



Academic Affairs
UNIVERSITY of ALASKA ANCHORAGE

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Date: June 11, 2018
To: Academic Council
From: Samuel Gingerich, Interim Chancellor and Provost and Executive Vice Chancellor for Academic Affairs
Subject: Proposed Accelerated Master's in Civil Engineering

6/11/2018 *affirmed*

In response to state needs and student interest, the College of Engineering is proposing an accelerated master's in Civil Engineering. This program is based on national practice and is designed to provide a rigorous and efficient pathway for high performing students. It is supported by the UAA Civil Engineering advisory board and the UAA College of Engineering Advisory Board.

The program proposal has been approved by the faculty, dean, and appropriate UAA curriculum committees and the Faculty Senate.

Attachments: BOR Program Action Request Form, Program Prospectus, Catalog Copy, Letters of Support



Board of Regents Program Action Request
University of Alaska
 Proposal to Add, Change, or Discontinue a Program of Study

1a. UA University UAA	1b. School or College College of Engineering	1c. Department or Program Civil Engineering																																								
2. Complete Program Title Civil Engineering Fast Track Master's Option																																										
3. Type of Program <input type="checkbox"/> Undergraduate Certificate <input type="checkbox"/> Associate <input checked="" type="checkbox"/> Baccalaureate <input type="checkbox"/> Post-Baccalaureate Certificate <input checked="" type="checkbox"/> Master's <input type="checkbox"/> Graduate Certificate <input type="checkbox"/> Doctorate																																										
4. Type of Action <input checked="" type="checkbox"/> Add <input type="checkbox"/> Change <input type="checkbox"/> Discontinue	5. Implementation date (semester, year) <input type="checkbox"/> Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Summer Year 2019																																									
6. Projected Revenue and Expenditure Summary (not required if the requested action is discontinuation). Provide information for the 5 th year after program change approval if a baccalaureate or doctoral degree program; for the 3 rd year after program approval if a master's or associate degree program; or for the 2 nd year after program approval if a graduate or undergraduate certificate. If information is provided for another year, specify (1st) and explain in the program summary attached. Note that revenues and expenditures are not always entirely new; some may be current (see 7d.)																																										
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Projected Annual Revenues in FY 19</th> <th colspan="2" style="text-align: left;">Projected Annual Expenditures in FY 19</th> </tr> </thead> <tbody> <tr> <td colspan="2">Unrestricted</td> <td>Salaries & benefits (faculty and staff)</td> <td>\$</td> </tr> <tr> <td>General Fund</td> <td>\$</td> <td>Other (commodities, services, etc.)</td> <td>\$</td> </tr> <tr> <td>Student Tuition & Fees</td> <td>\$49,452</td> <td>TOTAL EXPENDITURES</td> <td>\$0</td> </tr> <tr> <td>Indirect Cost Recovery</td> <td>\$</td> <td colspan="2">One-time Expenditures to Initiate Program (if >\$250,000)</td> </tr> <tr> <td>TVEP or Other (specify):</td> <td>\$</td> <td colspan="2">(These are costs in addition to the annual costs, above.)</td> </tr> <tr> <td colspan="2">Restricted</td> <td>Year 1</td> <td>\$n/a</td> </tr> <tr> <td>Federal Receipts</td> <td>\$</td> <td>Year 2</td> <td>\$ n/a</td> </tr> <tr> <td>TVEP or Other (specify):</td> <td>\$</td> <td>Year 3</td> <td>\$ n/a</td> </tr> <tr> <td>TOTAL REVENUES</td> <td>\$49,452</td> <td>Year 4</td> <td>\$ n/a</td> </tr> </tbody> </table>			Projected Annual Revenues in FY 19		Projected Annual Expenditures in FY 19		Unrestricted		Salaries & benefits (faculty and staff)	\$	General Fund	\$	Other (commodities, services, etc.)	\$	Student Tuition & Fees	\$49,452	TOTAL EXPENDITURES	\$0	Indirect Cost Recovery	\$	One-time Expenditures to Initiate Program (if >\$250,000)		TVEP or Other (specify):	\$	(These are costs in addition to the annual costs, above.)		Restricted		Year 1	\$n/a	Federal Receipts	\$	Year 2	\$ n/a	TVEP or Other (specify):	\$	Year 3	\$ n/a	TOTAL REVENUES	\$49,452	Year 4	\$ n/a
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Page # of attached summary where the budget is discussed, including initial phase-in: pp. 2-3																																										
7. Budget Status. Items a., b., and c. indicate the source(s) of the general fund revenue specified in item 6. If any grants or contracts will supply revenue needed by the program indicate amount anticipated and expiration date, if applicable.																																										
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8. Facilities. New or substantially (>\$25,000 cost) renovated facilities will be required. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, discuss the extent, probable cost, and anticipated funding source(s), in addition to those listed in sections 6 and 7 above.																																										
9. Projected Enrollments (headcount of majors). If this is a program discontinuation request, project the teach-out enrollments.																																										
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Page number of attached summary where demand for this program is discussed: pg. 2																																										

