Undergraduate Academic Board
Agenda

February 9, 2007
ADM 204
2:00 – 5:00 pm

I. Roll

( ) Barbara Brown  ( ) Gerry Busch  ( ) Len Smiley
( ) Ben Curtis  ( ) Grant Baker  ( ) Roy Poole
( ) Brad Bradshaw  ( ) Hilary Davies  ( ) Stephen Gillon
( ) Caedmon Liburd  ( ) Hilary Seitz  ( ) USUAA Vacant
( ) Catherine Sullivan  ( ) Jack Pauli  ( ) Toni Croft
( ) Cheryl Smith  ( ) Kevin Keating  ( ) FS Vacant

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

III. Approval of Meeting Summary for January 26, 2007 (pg. 3-5)

IV. Administrative Report

V. Chair’s Report

   A. GER Chairs Report- Ben Curtis

VI. Program/Course Action Request – Second Reading

   A. CAS

       Chg  PSY  A111  General Psychology (3 cr) (3+0) (pg. 6-11)

       Chg  PSY  A150  Lifespan Development (3 cr) (3+0) (pg. 12-18)

VII. Program/Course Action Request – First Reading

       Chg  MUS  A140  Fingerstyle Guitar I (2 cr) (2+0) (pg.19-23)
       Chg  MUS  A141  Fingerstyle Guitar II (2 cr) (2+0) (pg. 24-29)
       Add  HCA  A194  Personal Care Attendant to Certified Nurse Aide Bridge (4 cr) (3+2)
                   (pg. 30-37)
       Chg  ES  A341  Fluid Mechanics (3 cr) (3+0) (pg. 38-43)
       Chg  ES  A341L Fluid Mechanics Laboratory (1 cr) (0+1) (pg. 44-48)
Chg CE A441 Introduction to Environmental Engineering (3 cr) (3+0) (pg. 49-53)

Add CE A403 Arctic Engineering (3 cr) (3+0) (stacked w/ A603) (pg. 54-59)

Chg Bachelor of Science Civil Engineering (pg. 60-68)

Add Occupational Endorsement Certificate, Logistics (pg. 69-81)

Chg MATH A054 Prealgebra (3cr) (3+0) (pg. 82-86)

Chg RADT A131 Radiographic Procedures I (3 cr) (2+3) (pg. 87-100)

Chg RADT A132 Radiographic Procedures II (3 cr) (2+3) (pg. 101-118)

Chg RADT A132 Radiographic Procedures III (3 cr) (2+2) (pg. 119-128)

Chg RADT A195A Radiography Practicum (2 cr) (1+8) (pg. 129-136)

Chg RADT A195B Radiography Practicum II (3 cr) (1+16) (pg. 137-143)

Chg RADT A195C Radiography Practicum III (3 cr) (1+13) (pg. 144-150)

VIII. Old Business

IX. New Business

A. Honors College Proposal (pg. 151-153)
B. Priority Registration (pg. 154)

X. Informational Items and Adjournment

A. Curriculum Log

B. Curriculum Handbook

C. Purge List is now available online http://www.uaa.alaska.edu/governance/
I. Roll

(x) Barbara Brown  (x) Gerry Busch  (x) Len Smiley
(x) Ben Curtis  ( ) Grant Baker  (x) Roy Poole
( ) Brad Bradshaw  (x) Hilary Davies  (x) Stephen Gillon
(x) Caedmon Liburd  (x) Hilary Seitz  ( ) USUAA Vacant
(x) Catherine Sullivan  (x) Jack Pauli  ( ) Toni Croft
( ) Cheryl Smith  (x) Kevin Keating  ( ) FS Vacant

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

III. Approval of Meeting Summary for January 19, 2007 (pg. 3-5)  
Approved

IV. Administrative Report  
Board of Regents will meet in Homer next month  
1 degree program will be discussed

V. Chair’s Report  
A. GER Chairs Report- Ben Curtis  
Jazz 124 unanimously approved  
MUS/AKNS 215 approved  
Brought template forward for review

VI. Program/Course Action Request – Second Reading  
A. CBPP  
Chg Small Business Certificate (pg. 6-15)  
Approved

B. CAS  
Chg PSY A111 General Psychology (3 cr) (3+0)  
No revisions received

Chg PSY A150 Lifespan Development (3 cr) (3+0)  
No revisions received

Add CHEM A460 Chemical Ecotoxicology (3 cr) (3+0) (stacked with CHEM A660)  
(pg. 33-50)
Approved

Chg MUS A124 History of Jazz (3 cr) (3+0) (pg. 51-55)

Chg MUS A215 Music of Alaska Natives and Indigenous Peoples of Northern Regions (3 cr) (3+0) (cross listed w/ AKNS A215) (pg. 56-62)

Chg AKNS A215 Music of Alaska Natives and Indigenous Peoples of Northern Regions (3 cr) (3+0) (cross listed w/ MUS A215) (pg. 63-68)

Chg MUS A313 Opera Workshop (2 cr) (2+0) (pg. 69-73)

Chg Bachelor of Music, Performance (pg. 74-81)

C. CHSW

Chg SWK A481 Case Management in Social Work Practice (3 cr) (3+0) (pg. 16-25)

Chg Bachelor of Social Work (pg. 26-32)

Add DLS A101 Introduction to Children’s Residential Care (3 cr) (2+1) (pg. 82-88)

Add DLS A201 Skill Basics in Residential Services (3 cr) (2+1) (pg. 89-93)

Add DLS A205 Teaching Social Skills to Youth in Residential Care (4 cr) (2+2) (pg. 94-99)

Add DLS A206 Positive Behavioral Supports in Residential Youth Care (3 cr) (2+1) (pg. 100-103)

Add DLS A385 Working with Traumatized Children (3 cr) (2+1) (pg. 104-108)

Add Occupational Endorsement Certificate, Residential Services (pg. 109-123)

VII. Program/Course Action Request – First Reading

VIII. Old Business
IX. New Business

A. GERC Templates (pg. 124-139)
   All templates approved

B. Honors College Proposal (pg. 140-142)
   Resource concerns- what budget impact is it going to have on other programs?
   More on academic requirements that will be required from the students
   Will ask provost to attend

X. Informational Items and Adjournment

A. Curriculum Log

B. Curriculum Handbook

C. Purge List is now available online http://www.uaa.alaska.edu/governance/

Meeting Adjourned
Curriculum Action Request  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course or Program of Study

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS CAS</td>
<td>ASSC Division of Social Science</td>
<td>PSY</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/CEU</th>
<th>5b. Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY</td>
<td>A111</td>
<td></td>
<td>3.0</td>
<td>(Lecture + Lab) (3.+0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Complete Course/Program Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Psychology</td>
</tr>
</tbody>
</table>

Abbr. Title for Transcript (30 character)

<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>8. Type of Action</th>
<th>9. Repeat Status No</th>
<th># of Repeats</th>
<th>Max Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>Course</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
<th>11. Implementation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-F</td>
<td>semester/year</td>
</tr>
<tr>
<td>P/NP</td>
<td>From: 8/2007</td>
</tr>
<tr>
<td>NG</td>
<td>To: 12/9999</td>
</tr>
</tbody>
</table>

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

| 13. List any programs or college requirements that require this course |
| BS/BA in Psychology |

| 14. Coordinate with Affected Units: |
| UAA Deans; Directors of Mat-Su College, KPC, Kodiak College & PWSCC. |

<table>
<thead>
<tr>
<th>15. General Education Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
</tr>
<tr>
<td>Fine Arts</td>
</tr>
</tbody>
</table>

| 16. Course Description |
| Introduces methods, theories, and research in the psychological sciences. Core topics include psychological research methods, biopsychology, learning, cognition, lifespan development, personality, psychological disorders, and social psychology. |

<table>
<thead>
<tr>
<th>17a. Course Prerequisite(s) (list prefix and number)</th>
<th>17b. Test Score(s)</th>
<th>17c. Co-requisite(s) (concurrent enrollment required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>N/A</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17d. Other Restriction(s)</th>
<th>17e. Registration Restriction(s) (non-codable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>College</td>
<td>Major</td>
</tr>
</tbody>
</table>

| 18. Mark if course has fees |

| 19. Justification for Action |
| Updating the course description and course content guide to keep the course current. |

---

Initiator (faculty only)  Date  
Approved  Disapproved:  
Approved  Disapproved:  
Department Chairperson  Date  
Approved  Disapproved:  
Curriculum Committee Chairperson  Date  
Approved  Disapproved:  
Dean/Director of School/College  Date  
Approved  Disapproved:  
Undergraduate or Graduate Academic Board Chairperson  Date  
Approved  Disapproved:  
Provost or Designee  Date
UNIVERSITY OF ALASKA ANCHORAGE
COURSE CONTENT GUIDE

I. Initiation Date: January 2007

II. Course Information:
   A. College: College of Arts and Sciences
   B. Course Title: General Psychology
   C. Course Subject/Number: PSY A111
   D. Credit Hours: 3.0 credits
   E. Contact Time: 3 + 0 hours per week
   F. Grading Information: A-F
   G. Course Description: Introduces methods, theories, and research in the psychological sciences. Core topics include psychological research methods, biopsychology, learning, cognition, lifespan development, personality, psychological disorders, and social psychology.
   H. Status of course relative to degree or certificate programs:
      Required for B.A. or B.S. degree in psychology; applies toward Social Science requirement of GER.
   I. Course Attributes: Applies toward UAA GER Social Science requirement.
   J. Lab Fees: None
   K. Coordination: Extended campuses
   L. Course Prerequisite: None
   M. Registration Restriction: None

III. Course Activities:
   This class is delivered in a traditional-lecture format or a distance-delivery format. In either case, it is principally instructor-driven and lecture-oriented. On occasion, lecture can be supplemented with other activities.

IV. Evaluation:
   At least 95% of a student’s grade will be based on individual performance on quizzes, exams and written assignments. Other criteria (e.g., classroom participation, group activities) can account for up to 5% of the grade, with extra-credit activities accounting for no more than 3%.

V. Course-level Justification:
   This class is appropriate at the 100-level because it (a) has no prerequisites, and (b) presents a broad survey of several different areas of psychology.
VI. Outline

A. Core Topics
(Instructors must devote at least 1/15th of lectures and exams to each of the following 8 topics, and all of the subtopics.)

1) Introduction to the scope and methods of psychology:
   a) Roots and scope of modern psychology
   b) Major perspectives in psychology (e.g., Biophysical)
   c) Major themes in psychology (e.g., Nature and Nurture)
   d) Research design: Descriptive, correlational and experimental
   e) Research analysis: Basic statistical methods

2) Biological psychology
   a) Neural transmission
   b) Neurotransmitters
   c) Nervous systems
   d) Brain structures and functions

3) Cognition
   a) Memory
   b) Decision-making
   c) Language development
   d) Intelligence

4) Learning
   a) Classical conditioning
   b) Operant conditioning
   c) Social learning

5) Developmental Psychology:
   a) Physiological development:
   b) Psychosocial development
   c) Cognitive development

6) Personality Psychology
   a) Trait theories
   b) Psychoanalytic theories
   c) Humanistic theories
   d) Behavioral theories

7) Psychopathology and Psychological well-being
   a) Anxiety disorders
   b) Affective disorders
   c) Schizophrenic disorders
   d) Personality disorders

8) Social Psychology
   a) Social thinking (e.g., attitudes and attributions)
   b) Social influence (e.g., conformity and compliance)
   c) Social relations (e.g., attraction and altruism)

B. Optional Topics:
(Instructors can devote no more than $\frac{2}{15}$th of the semester to any of the following topics.)

1) Sensation & Perception
2) Consciousness
3) Motivation and Emotion
4) Stress and Health
5) Positive psychology and psychological well-being
6) Therapeutic assessment and interventions
7) Nature-Nurture
8) Evolutionary psychology

VII. Instructional Goals and Defined Outcomes

A. Instructional Goals: The instructor will:

1) Orient students toward the historical roots, dominant perspectives, major issues and key sub-disciplines of the modern psychological sciences.
2) Describe the differences among (a) subjective, non-scientific ideas about behavior and mental processes, (b) scientifically-derived hypotheses, and (c) empirically-supported conclusions.
3) Describe how the scientific method is applied to the psychological sciences, introducing the advantages and limitations of different types of research designs (i.e., case studies, surveys, correlational studies, and experiments), and different approaches to data collection (i.e., naturalistic observation and obtrusive observation).
4) Provide examples of theories, methods, and empirically-supported conclusions about the core topics in the psychological sciences (i.e., biological bases, learning, cognition, lifespan development, personality, psychological well-being, and social influences).
5) Show the application of the material to the lives of students and the diversity among people in the world around them.

B. Defined Outcomes: Students should be able to:

1) Describe the historical roots, dominant perspectives, major issues, and key sub-disciplines of the modern psychological sciences.
2) Demonstrate an understanding of (a) the problems of human subjectivity and biases in non-scientific impressions about human behavior and mental processes, and (b) the value of formal hypotheses that can be tested and either verified or rejected with systematic/objective observations of behaviors/processes.
3) Describe the differences between (a) non-empirical truth claims (e.g., subjective opinions, anecdotal observations, commonsense) and (b) empirical truth claims that are based on application of the scientific methods of survey research, correlational approaches and experimental designs.
4) Demonstrate an introductory knowledge of social science methods, including systematic observation of behavior and mental processes; empirical data analysis and quantitative reasoning using central
tendency, variability and correlation; theoretical models about core topics in the psychological sciences (i.e., biological bases, learning, cognition, lifespan development, personality, psychological well-being, and social influences).

5) Demonstrate sufficient understanding of empirical findings about both normal and abnormal behaviors/processes in the core topics of the psychological sciences, and how that knowledge applies to the diversity of people in the world around them.

VIII. Suggested Texts:

IX. Bibliography and Resources
A. *PsychInfo* (Consortium Library online database of psychological articles)
Curriculum Coordination Form

Notification Date: October 26, 2006

Initiating unit: PSY

Affected unit(s): UAA Deans; Directors of Mat-Su College, KPC, Kodiak College & PWSCC

Course Prefix and Number: PSY A111  Previous Prefix and Number:

Complete Course/Program Title: General Psychology

Previous Course/Program Title: same

Description of Action: Updating the course description and course content guide to keep the course current.

Supporting documentation of the proposal is attached.

Initiating faculty are also REQUIRED to send an email to uaa-faculty@uaa.alaska.edu describing the proposal, including the proposed action and the course prefix, number, course description, prerequisite, and any other relevant information.

Any questions concerning the proposed changes may be addressed to the appropriate department chair, or the chair of the appropriate curriculum committee. Written comments may also be sent to the UAB or GAB, in care of the Governance Office, at the following address:

University of Alaska Anchorage
Governance Office, ADM 213
3211 Providence Drive
Anchorage, AK 99508

If no written comments are received by the UAB or GAB within ten (10) days of notification date shown above, it is assumed that there are no objections to the proposal.

Note: Acknowledgement of coordination does not mean approval, it is only meant to verify that coordination has occurred.
<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1a. School or College</strong></td>
<td><strong>1b. Division</strong></td>
<td><strong>1c. Department</strong></td>
<td><strong>2. Course Prefix</strong></td>
<td><strong>3. Course Number</strong></td>
<td><strong>4. Previous Course Prefix &amp; Number</strong></td>
<td><strong>5a. Credits/CEU</strong></td>
<td><strong>5b. Contact Hours</strong></td>
</tr>
<tr>
<td>AS CAS</td>
<td>ASSC Division of Social Science</td>
<td>PSY</td>
<td>PSY</td>
<td>A150</td>
<td></td>
<td>3.0</td>
<td>(Lecture + Lab) (3.+0)</td>
</tr>
<tr>
<td><strong>6. Complete Course/Program Title</strong></td>
<td><strong>Abbreviated Title for Transcript (30 character)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifespan Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>7. Type of Course</strong></td>
<td><strong>8. Type of Action</strong></td>
<td><strong>9. Repeat Status No</strong></td>
<td><strong># of Repeats</strong></td>
<td><strong>Max Credits</strong></td>
<td><strong>10. Grading Basis</strong></td>
<td><strong>11. Implementation Date</strong></td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>Add</td>
<td>No</td>
<td>0</td>
<td>3</td>
<td>A-F</td>
<td>semester/year</td>
<td></td>
</tr>
<tr>
<td>Non-credit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P/NP</td>
<td>From: 8/2007</td>
<td></td>
</tr>
<tr>
<td>CEU</td>
<td>Change</td>
<td></td>
<td></td>
<td></td>
<td>NG</td>
<td>To: 12/9999</td>
<td></td>
</tr>
<tr>
<td>Professional Development</td>
<td>Delete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>12. Cross Listed with</strong></td>
<td><strong>13. List any programs or college requirements that require this course</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross Listed</td>
<td>BS &amp; BA Psychology; AAS &amp; BS Nursing; AAS &amp; BA Early Childhood Development; BA Elementary Education; AAS &amp; BS Human Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>14. Coordinate with Affected Units:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UAA Deans; Directors of Mat-Su College, KPC, Kodiak College &amp; PWSCC.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>15. General Education Requirement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantitative Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fine Arts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Sciences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrative Capstone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>16. Course Description</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reviews physical, cognitive, and socioemotional aspects of human growth, maturation, and development across the lifespan. Special attention is given to the effects of broader sociocultural influences on development. Classical and contemporary theories relating to development across the lifespan are considered.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>17a. Course Prerequisite(s) (list prefix and number)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>17b. Test Score(s)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>17c. Co-requisite(s) (concurrent enrollment required)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>17d. Other Restriction(s)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College</td>
<td>Major</td>
<td>Class</td>
<td>Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>17e. Registration Restriction(s) (non-codable)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>18. Mark if course has fees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>19. Justification for Action</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Updating the course description and course content guide to keep the course current.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Date: ____________________________

Initiator (faculty only)
I. Initiation Date: January 2007

II. Course Information:
   A. College: College of Arts and Sciences
   B. Course Title: Lifespan Development
   C. Course Subject/Number: PSY A150
   D. Credit Hours: 3.0 credits
   E. Contact Time: 3 + 0 hours per week
   F. Grading Information: A-F
   G. Course Description: Reviews physical, cognitive, and socioemotional aspects of human growth, maturation, and development across the lifespan. Special attention is given to the effects of broader sociocultural influences on development. Classical and contemporary theories relating to development across the lifespan are considered.
   H. Status of course relative to degree or certificate programs:
      Required for BA & BS in Psychology; AAS & BS Nursing; AAS & BA Early Childhood Development; BA Elementary Education; AAS & BS Human Services
   I. Course Attributes: Applies toward UAA GER Social Sciences Requirement.
   J. Lab Fees: None
   K. Coordination: Extended campuses
   L. Course Prerequisite: None
   M. Registration Restriction: None

III. Course Activities:
    This class is primarily delivered in a traditional-lecture format or a distance-delivery format. In either case, it is principally instructor-driven and lecture-oriented. On occasion, lecture can be supplemented with other activities.

IV. Evaluation:
    This course will provide basic knowledge regarding psychological research findings and theories of human development and assess this knowledge and reading comprehension through exams. Written and oral communication skills will be assessed through papers and other written assignments, group or class discussions, and/or student presentations. Attendance is essential due to the broad range of material covered in this foundational course, the applicability of this material to everyday life, and the opportunity the course content and targeted skills provide for personal growth.
V. Course-level Justification:
This class is appropriate at the 100-level because it presents a broad survey of several different areas of psychology.

VI. Outline: Core Topics

A. Overview of the study and psychological research findings relevant to lifespan development.

B. Classical and contemporary theories of lifespan development and the role of the scientific method.

C. Prenatal period:
   1. Physical, cognitive, and socioemotional beginnings of development: Role of nature/nurture, genetics, brain growth and development, stages of prenatal growth.
   2. Common difficulties/dysfunctions.

D. Infancy and toddler years:
   1. Physical, cognitive, and socioemotional domains of development: Neonatal development, reflex behaviors, development of knowing and perceiving, role of temperament, attachment, early child care, prelinguistics, and sensorimotor skills.
   2. Common difficulties/dysfunctions.

E. Early childhood:
   1. Physical, cognitive, and socioemotional domains of development: Accidental injuries, nutrition, cognitive neuroscience, preoperations, theory of mind, information-processing, language development, preschool, self-concept, and gender.
   2. Common difficulties/dysfunctions.

F. Middle childhood:
   1. Physical, cognitive, and socioemotional domains of development: Concrete operations, moral reasoning, literacy, elementary school, self-esteem, and multiple intelligences.
2. Common difficulties/dysfunctions.

G. Adolescence:

1. Physical, cognitive, and socioemotional domains of development: Puberty, interaction between the strands of development, neuron-cognition, formal operations, middle and high school, identity, sexual orientation, peer influences.

2. Common difficulties/dysfunctions.

H. Young adulthood:

1. Physical, cognitive, and socioemotional domains of development: Post-formal operations, intimate attachments with responsibility, reproduction, emotional intelligence, college, work.

2. Common difficulties/dysfunctions.

I. Middle adulthood:

1. Physical, cognitive, and socioemotional domains of development: Optimization of development, menopause, middle-life aging and crisis, role of expertise, mature learning, work, retirement, kinship ties, stability and change in personality.

2. Common difficulties/dysfunctions.

J. Later adulthood:

1. Physical, cognitive, and socioemotional domains of development: Presbyopia, aging brain, wisdom, life narratives, decline in physical functioning, social support, living arrangements

2. Common difficulties/dysfunctions.

K. Death and dying:

1. Physical, cognitive, and socioemotional domains of development: Cessation of bodily functions, spiritual and religious practices, grief, bereavement, care for the dead and dying, attention to legal, medical and ethical concerns

2. Common difficulties/dysfunctions.
VII. Instructional Goals and Defined Outcomes:

A. Instructional Goal: The instructor will:

1. Orient students toward the historical roots, dominant perspectives, and major issues in the scientific study of lifespan development.

2. Introduce the advantages of, and limitations of various scientific methods to derive empirically-supported conclusions that describe, predict, and explain changes and consistencies across the lifespan.

3. Provide examples of theories and empirically-supported conclusions about core topics in lifespan development (i.e., physical, cognitive and socioemotional issues as it relates to change and stability across each stage of the lifespan).

4. Show the application of the material to the personal development of students and the diversity of lifespan development among people in the world around them.

B. Defined Outcomes: Students should be able to:

1. Describe the historical roots, dominant perspectives, and major issues in the scientific study of lifespan development.

2. Demonstrate an understanding of the advantages and limitations of various scientific methods that are used to derive empirically-supported conclusions about changes and consistencies across the lifespan.

3. Demonstrate an introductory knowledge of theories and empirically-supported conclusions about core topics in lifespan development (i.e., physical, cognitive and socioemotional issues as it relates to change and stability across each stage of the lifespan).

4. Describe applications of the material to personal development and the diversity of lifespan development among people in the world around them.

VIII. Suggested Texts:


IX. Bibliography:
Curriculum Coordination Form

Notification Date: October 26, 2006

Initiating unit: PSY

Affected unit(s): UAA Deans; Directors of Mat-Su College, KPC, Kodiak College & PWSCC

Course Prefix and Number: PSY A150 Previous Prefix and Number: ` Complete Course/Program Title:Lifespan Development

Previous Course/Program Title: Life Span Development

Description of Action: Updating the course description and course content guide to keep the course current.

Supporting documentation of the proposal is attached.

Initiating faculty are also REQUIRED to send an email to uaa-faculty@uua.alaska.edu describing the proposal, including the proposed action and the course prefix, number, course description, prerequisite, and any other relevant information.

Any questions concerning the proposed changes may be addressed to the appropriate department chair, or the chair of the appropriate curriculum committee. Written comments may also be sent to the UAB or GAB, in care of the Governance Office, at the following address:

University of Alaska Anchorage
Governance Office, ADM 213
3211 Providence Drive
Anchorage, AK 99508

If no written comments are received by the UAB or GAB within ten (10) days of notification date shown above, it is assumed that there are no objections to the proposal.

Note: Acknowledgement of coordination does not mean approval, it is only meant to verify that coordination has occurred.
### Curriculum Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS CAS</td>
<td>AFAR Division of Fine Arts</td>
<td>MUSIC</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/CEU</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS</td>
<td>A140</td>
<td></td>
<td>2</td>
<td>(2+0)</td>
</tr>
</tbody>
</table>

### 6. Complete Course/Program Title

Fingerstyle Guitar I

### 7. Type of Course

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

### 8. Type of Action

- [x] Course
- [ ] Program

### 9. Repeat Status

- [ ] Yes
- [ ] No

### 10. Grading Basis

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

### 11. Implementation Date

- From: Fall/2007
- To: /9999

### 12. Cross Listed with

- [ ] Yes

### 13. List any programs or college requirements that require this course

### 14. Coordinate with Affected Units

- [x] Yes: Kenai Peninsula College and UAA faculty: ListServe
- [ ] No: Department, School, or College

### 15. General Education Requirement

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

### 16. Course Description

Beginning course for those who do not read music or who have limited experience with the guitar. Reading and performing melodies, solos, and accompaniment on the guitar from standard treble staff notation. Use of traditional and contemporary musical examples to teach 13 basic chord shapes, alternating bass technique, and 6 fingerstyle patterns.

SPECIAL NOTE: Student must furnish own 6-string acoustic guitar.

### 17a. Course Prerequisite(s)

### 17b. Test Score(s)

### 17c. Co-requisite(s)

### 17d. Other Restriction(s)

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

### 17e. Registration Restriction(s)

### 18. Mark if course has fees

### 19. Justification for Action

Course Description has been revised to state more clearly that this course is to be taught using standard musical notation. Course Content Guide has been updated.

---

**Initiator (faculty only) Date**

**Approved**

**Disapproved:**

---

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

**Approved**

**Disapproved:**

---

**Department Chairperson Date**

**Approved**

**Disapproved:**

---

**Undergraduate or Graduate Academic Board Chairperson Date**

**Approved**

**Disapproved:**

---

**Curriculum Committee Chairperson Date**

**Approved**

**Disapproved:**

---

**Provost or Designee Date**

**Approved**

**Disapproved:**

---
I. Course description: Beginning course for those who do not read music or who have limited experience with the guitar. Reading and performing melodies, solos, and accompaniment on the guitar from standard treble staff notation. Use of traditional and contemporary musical examples to teach 13 basic chord shapes, alternating bass technique, and 6 fingerstyle patterns.

SPECIAL NOTE: Student must furnish own 6-string acoustic guitar.

II. Course design
A. Credits: 2
B. Contact hours: 2 + 0
C. Course program: elective
D. Grading basis: A – F
E. Course prerequisites: none
F. Course fee: yes

III. Instructional Goals and Student Outcomes
A. The instructor will:
   1. explain and demonstrate the basic concepts of music theory and of standard treble staff notation, to enable students to read and play melodies, simple guitar solos, and harmonic accompaniment on their instrument from the written score;

   2. assist students in developing basic fingerstyle techniques through the introduction of right-hand patterns and left-hand chord placement;

   3. provide activities that develop sightreading, beginning solo skills, and ensemble skills through a format of graduated studies;

   4. present a variety of repertoires that explore the musical cultures of the United States, Latin America, the British Isles, Russia, and Western Europe.

B. The student will be able to:
   1. identify pitch and note value; read from and interpret simple musical scores; and perform melodies and guitar solos in the keys of C and Am in the first position, from standard treble staff notation;
2. move efficiently through basic chord progressions in the first position, using a recommended system of pivots, anchors and guides that build a good foundation of left-hand skills.

3. apply fingerstyle patterns as accompaniment to a written melody or vocal line;

IV. Evaluation

A. Attendance and Participation: Primary consideration is given to attendance when evaluating student progress. Points are awarded for class participation and solo/duet/small group performance activities.

B. Written Assignments and Tests: Written assignments and unit tests cover music theory, notation, and technique. A comprehensive written final exam is given at the end of the semester.

C. Practica: Performance tests are announced in advance and conducted throughout the course. Each practicum covers a specific playing skill and employs material used in daily drills.

V. Course Level Justification: MUS A140 is an entry-level course with no prerequisites; it develops basic playing skills and introduces music fundamentals.

VI. Course Outline

A. Introduction: history of the guitar in music of the western cultures; selection, care and maintenance of the instrument; guitar terminology; tuning; comparison of playing methods.

B. Basic music theory and notation: notation on the treble staff of rhythmic values in simple time, pitch, rests, ties, pick-ups, and dynamics; general music terminology.

C. Technical skills: The left hand: fingering in the first position; 13 basic chords; use of pivots, anchors and guides; analysis of harmonic progressions to determine efficient left-hand movement on the fretboard; The right hand: six basic accompaniment patterns; tonic-dominant bass alternation; pinches; rest and free strokes; arpeggiation.

D. The guitar as a solo instrument: reading and performing melodies in the first position in the keys of C Major and A minor; developing solo skills and performing simple repertoire from standard treble staff notation.

E. The guitar as accompaniment to a vocal line: simple vocal technique: phrasing, slurs, syllabic analysis; coordination of vocal and instrumental rhythmic patterns; and use of the capo to adjust vocal range.
VII. Suggested Texts


VIII. Bibliography


I. Sagreras, Julio S. *Las Lecciones de Guitarra, Bk. 1.* Columbus, Ohio: Guitar Heritage, Inc., 1996.
Curriculum Coordination Form

Notification Date: 11/16/06

Initiating unit: UAA: College of Arts and Sciences / Department of Music

Affected unit(s): University of Alaska Anchorage and Kenai Peninsula College

Course Prefix and Number: MUS A140   Previous Prefix and Number:

Complete Course/Program Title: Fingerstyle Guitar I

Previous Course/Program Title: Fingerstyle Guitar I

Description of Action: 1) revision of course description; 2) updating of bibliography; 3) reformatting of course content guide. Course content has not changed.

Supporting documentation of the proposal is attached.

Initiating faculty are also REQUIRED to send an email to uaa-faculty@uaa.alaska.edu describing the proposal, including the proposed action and the course prefix, number, course description, prerequisite, and any other relevant information.

Any questions concerning the proposed changes may be addressed to the appropriate department chair, or the chair of the appropriate curriculum committee. Written comments may also be sent to the UAB or GAB, in care of the Governance Office, at the following address:

University of Alaska Anchorage
Governance Office, ADM 213
3211 Providence Drive
Anchorage, AK 99508

If no written comments are received by the UAB or GAB within ten (10) days of notification date shown above, it is assumed that there are no objections to the proposal.

Note: Acknowledgement of coordination does not mean approval, it is only meant to verify that coordination has occurred.
# Curriculum Action Request

**University of Alaska Anchorage**

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

---

### 1a. School or College

AS CAS

### 1b. Division

AFAR Division of Fine Arts

### 1c. Department

MUSIC

---

### 2. Course Prefix

MUS

### 3. Course Number

A141

### 4. Previous Course Prefix & Number


### 5a. Credits/CEU

2

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

(2+0)

---

### 6. Complete Course/Program Title

Fingerstyle Guitar II

---

### 7. Type of Course

- [ ] Academic
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

### 8. Type of Action

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

---

### 9. Repeat Status

- Yes
- No

### 10. Grading Basis

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

### 11. Implementation Date

From: Fall/2007
To: /9999

### 12. Cross Listed with

- [ ] Stacked

---

### 13. List any programs or college requirements that require this course

---

### 14. Coordinate with Affected Units:

- [ ] yes: Kenai Peninsula College and UAA Faculty: ListServe

---

### 15. General Education Requirement

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

---

### 16. Course Description

Continuation of MUS A140 and development of music reading skills using standard treble staff notation. Introduces barre chords, bass runs, ornamentation, and Major and minor scale studies in the first and second positions. Solo examples from traditional, classical and contemporary literature and fingerstyle patterns in simple and compound time. Audition required for students who have not completed MUS A140, demonstrating ability to noteread melodies on the guitar in C Major and A minor and acquaintance with fingerstyle technique and the concept of alternating bass.

