Major Requirements
1. Complete the following breadth courses in the liberal arts (27-29 credits):
   a. Cultural Heritages
      Comparative Cultures 3
      (ANTH A250)
      Western Culture 6
      (HIST A101 and HIST A102)
      American Culture 3
      (HIST A131, HIST A132, PS A101)
   b. Arts and Letters
      Introduction to Literature 3
      (ENGL A121, ENGL A301, ENGL A302, ENGL A305, ENGL A306, ENGL A307)
      Language/Humanities 6-8
      Any two-semester sequence in one of the following humanities sequences or in a language other than English: [AKNS A101-AKNS A102 (with same letter suffix), ART A261-ART A262, ENGL A201-ENGL A202, MUS A221-MUS A222*, PHIL A211-PHIL A212, PHIL A313-PHIL A314, PS A332-PS A333, THR A311-THR A312, THR A411-THR A412]
c. Ways of Knowing  
(ENGL A120, PHIL A101, PHIL A201, PHIL A301, PHIL A421)

d. Social Behavior  
Double majors must choose one of the following not in the major:  
(ANTH A101, COMM A101, ECON A201, JPC A101, PS A102, PSY A111, SOC A101, SWK/HUMS A106)

2. Complete the following core courses (42 credits):

- CSCE A201 Computer Programming I 4
- CSCE A202 Object-Oriented Programming 3
- CSCE A211 Computer Programming II 4
- CSCE/EE A241 Computer Hardware Concepts 4
- CSCE A248 Computer Organization and Assembly Language Programming 3
- CSCE A311 Data Structures and Algorithms 3
- CSCE A320 Operating Systems 3
- CSCE A331 Programming Language Concepts 3
- CSCE A351 Automata, Algorithms, and Complexity 3
- CSCE A360 Database Systems 3
- CSCE A365 Computer Networks 3
- CSCE A401 Software Engineering 3
- CSCE A470 Computer Science and Engineering Capstone Project 3

3. Complete the following required support courses (16-17 credits):

- ENGL A312 Advanced Technical Writing (3) 3
  or
- ENGL A414 Research Writing (3)
- MATH A200 Calculus I (4) 3-4
  or
- MATH A272 Applied Calculus (3)
- MATH A231 Introduction to Discrete Mathematics 3
- PHIL A305 Professional Ethics (3) 3
- STAT A253 Applied Statistics for the Sciences (4) 4
  or
- STAT A307 Probability and Statistics (4)

4. Complete an additional 12 upper division credits in Computer Science/Computer Systems Engineering (CSCE prefix), Mathematics (excluding MATH A420 and MATH A495), or Statistics. Nine of these credits must be in courses with a CSCE prefix. A maximum of 3 credits of CSCE A395, a maximum of 3 credits of CSCE A495, and a maximum of 6 credits of CSCE A498 may be applied to degree requirements.

5. A grade of C or higher must be received in all CSCE, MATH, and STAT courses required to satisfy the above program requirements.

6. All Computer Science majors must take a standardized test of knowledge of computer science approved by the CS faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.

7. Students are encouraged to develop their program with a Computer Science advisor.

8. A total of 120 credits are required for the degree, of which 42 credits must be upper division.
The Department of Computer Science and Engineering offers courses covering the major areas of computer science. These courses constitute the basis for an undergraduate major that prepares students for a variety of professional and technical careers in business, industry and government, or for graduate work leading to advanced degrees. In addition, the department offers courses for students from other fields that will use computer science as a tool in their own areas.

The department offers two degrees in computer science: the Bachelor of Arts in Computer Science and the Bachelor of Science in Computer Science. The BA gives the student the opportunity to obtain a liberal arts background while the BS program gives the student the opportunity to pursue a sciences background. The BS is recommended for those seeking to pursue a graduate degree in computer science.

Both degrees prepare the student to pursue a professional career in the computing field and are based on the 2012-13 computing curriculum guidelines developed by the Accreditation Board for Engineering and Technology (ABET). The core of both degrees emphasizes broad fundamental principles of computer science and teaches the student the necessary skills to develop solutions using current or future technology. The core topics include computer programming, systems organization, software engineering, databases and theory. Upon completion of the core topics, the student may select electives that explore specific areas of computer science, such as computer graphics, architecture or intelligent systems.

**Accreditation**

The Bachelor of Science in Computer Science program is accredited by the Engineering and Computing Accreditation Commission of ABET, www.abet.org.

**Program Objectives**

The Computer Science program has adopted the following educational program objectives for the Bachelor of Arts and the Bachelor of Science degrees in Computer Science. Graduates with these degrees will achieve some or all of these objectives within five years of graduation with a Bachelor of Arts or Bachelor of Science degree in Computer Science:

1. Graduates will make contributions to the computing profession and apply computational solutions to solve real-world problems.
2. Graduates will successfully adapt to changes in the field of computer science.
3. Graduates will meet or exceed the expectations of their employers and professional mentors as computer science professionals and advance in their career.
4. Graduates who choose to pursue advanced degrees will be admitted to and successfully complete their advanced degree programs.
5. Graduates will contribute to the Alaska economy through their professional accomplishments in computing.

**Student Learning Outcomes**

Upon completion of the Bachelor of Arts or Bachelor of Science program in Computer Science, graduates will be able to:

1. Apply knowledge of computing and mathematics appropriate to the discipline.
2. Analyze a problem, and identify and define the computing requirements appropriate to its solution.
3. Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
4. Function effectively on teams to accomplish a common goal.
5. Demonstrate an understanding of professional, ethical, legal, security and social issues and responsibilities.
6. Communicate effectively with a range of audiences, including technical and non-technical audiences for business, end-user, client, and computing contexts.
7. Analyze the local and global impact of computing on individuals, organizations, and society.
8. Recognize the need for and an ability to engage in continuing professional development.
9. Use current techniques, skills, and tools necessary for computing practice.
10. Demonstrate oral communications skills consistent with a career in computer science. Apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
11. Apply design and development principles in the construction of software systems of varying complexity.

2. Demonstrate written communication skills consistent with a career in computer science.
3. Demonstrate abilities in critical thinking, problem solving and analysis skills, and software design.
4. Demonstrate abilities in software development and implementation.
5. Understand and apply core concepts in computer science to the development or analysis of computer systems, including algorithms, data structures, concepts of programming languages, operating systems, and computer organization and architecture.
6. Demonstrate an understanding of theoretical foundations of computer science including discrete mathematics, algorithm analysis, and computability.

Honors in Computer Science

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

1. Meet the requirements for Graduation with Honors as listed in Chapter 7 of this catalog.
2. Meet the requirements for a BA/BS degree in Computer Science.
3. Earn a grade point average of 3.50 or above in the major requirements.
4. Complete a minimum of 12 upper division credits required for the major in residence.

Bachelor of Arts, Computer 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. Major Requirements

1. Complete the following breadth courses in the liberal arts (27-29 credits):
   a. Cultural Heritages
      Comparative Cultures 3
      (ANTH A250)
      Western Culture 6
      (HIST A101 and HIST A102)
      American Culture 3
      (HIST A131, HIST A132, PS A101)
b. Arts and Letters
   Introduction to Literature  3
   (ENGL A121, ENGL A301, ENGL A302, ENGL A305, ENGL A306, ENGL A307)
   Language/Humanities  6-8
   Any two-semester sequence in one of the following
   humanities sequences or in a language other than
   English: [AKNS A101-AKNS A102 (with same letter suffix), ART A261-ART A262, ENGL A201-ENGL A202, MUS
   A221-MUS A222*, PHIL A211-PHIL A212, PHIL A313-PHIL A314, PS A332-PS A333, THR A311-THR A312, THR
   A411-THR A412]

c. Ways of Knowing  3
   (ENGL A120, PHIL A101, PHIL A201, PHIL A301,
   PHIL A421)

d. Social Behavior  3
   Double majors must choose one of the following
   not in the major:
   (ANTH A101, COMM A101, ECON A201, JPC A101,
   PS A102, PSY A111, SOC A101, SWK/HUMS A106)

2. Complete the following core courses (33-42 credits):
   CSCE A201 Programming Concepts Computer Programming I  3
   CSCE A202 Programming Concepts II Object-Oriented Programming  3
   CSCE A211 Computer Programming II  4
   CSCE/EE A241 Computer Hardware Concepts  4
   CSCE A242 Computer Organization and
      Assembly Language Programming  3
   CSCE A311 Data Structures and Algorithms  3
   CSCE A320 Operating Systems  3
   CS A330 Algorithms and Data Structures  3
   CSCE A331 Programming Language Concepts  3
   CS A342 Networks  3
   CSCE A351 Automata, Algorithms, and Complexity  3
   CSCE A360 Database Systems  3
   CSCE A365 Computer Networks  3
   CSCE A401 Software Engineering  3
   CSCE A470 Applied Software Development
      Project (3) Computer Science and Engineering
      Capstone Project  3
   or
   CS A495 Internship Project (3)

3. Complete the following required support courses (126-147 credits):
   ENGL A312 Advanced Technical Writing (3)  3
   or
   ENGL A414 Research Writing (3)
   MATH A200 Calculus I (4)  3-4
   or
   MATH A272 Applied Calculus (3)
   MATH A231 Introduction to Discrete Mathematics  3
   PHIL A305 Professional Ethics (3)  3
   STAT A253 Applied Statistics for the Sciences (4)  4
4. Complete an additional 152 upper division credits in Computer Science/Computer Systems Engineering (CSCE prefix) Computer Science, Mathematics (excluding MATH A420 and MATH A495), or Statistics. Nine of these credits must be in courses with a CSCE prefix Computer Science. A maximum of 3 credits of CSCE A395, a maximum of 3 credits of CSCE A495, and a maximum of 6 credits of CSCE A498 may be applied to degree requirements.

