Cover/Signature Page – Full Template

Institution Submitting Request: University of Utah
Proposed Title: Master of Science, Construction Engineering
School or Division or Location: College of Engineering
Department(s) or Area(s) Location: Civil and Environmental Engineering
Recommended Classification of Instructional Programs (CIP) Code[1] : 14.3301
Proposed Beginning Date: *08/01/2017*
Institutional Board of Trustees' Approval Date:

Proposal Type (check all that apply):

Regents' Agenda Items		
R401-4 and R401-5 Approval by Committee of the Whole		
SECTION NO.		ITEM
4.1.1	☐	(AAS) Associate of Applied Science Degree
4.1.2	☐	(AA) Associate of Arts Degree
	☐	(AS) Associate of Science Degree
4.1.3	☐	Specialized Associate Degree
4.1.4	☐	Baccalaureate Degree
4.1.5	☐	K-12 School Personnel Programs
4.1.6	☒	Master's Degree
4.1.7	☐	Doctoral Degree
5.2.2	☐	(CER C) Certificate of Completion
5.2.4	☐	Fast Tracked Certificate

Chief Academic Officer (or Designee) Signature:
I certify that all required institutional approvals have been obtained prior to submitting this request to the Office of the Commissioner.

_____
Signature Date:

Printed Name: Ruth Watkins

[1] CIP codes must be recommended by the submitting institution. For CIP code classifications, please see http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55.

Executive Summary – Full Template
University of Utah
Master of Science, Construction Engineering
08/01/2017

Program Description

This program will prepare individuals to apply scientific, mathematical, engineering, and management principles to the planning, design, and building of commercial and residential facilities and structures. It will include instruction in civil engineering fundamentals such as structural principles, site analysis, foundations, computer-assisted design, evaluation and testing, and materials combined with construction courses related to contracting, project management, graphic communications, and applicable laws and regulations.

Role and Mission Fit

The Utah System of Higher Education and Institutional Missions and Roles (R312) states that the institution's mission is to discover, create, and transmit knowledge through education and training programs at the undergraduate, graduate, and professional levels; through research and development; and through service and extension programs associated with a major teaching and research university. Emphasis is placed on teaching, research, and service. The institution contributes to the quality of life and economic development at the local, state, and national levels. http://academic-senate.utah.edu/wp-content/uploads/sites/6/2015/03/20121105-Agenda.pdf .) This program fits extremely well with the mission of the University of Utah by providing graduates prepared to build the critical infrastructure background required to improve the quality of life and promote economic development.

Faculty

While a few of the elective courses offered in this program will overlap our existing Civil and Environmental Engineering program, the majority of the curriculum will be introduced by new faculty. The existing courses and faculty have capacity and are prepared to support this effort. For the new courses, this year's Engineering Initiative provides the funds to hire three new full-time faculty, one tenure-track and two career-line lecturers. The tenure track position will involve a national search to find a faculty member with appropriate experience in transportation infrastructure. The two career-line positions will be posted and hired from industry professionals. It is an ABET requirement that at least one faculty member have practical experience in the field. Since the industry professionals are less likely to have taught, department leadership have met with Pat Tripeny from the Center for Teaching and Learning Education and Cory Stokes from UOnline to create a plan to mentor these new instructors, as well as help them successfully create online class content for the graduate program.

Market Demand

The rapidly growing economy in Utah and many parts of the country requires construction of new roads, houses, and commercial buildings. There are strong construction populations that will benefit from a new online MS degree in the western U.S., including areas like Boise, Las Vegas and Salt Lake City. Construction Engineering firms in Salt Lake City have confirmed the need for these graduates and have committed to help create curriculum. Select construction engineers will be invited to join the Industrial Advisory Board and provide valuable feedback to the department, new faculty hires, and recommending curriculum. Nate Martin in Continuing Education is working to complete a Viable Market Research plan for UOnline. Based on our initial preliminary studies, there are only a few programs currently offered around the country although that number is growing in response to aging infrastructure and sustainability concerns.

Student Demand

There is a national trend toward design/build projects across the country that requires students to have both engineering and construction skills. Prior to this national trend, students had to choose between engineering or construction management. This is no longer the case since this degree bridges the gap. The Fundamentals of Engineering exam (a professional exam for engineering students on their way to becoming registered Professional Engineers) are now adding an entire section dedicated to Construction, so more and more students have been asking for classes in construction. In a recent civil class discussion, students have been inquiring about the degree program for their future. We currently offer four classes in engineering management that are widely popular with students. The plan from the Engineering Initiative is to graduate an additional 15-20 MS students each year once the program becomes established.