### 17a. Course Prerequisite(s) (list prefix and number)

MUS A140

### 17b. Test Score(s)


### 17c. Co-requisite(s) (concurrent enrollment required)


### 17d. Other Restriction(s)

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

### 17e. Registration Restriction(s) (non-codable)


### 18. Mark if course has fees

- [ ] Yes

### 19. Justification for Action

Course Description has been revised to state more clearly that this course is to be taught using standard musical notation. Course Content Guide has been updated.

---

### Initiator (faculty only)

Initiator Signature Date

---

### Approved

Dean/Director of School/College Date

---

### Approved

Department Chairperson Date

---

### Approved

Undergraduate or Graduate Academic Board Chairperson Date

---

### Approved

Curriculum Committee Chairperson Date

---

### Approved

Provost or Designee Date

---

24
I. **Course description**: Continuation of MUS A140 and development of music reading skills using standard treble staff notation. Introduces barre chords, bass runs, ornamentation, and major and minor scale studies in the first and second positions. Solo examples from traditional, classical and contemporary literature and fingerstyle patterns in simple and compound time. Audition required for students who have not completed MUS A140, demonstrating ability to noteread melodies on the guitar in C Major and A minor and acquaintance with fingerstyle technique and the concept of alternating bass.

II. **Course design**
   A. **Credits**: 2
   B. **Contact hours**: 2 + 0
   C. **Course program**: elective
   D. **Grading basis**: A – F

III. **Course prerequisites**: MUS A140

IV. **Course fee**: yes

V. **Instructional Goals and Student Outcomes**
   A. **The instructor will**:
      1. introduce and demonstrate formal scale studies as a means of building an understanding of melodic and harmonic structure;
      2. present barre chords and demonstrate notereading that employs the second position, developing the student’s ability to navigate the fretboard;
      3. introduce fingerstyle techniques popularized by contemporary fingerstyle guitarists;
      4. provide opportunities for students to develop sightreading skills and solo performance skills within the format of large group instruction;
      5. present a progression of graduated studies that introduces new chord structures and refines the student’s ability to apply those chords in accompaniment;
6. present a variety of repertoires that explore the musical cultures of the United States, Latin America, the British Isles, Russia, Asia, and Western Europe.

B. The student will be able to:
   1. interpret and perform from simple musical scores that incorporate ornamentation and compound rhythms, reading from standard treble staff notation.

   2. perform scales, melodies and solos in the keys of C Major, A minor, G Major, E minor, D Major, and B minor, and will use the guitar to develop sightreading skills.

   3. move efficiently through basic chord progressions in the first and second positions, using a recommended system of pivots, anchors and guides that build a strong foundation of left-hand skills.

   4. apply fingerstyle patterns as accompaniment to a written melody or vocal line.

   5. perform simple guitar solos and will develop ensemble skills in a duo and trio format.

VI. Evaluation
   A. Attendance and Participation: Primary consideration is given to attendance when evaluating student progress. Points are awarded for class participation and solo/duet/small group performance activities.

   B. Written Assignments and Tests: Written assignments and unit tests cover music theory, notation, and technique. A comprehensive written final exam is given at the end of the semester.

   C. Practica: Performance tests are announced in advance and conducted throughout the course. Each practicum covers a specific playing skill and employs material used in daily drills.

VII. Course Level Justification: A continuation of MUS A140, MUS A141 is an entry-level course that develops basic sightreading and playing skills and builds knowledge of the fundamentals of music.

VIII. Course Outline
   A. Technical skills: The left hand: continuation of basic chords such as the dominant seventh and minor seventh; instruction in the use of suspended, major seventh, sixth, and ninth chords; introduction to the barre chord; analysis of harmonic progressions to determine efficient left-hand movement. The right hand: review of five basic patterns introduced in MUS A140; introduction of eight additional rhythmic patterns, including some in compound time; pinches, damping, slurs, the bass run.
B. The guitar as a solo instrument: reading and performing melodies in the first position in the keys of C, G, and D Major and A, E, and B minor; building technical skills through formal scale studies; performing simple guitar solos and instrumental duets.

C. The guitar as accompaniment: simple vocal technique - phrasing, slurs, syllabic analysis, coordination of vocal and instrumental rhythmic patterns; use of the capo to adjust vocal range; anticipation; ritardando.

IX. Suggested Texts


X. Bibliography


Curriculum Coordination Form

Notification Date: 11/16/06

Initiating unit: UAA: College of Arts and Sciences / Department of Music

Affected unit(s): University of Alaska Anchorage and Kenai Peninsula College

Course Prefix and Number: MUS A141     Previous Prefix and Number:

Complete Course/Program Title: Fingerstyle Guitar II

Previous Course/Program Title: Fingerstyle Guitar II

Description of Action: 1) revision of course description; 2) updating of bibliography; 3) reformatting of course content guide. Course content has not changed.

Supporting documentation of the proposal is attached.

Initiating faculty are also REQUIRED to send an email to uaa-faculty@uaa.alaska.edu describing the proposal, including the proposed action and the course prefix, number, course description, prerequisite, and any other relevant information.

Any questions concerning the proposed changes may be addressed to the appropriate department chair, or the chair of the appropriate curriculum committee. Written comments may also be sent to the UAB or GAB, in care of the Governance Office, at the following address:

University of Alaska Anchorage
Governance Office, ADM 213
3211 Providence Drive
Anchorage, AK  99508

If no written comments are received by the UAB or GAB within ten (10) days of notification date shown above, it is assumed that there are no objections to the proposal.

Note: Acknowledgement of coordination does not mean approval, it is only meant to verify that coordination has occurred.
**Curriculum Action Request**

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>KP KPC</td>
<td>B&amp;I</td>
<td>HCA</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/CEU</th>
<th>5b. Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCA</td>
<td>A194</td>
<td>N/A</td>
<td>4.0</td>
<td>(Lecture + Lab)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(3)+(2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Complete Course/Program Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Care Attendant to Certified Nurse Aide Bridge</td>
</tr>
<tr>
<td>PCA to CNA Bridge</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>8. Type of Action</th>
<th>9. Repeat Status No</th>
<th># of Repeats</th>
<th>Max Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>Course</td>
<td>Course Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contact Hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Repeat Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cross-Listed/Stacked</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Course Prerequisites</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Co-requisites</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Registration Restrictions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Class Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>College Major</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
<th>11. Implementation Date</th>
<th>semester/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-F</td>
<td>From: SPR / 2007</td>
<td></td>
</tr>
<tr>
<td>P/NP</td>
<td>To: /9999</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12. Cross Listed with</th>
<th>13. List any programs or college requirements that require this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>NONE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14. Coordinate with Affected Units</th>
<th>15. General Education Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAA/CTC, UAA/SON</td>
<td>Oral Communication</td>
</tr>
<tr>
<td>Department, School, or College</td>
<td>Written Communication</td>
</tr>
<tr>
<td>Initiator Signature Date</td>
<td>Quantitative Skills</td>
</tr>
<tr>
<td></td>
<td>Humanities</td>
</tr>
<tr>
<td></td>
<td>Fine Arts</td>
</tr>
<tr>
<td></td>
<td>Social Sciences</td>
</tr>
<tr>
<td></td>
<td>Natural Sciences</td>
</tr>
<tr>
<td></td>
<td>Integrative Capstone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16. Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trains Personal Care Attendants to be Certified Nurse Aides. Students build upon basic PCA skills and experience. Provides additional classroom, laboratory and clinical hours necessary to test for the Alaska Certified Nurse Aide certification.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17a. Course Prerequisite(s) (list prefix and number)</th>
<th>17b. Test Score(s)</th>
<th>17c. Co-requisite(s) (concurrent enrollment required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCA A103 or on the job agency training plus two years PCA experience and instructor approval.</td>
<td>N/A</td>
<td>NONE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17d. Other Restriction(s)</th>
<th>17e. Registration Restriction(s) (non-codable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Major Class Level</td>
<td>none</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>18. Mark if course has fees</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>19. Justification for Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides a Certified Nurse Aide training path for students who have previously completed Personal Care Attendant training.</td>
</tr>
</tbody>
</table>

---

Initiator (faculty only) Date

Approved Disapproved:

Dean/Director of School/College Date

Approved Disapproved:

Department Chairperson Date

Approved Disapproved:

Academic Board Chairperson Date

Approved Disapproved:

Curriculum Committee Chairperson Date

Approved Disapproved:

Provost or Designee Date
I. Date: Dec 11, 2006

Information from Curriculum Action Request

a. College or School: KP - Kenai Peninsula College

b. Course Subject: HCA

c. Course Number: A194

d. Credits/Contact Hours: 4.0 / 3 + 2

e. Course Title: Personal Care Attendant to Certified Nurse Aide Bridge

f. Grading Basis: A-F

g. Course Description:
Trains Personal Care Attendants to be Certified Nurse Aides. Students build upon basic PCA skills and experience. Provides additional classroom, laboratory and clinical hours necessary to test for the Alaska Certified Nurse Aide certification.

h. Course Prerequisites/Co requisites/Other Restrictions: Pre-requisite: HCA A103 or on the job agency training plus two years PCA experience and instructor approval.

i. Fees: Yes

II. Instructional Goals and Student Outcomes.

A. Instructional Goals: The instructor will present and provide practical training in each of the following topics. Training will include procedures, health, safety and environmental concerns and the role of the Certified Nurse Aide as it relates to each.

- Work environment, role of co-workers, communication skills, career track
- Holism, individual rights, ethical and legal issues
- Cultural influences in health and illness practices
- Body structure and function, normal growth and development
- Common diseases including Diabetes, COPD, Cardiovascular, Mental Illness, Addiction
- Issues related to Death and Dying, palliative care
- Issues related to Dementia and aggressive behavior
- Special needs of elderly and children including developmental disabilities
- Issues related to rehabilitation/restorative care
- Medical terminology
- Basic skills: asepsis, safety, body mechanics, bed making, personal care
- Complex skills: elimination, nutrition, vital signs, specimen collection
B. Student Outcomes: At the completion of this course students will be able to:

Function within the scope of practice of a nurse aide by:
- Correctly using ethical and legal concepts in relationships and communications with others, including healthcare providers and clients
- Demonstrating techniques to maintain confidentiality of information
- Identifying the lines of authority and reporting problems to the appropriate person
- Demonstrating promptness and dependability
- Seeking assistance when unsure of the appropriate action

Demonstrate appropriate communication skills by:
- Correctly listening and responding to patient’s verbal and nonverbal communications
- Seeking assistance in understanding a patient’s behavior, including cultural differences
- Correctly using terminology accepted in the employing nursing facility to record and reporting observations and pertinent information
- Recording and reporting observations, activities and communications accurately

Demonstrate behavior that maintains the rights of the patient by:
- Providing privacy and maintenance of confidentiality
- Promoting the patient’s right to make personal choices to accommodate individual needs
- Helping the patient to get to and participate in family and other group activities
- Maintaining the patient’s environment and providing the level of care that will minimize the need for physical and chemical restraints

Demonstrate knowledge of safety concepts by:
- Using the principles of medical asepsis and isolation techniques
- Using appropriate measures to relieve pain and promote sleep and rest
- Maintaining equipment and keeping patient space clean and orderly
- Applying principles of body mechanics in transferring and ambulation of patients
- Demonstrating the proper care of the client in protective devices

Demonstrate the basic nursing skills of:
- Monitoring body functions
- Taking and recording vital signs
- Measuring and recording height and weight
- Becoming certified in CPR and First Aid

Demonstrate basic personal care skills by correctly assisting patients with:
- Bathing
- Oral hygiene
- Grooming
- Dressing
- Toileting
- Feeding and hydration
- Proper feeding techniques
- Skin care

Demonstrate knowledge of growth and development concepts by:
- Describing basic physical changes that occur in a person’s body over the life span
- Listing the motor, language, cognitive and social skill changes that occur in person over the life span

Demonstrate knowledge of restorative nursing care by:
- Carrying out preventive maintenance and rehabilitative measures such as therapeutic ambulating, exercise, range of motion and bed/chair positioning in daily care
- Recognizing and promoting opportunities for self care according to a patient’s ability
- Helping to provide adequate nutrition, including fluid intake and progressive self-feeding
- Identifying and maintaining special dietary needs
- Promoting the mental health of patients by fostering good physical and environmental adjustments
- Setting and keeping personal boundaries

IV. Evaluation:
Letter grade. Student grade will be based on attendance, class participation, professional behavior, homework assignments, skill demonstrations, and exams.

V. Course level justification:
This course provides entry-level health care training.

VI. Topical Course Outline:
1. Course Orientation
   a. Reading assignments
   b. Workbook assignments
   c. Skills Labs/Clinical rotations
   d. Exams, extra credit and State certification
   e. CPR/1st Aid & State background check requirements
   f. State of Alaska CNA Program regulations
2. Role of a CNA, including
   a. Ethical standards
   b. Legal issues
   c. CNA as a member of the health care team
   d. Client’s rights and responsibilities
   e. Accepting responsibility for one’s actions
   f. Seeking assistance when unsure about appropriate actions
3. Basic nursing skills, including
   a. Monitoring body functions
   b. Taking and recording vital signs
   c. Measuring and recording a client’s height and weight
   d. Caring for the client’s environment
   e. Non-invasive testing and collection of physical specimens
   f. Measuring and recording fluid/food intake and output
   g. Caring for a client if the client’s death is imminent
   h. Hospice and postmortem care
4. Personal care skills, including
   a. Bathing
   b. Oral hygiene
   c. Grooming
   d. Dressing
   e. Toileting
   f. Feeding and hydration
   g. Proper feeding techniques
   h. Skin care
5. Safety concepts related to nursing, including
   a. Medical aseptic technique, including isolation
   b. Basic life support
   c. Environment
   d. Body mechanics
e. Transfers and ambulation
f. Fire and disaster
g. Food service
h. Infection control, including standard precautions
i. Recognizing abnormal signs and symptoms
j. Common acute and chronic conditions

6. Communication skills, including
   a. Psychosocial needs of clients
   b. Verbal and non-verbal communications
   c. Knowledge of communication modifications for clients with limited abilities
d. Medical and nursing terminology
e. Recording and reporting

7. Hygiene and restorative nursing care, including
   a. Personal hygiene
   b. Activities of daily living
c. Adequate nutrition and fluid
d. Excretory system
e. Bladder and bowel training/functions
f. Preventative maintenance and rehabilitative measures

8. Human growth and development
   a. Basic needs
   b. Developmental needs
c. Care of the cognitively impaired
d. Mental health and social services
e. Cultural factors
f. Sexuality
g. Process of aging
h. Death and dying
i. Caregiver stress and “burnout”

VII. Suggested Text:


VIII. Bibliography:


Alvare, Susan; Dugan, Diana; Fuzy, Jetta. Nursing Assistant Care, Hartman Publishing, Albuquerque, New Mexico, 2005.


State of Alaska, Personal Care Assistance 40 Hour Training Curriculum – Appendices, Center for Human Development/UAA, June 2004
Program/Course Title: Personal Care Attendant to Certified Nurse Aide Bridge

1. Please identify the library liaison consulted in preparation of this proposal.

   Name: Jane Furstenau

To see who your library liaison is at:
UAA go to: http://www.lib.uaa.alaska.edu/webgroup/liaison.php3
Kenai Peninsula College go to: http://www.uaa.alaska.edu/kenai/KPC%20Library%20Webpage/frameset.html
Kodiak College go to: http://www.koc.alaska.edu/library/default.html
Mat-Su College go to: http://www.matsu.alaska.edu/library/library_staff.htm

2. Please list any new library and information recommended to support the proposal.

   1. None
   2.
   3.

Initiator signature
Fee Request Form

1. School/College Kenai Peninsula College / UAA

2. Course Prefix and Number HCA A194

3. Title Personal Care Attendant to Certified Nurse Aide Bridge

4. Lab Fee Account Number:
   Org n/a   Obj n/a   Fund n/a

5. Type of Action:
   Add ☒   Deletion ☐   Change ☐ (☐ Increase or ☐ Decrease)

6. Fee Amount: $0 If a Change, please indicate the current approved lab fee $

7. Anticipated Student enrollment per class section: 16

8. Projected costs of material per class section: $0
   (Provide details under #10 Justification for lab fee)

9. Implementation Date Spring 2007

10. Justification for fee (include materials/supplies used and the cost per item).
    n/a

Approved
Disapproved

Department Chair
Date

Approved
Disapproved

Dean/Director of School/College
Date

Approved
Disapproved

Provost
Date
Resource Implication Form

1. School/College KPC

2. Program/Course Personal Care Attendant to Certified Nurse Aide Bridge

3. Course Prefix HCA

4. Course Number A194

5. Implementation Date S2007

6. Type of Action and Category
   - [X] Course addition
   - [ ] Course change
   - [ ] Program addition
   - [X] Program change

7. Consequences of Actions and Costs: Check all appropriate categories and provide an explanation of how it will be funded and by whom.
   - [ ] part-time faculty $0
   - [ ] new full-time faculty $0
   - [ ] reassignment of full-time faculty $0
   - [ ] additional class/lab space $0
   - [ ] modification of class/lab space $0
   - [ ] additional library resources $0
   - [ ] additional computer equipment $0
   - [ ] other costs $0

8. Explanation: New course in the HCA area. No new resources required, since the same adjunct faculty and lab facilities will be used for the new course, as have been using in teaching the existing HCA courses.

______ Approved
______ Disapproved

Department Chair ____________________________ Date ______________

______ Approved
______ Disapproved

Dean/Director of School/College ____________________________ Date ______________

______ Approved
______ Disapproved

Provost ____________________________ Date ______________
# Proposal to Initiate, Add, Change, or Delete a Course or Program of Study

**1a. School or College**

EN SOENGR

**1b. Division**

Civil Engineering

**1c. Department**

Civil Engineering

---

**2. Course Prefix**

ES

**3. Course Number**

A341

**4. Previous Course Prefix & Number**

---

**5a. Credits/CEU**

3

**5b. Contact Hours**

(Lecture + Lab) (3+0)

---

**6. Complete Course/Program Title**

Fluid Mechanics

**7. Type of Course**

- [ ] Academic
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

---

**8. Type of Action**

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

**8a. Prefix**

---

**8b. Credits**

---

**8c. Title**

---

**8d. Grading Basis**

---

**8e. Course Description**

---

**8f. Test Score Prerequisites**

---

**8g. Co-requisites**

---

**8h. Other Restrictions**

---

**9. Repeat Status**

- [ ] # of Repeats
- [ ] Max Credits

---

**10. Grading Basis**

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

---

**11. Implementation Date**

From: Aug/2007
To: Aug/2099

---

**12. Cross Listed with**

- [ ] Stacked

**13. List any programs or college requirements that require this course**

- BS Civil Engineering and BS Engineering (Mechanical Engineering track)

---

**14. Coordinate with Affected Units**

- BSE Department, School of Engineering
- Department, School, or College

**Initiator Signature**

Date

---

**15. General Education Requirement**

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

---

**16. Course Description**

The course provides an introduction to the physical properties and behavior of fluids. Topics include hydrostatics and dynamics of liquids and gases, dimensional analysis, fluid forces on immersed bodies, pipe flow, fluid machinery, and open channel flow.

**17a. Course Prerequisite(s) list prefix and number**

- MATH A201 and PHYS A211

**17b. Test Score(s)**

---

**17c. Co-requisite(s) (concurrent enrollment required)**

---

**17d. Other Restriction(s)**

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

**17e. Registration Restriction(s) (non-codable)**

- BSCE majors: Civil Engineering Professional status or approval of Civil Engineering Department Chair

---

**18. Mark if course has fees**

---

**19. Justification for Action**

Prerequisites are adjusted to reflect appropriate academic preparation and the associated laboratory class, ES A341L, is no longer a corequisite. ES A341L Fluid Mechanics Laboratory may be taken concurrently or following completion of ES A341 (lecture)

---

**Approved**

Initiator (faculty only)

Date

**Disapproved**

Dean/Director of School/College

Date

---

**Approved**

Department Chairperson

Date

**Disapproved**

Undergraduate or Graduate Academic Board Chairperson

Date

---

**Approved**

Curriculum Committee Chairperson

Date

**Disapproved**

Provost or Designee

Date
I. Course Description

The course provides an introduction to the physical properties and behavior of fluids. Topics include hydrostatics and dynamics of liquids and gases, dimensional analysis, fluid forces on immersed bodies, pipe flow, fluid machinery, and open channel flow.

II. Course Design

A. Course intent:

This course is designed to fit into a continuous curriculum of undergraduate education in either civil or mechanical engineering, building on prior education in mathematics and applied physics typical of an ABET-accredited Bachelor of Science degree program in these fields of study.

B. Number of Credits: Three (3)

C. Course schedule: Standard semester timeframe.

D. Total time of student involvement:

1. Lecture hours/week: Three (3)

2. Laboratory hours/week: Associated laboratory course, ES A341L, requires 3 laboratory hours per week

3. Total time of work expected outside of class: Six (6) hours/week.

E. Programs that require this course: Civil and Mechanical Engineering

F. Grading: A-F

G. Coordination with affected units: BSE Department (Bachelor of Science in Engineering – mechanical engineering track also requires this course)
H. **Justification for action**: Prerequisites are adjusted to reflect appropriate academic preparation and the associated laboratory class, ES A341L, is no longer a corequisite. Rather this lecture course is a pre- or corequisite for ES A341L.

I. **Prerequisites**: MATH 201 and PHYS A211, or approved equivalent

J. **Registration Restrictions**: Civil Engineering Professional status or approval of Civil Engineering Department Chair

K. **Course level justification**: This course requires prerequisite knowledge from courses typically completed in the sophomore year of ABET-accredited engineering degree programs.

III. **Course Outline**

A. **Introduction**
   1. Course organization and expectations
   2. Review of units of measure
   3. Basic fluid properties

B. **Fluid Statics**
   1. Principles governing pressure in a fluid at rest
   2. Measurement of pressure
   3. Hydrostatic forces
   4. Buoyancy, flotation, and stability

C. **Elementary Fluid Dynamics**
   1. Equations of fluid motion
   2. Bernoulli equation and applications

D. **Fluid Kinematics**
   1. Velocity fields
   2. Acceleration fields
   3. Reynolds transport theorem and applications

E. **Finite Control Volume Analysis**
   1. Review conservation of mass, linear momentum, and moment of momentum
   2. Review the first law of thermodynamics and applications to fluid behavior
   3. Irreversible flow

F. **Potential Flow**
   1. Review governing equations
   2. Inviscid flow
   3. Plane potential flows
   4. Introduction to viscous flow
G. Similitude, Dimensional Analysis, and Modeling
   1. Buckingham Pi Theorem
   2. Common dimensionless parameters for fluid mechanics
   3. Correlation of experimental data
   4. Typical model studies

H. Pipe flow
   1. General characteristics
   2. Laminar flow
   3. Turbulent flow

I. Flow over Immersed Bodies
   1. Boundary layers
   2. Drag
   3. Lift

J. Introduction to Open Channel Flow
   1. General characteristics and governing equations
   2. Uniform flow
   3. Gradually varied flow
   4. Non-uniform flow

IV. Instructional Goals and Student Outcomes

A. Instructional Goals

   Provide engineering students with a working knowledge of properties and behavior of fluids sufficient to solve common practical engineering problems involving liquids and gases, including those encountered on examinations for Professional Engineering license, and as a basis for advanced courses requiring this knowledge.

B. Student Outcomes

1. Introduction: Students are conversant with British and SI (metric) units of measure, and are able to solve elementary problems dealing with the ideal gas law, viscosity, vapor pressure, and surface tension.

2. Fluid Statics: Students can solve practical problems involving manometers and other pressure-measuring devices, static fluid pressures and forces on immersed surfaces, and Archimedes' Principle of buoyancy.

3. Elementary Fluid Dynamics: Students are able to solve basic practical problems with applications of the Bernoulli Equation involving streamlines, jets, and energy and hydraulic grade lines.
4. **Fluid Kinematics**: Students can apply Eulerian and Lagrangian descriptions of velocity fields and basic characteristics of steady and unsteady flows. Students are able to solve elementary practical problems involving the impulse-momentum method.

5. **Potential Flow**: Students are able to solve practical problems involving inviscid, irrotational, incompressible, and uniform flow using the Navier-Stokes Equations and principles and conventions of potential flow.

6. **Similitude, Dimensional Analysis, and Modeling**: The principles and applications of the Buckingham Pi Theorem and common dimensionless fluids parameters are applied by students. Students are practiced in solving problems related to scale modeling of hydraulic engineering works.

7. **Pipe flow**: Students are able to solve practical problems involving laminar and turbulent flow in conduits and pipes.

8. **Flow over Immersed Bodies**: Students are able to solve practical problems involving lift and drag on immersed bodies.

9. **Introduction to Open Channel Flow**: Students are able to apply fundamental principles and practical conventions of flow in open channels and are able to solve elementary problems of this type.

**V. Course Activities**

Conventional lectures are supplemented by reading assignments in the required text, handouts, Internet web pages, and other references. Practical problems are assigned and solutions are graded, annotated, returned, and reviewed in class.

**VI. Course Evaluation**: 

Instructional goals and student outcomes are typically evaluated on the basis of two interim exams and a comprehensive final exam assess students’ understanding of principles and practical skills taught in the course. Regular assignments of additional reading, internet or library research, and computational problems are submitted and graded. Letter grades will follow the scale A: 100-90, B: 89-80, C: 79-70, D: 69-60, and F: below 60.

**VII. Suggested Text**: 


**VIII. Alternate texts and references** (these or most recent edition)


## Curriculum Action Request

**University of Alaska Anchorage**

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

---

### 1a. School or College
EN SOENGR

### 1b. Division

### 1c. Department
Civil Engineering

### 2. Course Prefix
ES

### 3. Course Number
A341L

### 4. Previous Course Prefix & Number

### 5a. Credits/CEU
1

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

1 (0+1)

---

### 6. Complete Course/Program Title
Fluid Mechanics Laboratory

### Abbreviated Title for Transcript (30 character)

---

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

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

### 9. Repeat Status

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

### 11. Implementation Date
- From: Aug/2007
- To: Aug/2099

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

### 13. List any programs or college requirements that require this course
BS Civil Engineering and BS Engineering (Mechanical Engineering track)

### 14. Coordinate with Affected Units
BSE Department, School of Engineering

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

### 16. Course Description
The laboratory course provides supplemental explanation and practical exercises applying physical properties and behavior of fluids, including hydrostatics, fluid forces, pipe flow, fluid machinery, and open channel flow.

### 17a. Course Prerequisite(s) (list prefix and number)

### 17b. Test Score(s)

### 17c. Co-requisite(s) (concurrent enrollment required)
ES A341L Fluid Mechanics Laboratory may be taken concurrently or following completion of ES A341 (lecture)

### 17d. Other Restriction(s)
- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

### 17e. Registration Restriction(s) (non-codable)
Civil Engineering Professional status or approval of Civil Engineering Department Chair

### 18. Mark if course has fees

---

### 19. Justification for Action
Prerequisites are adjusted to reflect appropriate academic preparation and this laboratory class must no longer be taken concurrently with the lecture course ES A341. The course may now be taken either concurrently or following completion of ES A341. This change will help resolve class scheduling difficulties and accommodate students who have transferred from engineering programs at other universities. Outcomes are adjusted to include emphasis on computational analysis and technical communication.

---

### Initiator (faculty only)
[Signature]

### Date

### Dean/Director of School/College
[Signature]

### Date

### Department Chairperson
[Signature]

### Date

### Undergraduate or Graduate Academic Board Chairperson
[Signature]

### Date

### Provost or Designee
[Signature]

### Date

---
UNIVERSITY OF ALASKA ANCHORAGE
SCHOOL OF ENGINEERING
COURSE CONTENT GUIDE

Department: Civil Engineering

Date: 5 February 2007

Course Prefix, Number, and Title: ES A341L Fluid Mechanics Laboratory

I. Course Description

The laboratory course provides supplemental explanation and practical exercises applying physical properties and behavior of fluids, including hydrostatics, fluid forces, pipe flow, fluid machinery, and open channel flow.

II. Course Design

A. Course intent:

This course is designed to supplement a lecture course in theory and practice of fluid mechanics, such as ES A341 Fluid Mechanics, typical of similar courses in ABET-accredited Bachelor of Science in civil and mechanical engineering degree programs.

B. Number of Credits: One (1)

C. Course schedule: Standard semester timeframe.

D. Total time of student involvement:

1. Lecture hours/week: None

2. Laboratory hours/week: 3 laboratory hours per week

3. Total time of work expected outside of class: Three (3) hours/week.

E. Programs that require this course: BS Civil Engineering and BS Engineering (Mechanical Track)

F. Grading: A-F

G. Coordination with affected units: BSE Department (Bachelor of Science in Engineering – mechanical engineering track also requires this course)

H. Justification for action: Prerequisites are adjusted to reflect appropriate academic preparation and this laboratory class must no longer be taken.
concurrently with the lecture course ES A341. The course may now be taken either concurrently or following completion of ES A341. This change will help resolve class scheduling difficulties and accommodate students who have transferred from engineering programs at other universities. Outcomes are adjusted to include emphasis on computational analysis and technical communication.

I. **Corequisite:** ES A341L Fluid Mechanics Laboratory may be taken concurrently or following completion of ES A341 (lecture)

J. **Registration Restrictions:** Civil Engineering Professional status or approval of Civil Engineering Department Chair

K. **Course level justification:** This course requires prerequisite knowledge from courses typically completed in the sophomore year of ABET-accredited engineering degree programs.

III. **Laboratory Exercises**

A. **Fluid Properties**
   1. Measurement of viscosity
   2. Measurement of temperature
   3. Measurement of density and specific weight

B. **Fluid Statics**
   1. Measurement of pressure
   2. Measurement of hydrostatic forces
   3. Measurement of buoyancy

C. **Elementary Fluid Dynamics**
   1. Measurement of static and dynamic pressure in moving fluids
   2. Measurement of volumetric flow
   3. Measurement of frictional energy losses

D. **Fluid Kinematics**
   1. Measurement of fluid velocity
   2. Measurement of forces due to fluid motion
   3. Measurement of fluid power and related fluid machinery variables such as torque and rotational speed

E. **Similitude, Dimensional Analysis, and Modeling**
   1. Conduct simple hydraulic scale model studies with application of similitude principles

F. **Introduction to Open Channel Flow**
   1. Measurement of parameters in open channel flow
2. Measurement of hydraulic jumps and associated transitions from supercritical to subcritical flow

IV. Instructional Goals and Student Outcomes

A. Instructional Goals

Provide engineering students with a working knowledge of properties and behavior of fluids sufficient to conduct elementary laboratory experiments and to accomplish ordinary measurements of fluid properties and behavior with instruments and devices commonly used for these purposes.

B. Student Outcomes

1. Students are conversant with British and SI (metric) units of measure, and are able to accomplish elementary measurements of fluid properties such as density, specific weight, and viscosity.

2. Students are able to accomplish elementary measurements of involving manometers and other pressure-measuring devices, static fluid pressures and forces on immersed surfaces, and Archimedes’ Principle of buoyancy.

4. Students are able to accomplish elementary measurements of static and dynamic pressure in moving fluids, volumetric flow, and frictional energy losses.

5. Students are able to accomplish elementary measurements of fluid velocity, of forces due to fluid motion, and fluid power and related fluid machinery variables such as torque and rotational speed.

6. Students are able to conduct simple hydraulic scale model studies with application of similitude principles.

7. Students are able to measure basic parameters of open channel flow, of hydraulic jumps and associated transitions from supercritical to subcritical flow.

