I. Roll Call
   () Arlene Schmuland  () Anthony Paris  () Hsing-Wen Hu
   () Cindy Knall  () Dennis Drinka  () Clayton Trotter
   () Jervette Ward  () Parker McWilliams  () Sam Thiru
   () Peter Olsson

   Ex-Officio Members
   () David Yesner
   () Lora Volden
   () Scheduling/Publications

II. Approval of Agenda (pg. 1)

III. Approval of Meeting Summary (pg. 2)

IV. Administrative Reports
   A. Associate Dean of the Graduate School David Yesner
   B. University Registrar Lora Volden
   C. GAB Chair Arlene Schmuland

V. Program/Course Action Request - Second Readings

VI. Program/Course Action Request – First Readings
   Chg  BA  A634  Organizational Design and Development (3 cr)(3+0)(pg. 3-6)
   Chg  Master of Science, Civil Engineering (pg. 7-14)
   Chg  Master of Civil Engineering (pg. 15-21)

VII. Old Business

VIII. New Business
   A. 2015-2016 Election of New Chair

IX. Informational Items and Adjournment
   A. Graduate Academic Board Report to Faculty Senate (pg. 22)
Graduate Academic Board Summary

April 10, 2015
9:30-11:30am
LIB 307

I. Roll Call
(P) Arlene Schmuland (P) Anthony Paris (P) Hsing-Wen Hu
(P) Cindy Knall (P) Dennis Drinka (P) Clayton Trotter
(E) Jervette Ward (P) Parker McWilliams (P) Sam Thiru
(E) Peter Olsson

Ex-Officio Members
(P) David Yesner
(E) Lora Volden
(P) Scheduling and Publications

II. Approval of Agenda (pg. 1)
Approved

III. Approval of Meeting Summary (pg. 2-3)
Approved

IV. Administrative Reports
A. Associate Dean of the Graduate School David Yesner
   Met with Eric Pedersen to discuss terms of admission.
   Working on compliance requirements for graduate students

B. University Registrar Lora Volden

C. GAB Chair Arlene Schmuland

Program/Course Action Request - Second Readings
Chg Graduate Certificate, Family Nurse Practitioner (pg. 5-14)

Chg NS A625 Biostatistics for Health Professionals (cross listed with HS A625)
   (3 cr)(3+0)(pg. 15-18)

Chg NS A625L Biostatistics for Health Professionals Lab (1 cr)(0+3)(pg. 19-21)
   NS curriculum accepted for second reading

V. Program/Course Action Request – First Readings
Chg HS A625 Biostatistics for Health Professionals (cross listed with NS A625)
   (3 cr)(3+0)(pg. 22-25)

Dlt HS A625L Biostatistics for Health Professionals Lab (1 cr)(0+3)(pg. 26)
   HS curriculum waived first reading, approved for second

Chg EDEC A607 Observation and Documentation: Inquiry in Action (stacked with EDEC A407)
   (3 cr)(2+2)(pg. 27-32)

Chg EDEC A608 Analysis of Children's Literature: Early Childhood Years
   (stacked with EDEC A408)(3 cr)(3+0)(pg. 33-39)
   EDEC curriculum waive first reading, approved for second