¹Sometimes the courses required by a new degree or certificate program are already being taught by a UA university, e.g., as a minor requirement. Similarly, other program needs like equipment may already be owned. 100% of the value is indicated even though the course or other resource may be shared.

10. Number² of new TA or faculty hires anticipated (or number of positions eliminated if a program discontinuation):

Graduate TA	n/a
Adjunct	n/a
Term	n/a
Tenure track	n/a

11. Number² of TAs or faculty to be reassigned:

Graduate TA	n/a
Adjunct	n/a
Term	n/a
Tenure track	n/a

Former assignment of any reassigned faculty: n/a
For more information see page 4 of the attached summary.

12. Other programs affected by the proposed action, including those at other campuses (please list):

Program Affected	Anticipated Effect
BS Civil Engineering	None
MS Civil Engineering	Enrollments expected to increase

Page number of attached summary where effects on other programs are discussed: pg. 3

13. Specialized accreditation or other external program certification needed or anticipated. List all that apply or 'none': The BSCE is accredited by the Engineering Accreditation Commission (EAC) of ABET. The MSCE is not accredited by an outside body, which is not unusual for engineering master's degrees. The proposed Fast Track Master's Option will not require additional accreditation, although ABET will be informed of this addition to UAA's offerings.

14. Aligns with University or campus mission, goals, core themes, and objectives (list): The program aligns with UAA's mission, specifically to discover and disseminate knowledge through teaching and research and to serve the higher education needs of the state. It aligns with the Core Theme 1: Teaching and Learning, Core Theme 2: Research, Scholarship, and Creative Activity and Core Theme 3: Student Success. The program strongly aligns with the UAA 2020 Strategic Plan's values of student success, excellence, access and affordability, and it advances all three 2020 goals, i.e. advance a culture of excellence, more students persist and complete their educational goals, and graduate more students to fill Alaska's needs.

Page in attached summary where alignment is discussed: pg. 1

15. Aligns with Shaping Alaska's Future themes:

The program strongly aligns with the Student Achievement and Attainment theme of Shaping Alaska's Future, particularly in that it will provide Alaskan students with a program of distinction similar to those offered nationally (Issue D), and it is expected to improve recruitment of the best Alaskan students into an Alaskan master's degree program (Issues E and F). It also aligns with the Research and Development theme of Shaping Alaska's Future, because it is expected to increase the number of top-performing Alaskan students who pursue thesis-option master's degrees (Issue E).

Page in attached summary where alignment is discussed: pg. 1

16. State needs met by this program (list): Engineering is considered a high demand job area by the Alaska Department of Labor and Workforce Development, and it is an area in which the UA System is committed to producing more degrees. According to the Alaska Department of Labor and Workforce Development (ADOL), engineering-related occupations are expected to generate more openings than any other science, technology, engineering, and math (STEM) category by 2018. ADOL's Occupational Forecast 2014 to 2024 predicts a growth rate for CEs of 2.4% annually, for a total of 343 positions.