8. Students are able to accomplish numerical and statistical analyses of fluid property and behavior measurements with comparison to predictions based on theory and to present graphical and tabular results with accompanying narrative explanation in a modern professional manner.

V. Course Activities

Supervised laboratory sessions begin with review of applicable theory, explanation and demonstration of instrumentation and equipment, and review of expectations regarding the exercise at hand. Supplemental guidance is provided.
for appropriate analysis and documentation in the form of a written laboratory report. Students conduct experiments in groups sharing raw measurements. Analyses and preparation of laboratory reports are individually accomplished.

VI. Course Evaluation:

Student outcomes are evaluated on the basis of individually prepared and submitted laboratory reports. Letter grades will follow the scale A: 100-90, B: 89-80, C: 79-70, D: 69-60, and F: below 60.

VII. Suggested Text:


VIII. Alternate texts and references (these or most recent edition)


## Curriculum Action Request
### University of Alaska Anchorage

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

### 1. School or College
- EN SOENGR

### 2. Course Prefix
- CE

### 3. Course Number
- A441

### 4. Previous Course Prefix & Number

### 5. Credits/CEU
- 3

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

### 6. Complete Course/Program Title

**Introduction to Environmental Engineering**

### Abbreviated Title for Transcript (30 character)

### 7. Type of Course
- Academic
- Non-credit
- CEU
- Professional Development

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

### 9. Repeat Status
- # of Repeats
- Max Credits

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

### 11. Implementation Date
- From: Fall/2007
- To: /9999

### 12. Cross Listed with
- Stacked
- Other

### 13. List any programs or college requirements that require this course
- BS Civil Engineering

### 14. Coordinate with Affected Units
- N/A

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

### 16. Course Description

Introduction to the fundamentals of environmental engineering, including theory and application of water and wastewater engineering, water supply concepts, wastewater characteristics, treatment and disposal, solid waste management and air pollution control.

### 17a. Course Prerequisite(s)
- CHEM A106 General Chemistry I

### 17b. Test Score(s)

### 17c. Co-requisite(s)
- E5 A341 Fluid Mechanics, or approved equivalent

### 17d. Other Restriction(s)
- College
- Major
- Class
- Level

### 17e. Registration Restriction(s)
- Civil Engineering Professional admission status or approval by the Civil Engineering Department Chair

### 18. Mark if course has fees

### 19. Justification for Action

Prerequisites and corequisites are adjusted to assure appropriate academic preparation

---

### Approved
- Dean/Director of School/College
- Date

### Approved
- Department Chairperson
- Date

### Approved
- Academic Board Chairperson
- Date

### Approved
- Provost or Designee
- Date
UNIVERSITY OF ALASKA ANCHORAGE  
SCHOOL OF ENGINEERING  
COURSE CONTENT GUIDE  

Date: 5 February 2007

Department: Civil Engineering

Course Prefix, Number, and Title: CE A441 Introduction to Environmental Engineering

I. Course Description
   Introduction to the fundamentals of environmental engineering, including theory and application of water and wastewater engineering, water supply concepts, wastewater characteristics, treatment and disposal, solid waste management and air pollution control.

II. Course Design

   A. Fundamental intent: This Senior-level civil engineering course that will give students the ability to understand the unit processes and operations of water and wastewater treatment, and those associated with solid waste and air pollution. This course will prepare students to evaluate the need for treatment and to select appropriate systems for management of environmental pollution control.

   B. Number of Credits: Three (3)

   C. Course schedule: Standard semester timeframe.

   D. Lecture hours/week: Three (3)

   E. Laboratory hours/week: None

   F. Total time of work expected outside of class: Six (6) hours/week.

   G. Programs that require this course: BS Civil Engineering

   H. Grading: A-F

   I. Coordination with affected units: N/A

   J. Justification for action: Prerequisites and corequisites are adjusted to assure appropriate academic preparation.
K. **Prerequisites:** CHEM A106 General Chemistry I, or approved equivalent.

L. **Co-requisites:** E5 A341 Fluid Mechanics, or approved equivalent.

M. **Registration Restrictions:** Civil Engineering Professional admission status or approval by the Civil Engineering Department Chair

N. **Course level justification:** The course requires prerequisite knowledge from courses typically completed in the third (junior) year in ABET-accredited engineering degree programs.

III. **Course Outline**

A. Identifying and Solving Environmental Problems
B. Engineering Calculations
C. Material Balances and Separations
D. Reactions
E. Reactors
F. Energy Flows and Balances
G. Ecosystems
H. Water Quality
I. Water Supply and Treatment
J. Wastewater Treatment
K. Air Quality
L. Air Quality Control
M. Solid Waste
N. Hazardous Waste
O. Noise Pollution
P. Engineering Decisions

IV. **Instructional Goals and Student Outcomes**

a. **Instructional Goals:**

The objectives of this course are to:

1. Promote an overall technical understanding of global aspects of environmental pollution and its evaluation, control and management in the areas of water, wastewater, air, solid waste and hazardous waste;

2. Promote an understanding of the basic unit processes and operations that are available for treatment of drinking water and mitigation of environmental effects of a variety of waste streams;

3. Develop the ability to evaluate the need for and applicability of unit processes and operations, including fundamental design concepts, leading to engineered systems for water, wastewater, air, hazardous waste and solid waste treatment systems;
4. acquire knowledge enabling identification of specific data requirements for description of environmental quality problems leading to development of control strategies and the analysis of associated experimental data; and
5. develop an understanding of how multiple unit processes and operations can be combined for effective environmental pollution control, while minimizing negative effects upon natural environments.

b. Student Outcomes:

Upon successful completion of this course, students will be able to:
1. evaluate global environmental concerns and interactions in the areas of water, wastewater, air, hazardous waste, and solid waste collection, and treatment disposal;
2. apply engineering and scientific principles necessary to assess the degree of mitigation required regarding common environmental pollution problems;
3. apply a broad range of treatment processes and operations for the control of water, wastewater, air pollution, hazardous and solid waste preparatory for subsequent training in process design;
4. evaluate the need for and applicability of unit processes an operations leading to engineered systems for water, wastewater, air, hazardous waste and solid waste treatment systems;
5. evaluate how multiple unit processes and operations can be combined for effective environmental pollution control; and
6. identify specific data requirements for description of environmental quality problems leading to development control strategies.

V. Course Activities

Class sessions consist of lectures. Assignments are made to allow students to learn by application of the principles taught in the course. Exams and other measurement instruments are administered to assess the abilities of the students to apply principles presented in the course.

VI. Course Evaluation: Instructional goals and student outcomes are evaluated on the basis of graded assignments, quizzes, and exams.

VII. Suggested Text:


VIII. Bibliography:
### Curriculum Action Request

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>EN SOENGR</th>
<th>1b. Division</th>
<th>1c. Department</th>
<th>Civil Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Course Prefix</td>
<td>CE</td>
<td>3. Course Number</td>
<td>A403</td>
<td></td>
</tr>
<tr>
<td>4. Previous Course Prefix &amp; Number</td>
<td>CE A603</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5a. Credits/CEU</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5b. Contact Hours</td>
<td>(Lecture + Lab) (3+0)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**6. Complete Course/Program Title**  
Arctic Engineering

**Abbreviated Course/Program Title for Transcript (30 character)**

<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>Academic</th>
<th>Non-credit</th>
<th>CEU</th>
<th>Professional Development</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>8. Type of Action</th>
<th>Add</th>
<th>Change</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>(mark appropriate boxes)</td>
<td>Prefix</td>
<td>Credits</td>
<td>Title</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Repeat Status</th>
<th># of Repeats</th>
<th>Max Credits</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
<th>A-F</th>
<th>P/NP</th>
<th>NG</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>11. Implementation Date</th>
<th>semester/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>From:</td>
<td>To:</td>
</tr>
<tr>
<td>Fall/2007</td>
<td>9999</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12. Cross Listed with</th>
<th>Stacked</th>
<th>with CE A603</th>
</tr>
</thead>
</table>

| 13. List any programs or college requirements that require this course |
| BS Civil Engineering |

| 14. Coordinate with Affected Units: | N/A |
| Department, School, or College | |

| 15. General Education Requirement |
| Oral Communication | Written Communication | Quantitative Skills | Humanities |
| Fine Arts | Social Sciences | Natural Sciences | Integrative Capstone |

| 16. Course Description |
| The course introduces students to a broad spectrum of engineering challenges that are unique to cold regions of the world. Physical principles and practical data collection methods, analyses, designs, and construction methods are discussed. Students gain a working knowledge of cold regions engineering problems and modern solutions as a basis for more detailed study. Graduate students registered for CE A603 conduct a self-directed research project and present an associated written report on a specialized Arctic engineering issue. |

<table>
<thead>
<tr>
<th>17a. Course Prerequisite(s) (list prefix and number)</th>
<th>17b. Test Score(s)</th>
<th>17c. Co-requisite(s) (concurrent enrollment required)</th>
</tr>
</thead>
</table>

| 17d. Other Restriction(s) | 17e. Registration Restriction(s) (non-codable) |
| College | Major | Class | Level | Upper class standing in an accredited undergraduate program in engineering |

| 18. Mark if course has fees |

| 19. Justification for Action |
| The Bachelor of Science program in Civil Engineering pledges in its catalog introduction that "The UAA Civil Engineering program emphasizes northern region design considerations and provides specialized training appropriate for an engineering career in Alaska and other cold regions of the world." This required course will assure that this pledge is met for each UAA BSCE graduate and furthermore provide them with an essential credential for Professional Engineer licensure in Alaska (pending review and approval by the Alaska Board of Registration following creation of CE A403). |

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

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

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

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

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

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

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

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

<table>
<thead>
<tr>
<th>Approved</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disapproved</td>
<td></td>
</tr>
</tbody>
</table>
1a. School or College
EN SOENGR

1b. Division

1c. Department
Civil Engineering

2. Course Prefix
CE

3. Course Number
A603

4. Previous Course Prefix & Number

5a. Credits/CEU
3

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

6. Complete Course/Program Title
Arctic Engineering

Abbreviated Title for Transcript (30 character)

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

8. Type of Action
 Add
 Change
 Delete

(mark appropriate boxes)

9. Repeat Status

# of Repeats

Max Credits

10. Grading Basis
 A-F
 P/NP
 NG

11. Implementation Date
 From: Fall/2007
 To: 9/999

12. Cross Listed with

[Cross-Listed/Stacked]

CE A403

Cross-Listed Coordination Signature

13. List any programs or college requirements that require this course

MS Arctic Engineering

14. Coordinate with Affected Units:
 N/A
 Department, School, or College

Initiator Signature
 Date

15. General Education Requirement

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

16. Course Description
The course introduces students to a broad spectrum of engineering challenges that are unique to cold regions of the world. Physical principles and practical data collection methods, analyses, designs, and construction methods are discussed. Students gain a working knowledge of cold regions engineering problems and modern solutions as a basis for more detailed study. Graduate students registered for CE A603 conduct a self-directed research project and present an associated written report on a specialized Arctic engineering issue.

17a. Course Prerequisite(s) (list prefix and number)

17b. Test Score(s)

17c. Co-requisite(s) (concurrent enrollment required)

17d. Other Restriction(s)

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

Upper class standing in an accredited undergraduate program in engineering

17e. Registration Restriction(s) (non-codable)

[ Mark if course has fees ]

18. Justification for Action
The Bachelor of Science program in Civil Engineering pledges in its catalog introduction that "The UAA Civil Engineering program emphasizes northern region design considerations and provides specialized training appropriate for an engineering career in Alaska and other cold regions of the world." This required course at the undergraduate (CE A403) will assure that this pledge is met. The graduate level course (CE A603) is distinguished by the requirement for preparation of a scholarly paper, whose presentation will benefit undergraduate students.

Approved
Disapproved:

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

Approved
Disapproved:

Department Chairperson  Date  Undergraduate or Graduate Academic Board Chairperson  Date

Approved
Disapproved:

Curriculum Committee Chairperson  Date  Provost or Designee  Date

55
COURSE CONTENT GUIDE
University of Alaska Anchorage, School of Engineering

CE A403/603 Arctic Engineering (web-based, stacked)

Date initiated: 2/5/07                                       Date revised:

Course title: Arctic Engineering                             Course number: CE A403/603

Credits: 3.0                                              CEU’s: N/A

Course duration: 15 week semester

Contact hours: Information in the format of narrated slide presentations, short videos, and other online study aids are presented weekly, each requiring an average two hours to review. Required online guided discussions and other interactions with the instructor and fellow students require at least an additional one hour weekly, for 3.0 hours per week or 3 hours/week * 15 weeks = 45 hours total contact-equivalent student learning time.

Programs: Arctic and Civil Engineering

Grading basis: A - F

Course Description: The course introduces students to a broad spectrum of engineering challenges that are unique to cold regions of the world. Physical principles and practical data collection methods, analyses, designs, and construction methods are discussed. Students gain a working knowledge of cold regions engineering problems and modern solutions as a basis for more detailed study. Graduate students registered for CE A603 conduct a self-directed research project and present an associated written report on a specialized Arctic engineering issue.

Course registration restrictions:
CE A403: Upper class standing in an accredited undergraduate program in engineering
CE A603: Graduate standing, with a baccalaureate degree in engineering

Course prerequisites: NA

Fee amount: $38 (or current UAA distance delivery fee)

I. Instructional Goals and Student Outcomes.

    A. Instructional Goals: Instructors will present materials, lead discussions, and assign exercises intended to give senior and graduate engineering students an ability to analyze and apply climatic data, an understanding of the effects of cold temperatures, snow, ice and frozen ground on the design, maintenance and operation of engineered infrastructure, and knowledge of specialized construction issues in the arctic.

    B. Student Outcomes: On successful completion of the course, students will:
1. Understand physical reasons for climate variations
2. Know basic principles of heat transfer and have the ability to perform associated computations
3. Know the basic characteristics of ice and snow and the nature of their effects on engineering infrastructure
4. Understand fundamental aspects of freezing ground and associated effects on foundations and roads
5. Understand basic principles and practices of building design and construction in the presence of freezing temperatures and snow
6. Understand requirements for utilities that are unique to cold regions of the world
7. Understand critical aspects of construction, winter safety, and emergency survival in the Arctic
8. Have a basic understanding of psychrometric charts and of moisture migration in Arctic structures
9. Know of critical issues related to electrical engineering in the Arctic
10. Demonstrated skill for self-directed written research on Arctic Engineering issues (applies only for graduate students registered in CE A603).

II. Guidelines for evaluation

A. Individual participation in discussions: Students are required to participate in instructor-directed online discussion of course topics and are otherwise encouraged to interact with each other in a scholarly manner regarding the challenges of learning modules in the course.

B. Homework assignments: Students are required to retrieve and interpret data and other information and to perform computations associated with topics of the course learning modules.

C. Midterm and Final Exams: A midterm exam and a comprehensive final exam are administered online. Students are required to explicitly vouch for their academic honesty on the exam.

D. Term Research Project and Report (CE A603): CE A603 graduate students complete a research project and author a paper. The topic of the paper must directly involve cold regions engineering by discussing effects of freezing temperatures, snow, ice, permafrost or other aspects unique to the Arctic on the design, construction, operation, or maintenance of engineering works.
III. Course level justification

A. The primary context of the course is discussion among professional peers on advanced technical topics, with the basic assumption that students are accustomed to this level of interaction.

B. Presentations and reading by students include advanced scientific and engineering topics requiring a background in math and science equivalent to that of the senior year in bachelor’s degree programs in engineering for correct interpretation.

C. Significant responsibility for independent critical thinking, efficient learning habits, and interpretation of technical information falls on the student at a level commonly associated with upper-class undergraduate and graduate education.

D. CE A603 (graduate credit): The additional requirement for CE A603 students of the self-directed written research project requires abilities to analyze data, to evaluate models used in research, and to draw independent conclusions at a level beyond that typically required in undergraduate education.

IV. Topical course outline

A. Global Perspectives – climate and seasonal variations on Earth, heat balance of Earth and its atmosphere, long-term climate change
B. Heat Transfer – conduction, convection and radiation
C. Ice Engineering – properties of ice, introduction to sea, lake and river ice, challenges relating to ice
D. Snow Engineering – snow distribution, measurements and properties
E. Frozen Ground Engineering – review of soil properties, properties and behavior of frozen soils
F. Arctic Roads – challenges due to cold environment on roads and airfields, selection of proper construction materials, design and construction considerations
G. Arctic Buildings – site selection, design of roof, walls, floor and utilities, snow management
H. Arctic Utilities – introduction to water and wastewater systems, planning and project development
I. Arctic Construction – introduction to construction conditions and techniques in the arctic environment
J. Winter Safety and Survival – wind chill charts, survival tips, understanding of risk to hypothermia and frost bites
K. Mechanical Engineering Issues in Cold Regions – Psychrometrics, heating loads, moisture migration in structures
L. Electrical Engineering Issues in Cold Regions – Introduction to power generation, communications, instrumentation and corrosion prevention in cold climates
M. Term paper conference; reading and discussion of CE A603 student papers
V. Suggested text and bibliography

A. Suggested text. No suggested text. References are drawn from the professional literature and equivalent online sources of technical information.

B. Bibliography

# Curriculum Action Request
**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>EN SOENGR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1b. Division</strong></td>
<td></td>
</tr>
<tr>
<td>Civil Engineering</td>
<td></td>
</tr>
<tr>
<td><strong>1c. Department</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Course Prefix</strong></td>
<td></td>
</tr>
<tr>
<td><strong>3. Course Number</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>4. Previous Course Prefix &amp; Number</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5a. Credits/CEU</strong></td>
<td></td>
</tr>
<tr>
<td><strong>5b. Contact Hours</strong></td>
<td></td>
</tr>
<tr>
<td>(Lecture + Lab)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Complete Course/Program Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Science Civil Engineering</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>Academic</th>
<th>Non-credit</th>
<th>CEU</th>
<th>Professional Development</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>8. Type of Action</th>
<th>Add</th>
<th>Change</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(mark appropriate boxes)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Repeat Status</th>
<th># of Repeats</th>
<th>Max Credits</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
<th>A-F</th>
<th>P/NP</th>
<th>NG</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>11. Implementation Date</th>
<th>semester/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>From: Fall/2007</td>
<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>

<table>
<thead>
<tr>
<th>Cross-Listed Coordination Signature</th>
</tr>
</thead>
</table>

**13. List any programs or college requirements that require this course**

**14. Coordinate with Affected Units:** Bachelor of Science Engineering

**Department, School, or College**

<table>
<thead>
<tr>
<th>Initiator Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

**15. General Education Requirement**

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

**16. Course Description**

Adjustments in admission and graduation requirements from previously approved program

17a. Course Prerequisite(s) (list prefix and number)

17b. Test Score(s)

17c. Co-requisite(s) (concurrent enrollment required)

17d. Other Restriction(s)

| College | Major | Class | Level |

17e. Registration Restriction(s) (non-codable)

18. Mark if course has fees

19. Justification for Action

Admission standards are adjusted to match recording of pre-majors vs. full-majors in the Banner system. Additional natural science and technical electives are added to better achieve program objectives and relates student outcomes. An additional required course is added (CE A403 Arctic Engineering) to explicitly address program objectives and student outcomes related to cold regions engineering. Minor refinements are made to the catalog narrative throughout.

---

**Initiator (faculty only)**

[Signature]

**Date**

---

**Approved**

**Disapproved**

**Dean/Director of School/College**

[Signature]

**Date**

---

**Approved**

**Disapproved**

**Department Chairperson**

[Signature]

**Date**

---

**Approved**

**Disapproved**

**Academic Board Chairperson**

[Signature]

**Date**

---

**Approved**

**Disapproved**

**Curriculum Committee Chairperson**

[Signature]

**Date**

---

**Approved**

**Disapproved**

**Provost or Designee**

[Signature]

**Date**

---
INTRODUCTION

Civil Engineering is a professional discipline recognized by licensure in each of the 50 States and many countries abroad. Civil Engineering is a broad branch of engineering dedicated to providing civilization with essential infrastructure and services including bridges, buildings, ports, water resource development, waste disposal, dams, water power, irrigation and drainage works, roads, airports, railways, construction and management services,; surveying; city management and developmental planning.

Civil Engineering students are introduced to principles of mathematics, chemistry, and physics during their first two years of study. The third year of study is largely devoted to courses in applied extensions of the basic sciences to form the foundation for more advanced engineering analysis and design. Students draw upon previous learning in their senior year to focus their studies on sophisticated analyses and creative designs. Throughout the four-year engineering program students take courses in communication, humanities, social sciences and fine arts to improve their communication skills and to become more aware of their roles and responsibilities in modern society. The UAA Civil Engineering program emphasizes northern region design considerations and provides specialized training appropriate for an engineering career in Alaska and other cold regions of the world.

Bachelor of Science, Civil Engineering

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

Accreditation

The Bachelor of Science degree program in Civil Engineering at UAA is accredited by the Engineering Accreditation Commission of ABET, Inc., which is the foremost accreditor of engineering programs and related fields of study in the US.

PROGRAM OBJECTIVES AND EXPECTED OUTCOMES

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

1. have a basic knowledge of the principles and skills relating to the civil engineering sub-disciplines of water resources, geotechnical, structural, transportation, and environmental engineering;
2. have an understanding of the principles related to project delivery;
3. have sufficient technical competence to obtain employment as an entry level engineer and to be able to progress professionally within the discipline and are prepared for advanced study;
4. have a fundamental understanding of the issues related to civil engineering practice in cold regions;
5. are able to communicate their ideas;
6. are able to work within a team environment; and
7. are prepared for and understand the need for continued professional development throughout their careers.

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

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

Honors in Civil Engineering

Undergraduate civil engineering students may be recognized for exceptional performance by earning Departmental Honors in Civil Engineering. The award will be noted on their permanent university transcript. In order to receive honors in civil engineering, a student must meet each of the following requirements:

1. Complete all requirements for a BS degree in Civil Engineering. A minimum of 30 credits applicable to the civil engineering degree must be completed at UAA.
2. Be an active member for at least one year of both a national and an on-campus student chapter of a professional engineering society that addresses issues relevant to the civil engineering profession.
3. Have a GPA of 3.30 or higher in courses applicable to the BS degree in Civil Engineering.
4. Gain approval for and complete a design/research project prior to applying for graduation. An oral presentation of the project results to an appropriate audience will be required. The project proposal and final written report must be approved by the student’s academic advisor and the chair of civil engineering.
5. Take and pass the Fundamentals of Engineering Exam in the fall semester of the senior year.
6. Document a minimum of 8 weeks work experience in an engineering or engineering related position.

Admission Requirements

Admission to the civil engineering program is to one of three levels: Pre-Engineering, Engineering Fundamentals, or Civil Engineering Professional. Students admitted to any of the three levels are considered to be degree seeking engineering students. Pre-Engineering students are classified within the university system as “pre-majors”. Engineering Fundamentals and Civil Engineering Professional students are classified within the university system as “full majors”.

Pre-Engineering

Applicants for admission who have completed only the general Baccalaureate Degree Program Admission Requirements on page __ are admitted as pre-majors to the civil engineering program at the Pre-Engineering level.

Engineering Fundamentals

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

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

Transfer, change of major, and returning students who are applying for admission to the civil engineering program and have completed all of the Engineering Fundamentals Requirements listed under the civil engineering Graduation Requirements section with grades of “C” or better will be admitted to the civil engineering program at the Civil Engineering Professional level.

Advancement

Pre-Engineering to Engineering Fundamentals

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

Engineering Fundamentals to Civil Engineering Professional

Engineering Fundamentals students who have completed, or are within a semester of completing, the Engineering Fundamentals requirements must meet with their faculty advisor to apply for advancement to the Civil Engineering Professional status. Applicants who have successfully completed all the Engineering Fundamental requirements will be advanced to the Civil Engineering Professional status. Applicants who are within nine credits of completing the Engineering Fundamentals requirements will be admitted conditionally to the Civil Engineering Professional status. Students who fail to meet the conditions for advancement will be removed from the civil engineering program.

All applications for advancement within the civil engineering program must be submitted to the civil engineering department at least thirty days prior to beginning any CE or ES courses listed as a major requirement for the level for which they are applying.

Advising

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

Academic Progress

Any given civil engineering (CE) or engineering science (ES) course may only be taken when all prerequisites for the course are met with a grade of C or higher.

A student who is unable to earn a grade of “C” or better in a CE or ES course during his/her initial enrollment may attempt to earn a satisfactory grade one additional time, on a space-available basis. Failure to earn a grade of “C” or better on the second attempt results in removal from the civil engineering program.

A student who has a semester GPA in engineering courses below 2.0 will be placed on academic warning by the School of Engineering. A student on academic warning that receives a semester GPA in engineering courses of at least 2.0 will be removed from academic warning status by the School. Otherwise, he or she will be removed from the civil engineering program and will not be permitted to attend CE and ES courses.

Graduation Requirements

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

Complete the General University Requirements for Baccalaureate Degrees listed on page __.

B. General Education Requirements

Complete the General Education Requirements (GER) for Baccalaureate Degrees listed at the beginning of this chapter. UAA GER requirements (a minimum of 37 total credits in 8 different categories) are included in courses required for the BSCE degree. There are 15 GER credits in three different categories that the student may select.

- Fine Arts 3
- Humanities 6
- Social Sciences 6

Six (6) credits of these fifteen (15) credits must be at the 200-level or above. However, for the Humanities category, a series of two 100-level courses (such as HIST 101 and HIST 102) would satisfy the six credit humanities requirement and count as 3 credits toward the 200 level requirement. Courses selected for Social Sciences must be from different disciplines (i.e., different prefixes).

C. Engineering Fundamentals Requirements

Complete these required courses with a “C” or higher (61 credits)

- CHEM A105 General Chemistry I 3
- CHEM A105L General Chemistry I Lab 1
- CHEM A106 General Chemistry II 3
- CHEM A106L General Chemistry II Lab 1
- COMM A111, A235, A237, or A241 3
- ENGL A111 Methods of Written Communications 3
- ENGL A212 Technical Writing 3
- ES A103 Engineering Graphics 3
- ES A111 Engineering Science 3
- ES A201 Computer Techniques 3
- ES A209 Engineering Statics 3
- ES A210 Engineering Dynamics 3
- ES A302 Probability and Statistics for Engineers 3
- GEO A155 Fundamentals of Surveying 3
- MATH A200 Calculus I 4
- MATH A201 Calculus II 4
- MATH A202 Calculus III 4
- MATH A302 Ordinary Differential Equations 3
- PHYS A211 General Physics I 3
- PHYS A211L General Physics I Lab 1
- PHYS A212 General Physics II 3
- PHYS A212L General Physics II Lab 1

D. Civil Engineering Professional Requirements

1. Satisfactorily complete these required courses with a GPA of 2.0. Courses with an asterisk (*) are prerequisite courses and must be completed with a grade of “C” or better. (47 credits):

- CE A334* Properties of Materials 3
- CE A344 Water Resources Engineering 3
- CE A402 Transportation Engineering 3
- CE A403 Arctic Engineering 3
- CE A422 Foundation Engineering 3
- CE A431* Structural Analysis 4
- CE A432 Steel Design, or
- CE A433 Concrete Design 3
- CE A435* Soil Mechanics 3
- CE A438 Design of Engineering Systems 3
A Natural Science elective (minimum 3 credits) must be taken in addition to the 7 credit Natural Sciences General Education Requirement and may be selected from the following list:

- BIOL A115 Fundamentals of Biology I (4)
- BIOL A271 Principles of Ecology (4)
- CHEM A450 Environmental Chemistry (3)
- GEOG A205 Elements of Physical Geography (3)
- GEOL A111 Physical Geology (4)
- GEOL/Biol A178 Fundamentals of Oceanography (3)
- PHYS A303 Modern Physics (3)
- PHYS A314 Electromagnetics (3)
- PHYS A320 Simulation of Physical Systems (3)
- PHYS A456 Nonlinear Dynamics and Chaos (3)

Note: GEOL A111 is the recommended course.

Six (6) credits of technical elective courses are required that may be chosen from the following list of courses. These electives are intended to improve students' knowledge and skills relating to site characterization, problem identification, criteria development, and project design in the civil engineering sub-disciplines of water resources, geotechnical, structural, transportation, and environmental engineering. Graduate courses may not be applied to both a baccalaureate and masters degree.

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

Geotechnical Engineering
- CE A610 Advanced Foundation Engineering (3)
- CE A611 Geotechnical Earthquake Engineering (3)
- CE A676 Coastal Processes (3)
- CE A681 Frozen Ground Engineering (3)

Structural Engineering
- CE A432 Steel Design (3)** or
- CE A433 Concrete Design** (3)
- CE A434 Timber Design (3)
- CE A631 Structural Finite Elements (3)
- CE A633 Structural Dynamics (3)
- CE A634 Structural Earthquake Engineering (3)

** Note: Either CE A432 or CE A433 may be chosen as a technical elective, if not applied to satisfy the Civil Engineering Professional requirements described above.