5. A grade of C or higher must be received in all CSCE, MATH, and STAT courses required to satisfy the above program requirements.

6. All Computer Science majors must take a standardized test of knowledge of computer science approved by the CS faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.

7. Students are encouraged to develop their program with a Computer Science advisor.

8. A total of 120 credits are required for the degree, of which 42 credits must be upper division.
1a. School or College
   EN SOENGR

1b. Department
   Computer Science & Engineering

2. Complete Program Title/Prefix
   Bachelor of Science, Computer Science

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

   This program is a Gainful Employment Program:
   □ Yes or □ No

4. Type of Action:
   PROGRAM
   □ Add
   □ Change
   □ Delete

   PREFIX
   □ Add
   □ Change
   □ Inactivate

5. Implementation Date (semester/year)
   From: Fall/2013 To: 99/9999

6a. Coordination with Affected Units
   Department, School, or College: SOE
   Initiator Name (typed): Kenrick Mock
   Initiator Signed Initials: __________
   Date: ______________________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)
   Date: 12-10-12

6c. Coordination with Library Liaison
   Date: 12-10-12

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 program revision shares core courses with the Computer Systems Engineering program and updates the curriculum. The Student Learning Outcomes for the program were updated to match ABET's outcomes for accreditation.

Initiator (faculty only)
Kenrick Mock
Initiator (TYPE NAME)
Bachelor of Arts, Computer Science

. . . no changes to this degree in the scope of this document

Bachelor of Science, Computer 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. Major Requirements

1. Complete the following breadth courses designed to equip students with the technical competencies needed in scientific disciplines (23-25 credits):
   a. Mathematics and Statistics
      MATH A200 Calculus I 4
      STAT A307 Probability and Statistics 4
   b. Language/Humanities 6-8
      Any two-semester sequence in French, German, Japanese, Russian or Spanish, or one of the following humanities sequences:
      (ART A261-ART A262, ENGL A201-ENGL A202,
      MUS A221-MUS A222, PHIL A211-PHIL A212,
      PHIL A313-PHIL A314, PS A332-A333, THR A311-A312, THR A411-A412)
   c. Natural Sciences 9*
      To be selected from the following list:
      (ASTR A103, ASTR A104, BIOL A102, BIOL A103, BIOL A111, BIOL A112, BIOL A113, BIOL A114, BIOL A115, BIOL A116, CHEM A103/L, CHEM A104/L, CHEM A105/L, CHEM A106/L, GEOL A111, GEOL A221, PHYS A123/L, PHYS A124/L, PHYS A211/L, PHYS A212/L)
   *The total natural science requirement of each student includes 16 credits (7 credits from the General Education natural science requirement and 9 credits from the list above). These two requirements may be met by any combination of applicable courses that combine to 16 credits. The total must include two laboratory courses and at least 6 credits in each of two disciplines.

2. Complete the following core courses (42 credits):
   CSCE A201 Computer Programming I 4
3. Complete the following required support courses (21 credits):

- ENGL A312 Advanced Technical Writing (3) 3
- or
- ENGL A414 Research Writing (3)
- MATH A201 Calculus II 4
- MATH A231 Introduction to Discrete Mathematics 3
- PHIL A305 Professional Ethics (3) 3
- PHYS A123/L Basic Physics I with laboratory (4) 4
- or
- PHYS A211/L General Physics I with laboratory (4)
- PHYS A124/L Basic Physics II with laboratory (4) 4
- or
- PHYS A212/L General Physics II with laboratory (4)

4. Complete an additional 12 upper division credits in Computer Science/Computer Systems Engineering (CSCE prefix), Mathematics (excluding MATH A420 and MATH A495), or Statistics. Nine of these credits must be in courses with a CSCE prefix. A maximum of 3 credits of CSCE A395, a maximum of 3 credits of CSCE A495, and a maximum of 6 credits of CSCE A498 may be applied to degree requirements.

5. A grade of C or higher must be received in all CSCE, MATH, and STAT courses required to satisfy the above program requirements.

6. All Computer Science majors must take a standardized test of knowledge of computer science approved by the CS faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.

7. Students are encouraged to develop their program with a Computer Science advisor.

8. A total of 120 credits are required for the degree, of which 42 credits must be upper division.
Bachelor of Arts, Computer Science

... no changes to this degree in the scope of this document

Bachelor of Science, Computer 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. Major Requirements

1. Complete the following breadth courses designed to equip students with the technical competencies needed in scientific disciplines (23-25 credits):
   a. Mathematics and Statistics
      MATH A200 Calculus I 4
      STAT A307 Probability and Statistics 4
   b. Language/Humanities 6-8
      Any two-semester sequence in French, German, Japanese, Russian or Spanish, or one of the following humanities sequences:
      (ART A261-ART A262, ENGL A201-ENGL A202,
      MUS A221-MUS A222, PHIL A211-PHIL A212,
      PHIL A313-PHIL A314, PS A332-A333, THR A311-A312, THR A411-A412)
   c. Natural Sciences 9*
      To be selected from the following list:
      (ASTR A103, ASTR A104, BIOL A102, BIOL A103, BIOL A111, BIOL A112, BIOL A113, BIOL A114, BIOL A115,
      BIOL A116, CHEM A103/L, CHEM A104/L, CHEM A105/L, CHEM A106/L, GEOL A111, GEOL A221, PHYS A123/L,
      PHYS A124/L, PHYS A211/L, PHYS A212/L)
      *The total natural science requirement of each student includes 16 credits (7 credits from the General Education natural science requirement and 9 credits from the list above). These two requirements may be met by any combination of applicable courses that combine to 16 credits. The total must include two laboratory courses and at least 6 credits in each of two disciplines.

2. Complete the following core courses (37-42 credits):
   CSCE A201 Computer Programming I 4
3. Complete the following required support courses (18-21 credits):

- ENGL A312  Advanced Technical Writing (3)  3
  or
- ENGL A414  Research Writing (3)
- MATH A201  Calculus II  4
- MATH A231  Introduction to Discrete Mathematics  3
- PHIL A305  Professional Ethics (3)  3
- PHYS A123/L  Basic Physics I with laboratory (4)  4
  or
- PHYS A211/L  General Physics I with laboratory (4)
- PHYS A124/L  Basic Physics II with laboratory (4)  4
  or
- PHYS A212/L  General Physics II with laboratory (4)

4. Complete an additional 12 upper division credits in Computer Science/Computer Systems Engineering (CSCE prefix), Mathematics (excluding MATH A420 and MATH A495), or Statistics. Nine of these credits must be in courses with a CSCE prefix. A maximum of 3 credits of CSCE A395, a maximum of 3 credits of CSCE A495, and a maximum of 6 credits of CSCE A498 may be applied to degree requirements.
Complete an additional 12 upper division credits in Computer Science, Mathematics (excluding MATH A420 and MATH A495), or Statistics. Nine of these credits must be in Computer Science. A maximum of 3 credits of CS A395 may be applied to degree requirements.

5. A grade of C or higher must be received in all CSCE, MATH, and STAT courses required to satisfy the above program requirements.

6. All Computer Science majors must take a standardized test of knowledge of computer science approved by the CS faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.

7. Students are encouraged to develop their program with a Computer Science advisor.

8. A total of 120 credits are required for the degree, of which 42 credits must be upper division.
## Course Action Request

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

<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>
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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</th>
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<td>3</td>
<td>(Lecture + Lab)</td>
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<tr>
<th>6. Complete Course Title</th>
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<tr>
<td>Introduction to Power Systems</td>
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Abbreviated Title for Transcript (30 character)

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<th>7. Type of Course</th>
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<td>☑ Academic</td>
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| 8. Type of Action: | ☑ Add or ☐ Change or ☐ Delete |

If a change, mark appropriate boxes:
- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Other Restrictions
  - Class
  - Level
  - College
  - Major
- Other

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<th>9. Repeat Status No</th>
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<th>10. Grading Basis</th>
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<td>☐ P/NP</td>
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<th>11. Implementation Date</th>
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<td>semester/year</td>
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<tr>
<td>From: Fall/2013</td>
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<td>To: 99/9999</td>
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<td>☐ Stacked with</td>
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Cross-Listed Coordination Signature

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<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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</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).