Statement of Financial Support

Appropriated Fund……	☒
Special Legislative Appropriation……	☐
Grants and Contracts……	☐
Special Fees ……	☐
Differential Tuition (must be approved by the Regents)……..	☒
Other (please describe)……	☐

Faculty, adjuncts, and a staff position will be continuously provided by the legislature through the engineering initiative funding package. These courses will be taught under Civil & Environmental Engineering which already has legislative approval to charge differential tuition.

Similar Programs Already Offered in the USHE

There are no MS programs in Construction Engineering offered within the USHE institutions. This online MS program will be associated with an ABET-accredited undergraduate engineering program which will be fundamentally different from any existing construction management options offered at Utah institutions.

Program Description – Full Template
University of Utah
Master of Science, Construction Engineering
8/01/2017

Section I: The Request

University of Utah requests approval to offer *a Master of Science in Construction Engineering* effective *Fall 2016.* This program has been approved by the institutional Board of Trustees on *XX/XX/XXXX.*

Section II: Program Description

Complete Program Description

Physical infrastructure (roads, buildings, water distribution and treatment, etc.) is needed to promote population and economic developing throughout the world. From beginning planning to final operation and maintenance, engineers are needed to ensure successful projects. Construction Engineers are educated to understand and solve the complexities that arise during the engineering and construction phases. This comprehensive appoach includes initial design through the completion of the exterior building façade. The Construction Engineering degree will teach students to work in both public and private industry positions, improving graduate's skills to meet this growing trend.

Purpose of Degree

According to the American Institute of Steel Construction, three independent movements are converging to radically alter the manner in which infrastructure systems are designed and constructed. These factors represent the emergence of: 1) design/build projects, 2) 3-dimentional Building Information Modeling (BIM) software; and 3) sustainable/resilient development requirements. The national trend for Construction Engineering is very evident in both the public and private sectors. (e.g. $1.59 billion dollar I-15 reconstruction project, 12300 South Design Buld Project in Draper and Riverton Utah, both using the design/build in order to maximize cost saving and innovative design). The Construction Engineering degree requires a a hybrid education consisting of a strong civil engineering foundation coupled with experiential learning in architecture and construction practices. By providing the degree online, we anticipate being able to serve all of Utah and the surrounding region to enhance the capabilities of those working in the construction industry.

Institutional Readiness

The Department of Civil and Environmental is proposing a Master of Science degree in Construction Engineering. This program is anticipated to be online and compete nationally with other programs emerging in this growing area. Creation of a MS degree was first discussed in the department's Executive Committee and faculty meetings prior to submitting the Engineering Initiative Proposal in February 2015. These graduate offerrings will compliment a similar request to establish an ABET-approved undergraduate BS in Construction Engineering. Civil & Environmental Engineering Faculty formally voted to approve both efforts. Continued discussion aimed at providing a quality educational experience has occurred in frequent faculty meetings before and after the Engineering Initiative approval, including the Fall 2015 Department Retreat.

These new degrees will fit naturally with the department since we already offer several engineering management electives that can support this degree. Furthermore, it is anticipated that two or three of the

new courses may be used as electives for our existing graduate programs in Civil Engineering. Civil Engineering has also been working with the College of Engineering Dean's Office, UOnline, and support office to promote the best degree/education options for Construction Engineering. The Department of Civil & Environmental Engineering has also been in contact with more than 17 local large construction firms who overwhelmingly support this effort and agree to provide assistance or service on the Industry Advisory Board. The creation of the Construction Engineering BS and MS in Construction Engineering will not adversely affect our existing Bachelor of Science in Civil Engineering.

We have recently begun reaching out to Architecture and City and Metropolitan Planning and will be exploring the possibility of developing joint curricula in the future. The online nature of the our proposed MS degree will take time and effort to resolve issues with other programs.

Our undergraduate BS Construction Engineering degree will prepare graduates to apply knowledge of mathematics through differential and integral calculus, probability and statistics, general chemistry, and calculus-based physics; to analyze and design construction processes and systems in a construction engineering specialty field, applying knowledge of methods, materials, equipment, planning, scheduling, safety, and cost analysis; to explain basic legal and ethical concepts and the importance of professional engineering licensure in the construction industry; to explain basic concepts of management topics such as economics, business, accounting, communications, leadership, decision and optimization methods, engineering economics, engineering management, and cost control. When a student applies for a MS in Construction Engineering, their coursework and education will continue to build on the strong foundation from their undergraduate Construction Engineering degree. An undergraduate background in Civil and Environmental Engineering will also be suitable experience for this MS program.