Transportation Engineering
- CE A404 Highway Engineering (3)
- CE A675 Design of Ports and Harbors (3)
- GEO A456 Geomatics and Civil Design (3)
Environmental Engineering

AEST A601 Aquatic Processes Chemistry (3)
AEST A602 Water Quality Management (3)
AEST A603 Solid Waste Management (3)
AEST A613 Remediation (3)
CE A442 Environmental System Design (3)
CE A600 Fundamentals of Environmental Science and Engineering (3)
CE A605 Chemical and Physical Water and Wastewater Treatment Processes (3)
CE A606 Biological Treatment Processes (3)
AEST A608 Air Pollution (3)

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

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

Students are encouraged to follow the course sequence outlined below to accommodate course prerequisites and typical scheduling of instruction:

First Year
Fall Semester (17 credits):
- CHEM A105  General Chemistry I  3
- CHEM A105L General Chemistry I Lab  1
- ENGL A111 Methods of Written Communication  3
- ES A111  Engineering Science  3
- GEO A155  Fundamentals of Surveying  3
- MATH A200  Calculus I  4

Spring Semester (17 credits):
- CHEM A106  General Chemistry II  3
- CHEM A106L General Chemistry II Lab  1
- ES A103  Engineering Graphics  3
- ES A201  Computer Techniques  3
- MATH A201  Calculus II  4
- COMM A111, A235, A237, or A241  3

Second Year
Fall Semester (17 credits):
- ENGL A212  Technical Writing  3
- ES A209  Engineering Statics  3
- MATH A202  Calculus III  4
- PHYS A211  General Physics I  3
- PHYS A211L General Physics I Lab  1
- Social Sciences/Humanities/Fine Arts GER  3

Spring Semester (16 credits):
- ES A210  Engineering Dynamics  3
- ES A302  Probability and Statistics for Engineers  3
- MATH A302  Ordinary Differential Equations  3
- PHYS A212  General Physics II  3
- PHYS A212L General Physics II Lab  1
- Social Sciences/Humanities/Fine Arts GER  3

Third Year
Fall Semester (16 credits):
- CE A334  Properties of Materials  3
- ES A309  Elements of Electrical Engineering  3
- ES A331  Mechanics of Materials  3
- ES A341  Fluid Mechanics  4
- Social Sciences/Humanities/Fine Arts GER  3

Spring Semester (16 credits):
- CE A344  Water Resources Engineering  3
- CE A431  Structural Analysis  4
- CE A435  Soil Mechanics  3
- ES A346  Basic Thermodynamics  3
- Social Sciences/Humanities/Fine Arts GER  3

Changes underlined
Fourth Year

Fall Semester (18 credits):
- CE A402 Transportation Engineering 3
- CE A432 Steel Design, or
- CE A403 Arctic Engineering 3
- CE A441 Introduction to Environmental Engineering 3
- Natural Sciences Elective 3
- Technical Elective 3
- Social Sciences/Humanities/Fine Arts GER 3

Spring Semester (15 credits):
- CE A422 Foundation Engineering 3
- CE A403 Arctic Engineering, or
- CE A433 Concrete Design 3
- CE A438 Design of Engineering Systems 3
- ESM A450 Economic Analysis and Operations 3
- Technical Elective 3
### Curriculum Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBPP</td>
<td>ADBP</td>
<td>Logistics</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/CEU</th>
<th>5b. Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>(Lecture + Lab)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Complete Course/Program Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Endorsement Certificate, Logistics</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>7. Type of Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
</tr>
<tr>
<td>Non-credit</td>
</tr>
<tr>
<td>CEU</td>
</tr>
<tr>
<td>Professional Development</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. Type of Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
</tr>
<tr>
<td>Change</td>
</tr>
<tr>
<td>Delete</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Repeat Status No</th>
<th>Limit</th>
<th>Max Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-F</td>
</tr>
<tr>
<td>P/NP</td>
</tr>
<tr>
<td>NG N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. Implementation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>From: Fall/2007</td>
</tr>
<tr>
<td>To: /999</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>13. List any programs or college requirements that require this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14. Coordinate with Affected Units:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community and Technical College, Chugiak, Eagle River, Matanuska-Susitna Campus, Listserv</td>
</tr>
</tbody>
</table>

**Initiator Signature**

<table>
<thead>
<tr>
<th>15. General Education Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
</tr>
<tr>
<td>Written Communication</td>
</tr>
<tr>
<td>Quantitative Skills</td>
</tr>
<tr>
<td>Humanities</td>
</tr>
<tr>
<td>Fine Arts</td>
</tr>
<tr>
<td>Social Sciences</td>
</tr>
<tr>
<td>Natural Sciences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16. Course Description</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>17a. Course Prerequisite(s) (list prefix and number)</th>
<th>17b. Test Score(s)</th>
<th>17c. Co-requisite(s) (concurrent enrollment required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17d. Other Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>College</td>
</tr>
<tr>
<td>Major</td>
</tr>
<tr>
<td>Class</td>
</tr>
<tr>
<td>Level</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17e. Registration Restriction(s) (non-codable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>18. Mark if course has fees</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>19. Justification for Action:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The University of Alaska Anchorage currently provides an AAS and an undergraduate certificate program. It is proposed that the five core Logistics Operations courses offered become an Occupational Endorsement. This endorsement would serve those currently working or planning to work in fields related to logistics operations in both industry and the military who cannot commit to a long-term educational program, but would benefit from a two to three semester program in logistics operations and a corresponding professional qualification.</td>
</tr>
</tbody>
</table>

---

**Approved**

<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
</tr>
</thead>
</table>

**Disapproved:**

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

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

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate or Graduate Academic Board Chairperson</td>
<td>Date</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provost or Designee</td>
<td>Date</td>
</tr>
</tbody>
</table>
The University of Alaska Anchorage Department of Logistics within the College of Business and Public Policy proposes an Occupational Endorsement Certificate, Logistics Operations. This occupational endorsement would primarily meet the needs of working students interested in beginning or enhancing a career in logistics operations. Anchorage, Alaska is located within only nine flight hours from all major markets in the world, making it a key location in global logistics networks. As logistics service providers such as FedEx and DHL continue to increase their presence in Alaska, the proposed Occupational Endorsement Certificate in Logistics Operations would help prepare students for a career in the burgeoning field of logistics operations.

The Occupational Endorsement Certificate, Logistics Operations program would allow the College of Business and Public Policy to offer an evening transcripted certificate logistics operations program that could be completed by working students in two to three semesters. The executives of locally-based logistics service providers have expressed great interest in the proposed certificate as a possible extension of their logistic operations training programs for employees. (Please see the attached correspondences from Mr. Dave Haugen, Vice President, Lynden, Inc. and Mr. Scott Hawkins, President & Chief Operating Officer, Alaska Supply Chain Integrators.)

This certificate would also be attractive to military personnel within the logistics field who want to enhance or update their current logistics knowledge while attaining a professional qualification. The two to three semester completion timeframe for the proposed Occupational Endorsement Certificate might hold great appeal for military students because the standard military rotation for many assigned to Elmendorf Air Force Base and Fort Richardson is two years, providing more than enough time for military students to begin and complete the program.

As outlined in the attached description of the proposed Occupational Endorsement Certificate, Logistics Operations, the certificate would be awarded upon completion of five 3-credit courses in Logistics Operations. Because all 15 credits earned toward the Occupational Endorsement Certificate are transferable to both the Undergraduate Certificate in Logistics and the Associate of Applied Science degree in Logistics Operations, it also serves as the first stepping-stone for students who wish to complete different stages of their logistics education at different times.
The Logistics Department offers four undergraduate programs: the Occupational Endorsement Certificate in Logistics Operations, the Certificate in Logistics, the Associate of Applied Science in Logistics Operations, and a major in Global Logistics Management for the Bachelor of Business Administration. Logistics refers to the complex systems of the movement of material, component parts and information within a business firm; and the distribution of final products to customers. Logistics is an essential function that adds value to the final product. The goal of logistics management is timely delivery, competitive pricing, mobility and flexibility, together with innovative transportation services. Today competitive advantages in global markets exceed the realm of manufacturing. Companies that master information technology and logistics are setting global standards for overall performance. Firms with a virtual world-wide logistics system view that carries out dynamic and continuous distribution are gaining the competitive edge.

Every organization is engaged in logistics if it has a purchasing function and/or a delivery process. Prospective employers include business firms, nonprofit organizations and government agencies. Anchorage and Alaska are strategically located relative to the great markets of Europe, Asia and the mainland United States. More freight in tonnage passes through the Ted Stevens Anchorage International Airport on a daily basis than in any other airport in the United States. Truck and marine transportation is crucial to supplying Alaska with goods. The State owns a railroad, and pipelines move oil and other fuels. The military establishment of Alaska is located here largely because of the logistical advantages obtained from Alaska’s strategic location. Effective development of the logistics sector depends on the availability of a labor force that understands and can manage logistics systems.

**OCCUPATIONAL ENDORSEMENT CERTIFICATE, LOGISTICS**

The Occupational Endorsement Certificate in Logistics Operations, which is awarded by the Logistics Department, is designed to provide a comprehensive foundation for students who want to initiate or develop a career path in logistics without having to commit to lengthier educational programs. All 15 credits earned toward the Occupational Endorsement Certificate are transferable to both the Undergraduate Certificate in Logistics and the Associate of Applied Science degree in Logistics Operations.

At the completion of a Logistics Operations Occupational Endorsement Certificate, students are able to demonstrate:

1. Proficiency in adapting to a variety of logistics employment settings with an understanding of the common terminology, equipment, regulations, and information systems used.
2. Entry-level employability skills in the following areas: logistics operations, logistics customer service, purchasing, supply management, warehouse operations, inventory control, transportation services, and transport operations management.

**ADMISSION REQUIREMENTS**

See Occupational Endorsement Certificate admissions in Chapter 7 of this catalog.
GRADUATION REQUIREMENTS
Students must achieve a grade of “C” or better in all courses required for the certificate.

MAJOR REQUIREMENTS
1. See general university requirements for Occupational Endorsement Certificates at the
   beginning of this chapter.
2. Complete the following courses:
   - LGOPA 110 Logistics, Information Systems and Customer Service 3
   - LGOPA 120 Warehouse and Inventory Control System 3
   - LGOPA 125 Transportation Services 3
   - LGOPA 160 Purchasing and Supply Management 3
   - LGOPA 235 Transport Operations Management 3

UNDERGRADUATE CERTIFICATE, LOGISTICS

The Certificate in Logistics program enables students to enhance and develop their understanding
and skills in the fields of logistics and supply chain management. It is designed to provide
continuing education opportunities to professionals in the business community.

ADMISSION REQUIREMENTS
Satisfy the Admission to Certificate and Associates Degree Program Requirements in Chapter 7,
“Academic Standards and Regulations.”

GRADUATION REQUIREMENTS
Students must achieve a grade of “C” or better in all courses required for the certificate.

MAJOR REQUIREMENTS
1. Complete the following courses:
   - BAA151 Introduction to Business 3
   - BAA231 Fundamentals of Supervision 3
   - LGOPA110 Logistics Information Systems and Customer Service 3
   - LGOPA120 Warehouse and Inventory Control Systems 3
   - LGOPA160 Purchasing and Supply Management 3
   - LGOPA125 Transportation Services 3
   - LGOPA235 Rates, Tariffs, and Carrier Liability 3
   - CIS A105 Introduction to Personal Computers and Application Software 3
   or
   - CIS A110 Computer Concepts in Business 3
2. Two electives at the 100-level or higher.* 6
3. A total of 30 credits is required for this certificate.

* If students intend to pursue the Associate degree in Logistics it is recommended that students use
these elective credits to prepare for the Written Communications and Math courses required for the
AAS LGOP degree.
ASSOCIATE OF APPLIED SCIENCE, LOGISTICS OPERATIONS

The Logistics Operations degree was developed with input from Alaskan business, industry, and military representatives to meet the needs in all aspects of the operational and technical career fields of logistics. Students will build a foundation of knowledge and skills for successful logistics operations: information management and customer service, warehousing and inventory control, purchasing and supply management operations, transportation services, transportation rates, tariffs, and carrier liability. The Logistics Operations AAS degree is designed to prepare graduates for employment in all the operational and technical aspects of global logistics careers and fields. Students who complete the AAS and wish to continue their formal education in Global Logistics Management can apply up to 48 credits to the CBPP baccalaureate degree in Global Logistics Management. Students planning to go on to a four-year program in the College of Business and Public Policy should know that all ACCT, BA, CIS, ECON, LGOP, and LOG courses in those four-year programs must be completed with a grade of C or better.

ADMISSION REQUIREMENTS
Satisfy the Admission to Certificate and Associate Degree Programs Requirements in Chapter 7, “Academic Standards and Regulations.”

GENERAL UNIVERSITY REQUIREMENTS
1. Complete the General University Requirements for Associate Degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Degree Requirements (15 credits) located at the beginning of this chapter. To provide maximum transferability, it is recommended that students consider the Bachelor of Business Administration General Education Requirements, and business core requirements when selecting courses to fulfill the Associate of Applied Science General Requirements.

MAJOR REQUIREMENTS
1. Complete the following courses:
   BAA151 Introduction to Business 3
   BAA231 Fundamentals of Supervision 3
   BA/JUST A241 Business Law I 3
   CIS A110 Computer Concepts in Business 3
   ECON A201 Principles of Macroeconomics 3
   LGOPA110 Logistics Information Systems and Customer Service 3
   LGOPA120 Warehouse and Inventory Control Operations 3
   LGOPA160 Purchasing and Supply Management 3
   LGOPA235 Transport Operations Management 3
   MATH A107 College Algebra 3-4
   or
   MATH A172 Applied Finite Mathematics 3
2. Complete four of the following courses: 12
   BAA273 Introduction to Statistics for Business and Economics 3
   BAA295 Internship 3
BAA375 Statistics for Business and Economics 3
BAA377 Operations Management 3
ECON A429 Business Forecasting 3
Any 300- or 400- level LOG course 3
OSH A101 Introduction to Occupational Safety and Health 3
OSH A108 Injury Prevention and Risk Management 4
OSH A250 Hazardous Material Operation 3
TECH A295 Technical Internship 1-6
TECH A402 Operational Safety 3

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

MAJOR REQUIREMENTS
1. Complete the following courses:
   BAA151 Introduction to Business 3
   BAA231 Fundamentals of Supervision 3
   BA/JUST A241 Business Law I 3
   CIS A110 Computer Concepts in Business 3
   ECON A201 Principles of Macroeconomics 3
   LGOPA110 Logistics Information Systems and Customer Service 3
   LGOPA120 Warehouse and Inventory Control Operations 3
   LGOPA160 Purchasing and Supply Management 3
   LGOPA125 Transportation Services 3
   LGOPA235 Transport Operations Management 3
   MATH A107 College Algebra 3-4
   or
   MATH A172 Applied Finite Mathematics 3
2. Complete four of the following courses: 12
   BAA273 Introduction to Statistics for Business and Economics 3
   BAA295 Internship 3
   BAA375 Statistics for Business and Economics 3
   BAA377 Operations Management 3
   ECON A429 Business Forecasting 3
   Any 300- or 400- level LOG course 3
   OSH A101 Introduction to Occupational Safety and Health 3
   OSH A108 Injury Prevention and Risk Management 4
   OSH A250 Hazardous Material Operation 3
   TECH A295 Technical Internship 1-6
   TECH A402 Operational Safety 3
3. A total of 60-61 credits is required for the degree.
# BACHELOR OF BUSINESS ADMINISTRATION

The requirements for the Bachelor of Business Administration with a major in Global Logistics Management are listed with the BBA located earlier in this chapter.

## FACULTY
Elisha (Bear) Baker, IV, Term Professor, AFERB1@cbpp.uaa.alaska.edu  
William Oliver Hedgepeth, Associate Professor, AFWOH@cbpp.uaa.alaska.edu  
Philip Price, Associate Professor, PHILIPP@cbpp.uaa.alaska.edu  
Darren Prokop, Associate Professor, AFDJP1@cbpp.uaa.alaska.edu
Every organization is engaged in logistics if it has a purchasing function and/or a delivery process. Prospective employers include business firms, nonprofit organizations and government agencies. Anchorage and Alaska are strategically located relative to the great markets of Europe, Asia and the mainland United States. More freight in tonnage passes through the Ted Stevens Anchorage International Airport on a daily basis than in any other airport in the United States. Truck and marine transportation is crucial to supplying Alaska with goods. The State owns a railroad, and pipelines move oil and other fuels. The military establishment of Alaska is located here largely because of the logistical advantages obtained from Alaska’s strategic location. Effective development of the logistics sector depends on the availability of a labor force that understands and can manage logistics systems.

OCCUPATIONAL ENDORSEMENT CERTIFICATE, LOGISTICS

The Occupational Endorsement Certificate in Logistics Operations, which is awarded by the Logistics Department, is designed to provide a comprehensive foundation for students who want to initiate or develop a career path in logistics without having to commit to lengthier educational programs. All 15 credits earned toward the Occupational Endorsement Certificate are transferable to both the Undergraduate Certificate in Logistics and the Associate of Applied Science degree in Logistics Operations. At the completion of a Logistics Operations Occupational Endorsement Certificate, students are able to demonstrate:

1. Proficiency in adapting to a variety of logistics employment settings with an understanding of the common terminology, equipment, regulations, and information systems used.
2. Entry-level employability skills in the following areas: logistics operations, logistics customer service, purchasing, supply management, warehouse operations, inventory control, transportation services, and transport operations management.

ADMISSION REQUIREMENTS
See Occupational Endorsement Certificate admissions in Chapter 7 of this catalog.

GRADUATION REQUIREMENTS
Students must achieve a grade of “C” or better in all courses required for the certificate.

MAJOR REQUIREMENTS
1. See general university requirements for Occupational Endorsement Certificates at the beginning of this chapter.
2. Complete the following courses:
### UNDERGRADUATE CERTIFICATE, LOGISTICS

The Certificate in Logistics program enables students to enhance and develop their understanding and skills in the fields of logistics and supply chain management. It is designed to provide continuing education opportunities to professionals in the business community.

**ADMISSION REQUIREMENTS**

Satisfy the Admission to Certificate and Associates Degree Program Requirements in Chapter 7, “Academic Standards and Regulations.”

**GRADUATION REQUIREMENTS**

Students must achieve a grade of “C” or better in all courses required for the certificate.

**MAJOR REQUIREMENTS**

1. Complete the following courses:
   - BAA151 Introduction to Business 3
   - BAA231 Fundamentals of Supervision 3
   - LGOPA110 Logistics Information Systems and Customer Service 3
   - LGOPA120 Warehouse and Inventory Control Systems 3
   - LGOPA160 Purchasing and Supply Management 3
   - LGOPA125 Transportation Services 3
   - LGOPA235 Rates, Tariffs, and Carrier Liability 3
   - CIS A105 Introduction to Personal Computers and Application Software 3
   - LGOPA 110 Logistics, Information Systems and Customer Service 3
   - LGOPA 120 Warehouse and Inventory Control Systems 3
   - LGOPA 160 Purchasing and Supply Management 3
   - LGOPA 125 Transportation Services 3
   - LGOPA 235 Rates, Tariffs, and Carrier Liability 3
   - CIS A105 Introduction to Personal Computers and Application Software 3

* If students intend to pursue the Associate degree in Logistics it is recommended that students use these elective credits to prepare for the Written Communications and Math courses required for the AAS LGOP degree.

### ASSOCIATE OF APPLIED SCIENCE, LOGISTICS OPERATIONS

The Logistics Operations degree was developed with input from Alaskan business, industry, and military representatives to meet the needs in all aspects of the operational and technical career fields of logistics. Students will build a foundation of knowledge and skills for successful logistics operations: information management and customer service, warehousing and inventory control, purchasing and supply management operations, transportation services, transportation rates, tariffs, and carrier liability. The Logistics Operations AAS degree is designed to prepare graduates for employment in all the operational and technical aspects of global logistics careers and fields. Students who complete the AAS and wish to continue their formal education in Global Logistics Management can apply up to 48 credits to the CBPP baccalaureate degree in Global Logistics Management. Students planning to go on to a four-year program in the College of Business and Public Policy should know that all ACCT, BA, CIS, ECON, LGOP, and LOG courses in those four-year programs must be completed with a grade of C or better.

**ADMISSION REQUIREMENTS**

Satisfy the Admission to Certificate and Associate Degree

### UNDERGRADUATE CERTIFICATE, LOGISTICS

The Certificate in Logistics program enables students to enhance and develop their understanding and skills in the fields of logistics and supply chain management. It is designed to provide continuing education opportunities to professionals in the business community.

**ADMISSION REQUIREMENTS**

Satisfy the Admission to Certificate and Associates Degree Program Requirements in Chapter 7, “Academic Standards and Regulations.”

**GRADUATION REQUIREMENTS**

Students must achieve a grade of “C” or better in all courses required for the certificate.

**MAJOR REQUIREMENTS**

1. Complete the following courses:
   - BAA151 Introduction to Business 3
   - BAA231 Fundamentals of Supervision 3
   - LGOPA110 Logistics Information Systems and Customer Service 3
   - LGOPA120 Warehouse and Inventory Control Systems 3
   - LGOPA160 Purchasing and Supply Management 3
   - LGOPA125 Transportation Services 3
   - LGOPA235 Rates, Tariffs, and Carrier Liability 3
   - CIS A105 Introduction to Personal Computers and Application Software 3
   - LGOPA 110 Logistics, Information Systems and Customer Service 3
   - LGOPA 120 Warehouse and Inventory Control Systems 3
   - LGOPA 160 Purchasing and Supply Management 3
   - LGOPA 125 Transportation Services 3
   - LGOPA 235 Rates, Tariffs, and Carrier Liability 3
   - CIS A105 Introduction to Personal Computers and Application Software 3

* If students intend to pursue the Associate degree in Logistics it is recommended that students use these elective credits to prepare for the Written Communications and Math courses required for the AAS LGOP degree.

### ASSOCIATE OF APPLIED SCIENCE, LOGISTICS OPERATIONS

The Logistics Operations degree was developed with input from Alaskan business, industry, and military representatives to meet the needs in all aspects of the operational and technical career fields of logistics. Students will build a foundation of knowledge and skills for successful logistics operations: information management and customer service, warehousing and inventory control, purchasing and supply management operations, transportation services, transportation rates, tariffs, and carrier liability. The Logistics Operations AAS degree is designed to prepare graduates for employment in all the operational and technical aspects of global logistics careers and fields. Students who complete the AAS and wish to continue their formal education in Global Logistics Management can apply up to 48 credits to the CBPP baccalaureate degree in Global Logistics Management. Students planning to go on to a four-year program in the College of Business and Public Policy should know that all ACCT, BA, CIS, ECON, LGOP, and LOG courses in those four-year programs must be completed with a grade of C or better.

**ADMISSION REQUIREMENTS**

Satisfy the Admission to Certificate and Associate Degree
1. Complete the following courses:

**MAJOR REQUIREMENTS**

BAA151 Introduction to Business 3
BAA231 Fundamentals of Supervision 3
BA/JUST A241 Business Law I 3
CIS A110 Computer Concepts in Business 3
ECON A201 Principles of Macroeconomics 3
LGOPA110 Logistics Information Systems and Customer Service 3
LGOPA120 Warehouse and Inventory Control Operations 3
LGOPA160 Purchasing and Supply Management 3
LGOPA125 Transportation Services 3
LGOPA235 Transport Operations Management 3
MATH A107 College Algebra 3-4
or
MATH A172 Applied Finite Mathematics 3

2. Complete four of the following courses: 12

**MAJOR REQUIREMENTS**

BAA273 Introduction to Statistics for Business and Economics 3
BAA295 Internship 3
BAA375 Statistics for Business and Economics 3
BAA377 Operations Management 3
ECON A429 Business Forecasting 3
Any 300- or 400- level LOG course 3
OSH A101 Introduction to Occupational Safety and Health 3
OSH A108 Injury Prevention and Risk Management 4
OSH A250 Hazardous Material Operation 3
TECH A295 Technical Internship (1-6)
TECH A402 Operational Safety 3

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

**GENERAL UNIVERSITY REQUIREMENTS**

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

To provide maximum transferability, it is recommended that students consider the Bachelor of Business Administration General Education Requirements, and business core requirements when selecting courses to fulfill the Associate of Applied Science General Requirements.

**MAJOR REQUIREMENTS**

1. Complete the following courses:

**MAJOR REQUIREMENTS**

BAA151 Introduction to Business 3
BAA231 Fundamentals of Supervision 3
BA/JUST A241 Business Law I 3
CIS A110 Computer Concepts in Business 3
ECON A201 Principles of Macroeconomics 3
LGOPA110 Logistics Information Systems and Customer Service 3
LGOPA120 Warehouse and Inventory Control Operations 3
LGOPA160 Purchasing and Supply Management 3
LGOPA125 Transportation Services 3
LGOPA235 Transport Operations Management 3
MATH A107 College Algebra 3-4
or
MATH A172 Applied Finite Mathematics 3

2. Complete four of the following courses: 12

**MAJOR REQUIREMENTS**

BAA273 Introduction to Statistics for Business and Economics 3
BAA295 Internship 3
BAA375 Statistics for Business and Economics 3
BAA377 Operations Management 3
ECON A429 Business Forecasting 3
Any 300- or 400- level LOG course 3
OSH A101 Introduction to Occupational Safety and Health 3
OSH A108 Injury Prevention and Risk Management 4
OSH A250 Hazardous Material Operation 3
TECH A295 Technical Internship 1-6
TECH A402 Operational Safety 3

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

**GENERAL UNIVERSITY REQUIREMENTS**

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

To provide maximum transferability, it is recommended that students consider the Bachelor of Business Administration General Education Requirements, and business core requirements when selecting courses to fulfill the Associate of Applied Science General Requirements.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSH A250</td>
<td>Hazardous Material Operation</td>
<td>3</td>
</tr>
<tr>
<td>TECH A295</td>
<td>Technical Internship 1-6</td>
<td></td>
</tr>
<tr>
<td>TECH A402</td>
<td>Operational Safety 3</td>
<td></td>
</tr>
</tbody>
</table>

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

**BACHELOR OF BUSINESS ADMINISTRATION**

The requirements for the Bachelor of Business Administration with a major in Global Logistics Management are listed with the BBA located earlier in this chapter.

**FACULTY**

- Elisha (Bear) Baker, IV, Term Professor, AFERB1@cbpp.uaa.alaska.edu
- William Oliver Hedgepeth, Associate Professor, AFWOH@cbpp.uaa.alaska.edu
- Philip Price, Term Assistant Professor, PHILIPP@cbpp.uaa.alaska.edu
- Darren Prokop, Associate Professor, AFDJP1@cbpp.uaa.alaska.edu
From: Dave Haugen [DAVEH@lynden.com]
Sent: Monday, November 13, 2006 2:29 PM
To: Price, Philip
Cc: Dave Haugen
Subject: Occupational Endorsement Program

Philip,

I appreciate you taking the time to talk to me about the idea of establishing an Occupational Endorsement Program. As I understand it, the proposed Occupational Endorsement would be granted upon successful completion of 15 credits earned within the logistics curriculum. These credits would also count towards the Certificate in Logistics for those who would want to continue their education.

I believe the proposed Occupational Endorsement Program could attract some of the people that are currently just getting started with an entry level position within the logistics industry. As these people become aware of the level of knowledge that they will need to obtain to be successful within their career track, I believe that they will recognize the value of taking these classes. By rewarding these people when they complete the endorsement program, I believe that the desire to continue with additional education would logically follow.

Early recognition of educational achievement can only be a good thing for our employees as well as other companies like Lynden. I would encourage you to move forward with the establishment of the Occupational Endorsement program.

Thank you for the opportunity to comment.

Dave Haugen
From: Hawkins, Scott [Scott.Hawkins@asci4materials.com]
Sent: Monday, November 13, 2006 12:07 PM
To: Price, Philip
Subject: Changes in certification

Hello Philip,

In response to your question about the UAA Logistics class certification system, I would concur with the changes you are contemplating. Allowing a student to achieve some transcripted certification after 15 credits have been completed makes business sense to me.

It is important that students work toward something tangible and meaningful. From there, they can build toward further accomplishment, but their efforts are acknowledged in a manner that is documented, transferable, and permanent. I believe that students will find the Business Occupation certificate to be meaningful. As an employer, we would find it meaningful in the marketplace – i.e., to offer a company workforce with a higher number of certificated employees that have completed meaningful coursework.

Philip, as we will discuss on Thursday, ASCI is looking at establishing a work-study system that would result in a certain amount of money being deposited into an employee scholarship fund that would be available to pay for college tuition expenses. Students could work full or part time and be eligible for this benefit, provided they are registered for the program and enrolled in approved coursework (e.g., UAA Logistics classes, working toward a certificate or degree). For example, a sum of $2/hour worked would be deposited into the fund directly from ASCI accounts (not employee compensation). A full time worker would accumulate $4000 in education benefits in a year. Your certification changes would make the achievement of a meaningful certificate possible in a shorter period of time, thus increasing the value of this benefit to employees and the quality of the applicants seeking it.

See you Thursday.
Scott
Proposal to Initiate, Add, Change, or Delete a Course or Program of Study

1a. School or College
   AS CAS

1b. Division
   

1c. Department
   Mathematical Sciences

2. Course Prefix
   MATH

3. Course Number
   A054

4. Previous Course Prefix & Number
   

5a. Credits/CEU
   3

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

6. Complete Course/Program Title
   Prealgebra

   Abbreviated Title for Transcript (30 character)

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

8. Type of Action
   ☑ Add
   ☐ Change
   ☐ Delete

   Add
   Prefix
   Credits
   Title
   Course Description
   Test Score Prerequisites
   Other Restrictions
   Class
   College
   Level
   Major
   Other CCG

   Change
   Credits
   Contact Hours
   Repeat Status
   Course Number
   Grade Basis
   Cross-Listed/Stacked
   Co-requisites
   Registration Restrictions

   Delete
   Course Number
   Contact Hours
   Repeat Status

   Title
   Repeat Status
   Course Description
   Course Prerequisites
   Co-requisites

   Cross Listed with
   Stacked

9. Repeat Status
   No
   # of Repeats
   Max Credits

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

11. Implementation Date
    From: Fall/2007
    To: 9999

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

13. List any programs or college requirements that require this course
    CMA Exam

14. Coordinate with Affected Units:
    Culinary Arts, Medical Assisting, Kodiak College, Kenai Peninsula College, Kachemak Bay Campus, Matanuska
    Susitna College, College Preparatory and Developmental Studies.
    Department, School, or College

15. ☐ General Education Requirement
    ☑ Oral Communication
    ☑ Written Communication
    ☑ Quantitative Skills
    ☑ Humanities
    ☑ Fine Arts
    ☑ Social Sciences
    ☑ Natural Sciences
    ☑ Integrative Capstone

16. Course Description
    Basic concepts of prealgebra mathematics. Includes arithmetic operations and applications, whole numbers, integers,
    fractions, decimals, ratio and proportion, percent, geometry and measures, exponents, algebraic expressions, polynomials,
    solution of simple equations, and introduction to graphing and statistics.
    Special Note: Math A050A, A050B and A050C combined are equivalent to Math A054.

17a. Course Prerequisite(s) (list prefix and number)
    None

17b. Test Score(s)

17d. Other Restriction(s)
    ☐ College
    ☐ Major
    ☐ Class
    ☐ Level

17e. Registration Restriction(s) (non-codable)

18. ☑ Mark if course has fees
    Yes

19. Justification for Action
    Update course content guide, goals and outcomes, texts and bibliography.

Approved
Disapproved:

Initiator (faculty only) Date

Dean/Director of School/College Date

Approved
Disapproved:

Department Chairperson Date

Approved
Disapproved:

Academic Board Chairperson Date

Approved
Disapproved:

Provost or Designee Date

82 Date
Course Content Guide
University of Alaska Anchorage
College of Arts & Sciences
Department of Mathematical Sciences

Date of Initiation: January 15, 2007

Course Information:
Course Subject/Number: MATH A054
Credits and Contact Hours: 3.0 Credits, 3+0 Contact Hours
Course Title: Prealgebra
Grading Basis: A-F

Course Description: Basic concepts of prealgebra mathematics. Includes arithmetic operations and applications, whole numbers, integers, fractions, decimals, ratio and proportion, percent, geometry and measures, exponents, algebraic expressions, polynomials, solution of simple equations, and introduction to graphing and statistics. Special Note: Math A050A, A050B and A050C combined are equivalent to Math A054.

Prerequisites: None.
Lab Fees: Yes

1. Instructional Goals and Student Outcomes

A. Instructional Goals. The instructor will:
   - Explain how to manipulate whole numbers, integers, fractions and decimals
   - Define exponents and radicals.
   - Introduce tables, pictographs, Bar Graphs and Line Graphs, Means, Medians and Modes.
   - Demonstrate how to compute ratio, proportion and percents, and solve simple interest problems.
   - Demonstrate elementary geometry concepts (area, perimeter and volume calculations), the Pythagorean Theorem, similar and congruent triangles.
   - Introduce algebraic expressions and polynomials.

Student Outcomes. Students will be able to:
   - Manipulate whole numbers, integers, fractions and decimals
   - Simplify and use exponents and radicals
   - Extract and interpret data from tables, pictographs, Bar Graphs and Line Graphs.
   - Use ratios, proportions and percentages, and set up and solve application problems using ratios, proportions and percentages
   - Calculate perimeters, areas and volumes of basic geometric shapes
   - Add, subtract, multiply and divide monomials and polynomials

1. Course Activities
Course activities vary. Some instructors use lecture format, others may use self-study or lab based activities.
2. **Guidelines for evaluation**
The evaluation procedure is left to the discretion of the instructor. Short weekly quizzes are given by some instructors, while others prefer chapter tests or other specific blocks of material. Some instructors give a comprehensive midterm examination; most give a comprehensive final examination. The grading policy is left to the discretion of the instructor and such policies and procedures will be discussed during the first class meeting.

3. **Course level justification**
The course is not designed for entry level employment. The course prepares students to take Elementary Algebra and to develop the necessary arithmetic skills for courses in other disciplines.