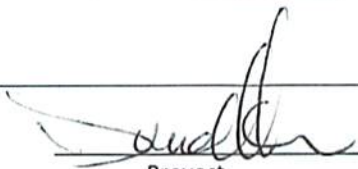

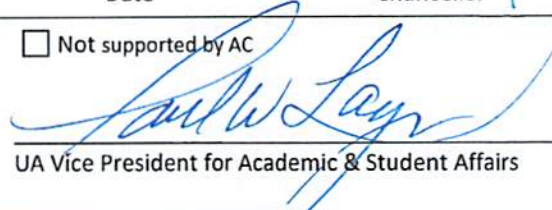
Page in the attached summary where the state needs to be met are discussed: pg. 1

18. Program is initially planned to be: (check all that apply)

- Available to students attending classes at UAA campus(es).
- Available to students via e-Learning
- Partially available to students via e-Learning

Page # in attached summary where e-Learning is discussed: pg. 4

17. Yes or No (circle one) if this program is an addition, would program be eligible for State's Eligible Training Provider List program?
(Click here for more information)

 Provost	6/18/18 Date	 Chancellor	6/11/2018 Date
<input checked="" type="checkbox"/> Consensus support of AC		<input type="checkbox"/> Not supported by AC	
<input checked="" type="checkbox"/> Recommend approval by VPASA		 UA Vice President for Academic & Student Affairs	
<input type="checkbox"/> Recommend disapproval by VPASA			

²Net FTE (full-time equivalents). For example, if a faculty member will be reassigned from another program, but his/her original program will hire a replacement, there is one net new faculty member. Use fractions if appropriate. Graduate TAs are normally 0.5 FTE. The numbers should be consistent with the revenue/expenditure information provided.

Attachments: Summary of Degree or Certificate Program Proposal Other (optional)

Revised: 12/12/2017

New Program Proposal Prospectus

UAA Civil Engineering Fast Track Master's Option

Program Overview: The College of Engineering is proposing an accelerated master's in Civil Engineering. Highly-qualified and motivated undergraduates will be able to count up to 6 credits of advanced engineering electives toward both the baccalaureate and master's degrees. Such a program has been offered for an accelerated mechanical engineering degree at the University of Alaska Fairbanks (UAF) since 2009, and a similar program was recently approved by the BOR for a fast-track Master's in Mechanical Engineering (MSME) at the UAA College of Engineering. For such programs, it is typical to allow a certain number of credits to be applied toward both the baccalaureate and the master's degrees, but with strict admissions requirements, including GPA and a percentage of degree completion of the baccalaureate requirements. Admission to UAA's Fast-Track Master's would require a minimum GPA of 3.25 after completion of 60% of the credits toward the baccalaureate degree. The latter requirement would generally place students in the spring semester of their junior year prior to being accepted to the fast-track program. This is the same general framework as the recently-approved Fast-Track MSME program at UAA.

Mission and Strategic Alignment: This program strongly aligns with the UAA 2020 Strategic Plan's values of student success, excellence, access and affordability, and it advances all three 2020 goals, i.e. advance a culture of excellence, more students persist and complete their educational goals, and graduate more students to fill Alaska's needs. The accelerated MSCE aligns with the UA Academic Master Plan's emphasis on developing and enhancing programs to respond to state needs (Goal 4) and on advancing research, scholarship, and creative activity (Goal 2). It strongly aligns with the Student Achievement and Attainment theme of Shaping Alaska's Future, particularly in that it provides Alaskan students with a program of distinction similar to those offered nationally (Issue D), and it is expected to improve recruitment of the best Alaskan students into an Alaskan master's degree program (Issues E and F). It aligns with the Research and Development theme of Shaping Alaska's Future, by increasing the number of top-performing Alaskan students who pursue thesis-option master's degrees (Issue E). This proposal aligns with all four UA strategic investment goals: contribute to Alaska's economic development, provide Alaska's skilled workforce, grow our world class research, and increase degree attainment. The American Society of Civil Engineers has adopted a policy statement recommending that in addition to a BSCE, that potential CEs should also be required to have a masters in CE, or at least 30 additional credits (or the equivalent) beyond the BSCE (ASCE Policy Statement 465).

Student Demand and State Needs: Engineering is considered a high demand job area by the Alaska Department of Labor and Workforce Development, and it is an area in which the UA System is committed to producing more degrees.

