

**April 24, 2015**

**9:30-11:30am**

**ADM 204**

**I. Roll Call**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Arlene Schmuland | <input type="checkbox"/> Anthony Paris     | <input type="checkbox"/> Hsing-Wen Hu    |
| <input type="checkbox"/> Cindy Knall      | <input type="checkbox"/> Dennis Drinka     | <input type="checkbox"/> Clayton Trotter |
| <input type="checkbox"/> Jervette Ward    | <input type="checkbox"/> Parker McWilliams | <input type="checkbox"/> Sam Thiru       |
| <input type="checkbox"/> 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)

**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 ( ) Dennis Drinka ( ) 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

1a. School or College CB CBPP		1b. Division ADBP Division of Business Programs			1c. Department BA
2. Course Prefix BA	3. Course Number A634	4. Previous Course Prefix & Number N/A	5a. Credits/CEUs 3	5b. Contact Hours (Lecture + Lab) (3+0)	
6. Complete Course Title Organizational Design and Development Org. Design and Development Abbreviated Title for Transcript (30 character)					
7. Type of Course <input checked="" type="checkbox"/> Academic <input type="checkbox"/> Preparatory/Development <input type="checkbox"/> Non-credit <input type="checkbox"/> CEU <input type="checkbox"/> Professional Development					
8. Type of Action: <input type="checkbox"/> Add     or <input checked="" type="checkbox"/> Change     or <input type="checkbox"/> Delete			9. Repeat Status No     # of Repeats     Max Credits		
If a change, mark appropriate boxes:			10. Grading Basis <input checked="" type="checkbox"/> A-F <input type="checkbox"/> P/NP <input type="checkbox"/> NG		
<input type="checkbox"/> Prefix <input type="checkbox"/> Course Number <input type="checkbox"/> Credits <input type="checkbox"/> Contact Hours <input type="checkbox"/> Title <input type="checkbox"/> Repeat Status <input type="checkbox"/> Grading Basis <input type="checkbox"/> Cross-Listed/Stacked <input type="checkbox"/> Course Description <input type="checkbox"/> Course Prerequisites <input type="checkbox"/> Test Score Prerequisites <input type="checkbox"/> Co-requisites <input type="checkbox"/> Automatic Restrictions <input type="checkbox"/> Registration Restrictions <input type="checkbox"/> Class <input type="checkbox"/> Level <input type="checkbox"/> General Education Requirement <input type="checkbox"/> College <input type="checkbox"/> Major <input checked="" type="checkbox"/> Other Update CCG (please specify)			11. Implementation Date     semester/year From: Fall/2015     To:     /9999		
			12. <input type="checkbox"/> Cross Listed with _____ <input type="checkbox"/> Stacked with _____ Cross-Listed Coordination Signature		
13a. Impacted Courses or Programs: List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at <a href="http://www.uaa.alaska.edu/governance">www.uaa.alaska.edu/governance</a> .					
Impacted Program/Course		Date of Coordination		Chair/Coordinator Contacted	
1. MBA, General Management		03/20/2015		Ed Forrest & Bogdan Hoanca	
2.					
3.					
Initiator Name (typed): <u>Terry Nelson</u> Initiator Signed Initials: _____     Date: _____					
13b. Coordination Email     Date: <u>04/03/2015</u> submitted to Faculty Listserv: ( <a href="mailto:uaa-faculty@lists.uaa.alaska.edu">uaa-faculty@lists.uaa.alaska.edu</a> )			13c. Coordination with Library Liaison     Date: <u>04/03/2015</u>		
14. General Education Requirement <input type="checkbox"/> Oral Communication <input type="checkbox"/> Written Communication <input type="checkbox"/> Quantitative Skills <input type="checkbox"/> Humanities <i>Mark appropriate box:</i> <input type="checkbox"/> Fine Arts <input type="checkbox"/> Social Sciences <input type="checkbox"/> Natural Sciences <input type="checkbox"/> Integrative Capstone					
15. Course Description ( <i>suggested length 20 to 50 words</i> ) 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.					
16a. Course Prerequisite(s) ( <i>list prefix and number or test code and score</i> ) BA A632			16b. Co-requisite(s) ( <i>concurrent enrollment required</i> ) N/A		
16c. Automatic Restriction(s) <input type="checkbox"/> College <input type="checkbox"/> Major <input type="checkbox"/> Class <input type="checkbox"/> Level			16d. Registration Restriction(s) ( <i>non-codable</i> ) Graduate standing		
17. <input checked="" type="checkbox"/> Mark if course has fees Standard CBPP computer lab fee			18. <input type="checkbox"/> Mark if course is a selected topic course		
19. Justification for Action To update course resources and textbook as part of the CBPP Five-Year Review Program.					