4. **Topical Course Outline**

1. Whole Numbers
   1.1 Notation
   1.2 Addition
   1.3 Subtraction
   1.4 Rounding and Estimating order
   1.5 Multiplication and Area
   1.6 Division
   1.7 Solving Equations
   1.8 Applications and Problem Solving
   1.9 Exponential Notation and Order of Operations

2. Introduction to Integers and Algebraic Expressions
   2.1 Integers and the Number Line
   2.2 Addition of Integers
   2.3 Subtraction of Integers
   2.4 Multiplication of Integers
   2.5 Division of Integers
   2.6 Introduction to Algebra and Expressions
   2.7 Like Terms and perimeter
   2.8 Solving Equations

3. Fraction Notation: Multiplication and Division
   3.1 Multiples and Divisibility
   3.2 Factorizations
   3.3 Fractions and Fraction Notation
   3.4 Multiplication of Fractions
   3.5 Simplifying Fractions
   3.6 Reciprocals and Division
   3.7 Solving Equations: The Multiplication Principle
4. Fraction Notation: Addition and Subtraction
   4.1 Least Common Multiples
   4.2 Addition, Order and Applications
   4.3 Subtraction, Equations and Applications
   4.4 Solving Equations: Using the Principles Together
   4.5 Mixed Numerals
   4.6 Addition and Subtraction of Mixed Numerals; Applications
   4.7 Multiplication and Division of Mixed Numerals; Applications

5. Decimal Notation
   5.1 Decimal Notation
   5.2 Addition and Subtraction of Decimals
   5.3 Multiplication of Decimals
   5.4 Division of Decimals
   5.5 Fraction Notation and Decimal Notation
   5.6 Estimating
   5.7 Solving Equations
   5.8 Applications and problem Solving

6. Introduction to Graphing and Statistics
   6.1 Tables and Pictographs
   6.2 Bar Graphs and Line graphs
   6.3 Ordered Pairs and Equations in Two Variables
   6.4 Graphing Linear Equations
   6.5 Means, Medians, and Modes
   6.6 Predictions and Probability

7. Ratio and Proportion
   7.1 Introduction to Ratios
   7.2 Rates and Unit Prices
   7.3 Proportions
   7.4 Applications of Proportions
   7.5 Geometric Applications

8. Percent Notation
   8.1 Percent Notation
   8.2 Solving Percent Problems using Proportions
   8.3 Solving Percent Problems using Equations
   8.4 Applications of Percent
   8.5 Sales Tax, Commission, and Discount
   8.6 Simple and Compound Interest
   8.7 Interest Rates on Credit Cards and Loans

9. Geometry and Measurement
   9.1 Systems of Linear Measurement
   9.2 Converting Units of Area
9.3 Perimeter and Area
9.4 Volume and Capacity
9.5 Angles and Triangles
9.6 Square Roots and the Pythagorean Theorem
9.7 Weight, Mass and Temperature
9.8 Medical Applications

10. Polynomials (Highly Recommended)
10.1 Addition and Subtraction of Polynomials
10.2 Multiplying and Factoring Polynomials
10.3 Integers as Exponents
10.4 Scientific Notation

VIII. Suggested Texts

IX. Bibliography
## Curriculum Action Request

**University of Alaska Anchorage**

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

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>CTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1b. Division</td>
<td>AHLS</td>
</tr>
<tr>
<td>1c. Department</td>
<td>Medical Imaging Sciences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>RADT</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Course Number</td>
<td>A131</td>
</tr>
<tr>
<td>4. Previous Course Prefix &amp; Number</td>
<td>N/A</td>
</tr>
<tr>
<td>5a. Credits/CEU</td>
<td>3 Credits</td>
</tr>
<tr>
<td>5b. Contact Hours</td>
<td>((Lecture + Lab) (2 + 3))</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Complete Course/Program Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiographic Procedures I</td>
</tr>
</tbody>
</table>

| Abbreviated Title for Transcript (30 character) | Radiographic Procedures I |

<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>X Academic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-credit</td>
<td>CEU</td>
</tr>
<tr>
<td>Professional Development</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. Type of Action</th>
<th>X Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Repeat Status</th>
<th>N/A Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A Max Hours</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
<th>X A-F</th>
</tr>
</thead>
<tbody>
<tr>
<td>P/NP</td>
<td>NG</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. Implementation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>semester/year</td>
</tr>
<tr>
<td>From: Spring 2007</td>
</tr>
<tr>
<td>To: ______/9999</td>
</tr>
</tbody>
</table>

| 12. | Cross Listed with | N/A |
|     | Stacked with      | N/A |
|     | Cross-Listed Coordination Signature | |

| 13. Coordinate with Affected Units: | UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve. |

<table>
<thead>
<tr>
<th>Initator Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>14. List any programs or college requirements that require this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate of Applied Science in Radiologic Technology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15. General Education Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication</td>
</tr>
<tr>
<td>Fine Arts</td>
</tr>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

| 16. Course Description: | Provides instruction regarding basic principles of radiographic procedures in performing examinations of the chest, abdomen, skeleton and pelvic girdle. Introduces the principles of radiation protection. Incorporates radiographic terminology and anatomy and allows for demonstration, practice, and evaluation of techniques in a laboratory environment. Special Note: Department approval required prior to registration. |

| 17a. Course Prerequisite(s) (list prefix and number) | None |
| 17b. Test Score(s) | None |
| 17c. Co-requisite(s) (concurrent enrollment required) | None |

| 17d. Other Restriction(s) | None |
| College | Major | Class | Level |
| Requires Department approval. |

| 17e. Registration Restriction(s) (non-codable) | None |

<table>
<thead>
<tr>
<th>18. Mark if course has fees</th>
</tr>
</thead>
</table>

| 19. Justification for Action: | Justification is co requisites and pre requisite no longer needed for the course because the advisory board recommended students begin their clinical their second semester of the program. This course is a required course for the AAS program in Radiologic Technology. All aspects of the program have been developed using the Professional Curriculum Guidelines produced by the American Society of Radiologic Technologists (ASRT); Eligibility requirements for professional certification through the American Registry of Radiologic Technologists (ARRT); and Standards for an Accredited Educational Program in Radiologic Sciences from the Joint Review Committee on Education in Radiologic Technology. |

<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
</tr>
</thead>
</table>

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

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

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provost or Designee</td>
<td>Date</td>
</tr>
</tbody>
</table>
Division: AHLS: Health and Safety

Department: Medical Imaging Sciences

Course Number and Title: RADT A131 Radiographic Procedures I 3 Credits

I. Course Description
Provides instruction regarding basic principles of radiographic procedures in performing examinations of the chest, abdomen, skeleton and pelvic girdle. Introduces the principles of radiation protection. Incorporates radiographic terminology and anatomy and allows for demonstration, practice, and evaluation of techniques in a laboratory environment. Special Note: Department approval required prior to registration.

II. Course Design
A. Designed for the beginning (first semester) Radiologic Technology student.
B. Number of Credits: 3 (2 + 3)
C. Total time of student involvement: 135 hours
   1. Lecture hours: 30 hours total.
   2. Laboratory hours: 45 hours total.
   3. Total time of work expected outside of class: 60 hours
D. This course is required for the Associate of Applied Science in Radiologic Technology.
E. Lab fees will be assessed to defray the cost of consumable material(s).
F. Course will be taught in no less than four weeks.
G. This is a revised course.
H. Course coordinated with UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve.
I. Course level justification: Introduces basic knowledge of radiographic procedures correlating to the level of education and expectations of a first year radiography student.

III. Course Activities
This course utilizes a lecture and laboratory format, discussions, simulations, and demonstrations of required competencies.

IV. Course Prerequisites: Course Restrictions:
Special Note: Requires Departmental Approval.

V. Course Evaluation:
A. Grading is A-F.
B. Grades are based on examinations, quizzes, demonstration of competencies, and attendance and participation.
C. Specific grading criteria will be discussed in the beginning of the course.
VI. Course Outline

1.0 General Safety
   1.1 General campus safety
   1.2 Classroom safety
   1.3 Fire safety
   1.4 Universal precautions/infection control
   1.5 Hazardous material/chemical spill response
   1.6 Radiation safety and protection
   1.7 Body mechanics/ergonomics

2.0 Principles, Terminology, and Radiation Protection
   2.1 General, Systemic, and Skeletal Anatomy and Arthrology
      2.1.1 Structural organization
      2.1.2 Systemic Anatomy
      2.1.3 Skeletal Anatomy
      2.1.4 Classifications of Bones
      2.1.5 Development of Bones
      2.1.6 Arthrology and Classification of Joints
      2.1.7 Summary of Joint Classification
   2.2 Radiographic Terminology
      2.2.1 General Terms
      2.2.2 Additional Special Use Projection Terms
      2.2.3 Body Planes, Sections, and Lines
      2.2.4 Body Surfaces and Parts
      2.2.5 Radiographic Projections
      2.2.6 General Body Positions
      2.2.7 Specific Body Positions
      2.2.8 Relationship Terms
      2.2.9 Terms Related to Movements
      2.2.10 Potentially Misused Terms
   2.3 Basic Imaging Principles
      2.3.1 Radiographic Criteria
      2.3.2 Image Markers and Patient ID
      2.3.3 Radiographic Technique and Image Quality
      2.3.4 Controlling Factors of Density
      2.3.5 Controlling Factors of Contrast
   2.4 Positioning Principles
      2.4.1 Professional Ethics and Patient Care
      2.4.2 Protocol and Order for General Radiographic Procedures
      2.4.3 Film/Screen and Digital Imaging
      2.4.4 Positioning Methods and Steps
      2.4.5 Positioning Sequence and Routine
      2.4.6 Essential Projections
      2.4.7 Cassette Sizes and Conversion Tables
      2.4.8 Topographic Positioning Landmarks
      2.4.9 Body Habitus
      2.4.10 Radiographic Image Viewing
   2.5 Digital Imaging
      2.5.1 PACS
      2.5.2 Computed Tomography
      2.5.3 Digital Fluoroscopy
      2.5.4 Computed Radiography
      2.5.5 Direct Digital Radiography
2.6 Radiation Protection
  2.6.1 Units of Radiation
  2.6.2 Radiographer Protection
  2.6.3 ALARA Principles
  2.6.4 Patient Doses
    2.6.4.1 General Diagnostic Procedures
    2.6.4.2 Sample Patient Dose Charts
    2.6.4.3 Fluoroscopic Procedures
    2.6.4.4 Worker Protection During Fluoroscopy
  2.6.5 Patient Protection

3.0 Radiography of the Chest
  3.1 Radiographic Anatomy
    3.1.1 Bony Thorax
    3.1.2 Respiratory System
    3.1.3 Larynx
    3.1.2 Trachea
    3.1.3 Right and Left Bronchi
    3.1.4 Lungs
    3.1.5 Chest Radiographs
    3.1.6 Mediastinum
  3.2 Radiographic Positioning
    3.2.1 Body Habitus and Degree of Inspiration
    3.2.2 Positioning Considerations
    3.2.3 Breathing Instructions
    3.2.4 Reasons for Erect Chest Radiographs
    3.2.5 Radiographic Criteria
    3.2.6 PA Chest Positioning
    3.2.7 Lateral Chest Positioning
    3.2.8 Central Ray Location and Positioning Method
    3.2.9 Lung Dimensions and Film Holder Placement
    3.2.10 Collimation Guidelines
    3.2.11 Alternative Modalities or Procedures
    3.2.12 Pathologic Indications
    3.2.13 Basic and Special Projections

4.0 Radiography of the Abdomen
  4.1 Radiographic Anatomy
    4.1.1 Abdominal Radiography
      4.1.1.1 Abdominal Muscles
      4.1.1.2 Abdominal Organ Systems
      4.1.1.3 Digestive System
      4.1.1.4 Accessory Digestive Organ
      4.1.1.5 Urinary System
      4.1.1.6 Abdominal Cavity
      4.1.1.7 Anatomic Relationships
      4.1.1.8 Quadrants and Regions
      4.1.1.9 Topographic Landmarks
  4.2 Radiographic Positioning
    4.2.1 Positioning Considerations
    4.2.2 Alternate Modalities
    4.2.3 Pathologic Indications
    4.2.4 Basic and Special Projections
    4.2.5 Acute Abdomen
5.0 Radiography of the Upper Limb

5.1 Radiographic Anatomy

5.1.1 Hand and Wrist
5.1.2 Joints of the Hand
5.1.3 Carpals
5.1.4 Forearm—Radius and Ulna
5.1.5 Distal Humerus
5.1.6 Classification of Joints
5.1.7 Wrist, Forearm, and Elbow Movements
5.1.8 Fat Pads

5.2 Radiographic Positioning

5.2.1 Positioning Considerations
5.2.2 Pathologic Indications
5.2.3 Basic and Special Projections
5.2.4 Fingers
5.2.4.1 PA
5.2.4.2 PA Oblique
5.2.4.3 Lateral
5.2.5 Thumb
5.2.5.1 AP
5.2.5.2 PA Oblique
5.2.5.3 Lateral
5.2.5.4 Roberts Method
5.2.6 Hand
5.2.6.1 PA
5.2.6.2 PA Oblique
5.2.6.3 Lateral
5.2.6.4 Lateral (Extension and Flexion)
5.2.6.5 AP Bilateral Oblique (Norgaard Method)
5.2.7 Wrist
5.2.7.1 PA
5.2.7.2 PA Oblique
5.2.7.3 Lateral
5.2.7.4 PA Scaphoid Views
5.2.7.5 Radial Deviation
5.2.7.6 Carpal Canal
5.2.7.7 Carpal Bridge
5.2.8 Forearm
5.2.8.1 AP
5.2.8.2 Lateral
5.2.9 Elbow
5.2.9.1 AP
5.2.9.2 AP Oblique
5.2.9.3 Lateral
5.2.9.4 Acute Flexion
5.2.9.5 Trauma Axial Laterals
5.2.9.6 Radial Head Laterals
5.2.10 Humerus
5.2.10.1 AP
5.2.10.2 Rotational Lateral
5.2.10.3 Horizontal Beam Lateral
5.2.10.4 Proximal Humerus
6.0 Radiography of the Proximal Humerus and Shoulder Girdle

6.1 Radiographic Anatomy
   6.1.1 Proximal Humerus
   6.1.2 Shoulder Girdle
   6.1.3 Clavicle
   6.1.4 Scapula

6.2 Radiographic Positioning
   6.2.1 Proximal Humerus Rotation
   6.2.2 Pathologic Indications
   6.2.3 Basic and Special Projections
   6.2.4 Shoulder (Non-trauma Routine)
      6.2.4.1 AP (External Rotation)
      6.2.4.2 AP (Internal Rotation)
      6.2.4.3 Inferosuperior Axial
      6.2.4.4 Posterior Oblique
      6.2.4.5 Intertubercular (Bicipital) Groove
   6.2.5 Shoulder (Trauma Routine)
      6.2.5.1 AP (Neutral Rotation)
      6.2.5.2 Transthoracic Lateral
      6.2.5.3 Scapula Y Lateral
   6.2.6 Clavicle
      6.2.6.1 AP and AP Axial
   6.2.7 Acromioclavicular (AC) Joints
      6.2.7.1 AP Bilateral With and Without Weights
   6.2.8 Scapula
      6.2.8.1 AP
      6.2.8.2 Lateral Erect
      6.2.8.3 Lateral Recumbent

7.0 Radiography of the Lower Limb

7.1 Radiographic Anatomy
   7.1.1 Foot (Phalanges and Metatarsals)
   7.1.2 Joints and Sesamoid Bones
   7.1.3 Tarsals
   7.1.4 Arches of Foot
   7.1.5 Ankle Joint
   7.1.6 Leg (Tibia and Fibula)
   7.1.7 Distal Femur
   7.1.8 Knee Joint
   7.1.9 Classifications of Joints
   7.1.10 Surfaces, Projections, and Motions of the Foot and Ankle

7.2 Radiographic Positioning
   7.2.1 Positioning Considerations
   7.2.2 Alternative Modalities or Procedures
   7.2.3 Pathologic Indications
   7.2.4 Basic and Special Projections
   7.2.5 Toes
      7.2.5.1 AP
      7.2.5.2 Oblique
      7.2.5.3 Lateral
      7.2.5.4 Sesamoids
   7.2.6 Foot
      7.2.6.1 AP
      7.2.6.2 Oblique
      7.2.6.3 Lateral
7.2.6.4 AP and Lateral (Weight-bearing)

7.2.7 Calcaneus
   7.2.7.1 Plantodorsal (Axial)
   7.2.7.2 Lateral

7.2.8 Ankle
   7.2.8.1 AP
   7.2.8.2 AP Mortise (15 degree Oblique)
   7.2.8.3 AP Oblique
   7.2.8.4 Lateral
   7.2.8.5 AP Stress

7.2.9 Leg-Tibia and Fibula
   7.2.9.1 AP
   7.2.9.2 Lateral

7.2.10 Knee
   7.2.10.1 AP
   7.2.10.2 Oblique (Medial Rotation)
   7.2.10.3 Oblique (Lateral Rotation)
   7.2.10.4 Lateral
   7.2.10.5 AP (Weight-bearing)

7.2.11 Knee-Intercondylar Fossa
   7.2.11.1 PA Axial (Camp Coventry and Holmblad Methods)
   7.2.11.2 AP Axial

7.2.12 Patella and Patellofemoral Joint
   7.2.12.1 PA
   7.2.12.2 Lateral
   7.2.12.3 Tangential (Merchant Method)
   7.2.12.4 Tangential (Inferosuperior, Hughston, and Settegast Methods)

7.2.13 Mid and Distal Femur
   7.2.13.1 AP
   7.2.13.2 Lateral

7.2.14 Mid and Proximal Femur
   7.2.14.1 AP
   7.2.14.2 Lateral

8.0 Proximal Femur and Pelvic Girdle

8.1 Radiographic Anatomy
   8.1.1 Femur
   8.1.2 Pelvis
   8.1.3 Hip Bone
   8.1.4 Topographical Landmarks
   8.1.5 True and False Pelvis
   8.1.6 Birth Canal
   8.1.7 Male and Female Pelvis
   8.1.8 Classifications of Joints

8.2 Radiographic Positioning
   8.2.1 Positioning Considerations
      8.2.1.1 Locating Femoral Head and Neck
      8.2.1.2 Effect of Lower Limb Rotation
      8.2.1.3 Gonadal Shielding
      8.2.1.4 Pediatric and Geriatric Applications
      8.2.1.5 Pathologic Indications
      8.2.1.6 Basic and Special Projections
8.2.2 Pelvis
8.2.2.1 AP Pelvis
8.2.2.2 AP Bilateral “Frog-leg” (Modified Cleaves Method)
8.2.2.3 AP Axial for Pelvic “Outlet” (Taylor Method)
8.2.2.4 AP Axial for Pelvic “Inlet” (Modified Lilienfield Method)
8.2.2.5 Posterior Oblique-Acetabulum (Judet Method)

8.2.3 Hip and Proximal Femur
8.2.3.1 AP Unilateral Hip
8.2.3.2 Axiolateral, Inferosuperior (Danelius-Miller Method)
8.2.3.3 Unilateral Frog-leg (Modified Cleaves Method)
8.2.3.4 Modified Axiolateral (Clements-Nakayama Method)

8.2.4 Sacroiliac Joints
8.2.4.1 AP Axial
8.2.4.2 Posterior Obliques

VII. Recommended Texts


VIII. Bibliography


IX. Instructional Goals, Student Outcomes, and Assessment Procedures.

A. Instructional Goals: This course is designed to provide the student with career entry skills described by national curriculum standards in Radiologic Technology. This course introduces radiographic procedures and laboratory application to prepare students for the clinical environment.
### B. Course Student Outcomes and Assessment Procedures:

<table>
<thead>
<tr>
<th>Student Outcomes: Upon successful completion the student will be able to do the following:</th>
<th>Assessment Procedures: The student outcomes can be assessed by one or more of the following:</th>
</tr>
</thead>
</table>
| List the four basic types of tissues. | Workbook Exercises  
Quiz  
Examination |
| List the 10 systems of the body. | Workbook Exercises  
Quiz  
Examination |
| Match specific bodily functions to their correct anatomic system. | Workbook Exercises  
Examination |
| List the four general classifications of bone. | Workbook Exercises  
Examination |
| Identify specific characteristics and aspects of bone. | Workbook Exercises  
Examination |
| Classify specific joints by their structure and function. | Workbook Exercises  
Examination |
| Classify specific synovial joints by their movement. | Workbook Exercises  
Examination |
| Define general radiographic and anatomic relational terminology. | Workbook Exercises  
Examination |
| Define the imaginary planes, sections, and surfaces of the body used to describe central ray angles or relationships among body parts. | Workbook Exercises  
Examination  
Quiz |
| Distinguish among a radiographic projection, position, and view. | Discussion  
Workbook Exercises  
Examination |
| List the antonyms of specific terms related to movement. | Workbook Exercises  
Discussion |
| Identify the criteria for evaluating a radiograph for positioning accuracy and image quality. | Discussion  
Workbook Exercises |
| Identify the importance of collimation, anatomic side markers, and proper radiograph identification. | Class Participation  
Workbook Exercises  
Examination |
| List the four image quality factors of a radiograph. | Class Participation  
Workbook Exercises  
Examination |
| Define radiographic density and the various controlling factors. | Class Participation  
Workbook Exercises  
Examination |
| Define radiographic contrast and the various controlling factors. | Class Participation  
Workbook Exercises  
Examination |
| Distinguish between long and short-scale radiographic contrast. | Class Participation  
Workbook Exercises  
Examination |
| List the three geometric factors that influence image sharpness. | Quiz  
Workbook Exercises |
|-------------------------|-------------------------------|
| Identify the best ways of controlling voluntary and involuntary motion. | Discussion  
Class Participation |
| Define radiographic distortion and identify its controlling factors. | Workbook Exercises  
Examination |
| Define the anode heel effect. | Workbook Exercises  
Examination |
| List the four types of body habitus | Quiz |
| Match the correct vertebral level to specific topographical landmarks. | Examination  
Workbook Exercises |
| Define the acronym PACS. | Examination  
Discussion |
| Identify the major components of a digital fluoroscopy system. | Discussion  
Quiz |
| Identify the components of the computed radiography (CR) image. | Discussion  
Quiz |
| Define the traditional units and International System of Units (SI units) of radiation measurement and the conversion factors used to convert between systems. | Workbook Exercises  
Examination |
| List the specific annual dose limiting recommendations of whole body effective dose for the general population and occupationally exposed workers. | Workbook Exercises  
Examination |
| Define ALARA. | Discussion  
Workbook Exercises  
Examination |
| Define skin entrance exposure (SEE) and effective dose (ED). | Discussion  
Examination |
| Identify specific methods to reduce exposure to the radiographer during fluoroscopic and radiographic procedures. | Discussion  
Demonstration  
Examination |
| Identify specific methods to reduce exposure to the patient during radiographic procedures. | Discussion  
Class Participation  
Examination |
| Identify the major types of area and gonadal shields and the minimum lead equivalent thickness requirements of these shields. | Demonstration  
Discussion  
Examination |
| Define the 10-day rule and describe its limitations. | Workbook Exercises  
Examination |

**Student Outcomes:** Upon successful completion the student will be able to do the following:

**Assessment Procedures:** The student outcomes can be assessed by one or more of the following:

| Identify the parts and function of specific structures of the respiratory system. | Workbook Exercises  
Examination |
| Describe the methods to ensure proper degree of inspiration during chest radiography. | Discussion  
Demonstration  
Class Participation |
<table>
<thead>
<tr>
<th>Describe the importance of employing close collimation, gonadal shielding, and film markers during chest radiography.</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify alterations in positioning routine and exposure factors specific to pediatric and geriatric patients.</td>
<td>Discussion Class Participation</td>
</tr>
<tr>
<td>List three reasons for taking chest radiographs with the patient in the erect position whenever possible.</td>
<td>Workbook Exercises Quiz Examination</td>
</tr>
<tr>
<td>Describe the three important positioning criteria that must be present on chest radiographs using erect PA and lateral positions.</td>
<td>Demonstration Discussion Class Participation</td>
</tr>
<tr>
<td>Properly position a routine PA and lateral chest exam.</td>
<td>Demonstration Lab Competency Form</td>
</tr>
<tr>
<td>Determine whether rotation is present on PA and lateral chest radiographs.</td>
<td>Discussion Lab Competency Form</td>
</tr>
<tr>
<td>List the major organs and structures of the digestive, biliary, and Urinary systems.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Identify whether select organs of the abdomen are intraperitoneal, retroperitoneal, or infraperitoneal.</td>
<td>Discussion Workbook Exercises</td>
</tr>
<tr>
<td>Identify the correct quadrant or region of the abdomen where specific organs are located.</td>
<td>Quiz Examination</td>
</tr>
<tr>
<td>Identify specific bony topographic landmarks used for positioning of the abdomen.</td>
<td>Demonstration Workbook Exercises</td>
</tr>
<tr>
<td>List specific methods for controlling involuntary and voluntary motion during abdominal radiography.</td>
<td>Discussion Quiz</td>
</tr>
<tr>
<td>Describe the factors that affect collimation and the use of gonadal shielding during abdominal radiography.</td>
<td>Discussion Class Participation Examination</td>
</tr>
<tr>
<td>List the correct central ray placement, part position, and radiographic criteria for specific abdomen positions.</td>
<td>Demonstration Workbook Exercises Lab Competency Form</td>
</tr>
<tr>
<td>Determine whether rotation, tilt, or both are present on a radiograph of an AP projection of the abdomen.</td>
<td>Discussion Lab Competency Form</td>
</tr>
<tr>
<td>Distinguish between acceptable and unacceptable abdomen radiographs based on exposure factors, motion, collimation, positioning, or other errors.</td>
<td>Discussion Lab Competency Form</td>
</tr>
<tr>
<td>List the total number of bones of the hand and wrist.</td>
<td>Workbook Exercises Quiz Examination</td>
</tr>
</tbody>
</table>

**Student Outcomes:** Upon successful completion the student will be able to do the following:

- Identify specific aspects of the phalanges, metacarpals, and carpal bones.
- Distinguish between ulnar and radial deviation wrist movements.
- Identify specific parts of the forearm, elbow, and distal humerus.
- Identify the correct central ray placement, part position, and...
<table>
<thead>
<tr>
<th>Task</th>
<th>Assessment Procedures: The student outcomes can be assessed by one or more of the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify the location of the major landmarks of the pelvis and hip and describe two methods of locating the femoral head and neck on an anteroposterior (AP) hip and pelvis radiograph.</td>
<td>Demonstration Workbook Exercises Examination</td>
</tr>
<tr>
<td>Determine whether a pelvis or hip is in a true AP position based on the established radiographic criteria.</td>
<td>Demonstration Discussion Examination Lab Competency Form</td>
</tr>
<tr>
<td>Using a pelvic radiographic phantom, produce satisfactory radiographs of specific positions.</td>
<td>Demonstration Lab Competency Form</td>
</tr>
<tr>
<td>Distinguish between acceptable and unacceptable pelvic girdle radiographs based on exposure factors, motion, collimation, positioning, or other errors.</td>
<td>Discussion Lab Competency Form</td>
</tr>
<tr>
<td>Identify the bones and specific features of the proximal femur and pelvic girdle on drawings and radiographs.</td>
<td>Workbook Exercises Examination Lab Competency Form</td>
</tr>
<tr>
<td>Identify specific joints of the foot, ankle, leg, and knee according to the correct classification and movement type.</td>
<td>Workbook Exercises Examination Lab Competency Form</td>
</tr>
<tr>
<td>Describe the specific projections of the toes, foot, ankle, calcaneus, knee, patella, intercondylar fossa, and femur, including central ray placement and angulation, correct film, and placement, part positioning, technical factors, and evaluation criteria.</td>
<td>Demonstration Discussion Workbook Exercises Examination Lab Competency Form</td>
</tr>
<tr>
<td>Using foot and/or knee phantom, produce satisfactory radiographs of the lower limb.</td>
<td>Demonstration Lab Competency Form</td>
</tr>
<tr>
<td>Distinguish between acceptable and unacceptable lower limb radiographs based on exposure factors, motion, collimation, positioning, or other errors.</td>
<td>Discussion Lab Competency Form</td>
</tr>
<tr>
<td>Identify specific projections of the proximal humerus and shoulder, including the type and size of film holder, the central ray location with correct angles, and the structures best demonstrated.</td>
<td>Workbook Exercises Quiz Examination</td>
</tr>
<tr>
<td>Identify the bones and specific features of the toes, foot, ankle, lower leg, knee, patella and distal femur.</td>
<td>Workbook Exercises Examination Lab Competency Form</td>
</tr>
<tr>
<td>Identify the bones and specific features of the proximal humerus and shoulder girdle.</td>
<td>Workbook Exercises Examination Lab Competency Form</td>
</tr>
<tr>
<td>List the technical and shielding considerations commonly used for proximal humerus and shoulder girdle radiography.</td>
<td>Workbook Exercises Quiz Examination</td>
</tr>
<tr>
<td>List the three radiographic criteria for a true lateral elbow position and shoulder girdle.</td>
<td>Quiz Workbook Exercises</td>
</tr>
<tr>
<td>Identify and apply the exposure conversion chart for various sizes of plaster and fiberglass casts.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>radiographic criteria for specific positions of the fingers, thumb, hand, wrist, forearm, and elbow.</td>
<td>Workbook Exercises Class Participation Lab Competency Form</td>
</tr>
</tbody>
</table>
Coordination Form

Notification Date: 9-15-06
Initiating unit: Medical Imaging Sciences Department
Affected unit(s): CHESW, Mat-Su, Kodiak, Prince William Sound, KPC, Military, ER, List Serve
Course Prefix and Number: RADT A131
Previous Prefix and Number: N/A
Complete Course/Program Title: Radiographic Procedures I; Radiologic Technology
Previous Course/Program Title: N/A

Description of Action: Changed course

Supporting documentation of the proposal is attached.

Initiating faculty are also REQUIRED to send an email to uaa-faculty@uaa.alaska.edu describing the proposal, including the proposed action and the course prefix, number, course description, prerequisite, and any other relevant information.

Any questions concerning the proposed changes may be addressed to the appropriate department chair, or the chair of the appropriate curriculum committee. Written comments may also be sent to the UAB or GAB, in care of the Governance Office, at the following address:

University of Alaska Anchorage
Governance Office, ADM 213
3211 Providence Drive
Anchorage, AK 99508

If no written comments are received by the UAB or GAB within ten (10) days of notification date shown above, it is assumed that there are no objections to the proposal.

Note: Acknowledgement of coordination does not mean approval, it is only meant to verify that coordination has occurred.
Fee Request Form

1. School/College CTC
2. Course Prefix and Number: RADT A131
3. Title: Radiographic Procedures I
4. Lab Fee Account Number:
   Org 11548   Obj 9159   Fund 104110
5. Type of Action:
   Add x   Deletion □   Change □ (□ Increase or □ Decrease)
6. Fee Amount: $30
7. Anticipated Student enrollment per class section: 15
8. Projected costs of material per class section: $ 450
   (Provide details under #10 Justification for lab fee)
9. Implementation Date: Fall 2006
10. Justification for fee (include materials/supplies used and the cost per item).