According to the Alaska Department of Labor and Workforce Development (ADOL), engineering-related occupations are expected to generate more openings than any other science, technology, engineering, and math (STEM) category by 2018. ADOL's Occupational Forecast 2014 to 2024 predicts a growth rate for CEs of 2.4% annually, for a total of 343 positions.

New Program Proposal Prospectus

A key benefit of the proposed Fast Track Master’s Option is that it targets the most academically talented Alaskan students who are already pursuing a BS in Civil Engineering. The fast-track option gives these students an incentive to pursue a master’s degree and is expected to motivate our best students to remain for an advanced degree. Students in two upper division CE classes, when polled for their interest in an accelerated MS program, responded affirmatively at 40% and 46%.

Finally, the Civil Engineering Advisory Board and the engineering community strongly support the accelerated master’s, as demonstrated by letters from Nicholas Choromanski of CRW Engineering Group and current chair of the UAA Civil Engineering Advisory Board; D. Michael Rabe, Managing Principal of CRW Engineering Group; Loren Leman, Civil/Environmental Engineer Consultant and past chair and current member of the UAA College of Engineering Advisory Board; and Stephen Nuss, Engineering Division Director, Anchorage Water & Wastewater Utility.

Enrollment Projections: An estimated 20% of student eligible for the fast-track option will enter the program. This number of students enrolling in this program may range between 2-6 students on an annual basis based on current and historical enrollments in the BSCE program. At the time of acceptance, the enrolled students will complete their senior level BSCE requirements while simultaneously initiating their MSCE work. At a minimum two semesters of coursework at the MSCE level will follow.

	Year 1	Year 2	Year 3	Year 4	Year 5
Enrollment Headcount	4	9	11	14	16
Graduates	0	3	4	5	6

Student Opportunities and Student Success: The University will better serve its highest achieving students by providing this opportunity to earn both a baccalaureate and master’s degree, before graduates take on full-time employment. The accelerated option is attractive for the reduced time-to-degree and overall cost to the student. Moreover, while engineering graduates may enter the workforce with a baccalaureate degree, career advancement often correlates with graduate study.

While many engineering master’s students choose to pursue a non-thesis master’s, this opportunity should lead more of the program’s very best students to select the thesis option and choose to pursue research with faculty members.

Current Capacity and Quality: Both the Bachelor of Science in Civil Engineering (BSCE) and the Master of Science in Civil Engineering (MSCE) at UAA are overseen by the UAA Civil Engineering Department. Student advising is provided by department faculty and designated student advising specialists within the College. Available space, equipment, and library resources at UAA are currently adequate for the delivery of both programs.

Resource Implications: The accelerated option is a resource-neutral repackaging of the existing BS and MS degrees in Civil Engineering. No additional faculty, space, equipment or library

New Program Proposal Prospectus

resources are needed. The existing advising structures within the College of Engineering and the Civil Engineering Department will support students in this option.

Affected Programs: The proposed Fast Track Master's Option repackages UAA's existing BSCE and MSCE. There is no expected impact on the BS program. The MSCE enrollment is expected to increase as the result of this offering.

Program Accreditation and Special Certifications: The BSCE is accredited by the Engineering Accreditation Commission (EAC) of ABET. The MSCE is not accredited by an outside body, which is not unusual for engineering master's degrees. The proposed Fast Track Master's Option will not require additional accreditation, although ABET will be informed of this addition to UAA's offerings.

Program Student Learning Outcomes and Plan for Assessment: The BSCE program has adopted twelve ABET Student Learning Outcomes. At the completion of the BSCE program, students will have:

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

The MSCE program has adopted the following five Student Learning Outcomes. At the completion of the MSCE program, students are able to:

- 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.

New Program Proposal Prospectus

Outline of Schedule for Implementation of the Program: The program passed the UAA Graduate Advisory Board and UAA Faculty Senate in late Spring 2018. With positive review by the Academic Council and Board of Regents, it is anticipated that students will be able to enroll in the program in Spring of 2019 with first graduates in Spring of 2020 (table below).

Critical Milestone	Date
Admissions opens, first students enrolled	Spring 2019
First graduates expected	Spring 2020

Discuss eLearning Options, If Applicable: The BSCE program is currently offered face-to-face on UAA's main campus. The MSCE program offers courses face-to-face, hybrid (simultaneous face-to-face and synchronous distance), and asynchronous distance. Currently, the MSCE program requires regular contact with an advisor as class offerings are quite dynamic. The Fast Track Master's Option utilizes existing MSCE courses, no change in dissemination technique is anticipated.