VI. Old Business

VII. New Business
A. UAB Values Statement (pg. 40-46)
   Approved

VIII. Informational Items and Adjournment: 10:45am
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB CBPP</td>
<td>ADBP Division of Business Programs</td>
<td>BA</td>
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<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA</td>
<td>A634</td>
<td>N/A</td>
<td>3</td>
<td>(3+0)</td>
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<table>
<thead>
<tr>
<th>6. Complete Course Title</th>
<th>Abbreviated Title for Transcript (30 character)</th>
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<tbody>
<tr>
<td>Organizational Design and Development</td>
<td>Org. Design and Development</td>
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<table>
<thead>
<tr>
<th>7. Type of Course</th>
<th>8. Type of Action:</th>
<th>9. Repeat Status No</th>
<th>10. Grading Basis</th>
<th>11. Implementation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>Add or Change or Delete</td>
<td># of Repeats</td>
<td>A-F</td>
<td>semester/year</td>
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<tr>
<td>Preparatory/Development</td>
<td>Non-credit</td>
<td>CEU</td>
<td>Professional Development</td>
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<tbody>
<tr>
<td></td>
<td>Date: 04/03/2015</td>
<td>Oral Communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Written Communication</td>
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<td></td>
<td>Quantitative Skills</td>
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<td>Humanities</td>
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<td>Fine Arts</td>
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<td>Social Sciences</td>
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<td></td>
<td>Natural Sciences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Integrative Capstone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15. Course Description (suggested length 20 to 50 words)</th>
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<tbody>
<tr>
<td>Explores factors, conditions, and practices that lead to creating and maintaining organizational success. Examines alternative methods of determining organizational effectiveness. Presents organizational design based on contingency theory perspective and examines major organizational dilemmas and dysfunctions. Surveys and applies critical tools available for organizational development.</td>
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<tr>
<th>16a. Course Prerequisite(s) (list prefix and number or test code and score)</th>
<th>16b. Co-requisite(s) (concurrent enrollment required)</th>
</tr>
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<tbody>
<tr>
<td>BA A632</td>
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<thead>
<tr>
<th>16c. Automatic Restriction(s)</th>
<th>16d. Registration Restriction(s) (non-codable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>College</td>
<td>Graduate standing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17. Mark if course has fees</th>
<th>18. Mark if course is a selected topic course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard CBPP</td>
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<tr>
<td>computer lab fee</td>
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</table>

<table>
<thead>
<tr>
<th>19. Justification for Action</th>
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<tbody>
<tr>
<td>To update course resources and textbook as part of the CBPP Five-Year Review Program.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13a. Impacted Courses or Programs: List any programs or college requirements that require this course.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at <a href="http://www.uaa.alaska.edu/governance">www.uaa.alaska.edu/governance</a>.</td>
</tr>
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</table>

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<tr>
<th>14. General Education Requirement Mark appropriate box:</th>
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<tr>
<th>13b. Coordination Email</th>
<th>13c. Coordination with Library Liaison</th>
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<tr>
<td>submitted to Faculty Listserv: (<a href="mailto:uaa-faculty@lists.uaa.alaska.edu">uaa-faculty@lists.uaa.alaska.edu</a>)</td>
<td>Date: 04/03/2015</td>
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<tr>
<td>To update course resources and textbook as part of the CBPP Five-Year Review Program.</td>
</tr>
</tbody>
</table>
I. Date Initiated
   April 20, 2015

II. Course Information
   College/School: College of Business and Public Policy
   Department: Business Administration
   Program: Master of Business Administration, General Management
   Course Title: Organizational Design and Development
   Course Number: A634
   Credits: 3
   Contact Hours: 3 per week x 15 weeks = 45 hours
                  0 lab hours
                  6 hours outside of class per week x 15 weeks = 90 hours
   Grading Basis: A-F
   Course Description: Explores factors, conditions, and practices that lead to
                     creating and maintaining organizational success. Examines alternative methods of
                     determining organizational effectiveness. Presents organizational design based on
                     contingency theory perspective and examines major organizational dilemmas and
dysfunctions. Surveys and applies critical tools available for organizational
                     development.
   Course Prerequisites: BA A632
   Registration Restrictions: Graduate Standing
   Fees: Standard CBPP computer lab fee

III. Course Activities
   A. Lecture
   B. Discussion
   C. Group work

IV. Course Level Justification
   Students rely on knowledge gained at the undergraduate level and the activities
   required in the course necessitate self-direction. The course is one of four options
   required for the Executive Focus of the Master of Business Administration.
V. Outline
A. Overview of Complex Organizations
B. Organizational Strategy, Structure, and Variety
C. Governance: Boards, Committee, and the “Principle-Agent” Problem
D. Organizational Design and Globalization
E. Organizational Design and Technology
F. Management of Growth
G. Inter-Organizational Relations
H. Innovation and Change Management
I. Decision Making Processes
J. Decision Making: Mistake, Misconduct, and Error

VI. Instructional Goals and Student Learning Outcomes

A. Instructional Goals.
The instructor will:

1. Review and interpret the academic and practitioners’ understanding of organizations, their structures, and processes.
2. Identify the tools and practices available to successfully intervene in the development and change of organizations.
3. Demonstrate how to apply the concepts and methods learned by performing an “Organizational Diagnosis” on an organization.

