CHANGE COURSE (MAJOR) and DROP COURSE PROPOSAL

SUBMITTED BY:

Department: CEE
Prepared by: Andrew Metzger
Email Contact: atmetzger@alaska.edu

College/Sch ool:
Phone: 907.474.6120
Faculty Contact: Andrew T. Metzger

1. COURSE IDENTIFICATION:
Dept: CE Course #: 434 No. of Credits: 3

2. ACTION DESIRED:
Change Course: X If Change, indicate below
Drop Course

NUMBER
PREQUISITES
CREDITS (including credit distribution)
CROSS-LISTED
STACKED (400/600)
OTHER (please specify)

TITLE
FREQUENCY OF OFFERING
X

COURSE CLASSIFICATION

(Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)

Dep t.

Other:
Change to a (3+0) course; the lab for this course has not been offered for several years, and will not be offered in the future. Offered fall of odd-numbered years

3. COURSE FORMAT:
NOTE: Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school's curriculum council. Furthermore, any core course compressed to less than six weeks must be approved by the core review committee.

COURSE FORMAT: (check all that apply)
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ 6 weeks to full semester

OTHER FORMAT (specify all that apply):
Mode of delivery:
(specify lecture, field trips, labs, etc)

lecture

4. COURSE CLASSIFICATIONS: (undergraduate courses only. Use approved criteria found on Page 10 & 17 of the manual. If justification is needed, attach on separate sheet.)
H = Humanities S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core? YES ☐ NO ☒ X

IF YES, check which core requirements it could be used to fulfill:
G = Oral Intensive, W = Writing Intensive, Natural Science, Format 6 also submitted Format 7 submitted Format 8 submitted

5. COURSE REPEATABILITY:
Is this course repeatable for credit? YES ☐ NO ☒ X

Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time).

How many times may the course be repeated for credit?

If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course? ☐ CREDITS
6. **CURRENT CATALOG DESCRIPTION AS IT APPEARS IN THE CATALOG:** including dept., number, title and credits

| CE 434 | Timber Design |
| 3 Credits | Offered As Demand Warrants |
Prerequisites: CE F331; ES F331. (2+3)

7. **COMPLETE CATALOG DESCRIPTION AS IT WILL APPEAR WITH THESE CHANGES:** (Underline new wording through old wording and use complete catalog format including dept., number, title, credits and cross-listed and stacked.) **PLEASE SUMMIT NEW COURSE SYLLABUS.** For stacked courses the syllabus must clearly indicate differences in required work and evaluation for students at different levels.

| CE 434 | Timber Design |
| 3 Credits | Offered As Demand Warrants Offered Fall of Odd-numbered Years |
Prerequisites: CE F331; ES F331. (2+3) (3+0)

8. **IS THIS COURSE CURRENTLY CROSS-LISTED?**

| YES/NO | NO |
| If Yes, DEPT | |
| NUMBER | |

(Requires written notification of each department and dean involved. Attach a copy of written notification.)

9. **GRADING SYSTEM:** Specify only one

| LETTER | X |
| PASS/FAIL: | |

10. **ESTIMATED IMPACT**

What impact, if any, will this have on budget, facilities/space, faculty, etc.

none

11. **LIBRARY COLLECTIONS**

Have you contacted the library collection development officer (kljensen@alaska.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

| No | Yes | X |

12. **IMPACTS ON PROGRAMS/DEPTS:**

What programs/departments will be affected by this proposed course? Include information on the Programs/Departments contacted (e.g., email, memo)

Civil Engineering Department

13. **POSITIVE AND NEGATIVE IMPACTS**

Please specify positive and negative impacts on other courses, programs and departments resulting from the proposed action.

Experience has shown us that class enrollment will increase if Timber Design is offered every-other year. We believe this plan is a better use of faculty resources. There are no perceived negative impacts with this change.

**JUSTIFICATION FOR ACTION REQUESTED**

The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. If you ask for a change in # of credits, explain why; are you increasing the amount of material covered in the class? If you drop a prerequisite, is it because the material is covered elsewhere? If course is changing to stacked (400/600), explain higher level of effort and performance required on part of students earning graduate credit. Use as much space as needed to fully justify the proposed change and explain what has been done to ensure that the quality of the course is not compromised as a result.
This course has traditionally been listed as a (2+3) course and “As Demand Warrants”. Demand over the last four years has been high enough to justify offering the course every-other year. All indications are that this will continue into the future. A review of CEE curriculum courses, both required and elective, revealed that the Timber Design course could be offered fall of odd-numbered years with little or no disruption to other courses or student’s ability to take required courses.

