Graduate Academic Board

Audio: 786-6755 | ID: 83249 | Agenda

April 24, 2015 9:30-11:30am **ADM 204**

I. **Roll Call**

() Arlene Schmuland () Anthony Paris () Cindy Knall () Dennis Drinka () Jervette Ward () Parker McWilliams () Sam Thiru () Peter Olsson

() Hsing-Wen Hu () Clayton Trotter

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**

- Associate Dean of the Graduate School David Yesner A.
- 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) Master of Science, Civil Engineering (pg. 7-14) Chg 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 ((P) Arle (P) Cine (E) Jerv (E) Pete	Call ene Schmu dy Knall vette Ward er Olsson	lland ((I (P) Anthony Paris) Dennis Drinka P) Parker McWilliams	(P) Hsing-Wen Hu () Clayton Trotter (P) Sam Thiru	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.	Admi r A.	nistrative Associa Met wit Workin	e Report ate Dean th Eric Pe g on con	s of the Graduate Scho edersen to discuss ter apliance requirement	ool David Yesner ms of admission. s for graduate students				
	B.	B. University Registrar Lora Volden							
	C.	. GAB Chair Arlene Schmuland							
	Progra Chg	am/Cour	se Actio	n Request - Second Graduate Certificat	Readings e, Family Nurse Practitioner (pg. 5-14)			
	Chg	NS	A625	25 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.	Progra Chg	am/Cour HS	se Actio A625	n Request – First R Biostatistics for He (3 cr)(3+0)(pg. 22-25	eadings alth Professionals (cross liste 5)	d with NS A625)			
	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	DEC A608 Analysis of Children's Literature: Early Childhood Years						
	EDEC curriculum waive first reading, approved for second								
VI.	Old Bu	isiness							
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 BA						
2. Course Prefix	3. Course Number	4. Previous	Course Pr	refix & Numb	er 5a.	Credits/CEUs	5b. Contact Hours	
BA A634 N/A					3	(Lecture + Lab) (3+0)		
6. Complete Course T Organizational Do Org. Design and Do Abbreviated Title for Transcri	itle esign and Developn evelopment _{pt (30 character)}	ient						
7. Type of Course Academic Preparatory/Development Non-credit CEU Professional Development								
8. Type of Action:	8. Type of Action: Add or Change or Delete 9. Repeat Status No # of Repeats Max Credits							
If a change, mark approp	oriate boxes:						-	
		e Number Ict Hours		10. Gr	ading Bas	sis 🖾 A-F L	」P/NP ∐ NG	
Title Grading Basis Course Descrip Test Score Pre	Dition	at Status -Listed/Stacked e Prerequisites quisites		11. lm Fi	plementat om: Fall/	tion Date semester/ye 2015 To:	ar /9999	
Automatic Res	trictions Regis	tration Restriction	ons	12.	Cross L	isted with		
] Level Gene] Major	ral Education Re	equirement		Stackad		Cross Listed Coordination Si	
Other Update 0	CCG (please specify)				Slackeu	with	Cross-Listed Coordination Si	gnature
13a. Impacted Course	es or Programs: List a	ny programs o	r college r	equirements	that requi	re this course.	na alaaka adu/gayarnanaa	
Flease type into helds pro	Impacted Program/Course			Date of Coo	rdination	Cha	air/Coordinator Contacted	
1. MBA, General Mana	gement		(03/20/2015		Ed Forrest & Bogo	dan Hoanca	
3.								
Initiator Name (typed)	: <u>Terry Nelson</u>	Initiator Signed	Initials:			Date:		
13b. Coordination Em submitted to Facult	ail Date: 04/03/ y Listserv: (uaa-faculty@l	2015 ists.uaa.alaska.e	edu)	13c. C	oordinatio	n with Library Liais	on Date: <u>04/03/2015</u>	
14. General Educatio Mark a	on Requirement ppropriate box:	Oral	Communicati Arts	ion 🗌 Writt	en Communi al Sciences	cation Quantit	ative Skills Humanities Sciences Integrative Capston	e
15. Course Description (suggested length 20 to 50 words) 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 Prerequi code and score) BA A632	site(s) (list prefix and nu	nber or test 1	16b. Co-re N/A	equisite(s) <i>(c</i> o	ncurrent ei	nrollment required)		
16c. Automatic Restri	ction(s)	1	16d. Regis	stration Rest	iction(s) (non-codable)		
College	Major 🗌 Class	Level	Grad	duate standin	g			
17. Mark if course has fees Standard CBPP 18. Mark if course is a selected topic course computer lab fee								
19. Justification for A To update cour	ction rse resources and te	extbook as pa	art of the	CBPP Five	Year Re	view Program.		
				Appro	ved			
Initiator (faculty only)			Date	🔟 Disap	proved De	ean/Director of School	/College	Date
nitiator (TYPE NAME)								
Approved				Appro	ved Ui	ndergraduate/Graduat	e Academic	Date
Disapproved Departme	nt Chair		Date	Disap	proved Bo	bard Chair		
Approved				Appro	ved			
Disapproved College/S	chool Curriculum Commit	tee Chair	Date	Disap	proved Pr	ovost or Designee		Date