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<th>Impacted Program/Course</th>
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<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tr>
<th>Initiator Name (typed):</th>
<th>Mathew Kupilik</th>
</tr>
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| Initiator Signed Initials: | ___________________
| Date: | ___________________ |

<table>
<thead>
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<th>13b. Coordination Email</th>
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submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

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<th>13c. Coordination with Library Liaison</th>
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<td>☐ Written Communication</td>
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<tr>
<td>☐ Quantitative Skills</td>
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<tr>
<td>☐ Humanities</td>
</tr>
<tr>
<td>☐ Social Sciences</td>
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<tr>
<td>☐ Natural Sciences</td>
</tr>
<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>An analysis of electric power systems, including topologies, ideal power transformers, balanced three phase systems, symmetrical components, transmission line parameter calculation, and power flow.</td>
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<table>
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<tr>
<th>16a. Course Prerequisite(s) (list prefix and number)</th>
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<td>EE A353 with a minimum grade of C</td>
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<th>16c. Co-requisite(s) (concurrent enrollment required)</th>
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<tr>
<td>☐ Level</td>
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<th>16e. Registration Restriction(s) (non-codable)</th>
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<th>17. Mark if course has fees standard SOE fee</th>
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| 18. Mark if course is a selected topic course |

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<tr>
<th>19. Justification for Action</th>
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<tbody>
<tr>
<td>This course is being added in response to constituent feedback.</td>
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Initiator (faculty only)  
Mathew Kupilik  
Initiator (TYPE NAME)  

<table>
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<tr>
<th>Approved</th>
<th>Disapproved</th>
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<td>Dean/Director of School/College</td>
<td>Date</td>
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<td>Undergraduate/Graduate Academic Board Chairperson</td>
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<table>
<thead>
<tr>
<th>Date</th>
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</thead>
</table>
UNIVERSITY OF ALASKA ANCHORAGE
COURSE CONTENT GUIDE

I. Initiation Date: February 2013

II. Course Information
A. College/School: School of Engineering
B. Course Title: Introduction to Power Systems
C. Course Subject/Number: EE A307
D. Credit Hours: 3.0 Credits
E. Contact Time: 3+0 Contact Time
F. Grading Information: A-F
G. Course Description: An analysis of electric power systems, including topologies, ideal power transformers, balanced three phase systems, symmetrical components, transmission line parameter calculation, and power flow.
H. Status of course relative to degree or certificate program: Required for BSE students seeking the Electrical Engineering specialization.
I. Course Fees: Yes, standard SOE fee
J. Coordination: SOE and Faculty Listserv
K. Course Prerequisites: EE A353 with a minimum grade of C.
L. Registration Restrictions: None

III. Evaluation
Grading is A-F. Grading is based on assignments, exams, quizzes, projects, and class discussions.

IV. Course Level Justification
This course builds upon earlier coursework and requires familiarity of electrical engineering topics discussed in earlier courses.

V. Course Outline
1. Review of AC power circuits
   a) Sinusoidal sources
   b) Complex power
   c) Maximum power transfer
2. Three phase systems
   a) Balanced/unbalanced
   b) Delta/wye topologies and conversions
3. Symmetric components
4. Power transformers
   a) Ideal circuit models
   b) Equivalent circuits
   c) Per unit ratings
   d) Three phase
5. Transmission
a) Approximate circuit models  
b) Steady state operation  
c) Voltage regulation  
d) Load limits  

6. Power flow  
a) Models and setup  
b) Solution methods  
c) Simulation  

VI. Instructional Goals and Student Learning Outcomes

A. Instructional Goals. The instructor will:

1. Present models and methods of analysis of common power systems.
2. Motivate the use of three phase systems and provide methods for analysis of balanced systems.
3. Introduce power transformers and their use in the electrical grid.
4. Discuss and analyze power transmission and solution to load flow simulations with respect to meeting loads, frequency and voltage requirements.

B. Student Learning Outcomes. Upon successful completion of this course students will be able to analyze:

<table>
<thead>
<tr>
<th></th>
<th>Assessment methods</th>
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</thead>
<tbody>
<tr>
<td>1. Simple AC power systems.</td>
<td>Assignments, Exams, Quizzes, Projects, Class Discussions</td>
</tr>
<tr>
<td>2. Three phase topologies, including conversions.</td>
<td>Assignments, Exams, Quizzes, Projects, Class Discussions</td>
</tr>
<tr>
<td>3. Power systems with transformers using ideal circuit equivalents.</td>
<td>Assignments, Exams, Quizzes, Projects, Class Discussions</td>
</tr>
<tr>
<td>4. Transmission lines using circuit approximations in steady state.</td>
<td>Assignments, Exams, Quizzes, Projects, Class Discussions</td>
</tr>
<tr>
<td>5. Power flow with respect to load, frequency, and voltage requirements.</td>
<td>Assignments, Exams, Quizzes, Projects, Class Discussions</td>
</tr>
</tbody>
</table>
VII. Suggested Texts

VIII. Bibliography
1a. School or College  
EN SOENGR  

1b. Division  
No Division Code  

1c. Department  
Electrical Engineering  

2. Course Prefix  
EE  

3. Course Number  
A333  

4. Previous Course Prefix & Number  
N/A  

5a. Credits/CEUs  
4  

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

6. Complete Course Title  
Electronic Devices  

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  

9. Repeat Status No  
# of Repeats  
Max Credits  

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

11. Implementation Date  
semester/year  
From: Fall/2013  
To: 99/9999  

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>
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Initiator Name (typed): Todd Petersen  
Initiator Signed Initials: _________  
Date:________________  

13b. Coordination Email  
Date: 2/8/2013  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)  

13c. Coordination with Library Liaison  
Date: 02/8/2013  

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 the analysis of electronics and electrical devices including semiconductors, diodes, field effect transistors (FETs), bipolar junction transistors (BJTs), large signal and small signal analysis techniques, and common electrical circuit topologies and analysis.  

16a. Course Prerequisite(s) (list prefix and number)  
EE A353 with a minimum grade of C or concurrent enrollment.  

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 standard SOE fee  

18. ☐ Mark if course is a selected topic course  

19. Justification for Action  
This course has been added in response to constituent feedback and program outcome assessment feedback results.  

Initiator (faculty only)  
Todd Petersen  
Initiator (TYPE NAME)  

Initiator Approved  
Disapproved  

Dean/Director of School/College  
Date  

Undergraduate/Graduate Academic  
Date  

Provost or Designee  
Date
I. Initiation Date: February 2013

II. Course Information
A. College/School: School of Engineering
B. Course Title: Electronic Devices
C. Course Subject/Number: EE A333
D. Credit Hours: 4.0 Credits
E. Contact Time: 3+3 Contact Time
F. Grading Information: A-F
G. Course Description: An introduction to the analysis of electronics and electrical devices including semiconductors, diodes, field effect transistors (FETs), bipolar junction transistors (BJTs), large signal and small signal analysis techniques, and common electrical circuit topologies and analysis.
H. Status of course relative to degree or certificate program: Required for BSE students seeking the electrical engineering specialization.
I. Lab Fees: Yes
J. Coordination: SOE and Faculty Listserv
K. Course Prerequisites: EE A353 with a minimum grade of C or concurrent enrollment.
L. Registration Restrictions: None

III. Evaluation
Grading is A-F. Grades are based on satisfactory completion of homework assignments, exams, and laboratory projects.

IV. Course Level Justification
This course builds off of knowledge gained in earlier engineering courses and relies upon knowledge of electrical engineering terms and methods used in previous courses.

V. Course Outline
1. Signals and Amplifiers
   a. Signals
   b. Frequency spectrum of signals
   c. Analog and digital signals
   d. Amplifiers
2. Semiconductors
   a. Electrical current flow in semiconductors
   b. The pn junction
3. Diodes
   a. The ideal diode
   b. The diode equation
   c. The piecewise linear model
d. Operation in circuits, forward and reverse biased
e. Rectifier circuits
f. Special diodes

4. Field Effect Transistors (FETs)
a. Device structure and physical operation
b. Current voltage characteristic
c. Large signal operation and analysis
d. The small-signal model
e. Amplifier design

5. Bipolar Junction Transistors (BJTs)
a. Device structure and physical operation
b. Current voltage characteristic
c. Large signal operation and analysis
d. The small-signal model
e. Amplifier design

6. Building Blocks of Integrated Circuit Amplifiers
a. The basic gain cell
b. The cascade amplifier
c. Current-mirror circuits
d. Transistor amplifier pairings

7. Differential and Multistage Amplifiers
a. The MOS differential pair
b. Small signal operation of the MOS differential pair
c. The BJT differential pair
d. Small signal operation of the BJT differential pair
e. Diff amp with an active load
f. Multistage amplifiers

8. Feedback
a. General principle of feedback structures
b. Properties of negative feedback
c. Four basic feedback topologies
   i. Voltage amplifiers
   ii. Current amplifiers
   iii. Transconductance amplifiers
   iv. Transresistance amplifiers

VI. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals</th>
<th>The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Present concepts of electrical signals and amplifiers to the students.</td>
<td></td>
</tr>
<tr>
<td>2. Introduce the fundamental operation and analysis of diodes.</td>
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</tr>
<tr>
<td>3. Examine properties of MOSFET and BJT transistor technologies and operation.</td>
<td></td>
</tr>
<tr>
<td>4. Introduce students to common circuit topologies for transistor circuits such as amplifiers and oscillators.</td>
<td></td>
</tr>
<tr>
<td>5. Examine concepts of differential amplifiers and multistage amplifiers.</td>
<td></td>
</tr>
</tbody>
</table>
6. Introduce common industry tools in the laboratory setting.