This course teaches the theory of design of timber structures as well as the practice of same. The practice of timber design and construction is outlined in the American Wood Council, National Design Standard (NDS). This standard has grown over the last decade and contains considerably more information than earlier editions. Because of this, it has become apparent that the student’s time is better spent learning the NDS code, required for engineering practice upon employment, than performing lab exercises. The lab has not been taught for several years. The proposed change will accurately reflect how the course has been offered over the last several years, and how we intend to offer it in the future.

**APPROVALS:**

<table>
<thead>
<tr>
<th>Signature, Chair, Program/Department of:</th>
<th>Date 2-11-15</th>
</tr>
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<tbody>
<tr>
<td>CIVIL &amp; ENV. ENG.</td>
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<thead>
<tr>
<th>Signature, Chair, College/School Curricul Council for:</th>
<th>Date 2/20/11</th>
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<tbody>
<tr>
<td>CEM</td>
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<tr>
<th>Signature, Dean, College/School of:</th>
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<td></td>
</tr>
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Signature of Provost (if applicable)
Offerings above the level of approved programs must be approved in advance by the Provost.

**ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE.**

<table>
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<tr>
<th>Signature, Chair, UAF Faculty Senate Curriculum Review Committee</th>
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**ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)**

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ATTACH COMPLETE SYLLABUS (as part of this application).

Note: The guidelines are online: http://www.uaf.edu/uafgov/faculty/od/syllabus.html
The department and campus wide curriculum committees will review the syllabus to ensure that each of the items listed below are included. If items are missing or unclear, the proposed course change will be denied.

SYLLABUS CHECKLIST FOR ALL UAF COURSES
During the first week of class, instructors will distribute a course syllabus. Although modifications may be made throughout the semester, this document will contain the following information (as applicable to the discipline):

1. Course information:
   □ Title, □ number, □ credits, □ prerequisites, □ location, □ meeting time 
   (make sure that contact hours are in line with credits).
2. Instructor (and if applicable, Teaching Assistant) information:
   □ Name, □ office location, □ office hours, □ telephone, □ email address.
3. Course readings/materials:
   □ Course textbook title, □ author, □ edition/publisher.
   □ Supplementary readings (indicate whether □ required or □ recommended) and
   □ any supplies required.
4. Course description:
   □ Content of the course and how it fits into the broader curriculum;
   □ Expected proficiencies required to undertake the course, if applicable.
   □ Inclusion of catalog description is strongly recommended, and
   □ Description in syllabus must be consistent with catalog course description.
5. □ Course Goals (general), and (see #6)
6. □ Student Learning Outcomes (more specific)
7. Instructional methods:
   □ Describe the teaching techniques (e.g., lecture, case study, small group discussion, private instruction, studio instruction, values clarification, games, journal writing, use of Blackboard, audio/video conferencing, etc.).
8. Course calendar:
   □ A schedule of class topics and assignments must be included. Be specific so that it is clear that the instructor has thought this through and will not be making it up on the fly (e.g. it is not adequate to say "lab". Instead, give each lab a title that describes its content). You may call the outline Tentative or Work in Progress to allow for modifications during the semester.
9. Course policies:
   □ Specify course rules, including your policies on attendance, tardiness, class participation, make-up exams, and plagiarism/academic integrity.
10. Evaluation:
    □ Specify how students will be evaluated, □ what factors will be included, □ their relative value, and
    □ how they will be tabulated into grades (on a curve, absolute scores, etc.)
11. Support Services:
    □ Describe the student support services such as tutoring (local and/or regional) appropriate for the course.
12. Disabilities Services:
The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials.
   □ State that you will work with the Office of Disabilities Services (208 WHIT, 474-5655) to provide reasonable accommodation to students with disabilities."
UNIVERSITY OF ALASKA FAIRBANKS
DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING

CE 434 Timber Design – Fall 2009
3 credit hours

Instructor: Paul V. Perreault, MSCE, PE
Duckering 345
Cell: 322-4753
E-mail: ftpvp@uaf.edu

Class Time: 9:15am – 10:15am MWF
At (currently shown as) Duckering Room 347

Office Hours: M, W 1:00p-3:00p

Prerequisites: CE F331, ES F331

Required Texts:


Required Reference:
(meaning – know where you can find one to use – but you do not need to buy it.)