Fees are necessary to offset the costs of maintaining an operational energized radiographic laboratory. Consumable supplies include the following:

<table>
<thead>
<tr>
<th>Estimated Number of Students</th>
<th>Radiographic Film</th>
<th>Processing Cleaning and Chemistry</th>
<th>Laboratory Supplies</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>8x10 per sheet =$.34 10x12 per sheet =$.49 11x14 per sheet =$.69 14x17 per sheet =$.99 $10 per student flat fee = $150.</td>
<td>Developer = $22.00 per 5 gal. (10 gal. per semester) Fixer = $11.50 per 5 gal. (10 gal. per semester) 2 Processor Cleanings =$120. 15 students = Dev. $3.00 per student Fix. $1.50 per student Proc. Cleaning = $8 per student = $187.50</td>
<td>Disinfectant supplies Disposable linens Disposable gloves Misc. supplies $7.50 per student flat fee = $112.50</td>
<td>$450.</td>
</tr>
<tr>
<td>Total</td>
<td>$150.</td>
<td>$187.50</td>
<td>$112.50</td>
<td>$450.</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTC</td>
<td>AHLS</td>
<td>Medical Imaging Sciences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEU</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RADT</td>
<td>A132</td>
<td>N/A</td>
<td>3 Credits</td>
<td>(2 + 3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Complete Course/Program Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiographic Procedures II</td>
</tr>
</tbody>
</table>

| Abbreviated Title for Transcript (30 character) | Radiographic Procedures II |

<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>X Academic</th>
<th>Non-credit</th>
<th>CEU</th>
<th>Professional Development</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>8. Type of Action</th>
<th>X Course</th>
<th>Program</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>9. Repeat Status</th>
<th>N/A Limit</th>
<th>N/A Max Hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
<th>X A-F</th>
<th>P/NP</th>
<th>NG</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>11. Implementation Date</th>
<th>semester/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>From: Spring 2007</td>
<td>To: _____/9999</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12. Cross Listed with</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stacked</td>
<td>N/A</td>
</tr>
<tr>
<td>Cross-Listed Coordination Signature</td>
<td>N/A</td>
</tr>
</tbody>
</table>

| 13. Coordinate with Affected Units: | UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve. |

| 14. List any programs or college requirements that require this course | Associate of Applied Science in Radiologic Technology |

<table>
<thead>
<tr>
<th>15. General Education Requirement</th>
<th>Oral Communication</th>
<th>Written Communication</th>
<th>Quantitative Skills</th>
<th>Humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 16. Course Description: | Provides instruction regarding basic principles of radiographic procedures in performing examinations of the spine, bony thorax, alimentary tract, genitourinary system, and associated specialized procedures. Incorporates radiographic terminology and anatomy and allows for demonstration, practice, simulation, and evaluation of techniques in a laboratory environment. |

<table>
<thead>
<tr>
<th>17a. Course Prerequisite(s) (list prefix and number)</th>
<th>RADT A131</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>17b. Test Score(s)</th>
<th>None</th>
</tr>
</thead>
</table>

| 17c. Co-requisite(s) (concurrent enrollment required) | None |

<table>
<thead>
<tr>
<th>17d. Other Restriction(s) None</th>
<th>College</th>
<th>Major</th>
<th>Class</th>
<th>Level</th>
</tr>
</thead>
</table>

| 17e. Registration Restriction(s) (non-codable) | Requires Departmental Approval |

| 18. X Mark if course has fees |

| 19. Justification for Action: | Justification for change is removal of co requisite because the advisory board recommended students begin their clinical second semester of the program. This course is a required course for the AAS degree in Radiologic Technology. All aspects of the program have been developed using the Professional Curriculum Guidelines produced by the American Society of Radiologic Technologists (ASRT); Eligibility requirements for professional certification through the American Registry of Radiologic Technologists (ARRT); and Standards for an Accredited Educational Program in Radiologic Sciences from the Joint Review Committee on Education in Radiologic Technology. |

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

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate or Graduate Academic Board Chairperson</td>
<td>Date</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provost or Designee</td>
<td>Date</td>
</tr>
</tbody>
</table>
Course Description
Provides instruction regarding basic principles of radiographic procedures in performing examinations of the spine, bony thorax, alimentary tract, genitourinary system, and associated specialized procedures. Incorporates radiographic terminology and anatomy and allows for demonstration, practice, simulation, and evaluation of techniques in a laboratory environment.

Course Design
A. Designed for the beginning (second semester) Radiologic Technology student.
B. Number of Credits: 3 (2 + 3)
C. Total time of student involvement: 135 hours
   1. Lecture hours: 30 hours total.
   2. Laboratory hours: 45 hours total.
   3. Total time of work expected outside of class: 60 hours
D. This course is required for the Associate of Applied Science in Radiologic Technology.
E. Course will be taught in no less than four weeks.
F. This is a revised course.
G. Lab fee will be assessed to defray the cost of consumable lab material(s).
H. Course coordinated with UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve.
I. Course level justification: Continues the introduction of basic knowledge regarding radiographic procedures correlating to the level of education and expectations of a first year radiography student.

Course Activities
This course utilizes a lecture and laboratory format, discussions, simulations, and demonstrations of required competencies.

Course Prerequisites:
RADT A131
Special Note: Requires Departmental Approval

Course Evaluation:
A. Grading A-F.
B. Grades are based on examinations, quizzes, demonstration of competencies, and attendance and participation.
C. Specific grading criteria will be discussed in the beginning of the course.
VI. Course Outline:

1.0 General Safety
   1.1 Campus
   1.2 Classroom
   1.3 Fire
   1.4 Universal precautions/infection control
   1.5 Hazardous material/chemical spill response
   1.6 Radiation safety and protection
   1.7 Body mechanics/ergonomics

2.0 Standard Terminology for Positioning and Projection (Review)
   2.1 Standard terms
      2.1.1 Radiographic position
      2.1.2 Radiographic projection
      2.1.3 Radiographic view
   2.2 Positioning terminology
      2.2.1 Recumbent
      2.2.2 Supine
      2.2.3 Prone
      2.2.4 Trendelenburg
      2.2.5 Decubitus
   2.3 Erect and upright
      2.3.1 Anterior position
      2.3.2 Posterior position
      2.3.3 Oblique position
   2.4 General planes
      2.4.1 Sagittal or mid-sagittal
      2.4.2 Coronal or mid-coronal
      2.4.3 Transverse
      2.4.4 Longitudinal
   2.5 Terminology of movement and direction
      2.5.1 Cephalad/caudad
      2.5.2 Inferior/superior
      2.5.3 Proximal/distal
      2.5.4 Plantar/palmar
      2.5.5 Pronate/supinate
      2.5.6 Flexion/extension
      2.5.7 Abduction/adduction
      2.5.8 Inversion/eversion
   2.6 Positioning aids

3.0 General Considerations
   3.1 Evaluation of radiographic orders
      3.1.1 Patient identification
      3.1.2 Verification of procedure(s) ordered
      3.1.3 Review of clinical history
      3.1.4 Taking clinical history and patient assessment
3.1.4.1. Role of the radiographer
3.1.4.2. Questioning skills
3.1.4.3. Determining the chief complaint
3.1.4.4. Localization
3.1.4.5. Chronology
3.1.4.6. Quality
3.1.4.7. Severity
3.1.4.8. Onset
3.1.4.9. Aggravating or alleviating factors
3.1.4.10. Associated manifestations
3.1.4.11. Special considerations for age, disability and cultural background

3.1.5. Establishment of patient rapport
3.1.5.1. Procedure explanation
3.1.5.2. Determination of pregnancy

3.1.6. Patient preparation
3.1.6.1. Verification of appropriate dietary preparation
3.1.6.2. Verification of appropriate medication preparation
3.1.6.3. Appropriate disrobing and gowning
3.1.6.4. Removal of items that may cause artifacts

3.1.7. Room preparation
3.1.7.1. Cleanliness, organization and appearance
3.1.7.2. Necessary supplies and accessory equipment available

3.1.8. Patient assistance
3.1.9. Patient monitoring
3.1.10. Image evaluation
3.1.11. Patient dismissal

4.0 Radiography of the Cervical and Thoracic Spine

4.1. Radiographic Anatomy
4.1.1. Vertebral column
4.1.2. Vertebral (spine) curvatures
4.1.3. Typical vertebra
4.1.4. Joints in vertebral column
4.1.5. Cervical vertebrae
4.1.6. Atlas (C1) and axis (C2)
4.1.7. Thoracic vertebrae
4.1.8. Intervertebral foramina versus zygapophyseal joints

4.2. Radiographic Positioning
4.2.1. Topographic landmarks
4.2.2. Positioning and technical considerations
4.2.3. Alternative modalities or procedures
4.2.4. Pathologic indications
4.2.5. Basic and special projections
4.2.6. Cervical spine (basic)
4.2.6.1. AP open mouth
4.2.6.2. AP axial
4.2.6.3. Obliques
4.2.6.4. Lateral, erect
4.2.6.5. Trauma lateral, horizontal beam
4.2.6.6. Cervicothoracic lateral (swimmer’s)

4.2.7. Cervical spine (special)
  4.2.7.1. Lateral hyperflexion and hyper extension
  4.2.7.2. AP (Fuchs method) or PA (Judd method)
  4.2.7.3. AP ‘wagging jaw’ (Ottonello method)
  4.2.7.4. AP axial (pillars)

4.2.8. Thoracic spine (basic)
  4.2.8.1. AP
  4.2.8.2. Lateral

4.2.9. Thoracic spine (special), Oblique

4.3. Radiographic anatomy review

5.0. Radiography of the Lumbar Spine, Sacrum, and Coccyx

5.1. Radiographic Anatomy
  5.1.1. Lumbar vertebrae
  5.1.2. Sacrum
  5.1.3. Coccyx
  5.1.4. Classification of joints
  5.1.5. Intervertebral foramina versus zygapophyseal joints
  5.1.6. Topographic landmarks
  5.1.7. Positioning considerations
  5.1.8. Pediatric and geriatric applications
  5.1.9. Alternative modalities and procedures
  5.1.10. Pathologic indications
  5.1.11. Lumbar spine
    5.1.11.1. AP (or PA)
    5.1.11.2. Obliques
    5.1.11.3. Lateral
    5.1.11.4. Lateral L5-S1
    5.1.11.5. AP axial L5-S1
  5.1.12. Scoliosis series
    5.1.12.1. PA (AP)
    5.1.12.2. Erect lateral
    5.1.12.3. AP (Ferguson method)
    5.1.12.4. AP (PA) R and L bending
  5.1.13. Spinal fusion series
    5.1.13.1. AP (PA) R and L bending
    5.1.13.2. Lateral-hyperextension and hyperflexion
  5.1.14. Sacrum and coccyx
    5.1.14.1. AP axial sacrum
    5.1.14.2. AP axial coccyx
    5.1.14.3. Lateral sacrum
    5.1.14.4. Lateral coccyx

6.0 Radiography of the Bony Thorax, Sternum, Ribs

6.1. Radiographic Anatomy
  6.1.1. Bony Thorax
  6.1.2. Sternum
  6.1.3. Ribs
  6.1.4. Palpable landmarks
6.1.5. Articulations of thorax

6.2. Radiographic Positioning

6.2.1. Sternum

6.2.2. Ribs

6.2.3. Recommend projections for ribs

6.2.4. Pediatric and geriatric applications

6.2.5. Alternative modalities and procedures

6.2.6. Pathologic indications

6.2.7. Sternum

6.2.7.1. RAO

6.2.7.2. Lateral

6.2.8. Sternoclavicular joints

6.2.8.1. PA

6.2.8.2. Anterior obliques

6.2.9. Ribs

6.2.9.1. Posterior ribs (AP)

6.2.9.2. Anterior ribs (PA)

6.2.9.3. Axillary ribs (oblique)

6.3. Radiographic anatomy review

7.0 Radiography of the Upper Gastrointestinal System

7.1. Procedural Considerations for Contrast Studies

7.2. Equipment and materials needed

7.3. Contrast media

7.3.1. Purpose

7.3.2. Types

7.3.2.1. Negative agents

7.3.2.1.1. Carbon dioxide

7.3.2.1.2. Air

7.3.2.1.3. Nitrous oxide

7.3.2.2. Positive agents

7.3.2.2.1. Barium sulfate

7.3.2.2.2. Iodinated

7.4. Single and double contrast examinations

7.4.1. Upper gastrointestinal system

7.4.2. Lower gastrointestinal system

7.4.3. Follow-up care

7.5. General procedure

7.6. Patient and body part positioning

7.7. Structures and functions demonstrated

7.8. Radiographic anatomy and examination

7.8.1. Digestive system and common radiographic procedures

7.8.2. Oral cavity and pharynx

7.8.3. Esophagus

7.8.4. Stomach

7.8.5. Air-barium distribution in stomach

7.8.6. Duodenum

7.8.7. Body habitus

7.8.8. Alimentary canal

7.8.9. Contrast media

7.8.10. Double contrast
7.8.11. Fluoroscopy equipment
7.8.12. Operator safety and protection
7.8.13. Digital fluoroscopy
7.8.14. Esophagram procedure
   7.8.14.1. Pathologic indications
   7.8.14.2. Patient preparation
   7.8.14.3. General procedure
   7.8.14.4. Reflux demonstration
7.8.15. Upper GI series
   7.8.15.1. Pathologic indications
   7.8.15.2. Patient preparation
   7.8.15.3. General procedure
   7.8.15.4. Pediatric and geriatric applications
   7.8.15.5. Alternative modalities and procedure

7.9 Radiographic Positioning
7.9.1. Esophagram (basic)
   7.9.1.1. RAO
   7.9.1.2. Lateral
   7.9.1.3. AP (PA)
7.9.2. Esophagram (special), LAO
7.9.3. Upper GI series
   7.9.3.1. RAO
   7.9.3.2. PA
   7.9.3.3. Right lateral
   7.9.3.4. LPO
   7.9.3.5. AP

8.0 Radiography of the Lower Gastrointestinal System
8.1 Radiographic anatomy
   8.1.1. Digestive system and common radiographic procedures
   8.1.2. Small intestine
   8.1.3. Large intestine
   8.1.4. Colon
   8.1.5. Digestive functions
8.2 Radiographic procedures
   8.2.1. Small bowel procedures
      8.2.1.1. Definition, purpose, contraindications
      8.2.1.2. Pathologic indications
      8.2.1.3. UGI/SBFT combination
      8.2.1.4. Small bowel series only
      8.2.1.5. Enteroclysis and intubation method
      8.2.1.6. Patient preparation and method of imaging
   8.2.2. Barium enema procedure
      8.2.2.1. Definition, purpose, contraindications
      8.2.2.2. Pathologic indications
      8.2.2.3. Patient and room preparation
      8.2.2.4. Equipment, supplies, and contrast media
      8.2.2.5. Procedure preparation
      8.2.2.6. Rectal tip insertion
      8.2.2.7. Fluoroscopy routine
   8.2.3. Types of lower GI procedures
8.2.3.1. Single and double contrast
8.2.3.2. Post fluoroscopy radiography
8.2.3.3. Evacuative proctography (defecography)
8.2.3.4. Colostomy barium enema
8.2.4. Safety concerns
8.2.5. Pediatric and geriatric applications
8.2.6. Alternative modalities or procedures

8.3. Radiographic positioning
8.3.1. Basic and special procedures
8.3.2. Small bowel series, PA
8.3.3. Barium enema (basic)
   8.3.3.1. PA and/or AP projection
   8.3.3.2. RAO
   8.3.3.3. LAO
   8.3.3.4. LPO and RPO
   8.3.3.5. Lateral rectum
   8.3.3.6. R lateral decubitus
   8.3.3.7. L lateral decubitus
   8.3.3.8. PA (AP) post evacuation
8.3.4. Barium enema (special)
   8.3.4.1. AP or LPO axial
   8.3.4.2. PA or RAO axial

9.0 Radiography of the Gallbladder and Biliary Ducts
9.1 Anatomy
   9.1.1 Liver
   9.1.2 Gallbladder and biliary ducts
   9.1.3 Body habitus and gallbladder variation
   9.1.4 Radiographic
9.2 Radiographic Procedures
   9.2.1 Biliary terminology
   9.2.2 Cholecystography (oral cholecystogram)
   9.2.3 Pathologic indications
   9.2.4 Oral cholecystogram procedure
   9.2.5 Sonography
   9.2.6 Operative cholangiogram
   9.2.7 Laparoscopic cholangiogram
   9.2.8 T-tube cholangiogram
   9.2.9 Percutaneous transhepatic cholangiography (CPT)
   9.2.10 Endoscopic retrograde cholangiopancreatography (ERCP)
   9.2.11 Alternative modalities and procedures

9.3 Radiographic positioning
   9.3.1 Basic and special projections
   9.3.2 Gallbladder
      9.3.2.1 PA scout
      9.3.2.2 LAO
      9.3.2.3 R Lateral decubitus (PA)
      9.3.2.4 PA erect
   9.3.3 Biliary ducts (operative cholangiogram)
      9.3.3.1 AP
10.0 Radiography of the Urinary System

10.1 Radiographic Anatomy
   10.1.1 Urinary system
   10.1.2 Kidneys
   10.1.3 Urine production
   10.1.4 Ureters and urinary bladder
   10.1.5 Male and female pelvic organs
   10.1.6 Radiographic procedures
   10.1.7 Urography
      10.1.7.1 Contrast media
      10.1.7.2 Common side effects
      10.1.7.3 Reactions to contrast media
      10.1.7.4 Mild, moderate, and severe reactions
   10.1.8 Venipuncture
   10.1.9 Pathologic indications
   10.1.10 Excretory urography
      10.1.10.1 Purpose, contraindications
      10.1.10.2 Patient, equipment, exam preparation
      10.1.10.3 Ureteric compression
   10.1.11 General IVU procedures
      10.1.11.1 Basic imaging routine
      10.1.11.2 Alternatives to routine nephrogram or nephrotomogram
   10.1.12 Hypertensive IVU
   10.1.13 Retrograde urography and retrograde cystography
   10.1.14 Voiding cystourethrography and retrograde urethrography
   10.1.15 Pediatric and geriatric applications
   10.1.16 Alternative modalities and procedures

10.2 Radiographic positioning
   10.2.1 Basic and special projections
   10.2.2 Intravenous urography
      10.2.2.1 AP (scout and series)
      10.2.2.2 Nephrotomogram
      10.2.2.3 RPO and LPO
      10.2.2.4 AP postvoid
      10.2.2.5 AP ureteric compression
   10.2.3 Retrograde urography, AP (scout, pyelogram, and ureterogram)
   10.2.4 Cystography
      10.2.4.1 AP (10° to 15° caudad)
      10.2.4.2 Oblique
      10.2.4.3 Lateral
   10.2.5 Voiding Cystourethrography
      10.2.5.1 Male – RPO (30°)
      10.2.5.2 Female - AP

11.0 Patient Education
   11.1 Barriers to Communication
11.1.1 Types
11.1.2 Methods for overcoming barriers

11.2 Clinical Situations
11.2.1 Common radiation safety issues and concerns
11.2.2 Patient education
11.2.3 Technologist’s responsibility
11.2.4 Standard procedure
11.2.5 Preparation for examination
   11.2.5.1 Diet
   11.2.5.2 Laxatives
   11.2.5.3 Enemas
      11.2.5.3.1 Saline
      11.2.5.3.2 Fleet
      11.2.5.3.3 Oil-retention
      11.2.5.3.4 Tap-water
      11.2.5.3.5 Soap suds

11.3 Monitoring and care during invasive procedures
11.3.1 Preparation for cardiac monitoring
11.3.2 EKG rhythms
   11.3.2.1 Normal
   11.3.2.1 Abnormal
11.3.3 Patient care considerations
   11.3.3.1 Adverse reactions
   11.3.3.2 Reactions to contrast media
   11.3.3.3 Other medical conditions

VII. Recommended Text


VIII. References


IX. Instructional Goals, Student Outcomes, and Assessment Procedures.

A. Instructional Goals: This course is designed to provide the student with career entry skills described by national curriculum standards in Radiologic Technology. This course introduces radiographic procedures and laboratory application for continued student preparation for the clinical environment.

B. Course Student Outcomes and Assessment Procedures:

<table>
<thead>
<tr>
<th>Student Outcomes: Upon successful completion the student will be able to do the following:</th>
<th>Assessment Procedures: The student outcomes can be assessed by one or more of the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define general radiographic and anatomic relational terminology.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Define the imaginary planes, sections, and surfaces of the body used to describe central ray angles or relationships among body parts.</td>
<td>Discussion Workbook Exercises Examination</td>
</tr>
<tr>
<td>Distinguish among a radiographic projection, position, and view.</td>
<td>Discussion Class Participation</td>
</tr>
<tr>
<td>Identify the criteria for evaluating a radiograph for positioning accuracy and image quality.</td>
<td>Discussion Class Participation</td>
</tr>
<tr>
<td>Identify the importance of collimation, anatomic side markers, and proper radiographic identification.</td>
<td>Discussion Class Participation</td>
</tr>
<tr>
<td>List the four image quality factors of a radiograph.</td>
<td>Discussion Class Participation</td>
</tr>
<tr>
<td>Identify the best ways of controlling voluntary and involuntary motion.</td>
<td>Discussion Class Participation Written Exercise</td>
</tr>
<tr>
<td>Match the correct vertebral level to specific topographical landmarks.</td>
<td>Demonstration Workbook Exercises Examination</td>
</tr>
<tr>
<td>Identify specific methods to reduce exposure to the radiographer during radiographic procedures.</td>
<td>Discussion</td>
</tr>
<tr>
<td>Identify the major types of area and gonadal shields and the minimum lead equivalent thickness requirements of these shields.</td>
<td>Discussion Written Exercise</td>
</tr>
<tr>
<td>Identify alterations in positioning routine and exposure factors specific to different age groupings.</td>
<td>Discussion Workbook Exercises Quiz</td>
</tr>
<tr>
<td>Identify specific anatomy of the cervical and thoracic spine.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Task</td>
<td>Assessment Procedures: The student outcomes can be assessed by one or more of the following:</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Identify features of the cervical and thoracic vertebrae that</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>distinguish them from other aspects of the vertebral column.</td>
<td>Discussion</td>
</tr>
<tr>
<td></td>
<td>Examination</td>
</tr>
<tr>
<td><strong>Student Outcomes:</strong> Upon successful completion the student will be</td>
<td><strong>Assessment Procedures:</strong> The student outcomes can be assessed by one or more of the following:</td>
</tr>
<tr>
<td>able to do the following:</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>Describe the location, classification and type of movement</td>
<td>Discussion</td>
</tr>
<tr>
<td>for specific joints of the cervical and thoracic spine.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>List additional terms for the first, second, and seventh cervical</td>
<td>Examination</td>
</tr>
<tr>
<td>vertebra.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>Perform specific projections of the cervical and thoracic spine.</td>
<td>Examination</td>
</tr>
<tr>
<td>Describe topographical landmarks associated with identifying specific</td>
<td>Demonstration</td>
</tr>
<tr>
<td>cervical and thoracic vertebra.</td>
<td>Lab Competency</td>
</tr>
<tr>
<td>Identify correct size and type of film holder, central ray location,</td>
<td>Demonstration</td>
</tr>
<tr>
<td>direction and angulation of the central ray for each position of</td>
<td>Lab Competency</td>
</tr>
<tr>
<td>the cervical and thoracic spine.</td>
<td>Examination</td>
</tr>
<tr>
<td>Identify radiographic anatomy and evaluate image quality by</td>
<td>Lab Competency</td>
</tr>
<tr>
<td>producing radiographs of a phantom.</td>
<td>Discussion</td>
</tr>
<tr>
<td>Evaluate radiographs of the cervical and thoracic spine.</td>
<td>Lab Competency</td>
</tr>
<tr>
<td>Describe the structures and function of the lumbar spine, sacrum,</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>and coccyx.</td>
<td>Quiz</td>
</tr>
<tr>
<td>Describe spina bifida and spondylolisthesis</td>
<td>Examination</td>
</tr>
<tr>
<td>Identify specific anatomy of the lumbar spine, sacrum and coccyx.</td>
<td>Demonstration</td>
</tr>
<tr>
<td>Identify specific radiographic anatomy of the lumbar spine, sacrum</td>
<td>Lab Competency</td>
</tr>
<tr>
<td>and coccyx.</td>
<td>Examination</td>
</tr>
<tr>
<td>Identify the anatomy that is seen with the ‘Scotty dog’ sign.</td>
<td>Lab Competency Form</td>
</tr>
<tr>
<td>Describe the classification of the joints found in the lumbar spine.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>Describe topographical landmarks that can be identified to locate</td>
<td>Examination</td>
</tr>
<tr>
<td>specific aspects of the lumbar spine, sacrum and coccyx.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>Describe selection of correct size image receptor, central ray</td>
<td>Examination</td>
</tr>
<tr>
<td>location, direction and angulation of central ray for each projection</td>
<td>Lab Competency</td>
</tr>
<tr>
<td>of the lumbar spine, sacrum, and coccyx.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>List or identify the patient dose ranges for skin, midline, and</td>
<td>Discussion</td>
</tr>
<tr>
<td>gonadal doses for all projections of the spine, sacrum and</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>coccyx.</td>
<td>Workbook Exercises</td>
</tr>
</tbody>
</table>
**Student Outcomes:** Upon successful completion the student will be able to do the following:

**Assessment Procedures:** The student outcomes can be assessed by one or more of the following:

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Assessment Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform specific basic and special projections for the lumbar spine, sacrum and coccyx.</td>
<td>Demonstration Lab Competency</td>
</tr>
<tr>
<td>Produce radiographic images of a phantom for evaluation of radiographic anatomy of the lumbar spine, sacrum and coccyx.</td>
<td>Lab Competency</td>
</tr>
<tr>
<td>Identify radiographic anatomy of the sternum and ribs.</td>
<td>Workbook Exercises Lab Competency Examination</td>
</tr>
<tr>
<td>Classify ribs as either true, false, or floating.</td>
<td>Discussion Quiz</td>
</tr>
<tr>
<td>Classify specific joints in the bony thorax according to their structure, mobility, and movement type.</td>
<td>Discussion Quiz Examination</td>
</tr>
<tr>
<td>Identify correct size and type of image receptor, central ray location, direction and angulation of central ray for each projection of the ribs and sternum.</td>
<td>Workbook Exercises Demonstration Lab Competency Examination</td>
</tr>
<tr>
<td>Describe the technical considerations important in radiography of the ribs and sternum.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Perform specific basic and special projections of the ribs and sternum.</td>
<td>Demonstration Lab Competency</td>
</tr>
<tr>
<td>Produce radiographic images of a phantom for evaluation of radiographic anatomy of the sternum and ribs.</td>
<td>Demonstration Lab Competency</td>
</tr>
<tr>
<td>Identify the patient dose ranges for skin, midline and gonadal does for all projections of the sternum and ribs.</td>
<td>Examination Discussion</td>
</tr>
<tr>
<td>List the organs of the upper and lower gastrointestinal system.</td>
<td>Workbook Exercises Quiz Examination</td>
</tr>
<tr>
<td>List the primary functions of the digestive system.</td>
<td>Workbook Exercises Discussion Examination</td>
</tr>
<tr>
<td>Identify specific anatomical features of the upper and lower gastrointestinal system.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Differentiate between mechanical and chemical digestion.</td>
<td>Workbook Exercises Quiz Examination</td>
</tr>
<tr>
<td>Describe the common radiolucent and radiopaque contrast media utilized for upper and lower gastrointestinal exams.</td>
<td>Workbook Exercises Discussion Demonstration</td>
</tr>
</tbody>
</table>

113
<table>
<thead>
<tr>
<th>Student Outcomes: Upon successful completion the student will be able to do the following:</th>
<th>Assessment Procedures: The student outcomes can be assessed by one or more of the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe patient preparation, room preparation and follow-up care.</td>
<td>Discussion</td>
</tr>
<tr>
<td>Define the role of the radiographer during fluoroscopic procedures.</td>
<td>Discussion</td>
</tr>
<tr>
<td>List the common clinical indications and contraindications for upper and lower gastrointestinal examinations.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>Describe the basic and special positions and projections utilized for upper and lower gastrointestinal procedures.</td>
<td>Examination</td>
</tr>
<tr>
<td>Differentiate quality characteristics of various radiographs of the upper and lower gastrointestinal examinations.</td>
<td>Demonstration</td>
</tr>
<tr>
<td>Identify dose ranges for all age groups for both upper and lower gastrointestinal procedures.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>Describe the patient preparation for various barium studies.</td>
<td>Examination</td>
</tr>
<tr>
<td>Describe the procedure to properly prepare a patient for a barium study.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>Describe the anatomy and function of the liver, gallbladder, and biliary ductal system.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>Define radiographic terms cholangiography, cholecystography, cholecystopaque, and cholecystocholangiography.</td>
<td>Examination</td>
</tr>
<tr>
<td>Describe the purpose, patient preparation, clinical indications, and contraindications for oral cholecystography (OCG).</td>
<td>Discussion</td>
</tr>
<tr>
<td>Explain the specific projections used in OCG examinations.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>List the advantages of sonography over the OCG.</td>
<td>Discussion</td>
</tr>
<tr>
<td>Define the radiographic terms operative cholangiography and post-operative (T-Tube) cholangiography.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>Describe the laparoscopic procedures of the biliary system.</td>
<td>Examination</td>
</tr>
<tr>
<td>Explain the purpose, procedure, and risks associated with percutaneous cholangiography (PTC) and endoscopic retrograde cholangiopancreatography (ERCP)</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>Identify patient dose ranges for all biliary system related radiographic procedures.</td>
<td>Written Exercises</td>
</tr>
<tr>
<td><strong>Student Outcomes</strong>: Upon successful completion the student will be able to do the following:</td>
<td><strong>Assessment Procedures</strong>: The student outcomes can be assessed by one or more of the following:</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
| Differentiate quality characteristics of various radiographs of the biliary system. | Workbook Exercises  
Discussion  
Examination |
| Describe the anatomy of the urinary system. | Workbook Exercises  
Examination |
| Discuss the location of the kidneys, ureters, and bladder with respect to the peritoneum. | Workbook Exercises  
Discussion  
Examination |
| Define the radiographic terms nephropotosis, micturition, urination, incontinence, extravasation, vasovagal, urticaria, and tachycardia. | Discussion  
Workbook Exercises  
Examination |
| Identify specific anatomical features of the male and female urinary system. | Workbook Exercises  
Examination |
| Describe the primary function of the urinary system. | Workbook Exercises  
Discussion  
Examination |
| Describe the use of contrast media for evaluation of the urinary system. | Discussion  
Workbook Exercises  
Examination |
| Differentiate between mild, moderate and severe side effects of contrast injection. | Discussion  
Examination |
| List seven basic questions to be asked of the patient prior to the injection procedure. | Discussion |
| Describe excretory urography. | Workbook Exercises  
Examination |
| Discuss the clinical indications and contraindications for excretory urography procedures. | Workbook Exercises  
Discussion |
| Define the radiographic procedures nephrogram and nephrotomogram in the context of techniques used to produce diagnostic images. | Workbook Exercises  
Examination |
| Describe the retrograde urogram procedure. | Workbook Exercises  
Discussion  
Quiz |
| Explain specific positions and projections utilized for producing diagnostic images of the urinary system. | Discussion  
Demonstration  
Examination |
| Identify patient dose ranges for all ages with respect to specific type of urinary system procedure performed. | Workbook Exercises  
Discussion  
Examination |
| Differentiate quality characteristics of various radiographs of the urinary system. | Discussion  
Examination |
Curriculum Coordination Form

Notification Date: 9-15-06

Initiating unit: Medical Imaging Sciences Department

Affected unit(s): UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve.

Course Prefix and Number: RADT A132

Previous Prefix and Number: N/A

Complete Course/Program Title: Radiographic Procedures II

Previous Course/Program Title: N/A

Description of Action: Changed course

Supporting documentation of the proposal is attached.

Initiating faculty are also REQUIRED to send an email to uaa-faculty@uaa.alaska.edu describing the proposal, including the proposed action and the course prefix, number, course description, prerequisite, and any other relevant information.