7. Give hands on experience designing, building and analyzing circuits in the laboratory setting.

B. **Student Learning Outcomes.** Upon successful completion of this course students will be able to:

| 1. Analyze and design amplifier circuits. | Assignments, Exams, Quizzes, Projects, Class Discussions, Labs |
| 2. Analyze and design electric circuits containing diodes. | Assignments, Exams, Quizzes, Projects, Class Discussions, Labs |
| 3. Analyze and design electric circuits containing FETs. | Assignments, Exams, Quizzes, Projects, Class Discussions, Labs |
| 4. Analyze and design electric circuits containing BJT s. | Assignments, Exams, Quizzes, Projects, Class Discussions, Labs |
| 5. Analyze and design electric circuits containing multiple stages. | Assignments, Exams, Quizzes, Projects, Class Discussions, Labs |
| 6. Design, build, and test a simple electronic device circuit to given specifications. | Assignments, Exams, Quizzes, Projects, Class Discussions, Labs |
| 7. Utilize common industry tools for circuit analysis. | Assignments, Exams, Quizzes, Projects, Class Discussions |

VII. **Suggested Text**


VIII. **Bibliography**

1a. School or College
   EN SOENGR

1b. Department
   Electrical Engineering (EE)

2. Complete Program Title/PREFIX
   Minor, Electrical Engineering

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

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

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

   PREFIX
   ☐ Add  ☐ Change  ☐ Inactivate

5. Implementation Date (semester/year)
   From: Fall/2013  To: 99/9999

6a. Coordination with Affected Units
   Department, School, or College:  School of Engineering
   Initiator Name (typed):  Jens Munk
   Initiator Signed Initials:  _________  Date:________________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)
   Date: 2/11/2013

6c. Coordination with Library Liaison
   Date: 2/11/2013

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

8. Justification for Action
   Updated course options for Minor to coincide with changes made to the Major based on constituent feedback.

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237
Minor, Electrical Engineering

Students majoring in another subject who wish to minor in Electrical Engineering must complete the following requirements. An * indicates a recommended set of courses for the minor.

1. A minimum of 18 credits must be selected from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EE A203</td>
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<td>EE/CS A241</td>
<td>Computer Hardware Concepts (4)</td>
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<td>EE A307</td>
<td>Introduction to Power Systems (3)</td>
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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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<table>
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<tr>
<td>Bachelor of Science in Engineering (BSE)</td>
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<td>Department, School, or College:</td>
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<tr>
<td>School of Engineering</td>
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<tr>
<td>Initiator Name (typed): Kenrick Mock</td>
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<tr>
<td>Initiator Signed Initials: _________</td>
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<td>Date: __________________</td>
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<tr>
<td>The Computer Systems Engineering track curriculum has been updated to harmonize with the Computer Science degrees. The Electrical Engineering track curriculum has been modified to include power systems as part of the core curriculum based on constituent feedback.</td>
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<th>Kenrick Mock</th>
</tr>
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</tr>
<tr>
<td>College/School Curriculum Committee Chair</td>
<td>Date</td>
</tr>
</tbody>
</table>

| 240 |
Bachelor of Science, Engineering

The Computer Science and Engineering, Electrical Engineering, and Mechanical Engineering departments offer a Bachelor of Science in Engineering, with concentrations in Computer Systems Engineering, Electrical Engineering or Mechanical Engineering.

Computer Systems Engineering

The Department of Computer Science and Engineering offers a Bachelor of Science in Engineering with a concentration in Computer Systems Engineering (BSE CSE), and a minor in Computer Systems Engineering. The program is a fully-accredited Bachelor of Science in Engineering, Computer Systems Engineering degree program. Students are introduced to principles of mathematics and physics during the first two years of study along with introductory courses in fundamentals of computer hardware and programming. The third and fourth years consist of upper division courses applicable to computer systems along with computer systems engineering electives in the area of the students’ interests. Students complete a project-oriented capstone course where they will apply their knowledge in computer systems engineering to solve challenging problems. Students also take courses on written and oral communication, humanities, social sciences, and fine arts to improve their communication skills and to put their profession into a broader societal context.

Electrical Engineering

The Department of Electrical Engineering offers a Bachelor of Science in Engineering with a concentration in Electrical Engineering (BSE EE), and a minor in Electrical Engineering. The program is a fully-accredited Bachelor of Science in Engineering, Electrical Engineering degree program. During the first two years of study, students are introduced to principles of mathematics, chemistry and physics, as well as basic circuit theory, digital logic and electrical devices. The third year of study largely focuses on fundamental electrical engineering concepts, including courses in signal analysis, electromagnetism, instrumentation and telecommunication. During the fourth year, students take more advanced courses, including technical electives that are more focused on electrical engineering analysis and design. Upper division electives include courses in computer design, antenna theory, communication theory, power distribution, and control systems. Students also take courses on written and oral communication, humanities, social sciences, and fine arts to improve their communication skills and to put their profession into a broader societal context.

Mechanical Engineering

. . . no changes to this track

Accreditation

Computer Systems Engineering

The Bachelor of Science in Engineering, Computer Systems Engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Electrical Engineering

The Bachelor of Science in Engineering, Electrical Engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Mechanical Engineering

. . . no changes to this track
Program Objectives

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
. . . no changes to this track

Student Learning Outcomes
The program has chosen the following set of program outcomes. It is expected that graduates from the program will have:
1. An ability to apply knowledge of mathematics, science, and engineering.
2. An ability to design and conduct experiments, as well as analyze and interpret data.
3. 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.
4. An ability to function on multidisciplinary teams.
5. An ability to identify, formulate, and solve engineering problems.
6. An understanding of professional and ethical responsibility.
7. An ability to communicate effectively.
8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. A recognition of the need for, and the ability to engage in, lifelong learning.
10. A knowledge of contemporary issues.
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Departmental Honors
Undergraduate students in the program may be recognized for exceptional performance by earning Departmental Honors. The award will be noted on their permanent university transcript. In order to receive Departmental Honors, a student must meet each of the following requirements.
1. Complete all program requirements.
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. Earn a GPA of 3.50 or above in the courses required for the major.
4. Gain approval for, complete, and present a design/research project prior to applying for graduation. The project proposal, presentation, and final written report must be approved by the program faculty.
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 should 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.

Admission Requirements

Admission to the 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 Admission to Baccalaureate Programs requirements in Chapter 7 of this catalog are admitted to the program at the Pre-Engineering level.

Engineering Level

Applicants for admission who, in addition to the Admission to Baccalaureate Programs 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 program at the Engineering level.

Advancement

Pre-Engineering to Engineering

To advance from the Pre-Engineering level to the Engineering level, students must meet the admission requirements to the Engineering level and complete and submit a Change of Major form.

Academic Progress

All prerequisites for engineering courses must be completed with a grade of C or higher, and all courses in the major requirements must be completed with a grade of C or higher. A student who is unable to earn a grade of C or higher in a CSE, EE, ES, ENGR or ME course may attempt to earn a satisfactory grade one additional time, on a space-available basis. Failure to earn a grade of C or higher on the second attempt may result in removal from the program. Re-admittance requires a letter of appeal from the student requesting re-admittance with an explanation of any mitigating factors and how these factors have been addressed. Re-admittance is subject to approval by the department chair of the program.

A student who has a semester GPA below 2.00 in the major requirements will be placed on academic warning by the program. If a student on academic warning status receives a semester GPA of at least 2.00 in the major requirements, that student will be removed from academic warning status by the program. Otherwise, if a student on academic warning status receives a semester GPA below 2.00 in the major requirements, the student will be dropped from the program and must reapply in order to continue in the program.

Academic Integrity

The program requires its students to abide by the principles of academic integrity described in the Student Code of Conduct. Should suspected cases of academic misconduct occur, these cases may be submitted to the UAA Dean of Students Office, where the Assistant Director of Student Conduct reviews all allegations of academic misconduct. At the conclusion of the review, the Assistant Director of Student Conduct issues a notification of the findings and conclusions to the reporting faculty member, department chair, and dean. Should a student from the program be found responsible for a case of academic misconduct by the UAA Dean of
Students Office on two separate occasions, that student will be dropped from the program. Re-admittance requires a letter of appeal from the student requesting re-admittance with an explanation of any mitigating factors and how these factors have been addressed. Re-admittance is subject to approval by the department chair of the student’s degree program.

**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 (GER) for Baccalaureate Degrees listed at the beginning of this chapter.