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

<table>
<thead>
<tr>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Apply central concepts and findings in organizational theory and design.</td>
</tr>
<tr>
<td>2. Apply organizational development research tools and prepare an organizational diagnosis.</td>
</tr>
<tr>
<td>3. Evaluate case studies and present the case analyses to the class.</td>
</tr>
</tbody>
</table>

VII. Suggested Text
VII. Bibliography


### 1a. School or College
EN SOENGR

### 1b. Department
Civil Engineering

### 2. Complete Program Title/Prefix
Masters of Science in Civil Engineering

### 3. Type of Program
Choose one from the appropriate drop down menu:

- Undergraduate:
- Graduate:

This program is a Gainful Employment Program:
- Yes
- No

### 4. Type of Action:

- PROGRAM
  - Add
  - Change
  - Delete

- PREFIX
  - Add
  - Change
  - Inactivate

### 5. Implementation Date (semester/year)
From: Fall/2015 To: 99/9999

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

Initiator Name (typed): Thomas Ravens
Initiator Signed Initials: 

date: 

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

### 6c. Coordination with Library Liaison
Date: 

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

### 8. Justification for Action
Increase opportunities for graduate studies to students who hold degrees related to engineering

---

Initiator (faculty only)

<table>
<thead>
<tr>
<th>Thomas Ravens</th>
<th>Date</th>
</tr>
</thead>
</table>

Initiator (TYPE NAME)

<table>
<thead>
<tr>
<th>Approved</th>
<th>Disapproved</th>
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<tbody>
<tr>
<td>Department Chair</td>
<td>Date</td>
</tr>
<tr>
<td>Undergraduate/Graduate Academic</td>
<td>Date</td>
</tr>
<tr>
<td>Provost or Designee</td>
<td>Date</td>
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</table>

Approved

Disapproved

Approved

Disapproved

Approved

Disapproved

Approved

Disapproved

Approved

Disapproved
Master of Civil Engineering (M-CE)

Admission Requirements

See Admissions Requirements for Graduate Degrees. All students must hold a baccalaureate degree in an engineering discipline or equivalent.

Program Student Learning Outcomes

In keeping with the program objectives, the expected student learning outcomes of the UAA MCE program include:

- An ability to use advanced methods of analysis,
- An ability to understand advanced civil engineering theory,
- An ability to conduct advanced civil engineering research,
- An ability to apply advanced engineering theory to the design of civil engineering systems, and
- An ability to work effectively within the management framework of organizations responsible for the practice of engineering.

Application Procedures

All application materials must be received by the UAA Office of Admissions by the required dates as established by the Admissions office. The required application materials to be submitted to the Office of Admissions include a completed UAA graduate application form, official transcripts of all college-level work, and a one-page statement selecting a core competency area and discussing the applicant’s career goals.

Graduation Requirements

In order to receive the Master of Civil Engineering, students must:

1. Satisfy all University Regulations for the Graduate Degrees listed at the beginning of this chapter;
2. Complete one of the following options, with all coursework and the graduate requirement option approved in advance by the student’s graduate advisor:
   a. 30 credits of coursework including satisfactory completion of CE A686;
   b. 30 credits of coursework and a comprehensive exam to be administered in the final semester of study (the exam can be waived if the average GPA is 3.9 or higher for courses listed on an approved Graduate Studies Plan);
3. Complete the Program Requirements below

Program Requirements
Students must complete at least three courses in one of the core competency areas of environmental, geotechnical, structures, transportation, water resources and one course in analysis (as listed below) all with a grade of B or better. Additionally, students must complete at least one course from the project management area of study, listed below. Remaining courses can be selected from the list provided or as approved by student’s graduate committee. No more than one 400-level course may be included without prior approval of the student’s graduate committee.

Environmental
- **AEST A601** Aquatic Process Chemistry
- **AEST A602** Water Quality Management
- **AEST A603** Solid Waste Management
- **AEST A608** Fundamentals of Air Pollution
- **AEST A613** Remediation

Geotechnical
- **CE A610** Engineering Seismology
- **CE A611** Geotechnical Earthquake Engineering
- **CE A612** Advanced Foundation Design
- **CE A614** Soil Strength and Slope Stability

Structures
- **CE A610** Engineering Seismology
- **CE A631** Structural Finite Elements
- **CE A633** Structural Dynamics
- **CE A634** Structural Earthquake Engineering
- **CE A637** Earthquake Resistant Structural Design
- **CE A639** Loads on Structures
- **CE A651** Advanced Structural Analysis
- **CE A652** Advanced Steel Design
- **CE A653** Advanced Reinforced Concrete