Any questions concerning the proposed changes may be addressed to the appropriate department chair, or the chair of the appropriate curriculum committee. Written comments may also be sent to the UAB or GAB, in care of the Governance Office, at the following address:

University of Alaska Anchorage
Governance Office, ADM 213
3211 Providence Drive
Anchorage, AK 99508

If no written comments are received by the UAB or GAB within ten (10) days of notification date shown above, it is assumed that there are no objections to the proposal.

Note: Acknowledgement of coordination does not mean approval, it is only meant to verify that coordination has occurred.
Fee Request Form

1. School/College: CTC
2. Course Prefix and Number: RADT A132
3. Title: Radiographic Procedures II
4. Lab Fee Account Number: Org 11548  Obj 9159  Fund 104110
5. Type of Action: Add x   Deletion □   Change □ ( □ Increase or □ Decrease)
6. Fee Amount: $30
7. Anticipated Student enrollment per class section: 15
8. Projected costs of material per class section: $450.
   (Provide details under #10 Justification for lab fee)
9. Implementation Date: Fall 2006
10. Justification for fee (include materials/supplies used and the cost per item).
    
    Fees are necessary to offset the costs of maintaining an operational energized radiographic laboratory. Consumable supplies include the following:

<table>
<thead>
<tr>
<th>Estimated Number of Students</th>
<th>Radiographic Film</th>
<th>Processing Cleaning and Chemistry</th>
<th>Laboratory Supplies</th>
<th>Total</th>
</tr>
</thead>
</table>
| 15                          | 8x10 per sheet = $.34  
  10x12 per sheet = $.49  
  11x14 per sheet = $.69  
  14x17 per sheet = $.99  
  $10 per student flat fee = $150. | Developer = $22.00 per 5 gal. (10 gal. per semester)  
Fixer = $11.50 per 5 gal. (10 gal. per semester)  
2 Processor Cleanings = $120.  
15 students = Dev. $3.00 per student  
Fix. $1.50 per student  
Proc. Cleaning = $8 per student flat fee = $187.50 | Disinfectant supplies  
Disposable linens  
Disposable gloves  
Misc. supplies = $7.50 per student flat fee = $112.50 | $450 |

Total $150  
$187.50  
$112.50  
$450.
Resource Implication Form

1. School/College CTC
2. Program/Course: Radiographic Procedures II
3. Course Prefix: RADT
4. Course Number: A132
5. Implementation Date: Fall 2002
6. Type of Action and Category
   - Course addition
   - Course change
   - Program addition
   - Program change
7. Consequences of Actions and Costs: Check all appropriate categories and provide an explanation of how it will be funded and by whom.
   - part-time faculty
   - new full-time faculty: $112,000
   - reassignment of full-time faculty
   - additional class/lab space
   - modification of class/lab space
   - additional library resources
   - additional computer equipment
   - other costs
8. Explanation: FY 02 initiative funding supports this course. This course will be included in the 5-semester Associate of Applied Sciences Degree in Radiologic Technology.
### Proposal to Initiate, Add, Change, or Delete a Course or Program of Study

**School or College:** CTC  
**Division:** AHLS  
**Department:** Medical Imaging Sciences

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTC</td>
<td>AHLS</td>
<td>Medical Imaging Sciences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEU</th>
<th>5b. Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RADT</td>
<td>A133</td>
<td>N/A</td>
<td>3 Credits</td>
<td>(Lecture + Lab) (2 + 2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Complete Course/Program Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiographic Procedures III</td>
</tr>
</tbody>
</table>

**Abbreviated Title for Transcript (30 character):** Radiographic Procedures III

<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>X Academic</th>
<th>Non-credit</th>
<th>CEU</th>
<th>Professional Development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. Type of Action</th>
<th>X Add</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Repeat Status</th>
<th>N/A Limit</th>
<th>N/A Max Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
<th>X A-F</th>
<th>P/NP</th>
<th>NG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. Implementation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>From: Spring 2007</td>
</tr>
<tr>
<td>To: _____/9999</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12. Cross Listed with</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stack with</td>
<td></td>
</tr>
</tbody>
</table>

| 13. Coordinate with Affected Units: | UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve. |

**Initiator Signature**  
**Date**

<table>
<thead>
<tr>
<th>14. List any programs or college requirements that require this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate of Applied Science in Radiologic Technology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15. N/A</th>
<th>General Education Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>. Oral Communication</td>
</tr>
<tr>
<td></td>
<td>. Written Communication</td>
</tr>
<tr>
<td></td>
<td>. Quantitative Skills</td>
</tr>
<tr>
<td></td>
<td>. Humanities</td>
</tr>
<tr>
<td></td>
<td>. Fine Arts</td>
</tr>
<tr>
<td></td>
<td>. Social Sciences</td>
</tr>
<tr>
<td></td>
<td>. Natural Sciences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16. Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides instruction regarding basic principles of radiographic procedures in performing skull, trauma, mobile, pediatric, and other specialized imaging examinations. Continues to incorporate radiographic terminology and anatomy and allows for demonstration, practice, and evaluation of performance in a laboratory environment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17a. Course Prerequisite(s) (list prefix and number)</th>
<th>17b. Test Score(s)</th>
<th>17c. Co-requisite(s) (concurrent enrollment required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RADT A132</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17d. Other Restriction(s) None</th>
</tr>
</thead>
<tbody>
<tr>
<td>College</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17e. Registration Restriction(s) (non-codable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requires Departmental Approval</td>
</tr>
</tbody>
</table>

| 18. X Mark if course has fees |

<table>
<thead>
<tr>
<th>19. Justification for Action:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justification for change is no co requisite is needed because the advisory board recommended students begin their clinical their second semester of the program. This course is a required course for the AAS degree in Radiologic Technology. All aspects of the program have been developed using the Professional Curriculum Guidelines produced by the American Society of Radiologic Technologists (ASRT); Eligibility requirements for professional certification through the American Registry of Radiologic Technologists (ARRT); and Standards for an Accredited Educational Program in Radiologic Sciences from the Joint Review Committee on Education in Radiologic Technology.</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provost or Designee</td>
<td>Date</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Committee Chairperson</td>
<td>Date</td>
</tr>
</tbody>
</table>
Course Content Guide
University of Alaska Anchorage
Community and Technical College

Division: AHLS: Health and Safety  Date: Fall 2006
Department: Medical Imaging Sciences

Course Number and Title: RADT A133 Radiographic Procedures III  3 Credits

I. Course Description
Provides instruction regarding basic principles of radiographic procedures in performing skull, trauma, mobile, pediatric, and other specialized imaging examinations. Continues to incorporate radiographic terminology and anatomy and allows for demonstration, practice, and evaluation of performance in a laboratory environment.

II. Course Design
A. Designed for the third semester Radiologic Technology student.
B. Number of Credits: 3 (2 + 2)
C. Total time of student involvement: 135 hours
   1. Lecture hours: 30 hours total.
   2. Laboratory hours: 30 hours total.
   3. Total work expected outside of class: 75 hours.
D. This course is required for the Associate of Applied Science in Radiologic Technology.
E. This is a changed course.
F. Lab fees will be assessed to defray the cost of consumable lab material(s).
G. Course will be taught in no less than four weeks.
H. Course coordinated with UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve.
I. Course level justification: Completes the sequence of Procedure courses that introduces basic knowledge regarding radiographic procedures.

III. Course Activities
This course utilizes a lecture and laboratory format, discussions, simulations, and demonstrations of required competencies.

IV. Course Prerequisites:
RADT A132
Special Note: Requires Departmental Approval

V. Course Evaluations
A. Grading A-F.
B. Grades are based on attendance, participation, examinations, written summaries and discussions.
C. Specific grading criteria will be discussed at the beginning of the course.
VI. Course Outline

1.0 General Safety
   1.1 Campus
   1.2 Classroom
   1.3 Fire
   1.4 Universal Precautions/infection control
   1.5 Hazardous material/chemical spill response
   1.6 Radiation Safety and Protection
   1.7 Body Mechanics/ergonomics

2.0 General Considerations
   2.1 Evaluation of radiographic orders
      2.1.1. Patient identification
      2.1.2. Verification of procedure(s) ordered
      2.1.3. Review of clinical history
      2.1.4. Taking clinical history and patient assessment
         2.1.4.1. Role of the radiographer
         2.1.4.2. Questioning skills
         2.1.4.3. Determining the chief complaint
         2.1.4.4. Localization
         2.1.4.5. Chronology
         2.1.4.6. Quality
         2.1.4.7. Severity
         2.1.4.8. Onset
         2.1.4.9. Aggravating or alleviating factors
         2.1.4.10. Associated manifestations
         2.1.4.11. Special considerations for age, disability and cultural background
      2.1.5. Establishment of patient rapport
         2.1.5.1. Procedure explanation
         2.1.5.2. Determination of pregnancy
      2.1.6. Patient preparation
         2.1.6.1. Verification of appropriate dietary preparation
         2.1.6.2. Verification of appropriate medication preparation
         2.1.6.3. Appropriate disrobing and gowning
         2.1.6.4. Removal of items which may cause artifacts
      2.1.7. Room preparation
         2.1.7.1. Cleanliness, organization and appearance
         2.1.7.2. Necessary supplies and accessory equipment available
      2.1.8. Patient assistance
      2.1.9. Patient monitoring
      2.1.10. Image evaluation
      2.1.11. Patient dismissal

3.0 Positioning Considerations for Skull, Facial, and Paranasal Sinuses.
   3.1 Patient instructions
   3.2 Patient positioning
   3.3 Part placement
3.4 Cassette selection and placement
3.5 Beam alignment and angulation
3.6 Beam limitation and shielding
3.7 Special considerations
  3.7.1 Atypical patients
  3.7.2 Mobile procedures
  3.7.3 Surgical unit procedures
3.8 Skull lines
  3.8.1 Glabellomeatal line
  3.8.2 Interpupillary line
  3.8.3 Orbitomeatal line
  3.8.4 Infraorbitomeatal line
  3.8.5 Acanthiomeatal line
  3.8.6 Glabelloalveolar line
3.9 Skull landmarks
  3.9.1 Auricular point
  3.9.2 Gonion (angle)
  3.9.3 Mental point
  3.9.4 Acanthion
  3.9.5 Nasion
  3.9.6 Glabella
  3.9.7 Inner canthus
  3.9.8 Outer canthus
  3.9.9 Infraorbital margin
3.10 Skull Positioning
3.11 Facial and paranasal sinuses
  3.11.1 Facial bones
  3.11.2 Nasal bones
  3.11.3 Orbits/optic foramina
  3.11.4 Zygomatic arches
  3.11.5 Mandible
  3.11.6 Temporomandibular articulations
  3.11.7 Paranasal sinuses

4.0 Mobile and Surgical Radiography
4.1 Prior to Bedside Procedure:
  4.1.1 Exam order
  4.1.2 Chart
  4.1.3 Right patient – Right procedure
4.2 Steps followed during bedside procedure
4.3 Bedside procedure for neonate
4.4 Bedside procedure for the orthopedic patient
4.5 Special situations
4.6 Radiography in surgery
  4.6.1 Surgical clothing
  4.6.2 Equipment preparation
  4.6.3 Sterile fields
  4.6.4 Communication skills
4.7 Radiation protection
4.8 Vertebral column
  4.8.1 Cervical
4.8.2. Thoracic
4.8.3. Lumbar
4.8.4. Sacrum and coccyx
4.8.5. Sacroiliac articulations

4.9. Bony thorax
4.9.1. Ribs
4.9.2. Sternum
4.9.3. Sternoclavicular articulations

4.10. Abdomen
4.10.1. Viscera
4.10.2. Female reproductive organs

5.0 Procedural Considerations for Contrast Studies
5.1 Equipment and materials needed
5.2 Contrast media
5.2.1. Purpose
5.2.2. Types
5.2.2.1. Negative agents
5.2.2.2. Positive agents

5.3. Single and double contrast examinations
5.3.1. Upper gastrointestinal system
5.3.2. Lower gastrointestinal system
5.3.3. Follow-up Care

5.4. General procedure
5.5. Patient and body part positioning
5.6. Structures and functions demonstrated
5.7. Positioning for the following routine studies:
5.7.1. Digestive system
5.7.1.1. Esophagus
5.7.1.2. Stomach
5.7.1.3. Small bowel
5.7.1.4. Colon/rectum
5.7.2. Biliary system
5.7.2.1. Gallbladder
5.7.2.2. Biliary ducts
5.7.2.3. Endoscopic retrograde cholangiographic
      Pancreatography (ERCP)
5.7.2.4. Operative cholangiography
5.7.3. Urinary system
5.7.3.1. Intravenous urography
5.7.3.2. Retrograde urography
5.7.3.3. Cystography and cystourethrography

5.8. Application of above considerations to the following special studies:
5.8.1. Arthrography
5.8.2. Hysterosalpingography
5.8.3. Myelography
5.8.4. Venography

6.0 Upper Limb
6.1 Radiographic Anatomy
6.2 Radiographic Positioning
6.3 Radiographic Image Evaluation

7.0 Lower Limb
7.1 Radiographic Anatomy
7.2 Radiographic Positioning
7.3 Radiographic Image Evaluation

8.0 Spine and Bony Thorax
8.1 Radiographic Anatomy
8.2 Radiographic Positioning
8.3 Radiographic Image Evaluation

9.0 Upper and Lower GI Procedures
9.1 Radiographic Anatomy
9.2 Radiographic Positioning
9.3 Radiographic Image Evaluation

10.0 GU Procedures
10.1 Radiographic Anatomy
10.2 Radiographic Positioning
10.3 Radiographic Image Evaluation

11.0 Patient Education
11.1. Barriers to Communication
   11.1.1. Types
   11.1.2. Methods for overcoming barriers
11.2. Clinical Situations
11.3. Common Radiation Safety Issues and Concerns

VII. Recommended Texts


VIII. References


IX. Instructional Goals, Student Outcomes, and Assessment Procedures.

A. Instructional Goals: This course is designed to provide the student with the remaining radiographic procedures career entry skills described by national curriculum standards in Radiologic Technology. This course completes the sequenced series of radiographic procedures courses required for eligibility for national certification in Radiologic Technology.

B. Course Student Outcomes and Assessment Procedures:

<table>
<thead>
<tr>
<th>Student Outcomes: Upon successful completion the student will be able to do the following:</th>
<th>Assessment Procedures: The student outcomes can be assessed by one or more of the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe standard positioning terms.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Describe positioning aids used in radiography.</td>
<td>Quiz Examination</td>
</tr>
<tr>
<td>Discuss general procedural considerations for radiographic examinations.</td>
<td>Written Assignment Examination</td>
</tr>
<tr>
<td>Explain the specific considerations that might be necessary to produce the required radiographs.</td>
<td>Discussion Workbook Exercises Examination Role Play</td>
</tr>
<tr>
<td>Demonstrate application of general considerations in various radiographic procedures with various patient types.</td>
<td>Class Participation Demonstration Role Play</td>
</tr>
<tr>
<td>Explain the structures and functions demonstrated in routine radiographic procedures.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Simulate radiographic procedures on a person or phantom in a laboratory setting.</td>
<td>Class Participation Demonstration</td>
</tr>
<tr>
<td>Evaluate images for: positioning, centering, appropriate anatomy, and overall image quality.</td>
<td>Class Participation Demonstration</td>
</tr>
<tr>
<td>Discuss equipment and supplies necessary to complete radiographic and fluoroscopic procedures.</td>
<td>Workbook Exercises Discussion Examination</td>
</tr>
<tr>
<td>Describe the patient preparation necessary for various contrast and special studies.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Describe the general procedure for all radiographic and fluoroscopic procedures.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Explain the specific views for all radiographic and fluoroscopic</td>
<td>Quiz</td>
</tr>
<tr>
<td>Procedure</td>
<td>Assessment Procedures</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>List the type, dosage and route of administration of contrast media</td>
<td>Quiz Examination</td>
</tr>
<tr>
<td>commonly used to perform all radiographic contrast and special studies.</td>
<td></td>
</tr>
<tr>
<td><strong>Student Outcomes:</strong> Upon successful completion the student will be able</td>
<td><strong>Assessment Procedures:</strong> The student outcomes can be assessed by one or more of the following:</td>
</tr>
<tr>
<td>to do the following:</td>
<td></td>
</tr>
<tr>
<td>List the general purpose, structure and function demonstrated in</td>
<td>Quiz Examination</td>
</tr>
<tr>
<td>special radiographic and fluoroscopic studies.</td>
<td></td>
</tr>
<tr>
<td>Identify relevant anatomy on a given radiographic image.</td>
<td>Workbook Exercises</td>
</tr>
<tr>
<td>Description</td>
<td>Examination</td>
</tr>
<tr>
<td>Describe the purpose for using contrast agents.</td>
<td>Discussion</td>
</tr>
<tr>
<td>Differentiate between positive and negative contrast agents.</td>
<td>Demonstration</td>
</tr>
<tr>
<td>Description</td>
<td>Discussion</td>
</tr>
<tr>
<td>Describe the types and purpose for various upper and lower gastrointestinal studies.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Identify methods of communication and describe how each are utilized in patient education.</td>
<td>Class Participation Discussion Examination</td>
</tr>
<tr>
<td>Identify patient communication barriers and how each can be overcome to provide patient education.</td>
<td>Class Participation Discussion Quiz</td>
</tr>
<tr>
<td>Given clinical simulations, explain radiographic examinations.</td>
<td>Demonstration</td>
</tr>
<tr>
<td>Given clinical simulations, provide directions to patients with various communication problems.</td>
<td>Demonstration</td>
</tr>
<tr>
<td>Explain radiation safety and protection practices associated with radiologic examinations.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Identify the monitoring, pre and post-procedure care, drug administration and special precautions for a patient undergoing myelography and urography.</td>
<td>Discussion Class Participation Examination</td>
</tr>
<tr>
<td>Demonstrate the appropriate procedure for gathering information prior to performing a bedside radiographic examination.</td>
<td>Demonstration</td>
</tr>
<tr>
<td>Describe the initial steps in performing a mobile radiographic procedure.</td>
<td>Discussion Examination</td>
</tr>
<tr>
<td>Describe the special precautions to be used when performing a procedure on a neonate.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Demonstrate routine skull projections in a laboratory environment.</td>
<td>Demonstration</td>
</tr>
<tr>
<td>Simulate pediatric procedures in a laboratory environment.</td>
<td>Demonstration</td>
</tr>
<tr>
<td>Simulate trauma projections for specific trauma procedures.</td>
<td>Demonstration</td>
</tr>
<tr>
<td>Describe the special problems faced in performing procedures on patient with tracheotomy and specific tubes, drains and catheters.</td>
<td>Workbook Exercises Examination</td>
</tr>
<tr>
<td>Describe the procedure for producing diagnostic images in the surgical suite.</td>
<td>Workbook Exercises Discussion Examination</td>
</tr>
<tr>
<td>Identify the appropriate radiation protection required when</td>
<td>Discussion</td>
</tr>
</tbody>
</table>
Coordinating Form

Notification Date: 9-15-06
Initiating unit: Medical Imaging Sciences Department
Affected unit(s): CHESW, Mat-Su, Kodiak, Prince William Sound, KPC, Military, ER, List Serve
Course Prefix and Number: RADT
Previous Prefix and Number: N/A
Complete Course/Program Title: Radiographic Procedures III
Previous Course/Program Title: N/A
Description of Action: New course
Supporting documentation of the proposal is attached.

Initiating faculty are also REQUIRED to send an email to uaa-faculty@uaa.alaska.edu describing the proposal, including the proposed action and the course prefix, number, course description, prerequisite, and any other relevant information.

Any questions concerning the proposed changes may be addressed to the appropriate department chair, or the chair of the appropriate curriculum committee. Written comments may also be sent to the UAB or GAB, in care of the Governance Office, at the following address:

University of Alaska Anchorage
Governance Office, ADM 213
3211 Providence Drive
Anchorage, AK 99508

If no written comments are received by the UAB or GAB within ten (10) days of notification date shown above, it is assumed that there are no objections to the proposal.

Note: Acknowledgement of coordination does not mean approval, it is only meant to verify that coordination has occurred.
Fee Request Form

1. School/College CTC

2. Course Prefix and Number: RADT A133

3. Title: Radiographic Procedures III

4. Lab Fee Account Number:
   Org 11548  Obj 9159  Fund 104110

5. Type of Action:
   Add ☑  Deletion ☐  Change ☐ (☐ Increase or ☐ Decrease)

6. Fee Amount: $30. If a Change, please indicate the current approved lab fee $

7. Anticipated Student enrollment per class section: 15

8. Projected costs of material per class section: $
   (Provide details under #10 Justification for lab fee)

9. Implementation Date: Fall 2006.

10. Justification for fee (include materials/supplies used and the cost per item).

   Fees are necessary to offset the costs of maintaining an operational energized radiographic laboratory. Consumable supplies include the following:

<table>
<thead>
<tr>
<th>Estimated Number of Students</th>
<th>Radiographic Film</th>
<th>Processing Cleaning and Chemistry</th>
<th>Laboratory Supplies</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>8x10 per sheet =$.34  10x12 per sheet =$.49  11x14 per sheet =$.69  14x17 per sheet =$.99  $10 per student flat fee = $150.</td>
<td>Developer =$22.00 per 5 gal. (10 gal. per semester)  Fixer = $11.50 per 5 gal. (10 gal. per semester)  2 Processor Cleanings = $120. 15 students = Dev. $3.00 per student  Fix. $1.50 per student  Proc. Cleaning = $8 per student = $187.50</td>
<td>Disinfectant supplies  Disposable linens  Disposable gloves  Misc. supplies $7.50 per student flat fee = $112.50</td>
<td>$450</td>
</tr>
</tbody>
</table>

   Total $150 $187.50 $112.50 $450.
**Course Information**

1. **School or College:** CTC
2. **Division:** AHLS
3. **Department:** Medical Imaging Sciences
4. **Course Prefix:** RADT
5. **Course Number:** A195A
6. **Previous Course Prefix & Number:** N/A
7. **Credits/CEU:** 2 Credits
8. **Contact Hours:** (Lecture + Lab) (1 + 8)
9. **Complete Course/Program Title:** Radiography Practicum I
10. **Abbreviated Title for Transcript:** Radiography Practicum I
11. **Type of Course:** Academic
12. **Grading Basis:** A-F
13. **Implementation Date:** From: Spring 2007, To: _____/9999
14. **Course Description:** Provides an opportunity to observe, participate, and apply basic radiographic skills in a structured and supervised healthcare environment, including patient interaction in the performance of examinations of the chest, abdomen, upper and lower extremities and pelvic girdle. Duties are assigned by the UAA instructor and supervised by an ARRT registered radiologic technologist. Special Note: Department approval required prior to registration.

15. **General Education Requirement:**
   - Oral Communication
   - Written Communication
   - Quantitative Skills
   - Humanities
   - Fine Arts
   - Social Sciences
   - Natural Sciences

16. **Justification for Action:** This course is being moved into another semester requiring a removal of the co-requisite because the advisory board recommended that students begin their clinical their second semester of the program. This course is a required component of the AAS program in Radiologic Technology. All aspects of the program have been developed using the Professional Curriculum Guidelines produced by the American Society of Radiologic Technologists (ASRT); Eligibility requirements for professional certification through the American Registry of Radiologic Technologists (ARRT); and Standards for an Accredited Educational Program in Radiologic Sciences from the Joint Review Committee on Education in Radiologic Technology.

17. **Course Prerequisite(s):** None
18. **Test Score(s):** None
19. **Co-requisite(s):** None
20. **Registration Restriction(s):** Requires Department approval.

---

**Approval Process**

- **Initiator (faculty only)**: [Signature] [Date]
- **Dean/Director of School/College**: [Signature] [Date]
- **Undergraduate or Graduate**: [Signature] [Date]
- **Academic Board Chairperson**: [Signature] [Date]
- **Provost or Designee**: [Signature] [Date]
Course Content Guide
University of Alaska Anchorage
Community and Technical College

Division: AHLS: Health and Safety
Date: Fall 2006

Department: Medical Imaging Sciences

Course Number and Title: RADT A195A  Radiography Practicum I  2 Credits

I.  Course Description
Provides an opportunity to observe, participate, and apply basic radiographic skills in a structured and supervised health care environment, including patient interaction in the performance of examinations of the chest, abdomen, upper and lower extremities and pelvic girdle. Duties are assigned by the UAA instructor and supervised by an ARRT registered radiologic technologists. Special Note: Department approval required prior to registration.

II.  Course Design
A.  Designed for beginning Radiologic Technology students.
B.  Number of Credits:  2 (1-0-8)
C.  Total time of student involvement: 135 hours
   1.  Total Lecture hours: 15 hours
   2.  Total Clinic hours: 104 hours
   3.  Total time of work expected outside of clinic: 16 hours
D.  This course is required for the Associate of Applied Science in Radiologic Technology.
E.  This is a revised course.
F.  Lab fees will be assessed to defray the costs of materials/insurance for students.
G.  Course will be taught in or in no less than 4 weeks.
H.  Course coordinated with UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve.
I.  Course level justification: Clinical application of fundamental radiographic knowledge and skills in a health care setting.

III.  Course Activities
Course is conducted in a clinical format, including simulations, demonstrations, observation, and radiographing patients for skill development and competency attainment.

IV.  Registration Restrictions
Requires Department approval.

V.  Course Evaluation
A.  Grading is pass/no pass.
B.  The student's skills will be assessed by formative and summative evaluations. The formative assessment will be preceptor (Clinical Educator) evaluations of professional (affective) skills. Technical (cognitive and psychomotor) skills will be assessed based on a minimum number of required competencies established for this course at an 85% proficiency level.
C.  Specific grading criteria will be discussed at the beginning of the course.
VI. **Course Outline**

1.0 General Safety
   1.1 Campus
   1.2 Facility and health care environment
   1.3 Fire
   1.4 Universal precautions/infection control
   1.5 Hazardous material/chemical spill response
   1.6 Radiation safety and protection
   1.7 Body mechanics/ergonomics

2.0 A review of the general organization
   2.1 Department personnel
   2.2 Attendance policies.

3.0 The organization of the daily work schedule
   3.1 Dress codes
   3.2 The need to project caring
   3.3 Communicate well with patients.

4.0 The administration of examination requests
   4.1 Proper documentation of the patient data.
   4.2 Review confidentiality of patient records.

5.0 Documentation
   5.1 Patient history
   5.2 Examination times
   5.3 Radiation protection
   5.4 Pregnancy information
   5.5 Allergies
   5.6 Numbers of images.

6.0 Patient care and transportation modes within the health care facility.

7.0 Review of policies and procedures specific to health care facility.

8.0 Observation and demonstration of the following radiographic procedures:
   8.1 Chest
   8.2 Abdomen
   8.3 Upper limb/extremity
   8.4 Proximal humerus and shoulder girdle
   8.5 Lower limb/extremity
   8.6 Proximal femur and pelvic girdle

9.0 Demonstrate efficient use of imaging equipment and image processing facilities.
10.0 Demonstrate, and practice infection control standards and procedures as required by the health care facility.

11.0 Observe and execute clerical/administrative functions
   11.1 Paper processing
   11.2 Filing
   11.3 Reception.

VII. **Recommended Texts**


VIII. **References**


IX. **Instructional Goals, Student Outcomes, and Assessment Procedures.**

A. **Instructional Goals:** This course is designed to provide supervised application of basic radiographic skills in a health care facility, including patient interaction in the performance of select radiographic examinations. This course develops career entry skills described by nationally recognized standards in Radiologic Technology.

B. **Course Student Outcomes and Assessment Procedures:**

<table>
<thead>
<tr>
<th>Student Outcomes: Upon successful completion the student will be able to do the following:</th>
<th>Assessment Procedures: The student outcomes can be assessed by one or more of the following:</th>
</tr>
</thead>
</table>
| Describe the department organization | Clinical Orientation Checklist  
Clinical Assessment Form |
| Observe and demonstrate the process for examination requests. | Administrative Procedures Checklist |
| Accurately record patient examination and data on department forms. | Administrative Procedures Checklist |
| Demonstrate confidentiality of patient records | Clinical Orientation Checklist  
Clinical Assessment Form  
Clinical Competency Form |
| Identify emergency supplies and discuss policies | Demonstration and Discussion  
Clinical Orientation Checklist |
| Observe then perform patient transportation for a procedure | Demonstration  
Clinical Competency Form |
| Demonstrate the ability to use the image processing system. | Clinical Assessment Form  
Clinical Competency Form |
| Observe clerical and administrative functions – paper processing, filing, reception functions. | Administrative Procedures Checklist |
| Observe all infection control policies/procedures | Clinical Orientation Checklist  
Clinical Assessment Form  
Clinical Competency Form |
<table>
<thead>
<tr>
<th>Student Outcomes: Upon successful completion the student will be able to do the following:</th>
<th>Assessment Procedures: The student outcomes can be assessed by one or more of the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree to the dress code and attendance policies of the assigned facility.</td>
<td>Signed Statement of Comprehension</td>
</tr>
<tr>
<td>Demonstrate ability to communicate with patient in a caring manner.</td>
<td>Clinical Assessment Form Professional Evaluation Form Competency Evaluation Form</td>
</tr>
<tr>
<td>Describe the functions of each aspect of clinical rotation.</td>
<td>Quiz</td>
</tr>
<tr>
<td>Demonstrate compliance with radiation protection procedures – using aprons, gloves, thyroid shields, glasses, contact shields, shadow shields and distance from radiation source.</td>
<td>Clinical Assessment Form Clinical Professional Evaluation Form Clinical Competency Form</td>
</tr>
<tr>
<td>Wear radiation monitoring devices as required by Federal and State agencies.</td>
<td>Clinical Assessment Form Clinical Professional Evaluation Form Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: chest x-rays</td>
<td>Clinical Assessment Form Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: abdomen x-rays</td>
<td>Clinical Assessment Form Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: upper limb x-rays</td>
<td>Clinical Assessment Form Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: proximal humerus, and shoulder girdle x-rays</td>
<td>Clinical Assessment Form Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: lower limb x-rays</td>
<td>Clinical Assessment Form Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: proximal femur and pelvic girdle x-rays</td>
<td>Clinical Assessment Form Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate proper use of radiographic technical factors, including kVp, mA, time, and mAs as they apply to the procedures.</td>
<td>Clinical Assessment Form Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate the use of calipers for establishing correct radiation exposure factors.</td>
<td>Clinical Assessment Form Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate room cleaning, restocking, and preparation for assigned procedures.</td>
<td>Clinical Assessment Form Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate the ability to identify gross radiographic anatomy and patient positions on radiographic images.</td>
<td>Clinical Assessment Form Clinical Competency Form</td>
</tr>
</tbody>
</table>
Coordination Form

Notification Date: 9-15-06
Initiating unit: Medical Imaging Sciences Department
Affected unit(s): CHESW, Mat-Su, Kodiak, Prince William Sound, KPC, Military, ER, List Serve
Course Prefix and Number: RADT A195A
Previous Prefix and Number: N/A
Complete Course/Program Title: Radiography Practicum I
Previous Course/Program Title: N/A

Description of Action: Change course

Supporting documentation of the proposal is attached.

Initiating faculty are also REQUIRED to send an email to uaa-faculty@uaa.alaska.edu describing the proposal, including the proposed action and the course prefix, number, course description, prerequisite, and any other relevant information.

Any questions concerning the proposed changes may be addressed to the appropriate department chair, or the chair of the appropriate curriculum committee. Written comments may also be sent to the UAB or GAB, in care of the Governance Office, at the following address:

University of Alaska Anchorage
Governance Office, ADM 213
3211 Providence Drive
Anchorage, AK 99508

If no written comments are received by the UAB or GAB within ten (10) days of notification date shown above, it is assumed that there are no objections to the proposal.