**C. Major Requirements**

Students must choose Computer Systems Engineering, Electrical Engineering or Mechanical Engineering. All courses in the major requirements must be completed with a grade of C or higher.

**Computer Systems Engineering**

1. Complete the following core courses (86 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE A201</td>
<td>Computer Programming I</td>
<td>4</td>
</tr>
<tr>
<td>CSCE A211</td>
<td>Computer Programming II</td>
<td>4</td>
</tr>
<tr>
<td>CSCE/EE A241</td>
<td>Computer Hardware Concepts</td>
<td>4</td>
</tr>
<tr>
<td>CSCE A248</td>
<td>Computer Organization and Assembly Language Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A311</td>
<td>Data Structures and Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A320</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A342</td>
<td>Digital Circuits Design</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A365</td>
<td>Computer Networks</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A448</td>
<td>Computer Architecture</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A465</td>
<td>Computer and Network Security</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A470</td>
<td>Computer Science and Engineering Capstone Project</td>
<td>3</td>
</tr>
<tr>
<td>EE A203</td>
<td>Fundamentals of Electrical Engineering I</td>
<td>4</td>
</tr>
<tr>
<td>EE A333</td>
<td>Electronic Devices</td>
<td>4</td>
</tr>
<tr>
<td>EE A353</td>
<td>Circuit Theory</td>
<td>3</td>
</tr>
<tr>
<td>ENGL A212</td>
<td>Technical Writing</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 A231</td>
<td>Introduction to Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH A302</td>
<td>Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHIL A305</td>
<td>Professional Ethics</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>
<td>1</td>
</tr>
<tr>
<td>STAT A307</td>
<td>Probability and Statistics</td>
<td>4</td>
</tr>
</tbody>
</table>

2. Advanced engineering electives: 15
Students are required to take 15 credits from the following list of approved CSE electives. Of the 15, at least 6 credits must be from classes with a CSCE prefix. A maximum of 3 credits from CSCE A395, a maximum of 3 credits from CSCE A495, and a maximum of 6 credits from CSCE A498 may be applied toward this degree requirement. Other relevant courses may be accepted by approved petition.

Any upper division elective with a CSCE prefix (1-4 per course)
EE/PHYS A314 Electromagnetics (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 A451 Digital Signal Processing (3)
EE A462 Communication Systems (3)
EE A465 Telecommunications (3)

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

**Electrical Engineering**

1. Complete the following core courses (95 credits):

   - CHEM A105 General Chemistry I 3
   - CHEM A105L General Chemistry I Laboratory 1
   - CSE A205 Introduction to C Programming for Engineers 3
   - CSCE A248 Computer Organization and Assembly Language Programming 3
   - EE A203 Fundamentals of Electrical Engineering I 4
   - EE/CSCE A241 Computer Hardware Concepts 4
   - EE A261 Matlab for Electrical Engineers 1
   - EE A307 Introduction to Power Systems 3
   - EE/ME A308 Instrumentation and Measurement 3
   - EE/PHYS A314 Electromagnetics 3
   - EE/PHYS A324 Electromagnetics II 3
   - EE A324L Electromagnetics Laboratory II 1
   - EE A333 Electronic Devices 4
   - EE A353 Circuit Theory 3
   - EE A353L Circuit Theory Laboratory 1
   - EE A354 Engineering Signal Analysis 3
   - EE A438 Design of Electrical Engineering Systems 3
   - EE A441 Integrated Circuit Design 3
   - EE A465 Telecommunications 3
   - EE A471 Automatic Control 3
   - ENGL A212 Technical Writing 3
   - ENGR A105A Engineering Computer-Aided Design I 1
   - ENGR A105B Engineering Computer-Aided Design II 1
   - ENGR A151 Introduction to Engineering 1
   - ES A208 Engineering Statics and Dynamics 5
   - ES A302 Engineering Data Analysis 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<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>
<td>1</td>
</tr>
</tbody>
</table>

2. Choose from the following advanced mathematics electives: 3

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

3. Choose from the following advanced engineering electives: 12

Students are required to take 12 credits from the following list of approved advanced engineering electives. Of the 12 credits, at least 6 of them must be from classes with the EE prefix.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE A403/A603</td>
<td>Arctic Engineering (3)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ES A411</td>
<td>Northern Design (3)</td>
</tr>
</tbody>
</table>

*Note: Only one of CE A403 or CE A603 or ES A411 can apply to the degree.*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE A365</td>
<td>Computer Networks (3)</td>
</tr>
<tr>
<td>CSCE A445</td>
<td>Computer Design and Simulation (4)</td>
</tr>
<tr>
<td>CSCE A465</td>
<td>Computer and Network Security (3)</td>
</tr>
<tr>
<td>EE/ME A306</td>
<td>Dynamics of Systems (3)</td>
</tr>
<tr>
<td>EE A407</td>
<td>Power Distribution (3)</td>
</tr>
<tr>
<td>EE A451</td>
<td>Digital Signal Processing (3)</td>
</tr>
<tr>
<td>EE A458</td>
<td>Antenna Theory (3)</td>
</tr>
<tr>
<td>EE A462</td>
<td>Communication Systems (3)</td>
</tr>
</tbody>
</table>

4. A total of 131 credits is required for the degree, of which 42 credits must be upper division.

**Mechanical Engineering**

... no changes to this track
ENGINEERING: COMPUTER SYSTEMS, ELECTRICAL AND MECHANICAL ENGINEERING

Bachelor of Science, Engineering
The Computer Science and Engineering, Electrical Engineering, and Mechanical Engineering departments offer a Bachelor of Science in Engineering, with concentrations in Computer Systems Engineering, Electrical Engineering or Mechanical Engineering.

Computer Systems Engineering
The Department of Computer Science and Engineering offers a Bachelor of Science in Engineering with a concentration in Computer Systems Engineering (BSE CSE), and a minor in Computer Systems Engineering. The program is a fully-accredited Bachelor of Science in Engineering, Computer Systems Engineering degree program. Students are introduced to principles of mathematics and physics during the first two years of study along with introductory courses in fundamentals of computer hardware and programming. The third and fourth years consist of upper division courses applicable to computer systems along with computer systems engineering electives in the area of the students’ interests. Students complete a project-oriented capstone course where they will apply their knowledge in computer systems engineering to solve challenging problems. Students also take courses on written and oral communication, humanities, social sciences, and fine arts to improve their communication skills and to put their profession into a broader societal context.

Electrical Engineering
The Department of Electrical Engineering offers a Bachelor of Science in Engineering with a concentration in Electrical Engineering (BSE EE), and a minor in Electrical Engineering. The program is a fully-accredited Bachelor of Science in Engineering, Electrical Engineering degree program. During the first two years of study, students are introduced to principles of mathematics, chemistry and physics, as well as basic circuit theory, digital logic and electrical devices. The third year of study largely focuses on fundamental electrical engineering concepts, including courses in signal analysis, electromagnetism, instrumentation and telecommunication. During the fourth year, students take more advanced courses, including technical electives that are more focused on electrical engineering analysis and design. Upper division electives include courses in computer design, antenna theory, communication theory, power distribution, and control systems. Students also take courses on written and oral communication, humanities, social sciences, and fine arts to improve their communication skills and to put their profession into a broader societal context.

Mechanical Engineering
...no changes to this track

Accreditation

Computer Systems Engineering
The Bachelor of Science in Engineering, Computer Systems Engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Electrical Engineering
The Bachelor of Science in Engineering, Electrical Engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Mechanical Engineering
...no changes to this track
Program Objectives

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
... no changes to this track...

Student Learning Outcomes
The program has chosen the following set of program outcomes. It is expected that graduates from the program will have:
1. An ability to apply knowledge of mathematics, science, and engineering.
2. An ability to design and conduct experiments, as well as analyze and interpret data.
3. 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.
4. An ability to function on multidisciplinary teams.
5. An ability to identify, formulate, and solve engineering problems.
6. An understanding of professional and ethical responsibility.
7. An ability to communicate effectively.
8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. A recognition of the need for, and the ability to engage in, lifelong learning.
10. A knowledge of contemporary issues.
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Departmental Honors
Undergraduate students in the program may be recognized for exceptional performance by earning Departmental Honors. The award will be noted on their permanent university transcript. In order to receive Departmental Honors, a student must meet each of the following requirements.
1. Complete all program requirements.
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. Earn a GPA of 3.50 or above in the courses required for the major.
4. Gain approval for, complete, and present a design/research project prior to applying for graduation. The project proposal, presentation, and final written report must be approved by the program faculty.
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 should 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.

Admission Requirements

Admission to the 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 Admission to Baccalaureate Programs requirements in Chapter 7 of this catalog are admitted to the program at the Pre-Engineering level.

Engineering Level

Applicants for admission who, in addition to the Admission to Baccalaureate Programs 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 program at the Engineering level.

Advancement

Pre-Engineering to Engineering

To advance from the Pre-Engineering level to the Engineering level, students must meet the admission requirements to the Engineering level and complete and submit a Change of Major form.