Transportation
- **CE A623** Traffic Engineering
- **CE A624** Pavement Design
- **CE A625** Highway Engineering
- **CE A626** Traffic Modeling and Simulation
- **CE A627** Advanced Traffic Flow Theory

Water Resources
- **CE A662** Surface Water Dynamics
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CE A663</td>
<td>Ground Water Dynamics</td>
</tr>
<tr>
<td>CE A674</td>
<td>Waves, Tides, and Ocean Processes for Engineers</td>
</tr>
<tr>
<td>CE A675</td>
<td>Design of Ports and Harbors</td>
</tr>
<tr>
<td>CE A676</td>
<td>Coastal Engineering</td>
</tr>
<tr>
<td>CE A677</td>
<td>Coastal Measurements and Analysis</td>
</tr>
<tr>
<td>CE A678</td>
<td>Design of Ocean Engineering Systems</td>
</tr>
<tr>
<td>CE A679</td>
<td>Sediment Transport and Coastal Processes</td>
</tr>
</tbody>
</table>

**Analysis**
- MATH A422  Partial Differential Equations
- MATH A423  Advanced Engineering Mathematics
- MATH A426  Numerical Methods
- STAT A402  Scientific Sampling
- STAT A601  Statistical Methods
- STAT A602  Advanced Scientific Sampling

**Project Management**
- AEST A604  Environmental Law, Regulations and Permitting
- ESM A601   Engineers in Organizations
- ESM A608   Legal Environment for Engineering Management
- ESM A610   Cost Estimating
- ESM A613   Management of Technical People
- PM A601    Project Management Fundamentals
Master of Civil Engineering (M-CE)

Admission Requirements
See Admissions Requirements for Graduate Degrees. All students must hold a baccalaureate degree in an engineering discipline or equivalent.

Program Student Learning Outcomes
In keeping with the program objectives, the expected student learning outcomes of the UAA MCE program include:

- An ability to use advanced methods of analysis,
- An ability to understand advanced civil engineering theory,
- An ability to conduct advanced civil engineering research,
- An ability to apply advanced engineering theory to the design of civil engineering systems, and
- An ability to work effectively within the management framework of organizations responsible for the practice of engineering.

Application Procedures
All application materials must be received by the UAA Office of Admissions by the required dates as established by the Admissions office. The required application materials to be submitted to the Office of Admissions include a completed UAA graduate application form, and official transcripts of all college-level work, and a one-page statement selecting a core competency area and discussing the applicant's career goals.

In addition, please submit to the College of Engineering a one-page statement selecting a core competency area and discussing the applicant's career goals.

Graduation Requirements
In order to receive the Master of Civil Engineering, students must:

1. Satisfy the General University Requirements for Graduate Degrees and all University Regulations for the Graduate Degrees listed at the beginning of this chapter;

2. Complete one of the following options, with all coursework and the graduate requirement option approved in advance by the student’s graduate advisor:
   a. 30 credits of coursework approved in advance by the student’s graduate advisor, including satisfactory completion of CE A686;
   b. 30 credits of coursework and a comprehensive exam to be administered in the final semester of study (the exam can be waived if the average GPA is 3.9 or higher for courses listed on an approved Graduate Studies Plan);
3. **Satisfactorily complete requirements for a comprehensive exam or 3 credits of CE A686 if applicable to the chosen competency area.** The following requirements apply for each individual competency area:

**Complete the Program Requirements below**

- **Environmental**: Students must complete 30 credit hours of coursework and a comprehensive exam. Students may opt to take up to 3 credit hours of CE A698 with advisor approval as part of the required 30 credit hours of coursework.

Students must complete at least three courses in one of the core competency areas of environmental, geotechnical, structures, transportation, water resources and one course in analysis (as listed below) all with a grade of B or better. Additionally, students must complete at least one course from the project management area of study listed below. Remaining courses can be selected from the list provided or as approved by student's graduate committee. No more than one 400-level course may be included without prior approval of the student’s graduate committee.

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<tr>
<td>CE A645 Chemical and Physical Water and Wastewater Treatment Processes</td>
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<td>CE A651 Advanced Structural Analysis</td>
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<tr>
<td>CE A647 Advanced Unit Processes</td>
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<td>CE A652 Advanced Steel Design</td>
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<tr>
<td></td>
<td></td>
<td>CE A654CE A653 Timber Design Advanced Reinforced Concrete</td>
</tr>
</tbody>
</table>
Within the last 9 credits applicable to the degree, each student may need to complete CE A686, per the requirements of their competency area. The Civil Engineering project must solve a practical engineering problem to the extent that original developments by the candidate are evident in the project report.