Course Goals: This class is designed to be a first-course in the design of timber structural components and assemblies as used in building construction. General design philosophy as well as building components and load paths will be discussed. Concepts surrounding wood as a building material will be explored. The design of elementary building components using dimensioned and engineered lumber
will be studied. Means of connecting timber elements and assemblies will also be studied.

Student Learning Outcomes: The student should leave the course with knowledge of how to use NDS Design Supplements to design timber structural elements. The level of competency should be consistent with an entry-level practicing engineer and Professional Engineering Exam questions on the topic.

Instructional methods: material will be taught through lecture

Course Content:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LRFD Design Criteria/ Building Codes</td>
</tr>
<tr>
<td>2</td>
<td>Loads and Load Combinations</td>
</tr>
<tr>
<td>3</td>
<td>Parts of a load-bearing-wall building; Load paths</td>
</tr>
<tr>
<td>4</td>
<td>Wood</td>
</tr>
<tr>
<td></td>
<td>What is wood?</td>
</tr>
<tr>
<td></td>
<td>Species of Wood/ Availability</td>
</tr>
<tr>
<td></td>
<td>Properties of wood</td>
</tr>
<tr>
<td>5</td>
<td>Wood as a building material</td>
</tr>
<tr>
<td>6</td>
<td>Dimensioned Lumber (Sawn Lumber)</td>
</tr>
<tr>
<td></td>
<td>Beam Design</td>
</tr>
<tr>
<td>7</td>
<td>Column/ Beam-Column Design</td>
</tr>
<tr>
<td>8</td>
<td>Connections</td>
</tr>
<tr>
<td>9</td>
<td>Built-up members</td>
</tr>
<tr>
<td>10</td>
<td>Engineered Lumber</td>
</tr>
<tr>
<td>11</td>
<td>Glued-Laminated-Beams (GLB)</td>
</tr>
<tr>
<td>12</td>
<td>Engineered wood products</td>
</tr>
<tr>
<td></td>
<td>Plywood</td>
</tr>
<tr>
<td>13</td>
<td>Assemblies</td>
</tr>
<tr>
<td></td>
<td>Diaphragms</td>
</tr>
<tr>
<td>14</td>
<td>Shear walls</td>
</tr>
<tr>
<td></td>
<td>Connections</td>
</tr>
<tr>
<td>15</td>
<td>Dynamic Loading</td>
</tr>
<tr>
<td></td>
<td>Wind &amp; Seismic loads</td>
</tr>
</tbody>
</table>

Evaluation: Grades are based on absolute scores

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>40%</td>
</tr>
<tr>
<td>Mid Term Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam (Comprehensive)</td>
<td>40%</td>
</tr>
</tbody>
</table>

Homework is due one week after it is assigned. Please do not email the homework. Submit hard-copies of your homework during the normal class period when due.

Expect exams to have an in-class component and take home design component due one week after it is assigned
Course Policies: Regular attendance and participation is expected, as well as professional behavior in class (show up on time, no talking during class, no walking out of/back in to class, no wearing headphones, no texting, and cells phones and computers are to be turned off in class, no eating in class – drinks are permissible).

Disability Services: The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insured that UAF students have equal access to the campus and course materials. We will work with the Office of Disability Services (203 WHIT, 474-7043) to provide reasonable accommodations to students with disabilities.
# CHANGE COURSE (MAJOR) and DROP COURSE PROPOSAL

**SUBMITTED BY:**

<table>
<thead>
<tr>
<th>Department</th>
<th>CEE</th>
<th>College/School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepared by</td>
<td>Andrew Metzger</td>
<td>Phone</td>
</tr>
<tr>
<td>Email Contact</td>
<td><a href="mailto:atmetzger@alaska.edu">atmetzger@alaska.edu</a></td>
<td>Faculty Contact</td>
</tr>
</tbody>
</table>