Initiator (faculty only) _____ Date _____ <b>Terry Nelson</b> Initiator (TYPE NAME) <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved     Department Chair _____ Date _____ <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved     College/School Curriculum Committee Chair _____ Date _____	<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved     Dean/Director of School/College _____ Date _____ <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved     Undergraduate/Graduate Academic Board Chair _____ Date _____ <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved     Provost or Designee _____ Date _____
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**COURSE CONTENT GUIDE**  
**UNIVERSITY OF ALASKA ANCHORAGE**  
**COLLEGE OF BUSINESS AND PUBLIC POLICY**

**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

<b>A. Instructional Goals.</b> <b>The instructor will:</b>
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>B. Student Learning Outcomes.</b> <b>Students will be able to:</b>	<b>Assessment Method</b>
1. Apply central concepts and findings in organizational theory and design.	Exams and group presentations
2. Apply organizational development research tools and prepare an organizational diagnosis.	Group research papers
3. Evaluate case studies and present the case analyses to the class.	Group research papers and group presentations

## VII. Suggested Text

Cummings, T.G. & Worley, C.G. (2014). *Organization development and change*, 10th ed. Stamford, CT: Cengage Learning.

## VII. Bibliography

- Bartlett, C. & Ghoshal, S. (2003). What is a global manager? *Harvard Business Review*, 81, 101-108.
- Cascio, W. (2005). Strategies for responsible restructuring. *Academy of Management Executive*, 19, 39-50.
- Downe, M. & Russ, G. (2005). Antecedents and consequences of failed governance: The Enron example. *Corporate Governance*, 5, 84-98.
- Fleming, P. & Spicer, A. (2014). Power in management and organization science. *The Academy of Management Annals*, 8(1), 237-298.
- Gioia, D. A., Patvardhan, S. D., Hamilton, A. L., & Corley, K. C. (2013). Organizational identity formation and change. *Academy of Management Annals*, 7, 123-192.
- Greenwood, R., Raynard, M., Kodeih, F., Micellota, E., & Lounsbury, M. (2011). Institutional complexity and organizational responses. *Annals of the Academy of Management*, 5(1): 1 -55.
- Greve, H. R., Palmer, D., & Pozner, J. (2011). Organizations gone wild: The causes, processes, and consequences of organizational misconduct. *The Academy of Management Annals*, 4(1): 53-107.
- Hatch, M.J., Schultz, M., & Skov, A. (2015). Organizational identity and culture in the context of managed change: Transformation in the Carlsberg Group, 2009–2013 *Academy Management Discovery*, 1, 56-87.
- Hofstede, G. (1993). Cultural constraints in management theories. *Academy of Management Executive*, 7, 81-94.
- Kodeih, F. & Greenwood, R. (2014). Responding to institutional complexity: The role of identity. *Organization Studies*, 35, 7-39.
- Nadler, D. & Tushman, M. (1999). The organization of the future: Strategic imperatives and core competencies for the 21<sup>st</sup> century. *Organizational Dynamics*, 28, 45-60.
- Pfeffer, J. & Veiga, J. (1999). Putting people first for organizational success. *Academy of Management Executive*, 13, 37-48.
- Prahalad, C. & Lieberthal, K. (1998). The end of corporate imperialism. *Harvard Business Review*, 76, 68-79.
- Rousseau, D. (1995). *Psychological contracts in organizations*, Thousand Oaks, CA: Sage.