Faculty and Staff: The proposed Fast Track Master's Option will be overseen by the UAA Civil Engineering Department, whose faculty are already administering the BSCE and MSCE programs. Including new hires, the CE Department will have twelve full time tenured and tenure track faculty, two of whom also have administrative assignments.

Supporting Documents: BOR PAR; Catalog Copy; Letters of support

MS, Civil Engineering Catalog Copy

Admission Requirements

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

Fast Track MSCE Option

Bachelor of Science in Civil Engineering (BSCE) students interested in pursuing a Master of Science in Civil Engineering (MSCE) degree are encouraged to discuss the Fast Track MSCE Option with their academic advisor(s) and plan on applying for admission to the MSCE Program during their junior year. In addition to the Admission Requirements for Graduate Degrees listed above, the Fast Track MSCE Option applicant must:

1. Be admitted to the UAA BSCE Program.
2. Have completed at least 60% of the credits toward the BSCE Program Requirements.
3. Have a grade point average (GPA) of 3.25 or higher for all coursework credited toward the BSCE degree requirements.

*Students admitted to the Fast Track MSCE Option may apply up to six (6) credit hours of 600-level technical electives from their BSCE Program toward the graduation requirements of the MSCE program.

Graduation Requirements

1. Satisfy the General University Requirements for Graduate Degrees.
2. Complete one of the following options, with approval in advance by the graduate advisor:
 - Thesis Option: 30 credits of course work including satisfactorily completing thesis work, of which at least 6 credits will be CE A699.
 - Project Option: 30 credits of coursework including satisfactorily completing a civil engineering project. At least 3 credits of the course work will be CE A686.
 - Comprehensive Exam Option: 30 credits of coursework and a comprehensive exam to be administered in the final semester of study.
3. Complete the program requirements below*.

Program Requirements

Students must complete coursework in the core competency areas of Arctic, environmental, geotechnical, structures, transportation, or water resources engineering and one course in mathematics at the 400-level or higher, all with a grade of B or better. Students electing to complete the Project Option or the Comprehensive Exam Option must complete one 600-level course from the Engineering, Science and Project Management (ESPM) Department course offerings as part of their required course work. The remaining courses for any of the options shall be selected from any of the following emphasis areas or as approved by the student's graduate committee. Courses at the 400-level must be approved by the student's graduate committee.

Emphasis Areas

Students may choose to pursue a general MSCE degree. Alternatively, students may choose to pursue an MSCE degree with an emphasis area recognized on their transcript. Students will

qualify for an MSCE degree with a sub-discipline emphasis by completing 15 credits of 600-level course work in one of the emphasis areas. Only one sub-discipline emphasis may be chosen for sub-discipline emphasis recognition. Graduate courses sorted by emphasis area are as follows:

Course	Title	Credits
Arctic		
<u>AE A681</u>	Frozen Ground Engineering	3
<u>AE A682</u>	Ice Engineering	3
<u>AE A683</u>	Arctic Hydrology and Hydraulic Engineering	3
<u>AE A684</u>	Arctic Utility Distribution	3
<u>AE A685</u>	Arctic Applications of Heat and Mass Transfer	3
<u>AE A689</u>	Cold Regions Pavement Design	3
Environmental		
<u>AE A684</u>	Arctic Utility Distribution	3
<u>AEST A601</u>	Aquatic Process Chemistry	3
<u>CE A645</u>	Chemical and Physical Water and Wastewater Treatment Processes	3
<u>CE A646</u>	Biological Treatment Processes	3
<u>CE A647</u>	Advanced Unit Processes	3
Geotechnical		
<u>AE A681</u>	Frozen Ground Engineering	3
<u>AE A685</u>	Arctic Applications of Heat and Mass Transfer	3
<u>CE A610</u>	Engineering Seismology	3
<u>CE A611</u>	Geotechnical Earthquake Engineering	3
<u>CE A612</u>	Advanced Foundation Design	3
<u>CE A614</u>	Soil Strength and Slope Stability	3
Structures		
<u>AE A682</u>	Ice Engineering	3
<u>CE A631</u>	Structural Finite Elements	3
<u>CE A633</u>	Structural Dynamics	3
<u>CE A637</u>	Earthquake Resistant Structural Design	3
<u>CE A639</u>	Loads on Structures	3
<u>CE A651</u>	Advanced Structural Analysis	3
<u>CE A652</u>	Advanced Steel Design	3
<u>CE A654</u>	Timber Design	3
Transportation		
<u>AE A689</u>	Cold Regions Pavement Design	3
<u>CE A623</u>	Traffic Engineering	3
<u>CE A624</u>	Pavement Design	3
<u>CE A625</u>	Highway Engineering	3
<u>CE A626</u>	Traffic Modeling and Simulation	3
<u>CE A627</u>	Advanced Traffic Flow Theory	3
Water Resources		
<u>AE A683</u>	Arctic Hydrology and Hydraulic Engineering	3
<u>CE A662</u>	Surface Water Dynamics	3
<u>CE A663</u>	Ground Water Dynamics	3
<u>CE A674</u>	Waves, Tides, and Ocean Processes for Engineers	3
<u>CE A675</u>	Design of Ports and Harbors	3
<u>CE A676</u>	Coastal Engineering	3
<u>CE A677</u>	Coastal Measurements and Analysis	3

Course	Title	Credits
CE A678	Design of Ocean Engineering Systems	3
CE A679	Sediment Transport and Coastal Processes	3

Thesis Option

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 field of graduate study.
2. The thesis should be of sufficient quality that it is publishable in a peer-reviewed journal, as judged by the graduate committee.
3. The work must demonstrate command of knowledge and skills associated with the candidate's field 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 must be defended by the student in an oral presentation to the student's graduate committee.

Civil Engineering Project Option

The civil engineering project will be conducted as individual study and includes the following items that the student submits to the advisory committee:

1. Project proposal to be approved by the graduate advisory committee.
2. Draft project report to be reviewed by the graduate advisory committee. The report should consist of an introduction, literature review, methodology (if applicable), results, conclusions, recommendations and references.
3. Final project report incorporating suggestions and improvements as prescribed by the graduate advisory committee.

Comprehensive Exam Option

The comprehensive exam shall be taken in the last semester of the degree program. Prior to the exam, the student and the student's advisor will review the coursework completed by the student as part of the Graduate Studies Plan. Aspects of that review will be used to create an exam based on four of the courses completed during the program. The final decision on which courses are to be used for the exam will be made by the advisor.

The Student and advisor will establish a period of time over which the exam will be taken. Additional requirements for the exam will be articulated to the student prior to the exam date.



June 7, 2018

University of Alaska Anchorage
Office of the Chancellor
3211 Providence Drive, ADM 216
Anchorage, Alaska 99508

Attn: Mr. Sam Gingrich, Chancellor

Re: Letter of Support - UAA Civil Engineering Fast Track Master's Option

Dear Chancellor Gingrich,

This letter supports the addition of a Fast Track Master's (FTM) Option for the UAA Civil Engineering Department. The FTM Option would benefit both the University and the engineering community in Alaska.

In the majority of the country, there is a growing trend for entry-level engineers to graduate with a Master's degree prior to entering the workforce. This is due to a combination of the ever growing complexities of engineering specialty sub-disciplines, employers seeking more qualified entry-level candidates, as well as general competition between entry-level engineers to stand out when seeking positions. However, this trend is currently not the norm in Alaska.

In Alaska, most graduating engineering students can successfully obtain a position within the first year of graduation with just a B.S. degree. In most cases, there is no reason or incentive for students to postpone their entry into the workforce, and incur additional debt, to further their education and receive a Master's degree. As a result, the burden of providing the additional education/training to these entry-level engineers falls on the employers.

The FTM Option would further motivate more of the Civil Engineering students graduating with a B.S. degree to seek a Master's degree by reducing the time and financial costs needed to complete the degree. This would lead to increased enrollment in post-graduate degree programs within the School of Engineering, and a more polished collection of entry-level engineers entering the workforce.