Academic Progress

All prerequisites for engineering courses must be completed with a grade of C or higher, and all courses in the major requirements must be completed with a grade of C or higher. A student who is unable to earn a grade of C or higher in a CSE, EE, ES, ENGR or ME course may attempt to earn a satisfactory grade one additional time, on a space-available basis. Failure to earn a grade of C or higher on the second attempt may result in removal from the program. Re-admittance requires a letter of appeal from the student requesting re-admittance with an explanation of any mitigating factors and how these factors have been addressed. Re-admittance is subject to approval by the department chair of the program.

A student who has a semester GPA below 2.00 in the major requirements will be placed on academic warning by the program. If a student on academic warning status receives a semester GPA of at least 2.00 in the major requirements, that student will be removed from academic warning status by the program. Otherwise, if a student on academic warning status receives a semester GPA below 2.00 in the major requirements, the student will be dropped from the program and must reapply in order to continue in the program.

Academic Integrity

The program requires its students to abide by the principles of academic integrity described in the Student Code of Conduct. Should suspected cases of academic misconduct occur, these cases may be submitted to the UAA Dean of Students Office, where the Assistant Director of Student Conduct reviews all allegations of academic misconduct. At the conclusion of the review, the Assistant Director of Student Conduct issues a notification of the findings and conclusions to the reporting faculty member, department chair, and dean. Should a student from the program be found responsible for a case of academic misconduct by the UAA Dean of
Students Office on two separate occasions, that student will be dropped from the program. Re-admittance requires a letter of appeal from the student requesting re-admittance with an explanation of any mitigating factors and how these factors have been addressed. Re-admittance is subject to approval by the department chair of the student’s degree program.

**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 (GER) for Baccalaureate Degrees listed at the beginning of this chapter.

**C. Major Requirements**

Students must choose Computer Systems Engineering, Electrical Engineering or Mechanical Engineering. All courses in the major requirements must be completed with a grade of C or higher.

**Computer Systems Engineering**

1. Complete the following core courses (85 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE A201</td>
<td>Computer Programming I</td>
<td>4</td>
</tr>
<tr>
<td>CSCE A211</td>
<td>Computer Programming II</td>
<td>4</td>
</tr>
<tr>
<td>CSCE/EE A241</td>
<td>Computer Hardware Concepts</td>
<td>4</td>
</tr>
<tr>
<td>CSCE A248</td>
<td>Computer Organization and Assembly Language Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A311</td>
<td>Data Structures and Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A320</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A205</td>
<td>Introduction to C Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A215</td>
<td>Object-Oriented Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A225</td>
<td>Assembly Language Programming for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A335</td>
<td>Operating Systems Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A342</td>
<td>Digital Circuits Design</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A355</td>
<td>Computer Networking for Engineers/Networks</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A438</td>
<td>Design of Computer Engineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A445</td>
<td>Computer Design and Interfacing</td>
<td>4</td>
</tr>
<tr>
<td>CSCE A465</td>
<td>Computer and Network Security</td>
<td>3</td>
</tr>
<tr>
<td>CSCE A470</td>
<td>Computer Science and Engineering Capstone Project</td>
<td>3</td>
</tr>
<tr>
<td>EE A203</td>
<td>Fundamentals of Electrical Engineering I</td>
<td>4</td>
</tr>
<tr>
<td>EE A333</td>
<td>Electronic Devices</td>
<td>4</td>
</tr>
<tr>
<td>EE/CS A211</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>ENGL A212</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENGR A153</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ES A202</td>
<td>Engineering Data Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>
ESM A450  Economic Analysis and Operations  3
MATH A200  Calculus I  4
MATH A201  Calculus II  4
MATH A202  Calculus III  4
MATH A231  Introduction to Discrete Mathematics  3
MATH A302  Ordinary Differential Equations  3
PHIL A305  Professional Ethics  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
STAT A307  Probability and Statistics  4

2. Choose from the following engineering science, advanced mathematics and statistics electives:  3-5
ES A208  Engineering Statics and Dynamics (5)
MATH A314  Linear Algebra (3)
MATH A371  Stochastic Processes (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)

23. Choose from the following advanced engineering electives: 15

Students are required to take 15 credits from the following list of approved CSE electives. Of the 15, at least 6 credits must be from classes with the CSCE prefix. A maximum of 3 credits is allowed from CSCE A395, a maximum of 3 credits from CSCE A495A497, and a maximum of 6 credits from CSCE A498 may be applied toward this degree requirement. Other relevant courses may be accepted by approved petition upon advisor approval.

CS A304  Object-Oriented Analysis and Modeling (3)
CS A331  Programming Language Concepts (3)
CS A351  Automata, Algorithms, and Complexity (2)
CS A360  Database Systems (3)
CS A385  Computer Graphics (3)
CS A401  Software Engineering (3)
CS A405  Artificial Intelligence (3)
CS A407  Evolutionary Computing (3)
CS A412  Computer and Data Security (3)
CS A432  Compiler Concepts and Techniques (2)
CS A448  Computer Architecture (3)
CS A480  Topics in Computer Science (3)
CS A671  Advanced Software Engineering (3)
CSE A442  VLSI Circuit Design (3)
CSE A481  Engineering Software Hardware Systems (3)
Any upper division elective with a CSCE prefix (1-4 per course)
EE/PHYS A314  Electromagnetics (3)
EE/PHYS A324  Electromagnetics II (3)
Electrical Engineering

1. Complete the following core courses (95 credits):

- CHEM A105 General Chemistry I 3
- CHEM A105L General Chemistry I Laboratory 1
- CSE A205 Introduction to C Programming for Engineers 3
- CSE A215 Object-Oriented Programming for Engineers 2
- CSE A248 Computer Organization and Assembly Language Programming 3
- CSCE A248 Computer Organization and Assembly Language Programming 3
- EE A203 Fundamentals of Electrical Engineering I 4
- EE A204 Fundamentals of Electrical Engineering II 4
- EE/CSCE A241 Computer Hardware Concepts 4
- EE A261 Matlab for Electrical Engineers 1
- EE A262 Introduction to Power Systems 3
- EE/ME A308 Instrumentation and Measurement 3
- EE/PHYS A314 Electromagnetics 3
- EE/PHYS A324 Electromagnetics II 3
- EE A324L Electromagnetics Laboratory II 1
- EE A333 Electronic Devices 4
- EE A353 Circuit Theory 3
- EE A353L Circuit Theory Laboratory 1
- EE A354 Engineering Signal Analysis 3
- EE A438 Design of Electrical Engineering Systems 3
- EE A441 Integrated Circuit Design 3
- EE A465 Telecommunications 3
- EE A471 Automatic Control 3
- ENGL A212 Technical Writing 3
- ENGR A105A Engineering Computer-Aided Design I 1
- ENGR A105B Engineering Computer-Aided Design II 1
- ENGR A151 Introduction to Engineering 1

Additional credits not shown above are necessary to satisfy General University Requirements and General Education Requirements. A total of 124-126 credits are required for the degree, of which 42 credits must be upper division.
ES A208 Engineering Statics and Dynamics 5
ES A302 Engineering Data Analysis 3
ESM A450 Economic Analysis and Operations 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. Choose from the following advanced mathematics electives:
   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)
3. Choose from the following advanced engineering electives: 12
   Students are required to take 12 credits from the following list of approved advanced engineering electives. Of the 12 credits, at least 6 of them must be from classes with the EE prefix.
   CE A403/A603 Arctic Engineering (3)
   or
   ES A411 Northern Design (3)
   Note: Only one of CE A403 or CE A603 or ES A411 can apply to the degree.
   CSCE A365 Computer Networks (3)
   CSCE A445 Computer Design and Interfacing (4)
   CSCE A465 Computer and Network Security (3)
   EE/AE A306 Dynamics of Systems (3)
   EE A407 Power Distribution (3)
   EE A451 Digital Signal Processing (3)
   EE A458 Antenna Theory (3)
   EE A462 Communication Systems (3)
4. A total of 131 credits is required for the degree, of which 42 credits must be upper division.

**Mechanical Engineering**

. . . no changes to this track
## 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>2. Course Prefix</th>
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<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours</th>
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**6. Complete Course Title**  
Introduction to Engineering  
Introduction to Engineering  
Abbreviated Title for Transcript (30 character)

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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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**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**

- No
- # of Repeats
- Max Credits

**10. Grading Basis**

- A-F
- P/NP
- NG

**11. Implementation Date**  
From: Fall/2014  
To: 99/9999

**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).

- Impacted Program/Course
- Catalog Page(s) Impacted
- Date of Coordination
- Chair/Coordinator Contacted

**Initiator Name (typed):** Dr. Steffen Peuker  
Initiator Signed Initials: _________  
Date: __________

**13b. Coordination Email**  
Date: 1/16/2013  
submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

**13c. Coordination with Library Liaison**  
Date: 1/17/2013

**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 engineering, both as a profession and as a field of study. Introduces students to the roles, responsibilities and capabilities of civil, computer systems, electrical and mechanical engineers.