Note: Acknowledgement of coordination does not mean approval, it is only meant to verify that coordination has occurred.
Fee Request Form

1. School/College: CTC
2. Course Prefix and Number: RADT A195A
3. Title: Radiography Practicum I
4. Lab Fee Account Number:
   Org 11548   Obj 9159   Fund 104110
5. Type of Action:
   Add x   Deletion □   Change □ (□ Increase or □ Decrease)
6. Fee Amount: $105
7. Anticipated Student enrollment per class section: 15
8. Projected costs of material per class section: $1545.
   (Provide details under #10 Justification for lab fee)
9. Implementation Date: Fall 2006
10. Justification for fee (include materials/supplies used and the cost per item).

Fees are necessary to offset the costs of maintaining the necessary resources for monitoring and documenting student clinical performance. Consumable supplies include the following:

<table>
<thead>
<tr>
<th>Estimated Number of Students</th>
<th>Clinical Education Handbook</th>
<th>Lead Identification Markers</th>
<th>Radiation Monitoring Service</th>
<th>Liability Insurance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>$11 per copy 15 copies = $165.</td>
<td>$10 per set 15 sets = $150.</td>
<td>$5.75 per student per month X 12 months X 15 students = $1035.</td>
<td>$15 per student 15 students = $225.</td>
<td>$1575.</td>
</tr>
<tr>
<td>Total</td>
<td>11 per copy copies = $165.</td>
<td>$10 per set sets = $150.</td>
<td>$5.75 per student/month X 12 months X = 1035.</td>
<td>$15 per student students = $225.</td>
<td>$1575.</td>
</tr>
</tbody>
</table>

Approved □   Disapproved □
Department Chair
Date

Approved □   Disapproved □
Dean/Director of Schools/College
Date

Approved □   Disapproved □
Provost
Date
1a. School or College  
CTC  

1b. Division  
AHLS  

1c. Department  
Medical Imaging Sciences  

2. Course Prefix  
RADT  

3. Course Number  
A195B  

4. Previous Course Prefix & Number  
N/A  

5a. Credits/CEU  
3 Credits  

5b. Contact Hours  
(Lecture + Lab)  
(0 + 16)  

6. Complete Course/Program Title  
Radiography Practicum II  

Abbreviated Title for Transcript (30 character)  
Radiography Practicum II  

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

8. Type of Action  
X Course  

☐ Prefix  
☐ Credits  
☐ Title  
☐ Grading Basis  
☐ Course Description  
☐ Test Score Prerequisites  
☐ Other Restrictions  
☐ Class  
☐ Level  
☐ College  
☐ Major  
☐ Other  

9. Repeat Status  
N/A Limit  
N/A Max Hours  

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

11. Implementation Date  
From: Spring 2007  
To: _____/9999  

12. ☐ Cross Listed with  
N/A  

☐ Stacked with  
N/A  

Cross-Listed Coordination Signature  

13. Coordinate with Affected Units:  
UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve.  

Initiator Signature  
Date  

14. List any programs or college requirements that require this course  
Associate of Applied Science in Radiologic Technology  

15. ☐ General Education Requirement  
☐ Oral Communication  
☐ Written Communication  
☐ Quantitative Skills  
☐ Humanities  
☐ Fine Arts  
☐ Social Sciences  
☐ Natural Sciences  

N/A  

Course Description: Provides structured and supervised application of radiographic skills in a health care facility, including patient interaction in the performance of examinations of the spine, thorax, upper and lower gastrointestinal, and genitourinary systems. Provides opportunity for continued development of previously gained practicum experience. Duties are assigned by the UAA instructor and supervised by an ARRT registered radiologic technologist.  

17a. Course Prerequisite(s) (list prefix and number)  
None  

17b. Test Score(s)  
None  

17c. Co-requisite(s) (concurrent enrollment required)  
None  

17d. Other Restriction(s) None  

17e. Registration Restriction(s) (non-codable)  
Departmental Approval  

18. Mark if course has fees  

19. Justification for Action: Justification for change, we are deleting course pre requisites and co requisites because the advisory board recommended that students begin their clinical their second semester of the program. This course is required for the AAS degree in Radiologic Technology. All aspects of the program have been developed using the Professional Curriculum Guidelines produced by the American Society of Radiologic Technologists (ASRT); Eligibility requirements for professional certification through the American Registry of Radiologic Technologists (ARRT); and Standards for an Accredited Educational Program in Radiologic Sciences from the Joint Review Committee on Education in Radiologic Technology.  

Approved  
Disapproved:  

Initiator (faculty only)  
Date  

Approved  
Disapproved:  

Dean/Director of School/College  
Date  

Approved  
Disapproved:  

Department Chairperson  
Date  

Approved  
Disapproved:  

Undergraduate or Graduate  
Academic Board Chairperson  
Date  

Approved  
Disapproved:  

Provost or Designee  
Date  

Curriculum Committee Chairperson  
Date
I. Course Description
Provides structured and supervised application of radiographic skills in a health care facility, including patient interaction in the performance of examinations of the spine, thorax, upper and lower gastrointestinal, and genitourinary systems. Provides opportunity for continued development of previously gained practicum experience. Duties are assigned by the UAA instructor and supervised by an ARRT registered radiologic technologist.

II. Course Design
A. Designed for the second semester Radiologic Technology student.
B. Number of Credits:  3 (0 + 16)
C. Total time of student involvement:  240 hours
   1. Total Clinic hours: 224 hours
   2. Total time of work expected outside of clinic: 16 hours
D. This course is required for the Associate of Applied Science in Radiologic Technology.
E. No lab fees.
F. Course will be taught in or in no less than 6 weeks.
G. This is a revised course.
H. Course coordinated with UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve.
I. Course level justification: Clinical application of fundamental radiographic knowledge and skills in a health care setting.

III. Course Activities
Course is conducted in a clinical format, including simulations, demonstrations, and performing radiographic examinations on patients for skill development and competency achievement.

IV. Registration Restrictions
Requires department approval

V. Course Evaluation
A. Grading is pass/no pass.
B. The student's skills will be assessed by formative and summative evaluations. The formative assessment will be preceptor (Clinical Educator) evaluations of professional (affective) skills. Technical (cognitive and psychomotor) skills will be assessed based on a minimum number of required competencies established for this course at an 85% proficiency level.
C. Specific grading criteria will be discussed at the beginning of the course.
VI. Course Outline

1.0 General Safety
   1.1 Campus
   1.2 Facility and health care environment
   1.3 Fire
   1.4 Universal precautions/infection control
   1.5 Hazardous material/chemical spill response
   1.6 Radiation safety and protection
   1.7 Body mechanics/ergonomics

2.0 A review of the general organization
   2.1 Department personnel
   2.2 Attendance policies.

3.0 The organization of the daily work schedule
   3.1 Dress codes
   3.2 The need to project caring
   3.3 Communicate well with patients.

4.0 The administration of examination requests
   4.1 Proper documentation of the patient data.
   4.2 Review confidentiality of patient records.

5.0 Documentation
   5.1 Patient history
   5.2 Examination times
   5.3 Radiation protection
   5.4 Pregnancy information
   5.5 Allergies
   5.6 Numbers of images.

6.0 Patient care and transportation modes within the health care facility.

7.0 Policies and procedures specific to health care facility.

8.0 Observation and demonstration of the following radiographic procedures:
   8.1 Cervical Spine
   8.2 Thoracic Spine
   8.3 Lumbosacral Spine
   8.4 Bony Thorax (Ribs, Sternum)
   8.5 Contrast studies (Barium and Iodinated contrast studies)
   8.6 Tomographic examinations
9.0 Demonstrate efficient use of imaging equipment and image processing facilities.

10.0 Demonstrate, and practice infection control standards and procedures as required by the healthcare facility.

11.0 Observe and execute clerical/administrative functions
   11.1 Paper processing
   11.2 Filing
   11.3 Reception.

VII. Recommended Texts


VIII. Bibliography


**VIII. Instructional Goals, Student Outcomes, and Assessment Procedures.**

**A. Instructional Goals:** This course is designed to provide supervised application of basic radiographic skills in a health care facility, including patient interaction in the performance of select radiographic examinations. This course develops career entry skills described by nationally recognized standards in Radiologic Technology.

**B. Course Student Outcomes and Assessment Procedures:**

<table>
<thead>
<tr>
<th><strong>Student Outcomes:</strong> Upon successful completion the student will be able to do the following:</th>
<th><strong>Assessment Procedures:</strong> The student outcomes can be assessed by one or more of the following:</th>
</tr>
</thead>
</table>
| Describe the department organization | Clinical Orientation Checklist  
Clinical Assessment Form |
| Observe and demonstrate the process for examination requests. | Administrative Procedures Checklist |
| Accurately records patient examination and data on department forms. | Administrative Procedures Checklist |
| Demonstrate confidentiality of patient records | Clinical Orientation Checklist  
Clinical Assessment Form  
Clinical Competency Form |
| Identify emergency supplies and discuss policies | Demonstration and Discussion  
Clinical Orientation Checklist |
| Perform patient transportation for a procedure | Demonstration Performance  
Clinical Competency Form |
| Agree to the dress code and attendance policies of the assigned facility. | Signed Statement of Comprehension |
| Demonstrate ability to communicate with patient in a caring manner. | Clinical Assessment Form  
Professional Evaluation Form  
Competency Evaluation Form |
| List the functions of each aspect of clinical rotation. | Quiz |
| Demonstrate compliance with radiation protection procedures – using aprons, gloves, thyroid shields, glasses, contact shields, shadow shields and distance from radiation source. | Clinical Assessment Form  
Clinical Professional Evaluation Form  
Clinical Competency Form |
| Wear radiation-monitoring devices in compliance with required Federal and State agencies. | Clinical Assessment Form  
Clinical Professional Evaluation Form  
Clinical Competency Form |
### RADT A195B Radiography Practicum II (page 2)

**Student Outcomes:** Upon successful completion the student will be able to do the following:

<table>
<thead>
<tr>
<th><strong>Assessment Procedures:</strong> The student outcomes can be assessed by one or more of the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: cervical spine x-rays</td>
</tr>
<tr>
<td>Clinical Assessment Form</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: thoracic spine x-rays</td>
</tr>
<tr>
<td>Clinical Assessment Form</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: lumbar spine x-rays</td>
</tr>
<tr>
<td>Clinical Assessment Form</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: sacrum and coccyx x-rays</td>
</tr>
<tr>
<td>Clinical Assessment Form</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: bony thorax (ribs and sternum) x-rays</td>
</tr>
<tr>
<td>Clinical Assessment Form</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: upper gastrointestinal x-rays</td>
</tr>
<tr>
<td>Clinical Assessment Form</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: lower gastrointestinal x-rays</td>
</tr>
<tr>
<td>Clinical Assessment Form</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate routine positions and equipment/technique set-up and manipulation for: iodinated contrast examinations</td>
</tr>
<tr>
<td>Clinical Assessment Form</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate the proper use of radiographic technical factors, including kVp, mA, time, and mAs as they apply to the procedures.</td>
</tr>
<tr>
<td>Clinical Assessment Form</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate the ability to identify gross radiographic anatomy and patient positions on radiographic images.</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
<tr>
<td>Demonstrate the ability to use the image processing system to produce diagnostic images.</td>
</tr>
<tr>
<td>Clinical Assessment Form</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
<tr>
<td>Observe clerical and administrative functions – paper processing, filing, reception functions.</td>
</tr>
<tr>
<td>Administrative Procedures Checklist</td>
</tr>
<tr>
<td>Observe all infection control policies/procedures</td>
</tr>
<tr>
<td>Clinical Orientation Checklist</td>
</tr>
<tr>
<td>Clinical Assessment Form</td>
</tr>
<tr>
<td>Clinical Competency Form</td>
</tr>
</tbody>
</table>
Curriculum Coordination Form

Notification Date:

Initiating unit: AHLS Medical Imaging Sciences Department

Affected unit(s):

Course Prefix and Number: RADT A195B

Previous Prefix and Number: N/A

Complete Course/Program Title: Radiography Practicum II

Previous Course/Program Title: N/A

Description of Action: Changed course

Supporting documentation of the proposal is attached.

Initiating faculty are also REQUIRED to send an email to uaa-faculty@uaa.alaska.edu describing the proposal, including the proposed action and the course prefix, number, course description, prerequisite, and any other relevant information.

Any questions concerning the proposed changes may be addressed to the appropriate department chair, or the chair of the appropriate curriculum committee. Written comments may also be sent to the UAB or GAB, in care of the Governance Office, at the following address:

University of Alaska Anchorage
Governance Office, ADM 213
3211 Providence Drive
Anchorage, AK 99508

If no written comments are received by the UAB or GAB within ten (10) days of notification date shown above, it is assumed that there are no objections to the proposal.

Note: Acknowledgement of coordination does not mean approval, it is only meant to verify that coordination has occurred.
**Curriculum Action Request**  
University of Alaska Anchorage  
Proposal to Initiate, Add, Change, or Delete a Course or Program of Study

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTC</td>
<td>AHLS</td>
<td>Medical Imaging Sciences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEU</th>
<th>5b. Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RADT</td>
<td>A195C</td>
<td>N/A</td>
<td>3 Credits</td>
<td>(Lecture + Lab) (0 + 13)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Complete Course/Program Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiography Practicum III</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>X Academic</th>
<th>Non-credit</th>
<th>CEU</th>
<th>Professional Development</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>8. Type of Action</th>
<th>X Add</th>
<th>Change</th>
<th>Prefix</th>
<th>Credits</th>
<th>Title</th>
<th>Course Description</th>
<th>Grading Basis</th>
<th>Contact Hours</th>
<th>Course Prerequisites</th>
<th>Cross-Listed/Stacked</th>
<th>Co-requisites</th>
<th>Other Restrictions</th>
<th>Registration Restrictions</th>
<th>Class</th>
<th>Level</th>
<th>College</th>
<th>Major</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>9. Repeat Status</th>
<th>N/A Limit</th>
<th>N/A Max Hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
<th>A-F</th>
<th>X P/NP</th>
<th>NG</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>11. Implementation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>From: Spring 2007</td>
</tr>
<tr>
<td>To: 0000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12. Cross Listed with</th>
<th>N/A</th>
</tr>
</thead>
</table>

| 13. Coordinate with Affected Units: | UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve. |

<table>
<thead>
<tr>
<th>Initiator Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

| 14. List any programs or college requirements that require this course: | Associate of Applied Science in Radiologic Technology |

<table>
<thead>
<tr>
<th>15. General Education Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

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

| 16. Course Description: | Provides structured and supervised application of radiographic skills in a health care facility, including patient interaction in the performance of examinations of the cranium, as well as trauma, mobile, and pediatric radiography. Provides opportunity for continued development of previous experience gained in the clinical environment. Duties are assigned by UAA instructor and supervised by an ARRT registered radiologic technologist. |

<table>
<thead>
<tr>
<th>17a. Course Prerequisite(s) (list prefix and number)</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>17b. Test Score(s) (non-codable)</td>
<td>None</td>
</tr>
<tr>
<td>17c. Co-requisite(s) (concurrent enrollment required)</td>
<td>Departmental approval</td>
</tr>
<tr>
<td>17d. Other Restriction(s)</td>
<td>None</td>
</tr>
</tbody>
</table>

| 17e. Registration Restriction(s) (non-codable) | Departmental approval |

| 18. Mark if course has fees |

| 19. Justification for Action: | Justification for change is deleting of pre requisites and co requisites because the advisory board members recommended that students begin their clinical their second semester in the program. This course is a required for the AAS degree in Radiologic Technology. All aspects of the program have been developed using the Professional Curriculum Guidelines produced by the American Society of Radiologic Technologists (ASRT); Eligibility requirements for professional certification through the American Registry of Radiologic Technologists (ARRT); and Standards for an Accredited Educational Program in Radiologic Sciences from the Joint Review Committee on Education in Radiologic Technology. |

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved:</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Undergraduate or Graduate Academic Board Chairperson</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Provost or Designee</th>
<th>Date</th>
</tr>
</thead>
</table>
I. **Course Description**

Provides structured and supervised application of radiographic skills in a health care facility, including patient interaction in the performance of examinations of the cranium, as well as trauma, mobile, and pediatric radiography. Provides opportunity for continued development of previous experience gained in the clinical environment. Duties are assigned by UAA instructor and supervised by an ARRT registered radiologic technologist.

II. **Course Design**

A. Designed for beginning Radiologic Technology students.
B. Number of Credits: 3 (0 + 13)
C. Total time of student involvement: 210 hours
   1. Total Lecture hours: 0 hours
   2. Total Clinic hours: 195 hours
   3. Total time of work expected outside of clinic: 15 hours
D. This course is required for the Associate of Applied Science in Radiologic Technology.
E. Lab fees: None.
F. This is a revised course.
G. Course will be taught in no less than 6 weeks.
H. Course coordinated with UAA colleges, extended campuses, UAF, Tanana Valley Campus, and list serve.
I. Course level justification: Clinical application of fundamental radiographic knowledge and skills in a health care setting.

III. **Course Activities**

Course is conducted in a clinical format, including simulations, demonstrations, and radiographing patients for skill development and competency achievement.

IV. **Registration Restrictions**

Required department approval

V. **Course Evaluation**

A. Grading is pass/no pass.
B. The student's skills will be assessed by formative and summative evaluations. The formative assessment will be preceptor (Clinical Educator) evaluations of professional (affective) skills. Technical (cognitive and psychomotor) skills will
be assessed based on a minimum number of required competencies established for this course at an 85% proficiency level.

C. Specific grading criteria will be discussed at the beginning of the course.

VI. Course Outline

1.0 General Safety
   1.1 Campus
   1.2 Facility and health care environment
   1.3 Fire
   1.4 Universal precautions/infection control
   1.5 Hazardous material/chemical spill response
   1.6 Radiation safety and protection
   1.7 Body mechanics/ergonomics

2.0 A review of the general organization
   2.1 Department personnel
   2.2 Attendance policies.

3.0 The organization of the daily work schedule
   3.1 Dress codes
   3.2 The need to project caring
   3.3 Communicate well with patients.

4.0 The administration of examination requests
   4.1 Proper documentation of the patient data.
   4.2 Confidentiality of patient records.

5.0 Documentation
   5.1 Patient history
   5.2 Examination times
   5.3 Radiation protection
   5.4 Pregnancy information
   5.5 Allergies
   5.6 Numbers of images.

6.0 Patient care and transportation modes within the health care facility.

7.0 Policies and procedures specific to health care facility.

8.0 Observation and demonstration of the following radiographic procedures:
   8.1 Cranial Radiography
   8.2 Trauma and mobile radiography
   8.3 Pediatric radiography
   8.4 Previous practicum requirements.
9.0 Demonstrate efficient use of imaging equipment and image processing facilities.

10.0 Demonstrate, and practice infection control standards and procedures as required by the healthcare facility.

11.0 Observe and execute clerical/administrative functions
   11.1 Paper processing
   11.2 Filing
   11.3 Reception.

VII. Recommended Texts


VIII. References


IX. Instructional Goals, Student Outcomes, and Assessment Procedures.

A. **Instructional Goals:** This course is designed to provide supervised application of radiographic skills in a health care facility, including patient interaction in the performance of select radiographic examinations. This course continues the development of career entry skills described by nationally recognized standards in Radiologic Technology.

B. **Course Student Outcomes and Assessment Procedures:**

<table>
<thead>
<tr>
<th><strong>Student Outcomes:</strong> Upon successful completion the student will be able to do the following:</th>
<th><strong>Assessment Procedures:</strong> The student outcomes can be assessed by one or more of the following:</th>
</tr>
</thead>
</table>
| Describe the department organization | Clinical Orientation Checklist  
Clinical Assessment Form |
| Observe and demonstrate the process for examination requests. | Administrative Procedures Checklist |
| Accurately record patient examination and data on department forms. | Administrative Procedures Checklist |
| Demonstrate confidentiality of patient records | Clinical Orientation Checklist  
Clinical Assessment Form  
Clinical Competency Form |
| Identify emergency supplies and discuss policies | Demonstration and Discussion  
Clinical Orientation Checklist |
| Perform patient transportation for a procedure | Demonstration  
Performance  
Clinical Competency Form |
| Agrees to the dress code and attendance policies of the program and assigned facility. | Signed Statement of Comprehension |
| Apply communication skills in a caring manner. | Clinical Assessment Form  
Professional Evaluation Form  
Competency Evaluation Form |
| List the functions of each aspect of clinical rotation. | Quiz |
| Demonstrate compliance with radiation protection procedures – using aprons, gloves, thyroid shields, glasses, contact shields, shadow shields and distance from radiation source. | Clinical Assessment Form  
Clinical Professional Evaluation Form  
Clinical Competency Form |
| Wear radiation-monitoring devices as required by Federal and State agencies. | Clinical Assessment Form  
Clinical Professional Evaluation Form  
Clinical Competency Form |
<table>
<thead>
<tr>
<th>Student Outcomes: Upon successful completion the student will be able to do the following:</th>
<th>Assessment Procedures: The student outcomes can be assessed by one or more of the following:</th>
</tr>
</thead>
</table>
| Demonstrate routine positions and equipment/technique set-up and manipulation for: skull and cranial examinations | Clinical Assessment Form  
Clinical Competency Form |
| Demonstrate routine positions and equipment/technique set-up and manipulation for: paranasal sinuses | Clinical Assessment Form  
Clinical Competency Form |
| Demonstrate routine positions and equipment/technique set-up and manipulation for: facial bones | Clinical Assessment Form  
Clinical Competency Form |
| Demonstrate routine positions and equipment/technique set-up and manipulation for: trauma examinations | Clinical Assessment Form  
Clinical Competency Form |
| Demonstrate routine positions and equipment/technique set-up and manipulation for: mobile examinations | Clinical Assessment Form  
Clinical Competency Form |
| Demonstrate routine positions and equipment/technique set-up and manipulation for: surgical mobile and fluoroscopic examinations | Clinical Assessment Form  
Clinical Competency Form |
| Demonstrate routine positions and equipment/technique set-up and manipulation for: pediatric examinations | Clinical Assessment Form  
Clinical Competency Form |
| Demonstrate the proper use of radiographic technical factors, including kVp, mA, time, and mAs as they apply to the procedures observed/demonstrated. | Clinical Assessment Form  
Clinical Competency Form |
| Demonstrate the use of calipers for establishing correct radiation exposure factors. | Clinical Assessment Form  
Clinical Competency Form |
| Demonstrate room cleaning, restocking, and preparation for assigned procedures. | Clinical Assessment Form  
Clinical Competency Form |
| Demonstrate the ability to identify gross radiographic anatomy and patient positions on radiographic images. | Clinical Assessment Form  
Clinical Competency Form |
| Demonstrate the ability to use the image processing system to produce diagnostic images. | Clinical Assessment Form  
Clinical Competency Form |
| Observe clerical and administrative functions – paper processing, filing, reception functions. | Administrative Procedures Checklist |
| Observe all infection control policies/procedures | Clinical Orientation Checklist  
Clinical Assessment Form  
Clinical Competency Form |
Coordination Form

Notification Date:

Initiating unit: Medical Imaging Sciences Department

Affected unit(s):

Course Prefix and Number: RADT A195C

Previous Prefix and Number: N/A

Complete Course/Program Title: Radiography Practicum III

Previous Course/Program Title: N/A

Description of Action: Changed course

Supporting documentation of the proposal is attached.

Initiating faculty are also REQUIRED to send an email to uaa-faculty@uaa.alaska.edu describing the proposal, including the proposed action and the course prefix, number, course description, prerequisite, and any other relevant information.

Any questions concerning the proposed changes may be addressed to the appropriate department chair, or the chair of the appropriate curriculum committee. Written comments may also be sent to the UAB or GAB, in care of the Governance Office, at the following address:

University of Alaska Anchorage
Governance Office, ADM 213
3211 Providence Drive
Anchorage, AK 99508

If no written comments are received by the UAB or GAB within ten (10) days of notification date shown above, it is assumed that there are no objections to the proposal.

Note: Acknowledgement of coordination does not mean approval, it is only meant to verify that coordination has occurred.
The 2000 Accreditation Report from the Northwest Association commended the University of Alaska Anchorage for launching the University Honors Program. Since 1998, enrollment has grown from 20 students to 180 students and disciplinary honors options have grown from 2 departments to 18 departments. Honors graduates have gone on to some of the best graduate and professional programs in the nation, and awards made by the Office of Undergraduate Research & Scholarship have increased by 143%. It is now time to move from Program to College status. This change will bring coherence to undergraduate research and honors education. It will highlight the value that UAA places on excellence in undergraduate education and on student success. The Honors College will strengthen the culture of active learning and foster student/faculty and community partnerships. It will improve the overall quality of UAA. It will also bolster the public image of our campus thereby helping us attract and retain better students and assist in successful extramural fundraising to support the activities of UAA students.

**FUNCTIONS**

The University Honors College focuses on undergraduate education. *The Honors College mission is to be a catalyst for scholarly excellence through engaging students and faculty in challenging learning, teaching, and research opportunities.* Students enrolled in the University Honors College are also enrolled in the disciplinary school or college in which they complete their degree program. Students who complete the requirements of their school or college and the University Honors College graduate with the designation of *University Honors Scholar* on their transcript and diploma.

The University Honors College supports the UAA disciplinary schools and colleges and their students in the following ways:

- Assisting the disciplinary schools and colleges through the recruitment of exceptional students and in the retention of those students.

- Advancing, coordinating and administering active learning and undergraduate research opportunities for students and faculty across the campus.

- Developing and delivering multi-disciplinary Honors curricula.

- Providing leadership in determining the criteria for honors education at UAA (including admission, course work, and transcripted academic Honors designations).
• Aiding the disciplinary schools and colleges in the development of their own disciplinary honors options.
• Providing extensive academic advising and student support.

• Aiding the disciplinary schools and colleges by helping UAA students to compete for local and prestigious national scholarships requiring nomination.
• Providing interdisciplinary professional development opportunities for faculty.
• Providing an academic home for cross disciplinary curricular options (e.g. 49th State Fellows and Complex and Natural Systems).

• Partnering with the Office of Student Affairs in implementing retention strategies related to undergraduate research and scholarship experiences.
• Partnering with the Office of the Vice Provost for Research and Graduate Studies to bridge undergraduate research experiences with post graduate opportunities.
• Partnering with the Office of Community Partnerships to support student opportunities in the community.

• Leading the Freshman Convocation planning to welcome and promote research and discovery as part of the undergraduate experience to new students.

**ADVISORY BODIES**

The University Honors College has five advisory bodies:

• The University Honors Council advises the Dean on all major matters pertaining to University Honors in areas of curriculum, policy-making, strategic planning, outcomes assessment and Honors College design.

• The University Honors Student Advisory Board advises the Dean of all matters of student concern.

• The Undergraduate Research Task Force, chaired by the Faculty Associate for Undergraduate Research, advises the Dean in all matters regarding the promotion and advancement of undergraduate research and engagement on the campus.

• The University Honors College Advisory Board advises the Dean on matters external to the College and provides advocacy for College initiatives. The Board is comprised of accomplished citizens from all walks of life and will include an ex officio member from the University Honors Council.
• The University Honors College Chapter of the UAA Alumni Association advises the Dean on Alumni matters and activities in support of the College.

**STRUCTURE**

Development of the University Honors College curriculum is the responsibility of the University Honors Council which will in turn submit curriculum changes through the Dean to the Undergraduate Academic Board. The University Honors College curriculum will be based on a goal of increasing overall quality of honors education within the institution while also (a) increasing the participation of faculty teaching honors across the disciplinary schools and colleges, and (b) increasing the number of faculty working with students in undergraduate research and scholarship.

Currently, the Honors curriculum consists of a core curriculum using the HNRS prefix and individual student contracts with faculty in independent study/research/internships or regularly offered classes. In addition there are various mechanisms for identifying honors sections in disciplinary classes and for implementing departmental honors. Under the Honors College, the core curriculum will continue in its current form. In addition the Dean of the Honors College will work with the Honors Council and the Undergraduate Academic Board to develop consistent policies for honors work in disciplinary courses and for departmental honors.

As implied by the functions described above, the University Honors College has five distinct areas of responsibility, in addition to offering the University Honors curriculum:

• Recruitment and student support (including Honors student life and leadership activities).
• Major scholarships and other student merit-based financial support.
• Undergraduate research and scholarship, including a comprehensive awards program, the Undergraduate Research Symposium, and Freshman Convocation.
• Fostering disciplinary honors development.
• Providing leadership for undergraduate research and honors education at UAA
Problem: Nearly 1000 course seats were taken by non-degree seeking students during the first three weeks of fall 2006 registration. Approximately 380 of these seats were in GER courses.

At the close of business on the first day of registration for spring 2007, 206 courses were closed and over 4700 students (32% of our student population) had registered (with 2637 registering before 8:30 a.m.). 621 non-degree seeking students, including secondary school students, registered during the first day of spring 2007 registration. By staggering registration for certificate- and degree-seeking student populations, UAA has the opportunity to assist students to complete certificates and degrees in a timelier manner by providing additional registration access to GER seats. By delaying the registration of non-degree seeking for three weeks, UAA has the opportunity to provide registration access to over 500 GER seats to certificate- and degree-seeking students.

Solution: The following priority registration schedule is proposed, effective for fall 2007 registration, to advance university goals of increasing student persistence and improving student graduation rates.

1. All students who have applied for graduation from a UAA certificate or degree program, all admitted graduate students, and all designated learner populations approved by the Assistant Vice Chancellor for Enrolment Management. **This group would gain access to registration for 2 days before anyone else. Fall '07 registration would begin for this group on April 9, 2006.**

2. All certificate- and degree-seeking students with a completed admissions file who are continuing from previous semester (summer excluded). **This group would gain registration access the next 2 days. Fall '07 registration would begin for this group on April 11, 2006.**

3. All newly admitted certificate- and degree-seeking students, new transfer students, and certificate- and degree-seeking students who have been admitted in the last 2 years who have stopped out and are now returning. **Fall '07 registration would open for this group beginning April 13, 2006.**

4. Student classified as non-degree seeking students, including secondary school students, would gain access to registration approximately 3 weeks after registration first opens for the first certificate- and degree-seeking student cohort. **Fall '07 registration would begin for this group on April 30, 2006.**

According to UAA enrollment activity trends, students are registering earlier every year and more students are taking advantage of the 24/7 registration option that is available to them via UAOnline. UAOnline allows students to conduct business outside normal business hours. The goal of these new priority deadlines is to serve students and the university mission more effectively by:

- Providing certificate and degree-seeking students with additional opportunities to register early for required courses to complete their degree in a timely manner;
- Providing students with additional opportunities to register early for required courses to meet the newly implemented GER policy requiring degree-seeking student to complete all Tier 1 GER core courses prior to accumulating 60 credits.
- Encouraging certificate- and degree-seeking students to apply for admission to their desired program of study in a timely manner.
- Encouraging certificate- and degree-seeking students to apply for graduation in a timely manner.
- Continuing to service those students wishing to take courses for professional development or personal enrichment, while giving registration advantage to students pursing certificates or degrees who may be under time constraints to meet the financial aid 150% time to degree requirement for funding.

For example, there were 27,643 individuals eligible to register for the spring 2007 semester. What follows is a breakdown of eligibility for the spring 2007 semester using the cohorts proposed above:

- Cohort 1 - 1,232 would be eligible to register
- Cohort 2 - 12,305 would be eligible to register
- Cohort 3 - 4,649 would be eligible to register
- Cohort 4 - 9,457 would be eligible to register (928 of this cohort are eligible secondary school students).

Anchorage spring semester opening headcounts are 12-13,000 students, with 3,500 to 3,800 non-degree students.