We encourage the University of Alaska Anchorage to move forward with implementing the Civil Engineering Fast Track Master's Option.

Sincerely,
CRW Engineering Group, LLC

A blue ink signature of Nicholas Choromanski, consisting of a stylized, cursive script.

Nicholas Choromanski, PE, SE
UAA CE Advisory Board, Chair

A blue ink signature of D. Michael Rabe, consisting of a stylized, cursive script.

D. Michael Rabe, PE
Principal/Managing Member

LOREN LEMAN, P.E.
PO BOX 190773
ANCHORAGE, ALASKA 99519-0773
(907) 243-2000
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June 5, 2018

UA Board of Regents
PO Box 755300
Fairbanks, AK 99775

Dear Chair O'Neill and Members:

Re: UAA Civil Engineering Fast Track Master's Option

I support the proposal to create a Fast Track Option for pursuit of a Master's Degree in Civil Engineering at UAA. This is similar to what has been available for mechanical engineering students at UAF for nine years and what you have recently approved for mechanical engineering at UAA.

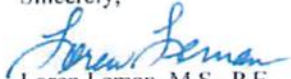
Although the B.S. degree remains a viable entry-level degree for many engineers, the M.S. degree has become increasingly more important, especially in specialty sub-disciplines of civil engineering, like sanitary/environmental engineering, my own focus. The UAA College of Engineering proposal is a creative way to attract more graduate students from among its most academically advanced, accelerating the process and reducing the cost for students, while still maintaining the integrity and reputation of its graduate program.

The Fast Track Option and its expected increased student enrollment are consistent with the goal we in the Legislature set 20 years ago and the Board of Regents has implemented—to graduate more engineering students prepared for the workplace to meet Alaska's challenging needs.

I have practiced civil/environmental engineering for nearly 45 years, have served on the UAA College of Engineering Advisory Board for more than seven years, and chaired it for nearly five of those years. I am also active on the Joint Engineering Advisory Council (JEAC) with our counterparts at UAF. Proposals like this help both institutions, but more importantly, help the students who will benefit from them.

I encourage you to support the Civil Engineering Fast Track Master's Option.

Sincerely,



Loren Lemman, M.S., P.E.
Consulting civil/environmental engineer
Past chairman and current member
UAA CoEng Advisory Board



Mayor
Ethan Berkowitz

Anchorage Water & Wastewater Utility Engineering Division



Board Chair
Aaron D. Dotson

May 31, 2018

Mrs. Gloria O'Neill, Chair
Board of Regents, University of Alaska
P.O. Box 755300
Fairbanks, Alaska 99775

RE: University of Alaska Anchorage Civil Engineering Fast Track Master's Program

Dear Chair O'Neill;

The Engineering Division of the Anchorage Water and Wastewater Utility (AWWU) employees many graduates from University of Alaska engineering programs. Additionally, AWWU hires many engineering interns each year. Many of our interns are students pursuing a bachelor's degree from the UAA Department of Civil Engineering. Over the last few years, I have noticed a shift in the philosophy of many of the interns we have employed: where they once were looking to enter the job market with just a bachelor's degree, several now desire to pursue a master's degree. When asked, the interns attribute the decision to pursue a master's degree to the need to be more competitive in an Alaska job market that has seen almost 1,000 engineering related jobs disappear over the last several years.

I support the addition of a Fast Track Masters (FTM) program within the UAA Department of Civil Engineering. I see many benefits to this program, and I encourage the Board of Regents to adopt it as soon as possible. Some of the benefits I see from implementation of the FTM include:

- FTM is faster and less expensive for the student, which should increase enrollment in the MSCE program.
- Graduate students in the FTM program will complete coursework faster, allowing more throughput of the MSCE program without additional faculty, staff or funding.
- FTM provides incentive for potential graduate students to stay in Anchorage, helping to keep "Alaskan Grown" engineers in-state.
- Graduate degreed engineers are more attractive to Alaskan employers; FTM graduates will be very employable.
- Having highly educated engineers with Alaskan experience will help to solve the infrastructure challenges Alaska faces now and into the future.

Respectfully,

Stephen Nuss, P.E.
Engineering Division Director

Anchorage Water & Wastewater Utility  Clearly

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