1. The project problem and solution must be explained in the context of the current state of the art by means of a thorough review of pertinent literature.

2. The project must include advanced technical components directly involving modern practice of civil engineering.
The project must have sufficient scope to clearly demonstrate the candidate’s
1a. School or College
EN SOENGR

1b. Department
Civil Engineering

2. Complete Program Title/Prefix
Masters of Civil Engineering

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

Master of Civil Engineering

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

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

PREFIX
☐ Add
☐ Change
☐ Inactivate

5. Implementation Date (semester/year)
From: Fall 2015 To: 99/9999

6a. Coordination with Affected Units
Department, School, or College: CoEng
Initiator Name (typed): Thomas Ravens
Initiator Signed Initials: __________
Date: __________

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

6c. Coordination with Library Liaison Date: __________

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

8. Justification for Action
Increase opportunities for graduate studies to students who hold degrees related to engineering and provide consistency in graduation requirements across subdisciplines

Initiator (faculty only)
Thomas Ravens
Date

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

☐ Approved
☐ Disapproved
Undergraduate/Graduate Academic Board Chair Date

☐ Approved
☐ Disapproved
Provost or Designee Date

☐ Approved
☐ Disapproved
Department Chair Date

☐ Approved
☐ Disapproved
College/School Curriculum Committee Chair Date
Master of Science in Civil Engineering (MS-CE)

Admission Requirements
See Admission Requirements for Graduate Degrees. All students must hold a baccalaureate degree in an engineering discipline or equivalent.

Program Student Learning Outcomes
In keeping with the program objectives, the expected student learning outcomes of the UAA MSCE program include:

- An ability to use advanced methods of analysis,
- An ability to understand advanced civil engineering theory,
- An ability to conduct advanced civil engineering research,
- An ability to apply advanced engineering theory to the design of civil engineering systems, and
- An ability to work effectively within the management framework of organizations responsible for the practice of engineering.

Application Procedures
All application materials must be received by the UAA Office of Admissions by the required dates as established by the Admissions office. The required application materials to be submitted to the Office of Admissions include a completed UAA graduate application form, official transcripts of all college-level work, and a one-page statement selecting a core competency area and discussing the applicant’s career goals.

Graduation Requirements
In order to receive the Master of Science in Civil Engineering, students must:
1. Satisfy all University Requirements for Graduate Degrees listed at the beginning of this chapter;
2. Complete 30 credits of coursework approved in advance by the student’s graduate advisor; and
3. Satisfactorily complete thesis work approved in advance by the student’s graduate committee, of which 6 credits will be CE A699 Thesis.

Course Requirements
Students must complete at least three courses in one of the core competency areas of environmental, geotechnical, structures, transportation, water resources and one course
in analysis all with a grade of B or better. Remaining courses can be selected from any of the following areas or as approved by student’s graduate committee. No more than one 400-level course may be included without prior approval of the student’s graduate committee.

Environmental
- **AEST A601** Aquatic Process Chemistry
- **AEST A602** Water Quality Management
- **AEST A603** Solid Waste Management
- **AEST A608** Fundamentals of Air Pollution
- **AEST A613** Remediation
- **CE A645** Chemical and Physical Water and Wastewater Treatment Processes
- **CE A646** Biological Treatment Processes
- **CE A647** Advanced Unit Processes

Geotechnical
- **CE A610** Engineering Seismology
- **CE A611** Geotechnical Earthquake Engineering
- **CE A612** Advanced Foundation Design
- **CE A614** Soil Strength and Slope Stability

Structures
- **CE A610** Engineering Seismology
- **CE A631** Structural Finite Elements
- **CE A633** Structural Dynamics
- **CE A634** Structural Earthquake Engineering
- **CE A637** Earthquake Resistant Structural Design
- **CE A639** Loads on Structures
- **CE A651** Advanced Structural Analysis
- **CE A652** Advanced Steel Design
- **CE A653** Advanced Reinforced Concrete

Transportation
- **CE A623** Traffic Engineering
- **CE A624** Pavement Design
- **CE A625** Highway Engineering
- **CE A626** Traffic Modeling and Simulation
- **CE A627** Advanced Traffic Flow Theory

Water Resources
- **CE A662** Surface Water Dynamics
- **CE A663** Ground Water Dynamics
- **CE A674** Waves, Tides, and Ocean Processes for Engineers
- **CE A675** Design of Ports and Harbors
- **CE A676** Coastal Engineering
**Thesis Requirement**

The completed thesis must meet the following requirements:

1. The work must contribute to the body of knowledge in the candidate’s field of graduate study. A literature review is required to show how the work is associated with the current state of the art in the candidate’s graduate field of study.