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

- None

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

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

**16d. Other Restrictions(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**

Prerequisites are updated to allow students to take this introduction to engineering course as early as possible to guide them in their decision to pursue an engineering degree.

**Initiator (faculty only)**

**Initiator (TYPE NAME)**

**Initiator Signed Initials**

**Date:** __________

**Approved**

**Disapproved**

**Dean/Director of School/College**

**Date:** __________

**Approved**

**Disapproved**

**Undergraduate/Graduate Academic Board Chairperson**

**Date:** __________

**Approved**

**Disapproved**

**Provost or Designee**

**Date:** __________
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**Purge** per Paul Martin

**Purge** per T.J. Miller

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## Original GER Purge List for 2013-14 UAA Catalog with Responses

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<th>SUBJECT</th>
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<th>BANNER</th>
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<th>Was this course carried over by request from the 2013-14 purge list?</th>
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<th>COURSE IMPACTS</th>
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</table>

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Section 6 - General Education Requirements (GER)

6.1 General Education and General Course Requirements

The Associate of Arts degree program and programs at the baccalaureate level must comply with the UAA General Education Requirements specified for that program in the catalog. Associate of Applied Science degree programs and undergraduate certificate programs of 30 credits or more must have identifiable general education components in the areas of communication, computation and human relations. These components must be at the collegiate level, must require a combined effort equivalent to at least 6 academic credits (for the program), and their student learning outcomes must be assessed.

The student learning outcomes of these general requirements may be met through specific courses or through activities embedded in the major requirements. If embedded, programs will be asked to identify the number and types of exercises used to fulfill these requirements and to describe their assessment methods.

When an action involves a change in GER, the UAB will refer the action, preferably with recommendations, to the General Education Review Committee (GERC).

When an action involves a change in the GER, the faculty initiator must communicate with all affected faculty in school/colleges, community campuses (including Prince William Sound Community College), deans, and their assistants.

All GER courses must have instructional goals and assessable student learning outcomes that are consistent with the current UAA catalog GER category descriptors and the appropriate GER Student Learning Outcomes. See the Governance webpage at www.uaa.alaska.edu/governance/GER.

All GER courses are subject to ongoing review and approval through the normal Governance process on a cycle, proposed by the departments and approved by the colleges, which must not exceed 10 years.

The GERC is a standing committee of the UAB reporting to the UAB.

The GERC review process is as follows:

1. Department/school/college prepare proposal and coordinate
2. UAB agenda (first reading)
3. GER Committee of UAB
4. UAB agenda (second reading)
5. Faculty Senate (approved actions of UAB only)
6. Administration (approved actions of the UAA Faculty Senate only)

6.2 Revision of or Request for GER Course

It is advisable to write the CCG first. The information from the CCG can then be pasted into the CAR. Before developing the CCG, the following need to be considered in addition to the course content: type of course, level, number, whether it will be stacked or cross-listed, prerequisites and registration restrictions, instructor goals and student learning outcomes.

1. Additional Considerations:
   - Inter MAU coordination to facilitate transfer between campuses.
   - Courtesy coordination is recommended to determine potential transfer conflicts.
Check other campus’ catalogs to see if they have a course with the same prefix and number.

If this is the case and the course is not a GER, consider using a new, unused (at all MAUs) course number if making this course a GER at UAA. The registrar’s office can provide assistance with course number suggestions.

If a new number is inappropriate, please bring transfer concerns to the attention of the GERC.

The appropriate GER templates must be applied (www.uaa.alaska.edu/governance/)

Addresses appropriate GER student learning outcome(s) from the GER Preamble (www.uaa.alaska.edu/records/catalogs/catalogs.cfm)

1. Communicate effectively in a variety of contexts and formats;
2. Reason mathematically and analyze quantitative and qualitative data competently to reach sound conclusions;
3. Relate knowledge to the historical context in which it developed and the human problems it addresses;
4. Interpret different systems of aesthetic representation and understand their historical and cultural contexts;
5. Investigate the complexity of human institutions and behavior to better understand interpersonal, group and cultural dynamics;
6. Identify ways in which science has advanced the understanding of important natural processes;
7. Locate and use relevant information to make appropriate personal and professional decisions;
8. Adopt critical perspectives for understanding the forces of globalization and diversity; and
9. Integrate knowledge and employ skills gained to synthesize creative thinking, critical judgment and personal experience in a meaningful and coherent manner.

Meets category definition from Board of Regents Regulation (www.alaska.edu/bor/policy-regulations/)

Addresses and assesses GER student learning outcomes for the classification descriptions described in the catalog (www.uaa.alaska.edu/records/catalogs/catalogs.cfm) and this handbook

- Oral communication skills. Students:
  - develop both their message creation and message interpretation skills in order to be more successful communicators;
  - develop an awareness of the role of communication in a variety of human relationships.
  - develop and implement effective and appropriate communication skills, including the ability to develop, organize, present and critically evaluate messages; analyze audiences; and adapt to a variety of in-person communication settings.

- Quantitative skills. Students:
  - develop their algebraic, analytic and numeric skills; use them to solve applied problems.
  - correctly explain their mathematical reasoning.
  - practice methods for establishing credibility, reasoning critically and appealing to the emotions and values of their audience.
  - write for a variety of purposes and audiences by employing methods of rhetorical and cultural analysis.
  - develop the tools to read, think and write analytically about print and nonprint texts and to generate texts that engage their own perceptions while synthesizing the ideas of texts and scholars.
  - demonstrate their ability to communicate effectively by selecting form and content that fits the situation; adhering to genre conventions; adapting their voice, tone, and level of formality.
to that situation; and controlling stylistic features such as sentence variety, syntax, grammar, usage, punctuation and spelling.

- **Fine arts.** Students should be able to:
  - identify and describe works of art by reference to media employed, historical context and style, and structural principles of design and composition.
  - interpret the meaning or intent of works of art and assess their stylistic and cultural importance by reference to their historical significance, their relationship to earlier works and artists, and their overall impact of subsequent artistic work.

- **Humanities.**
  - Students who complete a *content-oriented* course in the humanities should be able to:
    - identify texts or objects, place them in the historical context of the discipline,
    - articulate the central problems they address and provide reasoned assessments of their significance.
  - Students who complete a *skills oriented* humanities course in *logic* should be able to:
    - identify the premises and conclusions of brief written arguments,
    - evaluate their soundness or cogency, and recognize common fallacies.
    - use a formal technique to determine the validity of simple deductive arguments and
    - evaluate the adequacy of evidence according to appropriate inductive standards.
  - Students who complete a *skill-oriented* humanities course in a *language* should:
    - demonstrate proficiency in listening, speaking and writing.

- **Natural sciences.** Students will:
  - Be able to apply the scientific method by formulating questions or problems, proposing hypothetical answers or solutions, testing those hypotheses, and reaching supportable conclusions.
  - demonstrate an understanding of the fundamentals of one or more scientific disciplines,
  - demonstrate a knowledge of the discoveries and advances made within that discipline, and the impact of scientific information in sculpting thought and in providing the foundations for the technology in use at various times in history.
  - Students completing the laboratory class will:
    - demonstrate the ability to work with the tools and in the settings encountered by professionals in the discipline,
    - critically observe materials, events or processes, and
    - accurately record and analyze their observations.

- **Social sciences.** Students will be able to:
  - describe the discipline she or he has studied and discuss the key principles or themes that unify it,
  - describe and contrast key scientific theories and theoretical approaches in a discipline and the ways in which these theories structure social scientists’ thinking and research,
  - demonstrate the ability to think critically about how society works and how our social realities are created by diverse social processes and cultural practices. Describe the wide range of social science data and the importance of using empiricism, both qualitative and quantitative, in making claims about the social world and in setting evidence-based social policy,
  - explain and use basic social science methods and summarize the assumptions behind the limitations of inductive or deductive approaches that might include: the formulation of research questions and hypotheses; data collection and analysis; and testing, verifying, and rejecting hypotheses.

- **Integrative capstone.** Students must:
  - demonstrate the ability to integrate knowledge by accessing, judging and comparing knowledge gained from diverse fields and by critically evaluating their own views in relation to those fields.

- Provides rationale for retaining or adding this course to the GER menu
• Integrative capstone courses that restrict registration to completion of Tier I GERs should use the following registration restriction verbiage: Completion of Tier I (basic college-level skills) courses.

Actions involving changes in GER are referred to the GERC after first reading at UAB. After GERC review and approval, the second reading takes place at UAB.

2. The following must be submitted to the Governance Office (aygov@uaa.alaska.edu):
   a. Signed CAR.
   b. Completed CCG.
      If the new or revised course affects a degree or certificate, a separate signed PAR must be submitted for each program change, together with revised catalog copy in Word using the track changes function. A Word copy of the current catalog is available on the Governance website (www.uaa.alaska.edu/records/catalogs/catalogs.cfm).
   c. Signed Fee Request Form (one per course) for courses with new, deleted or revised fees. (www.uaa.alaska.edu/governance/coordination/index.cfm). The Fee Request Form is not required if there are no changes to existing fees.