1. **COURSE IDENTIFICATION:**

| Dept | CE | Course # | 434 | No. of Credits | 3 |

| COURSE TITLE | Timber Design |

2. **ACTION DESIRED:**

- Change Course: □
- If Change, indicate below what change.
- Drop Course: □

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>PREQUISITES</th>
<th>CREDITS (including credit distribution)</th>
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<th>STACKED (400/600)</th>
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<td></td>
<td></td>
<td></td>
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</table>

3. **COURSE FORMAT.**

NOTE: Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school’s curriculum council. Furthermore, any core course compressed to less than six weeks must be approved by the core review committee.

<table>
<thead>
<tr>
<th>COURSE FORMAT:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6 weeks to full semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHER FORMAT (specify all that apply):</td>
<td>lecture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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4. **COURSE CLASSIFICATIONS:** (undergraduate courses only. Use approved criteria found on Page 10 & 17 of the manual. If justification is needed, attach on separate sheet.)

<table>
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<th>H = Humanities</th>
<th>S = Social Sciences</th>
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<tr>
<td>YES</td>
<td>NO</td>
</tr>
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</table>

If YES, check which core requirements it could be used to fulfill:

- O = Oral Intensive
- W = Writing Intensive

5. **COURSE REPEATABILITY:**

<table>
<thead>
<tr>
<th>Is this course repeatable for credit?</th>
<th>YES</th>
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Justification: Indicate why the course can be repeated
(for example, the course follows a different theme each time).

How many times may the course be repeated for credit?

If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course?

CREDITS
6. CURRENT CATALOG DESCRIPTION AS IT APPEARS IN THE CATALOG: including dept., number, title and credits

CE 434 Timber Design
3 Credits Offered As Demand Warrants
Prerequisites: CE F331; ES F331. (2+3)

7. COMPLETE CATALOG DESCRIPTION AS IT WILL APPEAR WITH THESE CHANGES: (Underline new wordingstrike-through-old-wording and use complete catalog format including dept., number, title, credits and cross-listed and stacked.) PLEASE SUBMIT NEW COURSE SYLLABUS. For stacked courses the syllabus must clearly indicate differences in required work and evaluation for students at different levels.

CE 434 Timber Design
3 Credits Offered As Demand Warrants Offered Fall of Odd-numbered Years
Prerequisites: CE F331; ES F331. (2+3) (3+0)

8. IS THIS COURSE CURRENTLY CROSS-LISTED?

YES/NO NO If Yes, DEPT NUMBER
(Requires written notification of each department and dean involved. Attach a copy of written notification.)

9. GRADING SYSTEM: Specify only one

LETTER: X PASS/FAIL: 

10. ESTIMATED IMPACT
WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

none

11. LIBRARY COLLECTIONS
Have you contacted the library collection development officer (kljensen@alaska.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

No Yes X

12. IMPACTS ON PROGRAMS/DEPTS:
What programs/departments will be affected by this proposed action? Include information on the Programs/Departments contacted (e.g., email, memo)

Civil Engineering Department

13. POSITIVE AND NEGATIVE IMPACTS
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This course teaches the theory of design of timber structures as well as the practice of same. The practice of timber design and construction is outlined in the American Wood Council, National Design Standard (NDS). This standard has grown over the last decade and contains considerably more information than earlier editions. Because of this, it has become apparent that the student's time is better spent learning the NDS code, required for engineering practice upon employment, than performing lab exercises. The lab has not been taught for several years. The proposed change will accurately reflect how the course has been offered over the last several years, and how we intend to offer it in the future.

APPROVALS:

Signature, Chair, Program/Department of: CIVIL & ENV. ENG

Date 2-11-11

Signature, Chair, College/School Curriculum Council for: CEM

Date 2/20/11

Signature, Dean, College/School of: CEM

Date 2/21/11

Signature of Provost (if applicable)

Offerings above the level of approved programs must be approved in advance by the Provost.

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE.

Signature, Chair, UAF Faculty Senate Curriculum Review Committee

Date

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

Signature, Chair, Program/Department of:

Date

Signature, Chair, College/School Curriculum Council for:

Date

Signature, Dean, College/School of:

Date
ATTACH COMPLETE SYLLABUS (as part of this application).