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

1a. School or College <b>EN SOENGR</b>	1b. Department <b>Civil Engineering</b>						
2. Complete Program Title/Prefix <b>Masters of Science in Civil Engineering</b>							
3. Type of Program Choose one from the appropriate drop down menu: Undergraduate: <b>CHOOSE ONE</b> or Graduate: <b>Master of Science</b>							
This program is a Gainful Employment Program: <input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No							
4. Type of Action: <b>PROGRAM</b> <input type="checkbox"/> Add <input checked="" type="checkbox"/> Change <input type="checkbox"/> Delete							
<b>PREFIX</b> <input type="checkbox"/> Add <input type="checkbox"/> Change <input type="checkbox"/> Inactivate							
5. Implementation Date (semester/year) From: <b>Fall/2015</b> To: <b>99/9999</b>							
6a. Coordination with Affected Units Department, School, or College: <b>CoEng</b> Initiator Name (typed): <b>Thomas Ravens</b> Initiator Signed Initials: _____ Date: _____							
6b. Coordination Email submitted to Faculty Listserv ( <a href="mailto:uaa-faculty@lists.uaa.alaska.edu">uaa-faculty@lists.uaa.alaska.edu</a> ) Date: _____							
6c. Coordination with Library Liaison Date: _____							
7. Title and Program Description - Please attach the following: <input type="checkbox"/> Cover Memo <input checked="" type="checkbox"/> Catalog Copy in Word using the track changes function							
8. Justification for Action <b>Increase opportunities for graduate studies to students who hold degrees related to engineering</b>							
<table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"> <input type="checkbox"/> Approved            Initiator (faculty only) _____ Date _____  <b>Thomas Ravens</b>            Initiator (TYPE NAME)         </td> <td style="width:50%; border: none;"> <input type="checkbox"/> Disapproved _____ Dean/Director of School/College _____ Date _____         </td> </tr> <tr> <td style="border: none;"> <input type="checkbox"/> Approved  <input type="checkbox"/> Disapproved Department Chair _____ Date _____         </td> <td style="border: none;"> <input type="checkbox"/> Approved _____ Undergraduate/Graduate Academic Board Chair _____ Date _____  <input type="checkbox"/> Disapproved _____         </td> </tr> <tr> <td style="border: none;"> <input type="checkbox"/> Approved  <input type="checkbox"/> Disapproved College/School Curriculum Committee Chair _____ Date _____         </td> <td style="border: none;"> <input type="checkbox"/> Approved _____  <input type="checkbox"/> Disapproved _____ Provost or Designee _____ Date _____         </td> </tr> </table>		<input type="checkbox"/> Approved Initiator (faculty only) _____ Date _____ <b>Thomas Ravens</b> Initiator (TYPE NAME)	<input type="checkbox"/> Disapproved _____ Dean/Director of School/College _____ Date _____	<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved Department Chair _____ Date _____	<input type="checkbox"/> Approved _____ Undergraduate/Graduate Academic Board Chair _____ Date _____ <input type="checkbox"/> Disapproved _____	<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved College/School Curriculum Committee Chair _____ Date _____	<input type="checkbox"/> Approved _____ <input type="checkbox"/> Disapproved _____ Provost or Designee _____ Date _____
<input type="checkbox"/> Approved Initiator (faculty only) _____ Date _____ <b>Thomas Ravens</b> Initiator (TYPE NAME)	<input type="checkbox"/> Disapproved _____ Dean/Director of School/College _____ Date _____						
<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved Department Chair _____ Date _____	<input type="checkbox"/> Approved _____ Undergraduate/Graduate Academic Board Chair _____ Date _____ <input type="checkbox"/> Disapproved _____						
<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved College/School Curriculum Committee Chair _____ Date _____	<input type="checkbox"/> Approved _____ <input type="checkbox"/> Disapproved _____ Provost or Designee _____ Date _____						

# 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
- [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  
[CE A677](#) Coastal Measurements and Analysis  
[CE A678](#) Design of Ocean Engineering Systems  
[CE A679](#) Sediment Transport and Coastal Processes

#### 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, 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;~~
  - [2.b.30 credits of coursework and a comprehensive exam to be administered in the final semester of study \(the exam can be waived if the average GPA is 3.9 or higher for courses listed on an approved Graduate Studies Plan\);](#)

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3. The project must have sufficient scope to clearly demonstrate the candidate's



# 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

<a href="#"><u>CE A677</u></a>	Coastal Measurements and Analysis
<a href="#"><u>CE A678</u></a>	Design of Ocean Engineering Systems
<a href="#"><u>CE A679</u></a>	Sediment Transport and Coastal Processes

#### Analysis

<a href="#"><u>MATH A422</u></a>	Partial Differential Equations
<a href="#"><u>MATH A423</u></a>	Advanced Engineering Mathematics
<a href="#"><u>MATH A426</u></a>	Numerical Methods
<a href="#"><u>STAT A402</u></a>	Scientific Sampling
<a href="#"><u>STAT A601</u></a>	Statistical Methods
<a href="#"><u>STAT A602</u></a>	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.
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](#).

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## 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.

Commented [KM1]: This section will be on the Learning Outcomes Tab on the catalog website

## 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 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](#).

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[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  
[CE A677](#)      Coastal Measurements and Analysis  
[CE A678](#)      Design of Ocean Engineering Systems  
[CE A679](#)      Sediment Transport and Coastal Processes

**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.
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.

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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