2. The thesis, as judged by the graduate committee, must be publishable in either peer-reviewed technical conference proceedings or a peer-reviewed journal.

3. The work must demonstrate command of knowledge and skills associated with the candidate’s program of graduate study.

4. The thesis proposal, submitted at least one semester prior to the thesis defense, must present evidence that the above requirements will be satisfied and will generally consist of an explicit problem statement, a literature review, and one or more sections describing the research and the analytical methods that will be applied.

5. The thesis is to be defended by the student in an oral presentation to the student’s graduate committee and invited guests.
Master of Science in Civil Engineering (MS-CE)

Admission Requirements

See Admission Requirements for Graduate Degrees. All students must hold a baccalaureate degree in an engineering discipline or equivalent.

Program Student Learning Outcomes

In keeping with the program objectives, the expected student learning outcomes of the UAA MSCE program include:

- An ability to use advanced methods of analysis,
- An ability to understand advanced civil engineering theory,
- An ability to conduct advanced civil engineering research,
- An ability to apply advanced engineering theory to the design of civil engineering systems, and
- An ability to work effectively within the management framework of organizations responsible for the practice of engineering.

Application Procedures

All application materials must be received by the UAA Office of Admissions by the required dates as established by the Admissions office. The required application materials to be submitted to the Office of Admissions include a completed UAA graduate application form, official transcripts of all college-level work, and a one-page statement selecting a core competency area and discussing the applicant's career goals.

In addition, please submit to the College of Engineering a one-page statement selecting a core competency area and discussing the applicant's career goals.

Graduation Requirements

In order to receive the Master of Science in Civil Engineering, students must:

1. Satisfy the General University Requirements for Graduate Degrees all University Requirements for Graduate Degrees listed at the beginning of this chapter;
2. Complete 30 credits of coursework approved in advance by the student's graduate advisor, and
3. Satisfactorily complete thesis work approved in advance by the student's graduate committee, of which 6 credits will be CE A699 Thesis.
4. **Complete the Program Requirements below.**

Students must complete at least three courses in one of the core competency areas of environmental, geotechnical, structures, transportation, water resources and one course in analysis all with a grade of B or better. Remaining courses can be selected from any of the following areas or as approved by student’s graduate committee. No more than one 400-level course may be included without prior approval of the student's graduate committee.

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<td></td>
</tr>
</tbody>
</table>
Analysis

MATH A422 Partial Differential Equations
MATH A423 Advanced Engineering Mathematics
MATH A426 Numerical Methods
STAT A402 Scientific Sampling
STAT A601 Statistical Methods
STAT A602 Advanced Scientific Sampling

Thesis Requirement

The completed thesis must meet the following requirements:

1. The work must contribute to the body of knowledge in the candidate’s field of graduate study. A literature review is required to show how the work is associated with the current state of the art in the candidate’s graduate field of study.

2. The thesis, as judged by the graduate committee, must be publishable in either peer-reviewed technical conference proceedings or a peer-reviewed journal.

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5. The thesis is to be defended by the student in an oral presentation to the student’s graduate committee and invited guests.
Graduate Academic Board report to Faculty Senate, May 2015:

GAB 2013-2014 proposed goals and yearlong agenda:
1. Review curriculum in an expeditious manner [done]
2. Take a closer look at stacking [have chosen to change some GAB procedures in regards to stacking: e.g. not reviewing the undergraduate curriculum as well as graduate]
3. Evaluate and assist with workflow for e-curriculum [done, continues]
4. Begin reviewing processes in the curriculum handbook as they pertain to GAB [done partially in tandem with #3, also created a document excerpting the curriculum handbook IRT board activities]

Curriculum statistics:
Courses [changes, deletes, adds] approved: 82
Programs [changes, adds] approved: 20