3. Coordination should be done early in the process and consists of three steps:
   a. Coordination memo or email. Coordination is required when the new course has any impact on another course or program. The faculty initiator must contact the department chair/director of every affected program and provide documentation of the changes to the affected programs upon request. Proof of coordination must be provided to the Governance Office.
      A list of impacted courses, programs and catalog references can be found by an electronic search of the UAA catalog using keywords such as MATH A172. A spreadsheet is required listing the reference, the impacted program/course/catalog copy, and the impact (program requirements, electives, selectives, course prerequisite, corequisites).
   b. The faculty initiator is also required to send an email to uaa-faculty@lists.uaa.alaska.edu explaining the revision or new course. The email must include contact information, as well as:
      • School and department (CAR boxes 1a and 1c),
      • course prefix (CAR box 2),
      • course number (CAR box 3),
      • course title (CAR box 6),
      • Add/Change/Delete and if change, a summary list of changes (CAR box 8),
      • course description (CAR box 15),
      • justification for action (CAR box 19),
      • any other relevant information.
      Do not attach the CAR/PAR or the CCG to the email. The coordination email must be sent at least 10 working days before being presented at UAB/GAB.
   c. The faculty initiator is required to send the CAR and CCG to the library liaison for that department (http://consortiumlibrary.org/find/subject_liaison_librarians).

4. GER courses are approved through the curriculum approval process outlined in section 3.
5. GER changes should have a **Fall** implementation date. In order to ensure approval is received in time, the faculty initiator should consult the curricular production calendar on the Governance website. Curriculum must have first reading at UAB by the third Friday in February to be considered for Fall implementation. It is recommended that first reading take place no later than first week in March.

6.3 Deletion of a GER Course

UAA policy states that a course may not remain on the GER list if it has not been offered successfully at least once during the past four semesters, excluding summer sessions. The **purge** list of GER courses will be provided to UAB by the Office of the Registrar each spring. Review of the GER list will be done annually by UAB in the spring semester.
<table>
<thead>
<tr>
<th>Name</th>
<th>Representing</th>
<th>Phone</th>
<th>Fax</th>
<th>E-mail</th>
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<td>Francisco Miranda</td>
<td>FS Rep. CAS</td>
<td>786-4035</td>
<td>786-4190</td>
<td><a href="mailto:fmiranda2@uaa.alaska.edu">fmiranda2@uaa.alaska.edu</a></td>
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<td>Alberta Harder</td>
<td>FS Rep. at Large</td>
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<td>786-6162</td>
<td><a href="mailto:amharder@uaa.alaska.edu">amharder@uaa.alaska.edu</a></td>
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<tr>
<td>Soren Orley</td>
<td>FS Rep. at Large</td>
<td>786-1662</td>
<td>786-4115</td>
<td><a href="mailto:seorley@uaa.alaska.edu">seorley@uaa.alaska.edu</a></td>
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<td>FS Rep. at Large</td>
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<tr>
<td>Paola Banchero</td>
<td>CAS</td>
<td>786-4194</td>
<td>786-4179</td>
<td><a href="mailto:pbanchero@ipc.alaska.edu">pbanchero@ipc.alaska.edu</a></td>
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<tr>
<td>Mari Ippolito</td>
<td>CAS</td>
<td>786-1718</td>
<td>786-4898</td>
<td><a href="mailto:mfippolito@uaa.alaska.edu">mfippolito@uaa.alaska.edu</a></td>
<td>11-13</td>
</tr>
<tr>
<td>Barbara Harville</td>
<td>CAS</td>
<td>786-4396</td>
<td>786-4888</td>
<td><a href="mailto:baharville@uaa.alaska.edu">baharville@uaa.alaska.edu</a></td>
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<tr>
<td>Len Smiley</td>
<td>CAS</td>
<td>786-1963</td>
<td>786-6162</td>
<td><a href="mailto:lmsmiley@uaa.alaska.edu">lmsmiley@uaa.alaska.edu</a></td>
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<tr>
<td>Dave Fitzgerald (Chair)</td>
<td>CBPP</td>
<td>786-4482</td>
<td>786-4115</td>
<td><a href="mailto:dafitzgerald@uaa.alaska.edu">dafitzgerald@uaa.alaska.edu</a></td>
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<td>Carol Lynn Senette</td>
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<tr>
<td>Eileen Weatherby</td>
<td>COH</td>
<td>455-2914</td>
<td></td>
<td><a href="mailto:ewweatherby@uaa.alaska.edu">ewweatherby@uaa.alaska.edu</a></td>
<td>12-14</td>
</tr>
<tr>
<td>Irasema Ortega</td>
<td>COE</td>
<td>786-4454</td>
<td></td>
<td><a href="mailto:iortega2@uaa.alaska.edu">iortega2@uaa.alaska.edu</a></td>
<td>11-13</td>
</tr>
<tr>
<td>Jeffrey Callahan</td>
<td>CTC</td>
<td>786-6425</td>
<td>786-6448</td>
<td><a href="mailto:jcallahan@uaa.alaska.edu">jcallahan@uaa.alaska.edu</a></td>
<td>12-14</td>
</tr>
<tr>
<td>Utpal Dutta</td>
<td>SOENGR</td>
<td>786-1952</td>
<td>786-1079</td>
<td><a href="mailto:udutta2@uaa.alaska.edu">udutta2@uaa.alaska.edu</a></td>
<td>12-14</td>
</tr>
<tr>
<td>Kevin Keating</td>
<td>LIB</td>
<td>786-1909</td>
<td>786-1834</td>
<td><a href="mailto:kmkeating@uaa.alaska.edu">kmkeating@uaa.alaska.edu</a></td>
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</tr>
<tr>
<td>Michael Hawfield</td>
<td>Kenai Peninsula</td>
<td>235-1611</td>
<td>235-1626</td>
<td><a href="mailto:mchawfield@kpc.alaska.edu">mchawfield@kpc.alaska.edu</a></td>
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</tr>
<tr>
<td>Joan O’Leary</td>
<td>Mat-Su College</td>
<td>745-9753</td>
<td>745-9711</td>
<td><a href="mailto:joleary@matsu.alaska.edu">joleary@matsu.alaska.edu</a></td>
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</tr>
<tr>
<td>Kathryn Hollis Buchanan</td>
<td>Kodiak</td>
<td>486-1210</td>
<td></td>
<td><a href="mailto:khollisbuchanan@kodiak.alaska.edu">khollisbuchanan@kodiak.alaska.edu</a></td>
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</tr>
<tr>
<td>Christina Stuive</td>
<td>Advising &amp; Counseling</td>
<td>262-0335</td>
<td>262-0322</td>
<td><a href="mailto:cjstuive@kpc.alaska.edu">cjstuive@kpc.alaska.edu</a></td>
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<tr>
<td>Thia Falcone</td>
<td>Adjunct faculty</td>
<td>486-1213</td>
<td>486-1250</td>
<td><a href="mailto:cafalcone@kodiak.alaska.edu">cafalcone@kodiak.alaska.edu</a></td>
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<tr>
<td>Vacant</td>
<td>USUAA</td>
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**Ex-Officios**

<table>
<thead>
<tr>
<th>Name</th>
<th>Representing</th>
<th>Phone</th>
<th>Fax</th>
<th>E-mail</th>
<th>Term</th>
</tr>
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<tbody>
<tr>
<td>Susan Kalina</td>
<td>Academic Affairs</td>
<td>786-1988</td>
<td>786-1426</td>
<td><a href="mailto:smkalina@uaa.alaska.edu">smkalina@uaa.alaska.edu</a></td>
<td></td>
</tr>
<tr>
<td>Lora Volden</td>
<td>Office of the Registrar</td>
<td>786-1560</td>
<td>786-1581</td>
<td><a href="mailto:lvolden@uaa.alaska.edu">lvolden@uaa.alaska.edu</a></td>
<td></td>
</tr>
<tr>
<td>Robert Boeckmann</td>
<td>Pres., Faculty Senate</td>
<td>786-1949</td>
<td>786-4115</td>
<td><a href="mailto:rbboeckmann@uaa.alaska.edu">rbboeckmann@uaa.alaska.edu</a></td>
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### Scheduled Meeting Dates

**Fall 2012**
- August 24, 31
- September 14, 21, 28
- October 12, 19, 26
- November 9, 16, 30
- December 14, 21, 28

**Spring 2013**
- January 11, 18, 25
- February 8, 15, 22
- March 8, 22, 29
- April 12, 19, 26

### Governance Office Staff

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
<th>Fax</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kimberly Swiante, Governance Coordinator</td>
<td>786-1994</td>
<td>786-6123</td>
<td><a href="mailto:kswiante@uaa.alaska.edu">kswiante@uaa.alaska.edu</a></td>
</tr>
<tr>
<td>Administrative Assistant</td>
<td>786-1945</td>
<td>786-6123</td>
<td><a href="mailto:UAA_gov@uaa.alaska.edu">UAA_gov@uaa.alaska.edu</a></td>
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