Note: The guidelines are online: http://www.uaf.edu/ufgov/faculty/cd/syllabus.html

The department and campus wide curriculum committees will review the syllabus to ensure that each of the items listed below are included. If items are missing or unclear, the proposed course change will be denied.

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During the first week of class, instructors will distribute a course syllabus. Although modifications may be made throughout the semester, this document will contain the following information (as applicable to the discipline):

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   - Title, number, credits, prerequisites, location, meeting time (make sure that contact hours are in line with credits).

2. Instructor (and if applicable, Teaching Assistant) information:
   - Name, office location, office hours, telephone, email address.

3. Course readings/materials:
   - Course textbook title, author, edition/publisher.
   - Supplementary readings (indicate whether required or recommended) and any supplies required.

4. Course description:
   - Content of the course and how it fits into the broader curriculum;
   - Expected proficiencies required to undertake the course, if applicable.
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5. Course Goals (general), and (see #6)

6. Student Learning Outcomes (more specific)

7. Instructional methods:
   - Describe the teaching techniques (eg: lecture, case study, small group discussion, private instruction, studio instruction, values clarification, games, journal writing, use of Blackboard, audio/video conferencing, etc.).

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UNIVERSITY OF ALASKA FAIRBANKS
DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING

CE 434 Timber Design – Fall 2009
3 credit hours

Instructor: Paul V. Perreault, MSCE, PE
Duckering 345
Cell: 322-4753
E-mail: ftpvp@uaf.edu

Class Time: 9:15am – 10:15am MWF
At (currently shown as) Duckering Room 347

Office Hours: M, W 1:00p-3:00p

Prerequisites: CE F331, ES F331

Required Texts:


Required Reference:
(meaning – know where you can find one to use – but you do not need to buy it.)


Course Goals: This class is designed to be a first-course in the design of timber structural components and assemblies as used in building construction. General design philosophy as well as building components and load paths will be discussed. Concepts surrounding wood as a building material will be explored. The design of elementary building components using dimensioned and engineered lumber
will be studied. Means of connecting timber elements and assemblies will also be studied.

Student Learning Outcomes: The student should leave the course with knowledge of how to use NDS Design Supplements to design timber structural elements. The level of competency should be consistent with an entry-level practicing engineer and Professional Engineering Exam questions on the topic.

Instructional methods: material will be taught through lecture

Course Content:

| Week 1     | LRFD Design Criteria/ Building Codes                  |
| Week 2     | Loads and Load Combinations                          |
| Week 3     | Parts of a load-bearing-wall building; Load paths    |
| Week 4     | Wood                                                |
|            | What is wood?                                       |
|            | Species of Wood/ Availability                       |
|            | Properties of wood                                  |
| Week 5     | Wood as a building material                         |
| Week 6     | Dimensioned Lumber (Sawn Lumber)                    |
|            | Beam Design                                         |
| Week 7     | Column/ Beam-Column Design                          |
| Week 8     | Connections                                         |
| Week 9     | Built-up members                                    |
| Week 10    | Engineered Lumber                                   |
| Week 11    | Glued-Laminated-Beams (GLB)                          |
| Week 12    | Engineered wood products                            |
|            | Plywood                                             |
| Week 13    | Assemblies                                          |
|            | Diaphragms                                          |
| Week 14    | Shear walls                                         |
|            | Connections                                         |
| Week 15    | Dynamic Loading                                     |
|            | Wind & Seismic loads                                |

Evaluation: Grades are based on absolute scores

| Homework | 40% |
| Mid Term Exam | 20% |
| Final Exam (Comprehensive) | 40% |

Homework is due one week after it is assigned. Please do not email the homework. Submit hard-copies of your homework during the normal class period when due.

Expect exams to have an in-class component and take home design component due one week after it is assigned
Course Policies: Regular attendance and participation is expected, as well as professional behavior in class (show up on time, no talking during class, no walking out of/back in to class, no wearing headphones, no texting, and cells phones and computers are to be turned off in class, no eating in class – drinks are permissible).

Disability Services: The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insured that UAF students have equal access to the campus and course materials. We will work with the Office of Disability Services (203 WHIT, 474-7043) to provide reasonable accommodations to students with disabilities.