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

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:	Assessment Method
1. Apply central concepts and findings in organizational theory and design.	Exams and group presentations
 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

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- Cascio, W. (2005). Strategies for responsible restructuring. *Academy of Management Executive*, 19, 39-50.
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- 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.
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- 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 21st 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 EN SOENGR			1b.	Departmen Civil En	t gineering	7	
2. Complete Program Title Masters of Science	e/Prefix ce in Civil Engineering						
3. Type of Program							
Choose one from the appr	ropriate drop down menu:	Undergrad CHOOSE	duate: ONE		or	Graduate: Master of Science	
This program is a Gainful	Employment Program:	🗌 Yes	or	🛛 No			
4. Type of Action:	PROGRAM ☐ Add ☐ Change ☐ Delete		P [[REFIX] Add] Change] Inactiva	e te		
5. Implementation Date From: Fall/2015	(semester/year) To: 99/9999						
6a. Coordination with Aff	fected Units	Departm	ent, S	chool, or C	ollege: Co	Eng	
Initiator Name (typed Date:	i): Thomas Ravens				Initi	ator Signed Initials:	
6b. Coordination Email s	ubmitted to Faculty Listserv (uaa	-faculty@lists	.uaa.a	llaska.edu)	Dat	te:	
6c. Coordination with Library Liaison Date:							
7. Title and Program De	escription - Please attach the foll	owing:					
	Cover Memo	$\boxtimes C$	Catalo	g Copy in	Word usin	g the track changes function	
8. Justification for Actio Increase opportur	n nities for graduate studie	es to studer	nts w	/ho hold	degrees	related to engineering	
				Approved			
Initiator (faculty only) Thomas Ravens Initiator (TYPE NAME)	Date		Disapproved	Dean/Directo	or of School/College	Date
Approved				Approved	Undergradua	ate/Graduate Academic	Date
Disapproved Department	Chair	Date		Disapproved	Board Chair		
Disapproved College/Scho	ool Curriculum Committee Chair	Date		Approved Disapproved	Provost or D	esignee	Date

Master of Civil Engineering (M-CE) Admission Requirements

See <u>Admissions Requirements for Graduate Degrees</u>. 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

- <u>CE A610</u> Engineering Seismology
- <u>CE A611</u> Geotechnical Earthquake Engineering
- <u>CE A612</u> Advanced Foundation Design
- <u>CE A614</u> Soil Strength and Slope Stability

Structures

- <u>CE A610</u> 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
- <u>CE A651</u> 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
- <u>CE A627</u> 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
- <u>CE A677</u> Coastal Measurements and Analysis
- CE A678 Design of Ocean Engineering Systems
- <u>CE A679</u> 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

Adm	nission Requirements		Formatted: Font: Arial
See <u>A</u>	dmissions Requirements for Graduate Degrees. All students must hold a	<	Formatted: Font: (Default) Arial
baccal	aureate degree in an engineering discipline <u>or equivalent</u> .		Formatted: Font: Arial
Prog	gram Student Learning Outcomes		
In keej	ping with the program objectives, the expected student learning outcomes of the		
	ICE 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
Appli	cation Procedures		
All app	lication materials must be received by the UAA Office of Admissions by the		
require	ed dates as established by the Admissions office. The required application		
materi	als to be submitted to the Office of Admissions include a completed UAA		
gradua	ate application form, and official transcripts of all college-level work, and a one-		
page s	tatement selecting a core competency area and discussing the applicant's career		
goals.	.		
In add	ition, 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. <u>Satisfy the General University Requirements for Graduate Degrees</u> 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. Satisfactorily complete requirements for a comprehensive exam or 3 credits of <u>CE A686</u> if applicable to the chosen competency area. The following requirements apply for each individual competency area: <u>Complete the Program</u> <u>Requirements below</u>
 - a. Environmental: Students must complete 30 credit hours of coursework and a comprehensive exam. Students may opt to take up to 3 credit hours of <u>CE A698</u> 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 <u>(as listed below)</u> all with a grade of B or better. Additionally, students must complete at least one course from the project management area of study, <u>listed below</u>. 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
<u>CE A647</u>	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 A654CE A65	3 Timber Design Advanced Reinforced Concrete

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CE A663	Ground Water Dynamics		Formatted	
CE A674	Waves, Tides, and Ocean Processes for Engineers		Formatted	
CE A675	Design of Ports and Harbors	\checkmark	Formatted	
CE A676	Coastal Engineering	\mathbb{N}	Formatted	
CE A677	Coastal Measurements and Analysis	IV	Formatted	
CE A678	Design of Ocean Engineering Systems		Formatted	(
CE A679	Sediment Transport and Coastal Processes	M/	Formatted	 [
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<u>STAT A601</u>	Statistical Methods	// ////////////////////////////////////	Formatted	
<u>STAT A602</u>	Advanced Scientific Sampling	///////////////////////////////////////	Formatted	
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<u>AEST A604</u>	Environmental Law, Regulations and Permitting	1 	Formatted	
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ESM A610			Formatted	
ESM A613	Management of Technical People		Formatted	
PM A601	Project Management Fundamentals		Formatted	
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Within the last 9	credits applicable to the degree, each student may need to		Formatted	
complete <u>CE A@</u>	86, per the requirements of their competency area. The Civil		Formatted	
Engineering pro	iect must solve a practical engineering problem to the extent that		Formatted	
ariginal davalar	mente hu the condidete are evident in the project report		Formatted	
			Formatted	 [
1. The projec	t problem and solution must be explained in the context of the current		Formatted	
state of the	eart by means of a thorough review of pertinent literature.		Formatted	
2. The project	t must include advanced technical components directly involving modern		Formatted	
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practice of	own engineering.		Formatted	
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3. The project must have sufficient scope to clearly demonstrate the candidate's



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 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: Undergrad CHOOSE	luate: or Graduate: ONE Master of Civil Engineering
This program is a Gainful Employment Program:	or 🖾 No
4. Type of Action: PROGRAM	PREFIX
🗌 Add	Add
Change	Change
5. Implementation Date (semester/year) From: Fall/2015 To: 99/9999	
6a. Coordination with Affected Units Departme	ent, School, or College: CoEng
Initiator Name (typed): Thomas Ravens Date:	Initiator Signed Initials:
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 🛛 🖾 C	atalog Copy in Word using the track changes function
8. Justification for Action Increase opportunities for graduate studies to studer consitency in graduation requirements across subdisc	nts who hold degrees related to engineering and provide iplines
	Approved
Initiator (faculty only) Date	Disapproved Dean/Director of School/College Date
Thomas Ravens	
Approved	Approved
Disapproved Department Chair Date	Disapproved Board Chair
Approved	Approved
Disapproved College/School Curriculum Committee Chair Date	Disapproved Provost or Designee Date

Master of Science in Civil Engineering (MS-CE)

Admission Requirements

See <u>Admission Requirements for Graduate Degrees</u>. 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 <u>CE A699</u> 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
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- 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
- <u>CE A647</u> Advanced Unit Processes

Geotechnical

- CE A610 Engineering Seismology
- <u>CE A611</u> Geotechnical Earthquake Engineering
- <u>CE A612</u> Advanced Foundation Design
- CE A614 Soil Strength and Slope Stability

Structures

- <u>CE A610</u> Engineering Seismology
- CE A631 Structural Finite Elements
- CE A633 Structural Dynamics
- <u>CE A634</u> Structural Earthquake Engineering
- <u>CE A637</u> 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

- <u>CE A662</u> Surface Water Dynamics
- CE A663 Ground Water Dynamics
- CE A674 Waves, Tides, and Ocean Processes for Engineers
- <u>CE A675</u> Design of Ports and Harbors
- CE A676 Coastal Engineering

<u>CE A677</u>	Coastal Measurements and Analysis
CE A678	Design of Ocean Engineering Systems

<u>CE A679</u> 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:

- 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.

Aam	lission Requirements	Formatted: Font: (Default) Arial
See <u>Ad</u>	Imission Requirements for Graduate Degrees. All students must hold a	Formatted: Font: Arial
oaccaia	aureate degree in an engineering discipline <u> or equivalent</u> .	
Prog	ram Student Learning Outcomes	
In keep	ing with the program objectives, the expected student learning outcomes of the	
UAA M	SCE 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	
5	systems, and	
• /	An ability to work effectively within the management framework of organizations	
• /	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 Le
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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 with<u>out</u> 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	$\ \ $
<u>CE A646</u>	Biological Treatment Processes	///
<u>CE A647</u>	Advanced Unit Processes	$\ $
A		
Geotechnical		
<u>CE A610</u>	Engineering Seismology	
<u>CE A611</u>	Geotechnical Earthquake Engineering	
<u>CE A612</u>	Advanced Foundation Design	/
<u>CE A614</u>	Soil Strength and Slope Stability	
A		/ ,
Structures		
<u>CE A610</u>	Engineering Seismology	
<u>CE A631</u>	Structural Finite Elements	\vee
<u>CE A633</u>	Structural Dynamics	/
<u>CE A634</u>	Structural Earthquake Engineering	_
<u>CE A637</u>	Earthquake Resistant Structural Design	
<u>CE A639</u>	Loads on Structures	\nearrow
<u>CE A651</u>	Advanced Structural Analysis	\mathbb{N}
<u>CE A652</u>	Advanced Steel Design	
<u>CE A654CE A65</u>	3 <u>Timber Desig</u> Advanced Reinforced Concreten	$\langle \rangle$
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Transportation		111

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CE A623	Traffic Engineering
<u>CE A624</u>	Pavement Design
<u>CE A625</u>	Highway Engineering
CE A675CE	A626 Design of Ports and Harbors Traffic Modeling and Simulation
<u>CE A627</u>	Advanced Traffic Flow Theory

Water Resources

<u>CE A662</u> Surface Water Dynamics

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CE A663	Ground Water Dynamics
<u>CE A674</u>	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 A67 <u>8</u>	Design of Ocean Engineering Systems
CE A679	Sediment Transport and Coastal Processes

Analysis

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

Thesis Requirement

The completed thesis must meet the following requirements:

- 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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- 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