If students want to complete the MS degree in Construction Engineering without the BS in Construction or Civil Engineering or closely related field, their committee will determine their missing knowledge and assign remedial coursework to complete in addition to the 30 credits for an MS in Construction Engineering.

Departmental Faculty

In addition to the faculty listed below, the Engineering Initiative will also provide 4-5 adjunct faculty that can be hired part-time from industry. This will allow the department to provide instruction from top individuals in industry and promote increased relationships with industry.

According to ABET, the program must demonstrate that the majority of faculty teaching courses that are primarily design content are qualified to teach the subject matter by virtue of professional licensure, or by education and design experience. The faculty must include at least one member who has had full-time experience and decision-making responsibilities in the construction industry.

Department Faculty Category	Dpt Faculty Headcount – Prior to Program Implementation	Faculty Additions to Support Program	Dpt Faculty Headcount at Full Program Implementation
With Doctoral Degrees (Including MFA and other terminal degrees, as specified by the institution)			
Full-time Tenured	21.5	1	22.5
Full-time Non-Tenured	1	2	3
Part-time Tenured	0	0	0
Part-time Non-Tenured	0	0	0
With Master's Degrees			
Full-time Tenured	0	0	0
Full-time Non-Tenured	0	0	0
Part-time Tenured	0	0	0
Part-time Non-Tenured	0	0	0
With Bachelor's Degrees			
Full-time Tenured	0	0	0
Full-time Non-Tenured	0	0	0
Part-time Tenured	0	0	0
Part-time Non-Tenured	0	0	0
Other			
Full-time Tenured	0	0	0
Full-time Non-Tenured	0	0	0
Part-time Tenured	0	0	0
Part-time Non-Tenured	4	4	8
Total Headcount Faculty in the Department			
Full-time Tenured	22.5	3	25.5
Full-time Non-Tenured	0	0	0
Part-time Tenured	0	0	0
Part-time Non-Tenured	4	4	8
Total Department Faculty FTE *(As reported in the most recent A-1/S-11 Institutional Cost Study for "prior to program implementation" and using the A-1/S-11 Cost Study Definition for the projected "at full program implementation.")*	22.5	X	25.5

Staff

The Engineering Initiative has allocated monies for hiring one staff person. This person will serve as the online coordinator in the department, advise the online students, be a point of contact for the UOnline office, marketing and promoting online education, and coordinate the creation and recording of classes. One teaching assistant was also budgeted in the request.

Library and Information Resources

Since the Master of Science-Construction Engineering will be a non-thesis degree, perhaps less Library support is needed for student research. Nevertheless, the Library has verified it has sufficient resources available to provide for any faculty or student needs.

Admission Requirements

Admissions will be completed online through Apply Yourself (Admissions Office software). Requirements include the GRE or PE License (Professional Engineers license seen as evidence of accomplishment). Professional Track applicants who have graduated from an ABET accredited university with a B.S. Degre in engineering or a closely related field and a GPA of 3.20 or higher are not required to take the GRE.

Student Advisement

The new staff hire will advise using technology for face-to-face appointments, telephone calls, email correspondence, open house events, or company presentations (marketing events with our industry partners). A faculty advisor from the three new hires will also be assigned to each student.

Justification for Graduation Standards and Number of Credits

The MS Construction Engineering degree will require 30 credits of graduate-level coursework with a minimum cumulative GPA fo 3.0 for the Program of Study according to University guidelines. These are standard requirements for course-only MS degrees in the Department and elsewhere around the country.

External Review and Accreditation

This program was presented to the College of Engineering advisory board for input and the Department Chair of Civil and Environmental Engineering met with several construction professions in developing the proposed concept. The next step involves the creation of an Industry Advisory Board (IAB). The IAB is created from construction firms around the globe to provide input, meeting three times each year to review the specifics of this program in consultation with department faculty and the Chair.

Projected Program Enrollment and Graduates; Projected Departmental Faculty/Students

Data Category	Current – Prior to New Program Implementation	PROJ YR 1	PROJ YR 2	PROJ YR 3	PROJ YR 4	PROJ YR 5
Data for Proposed Program						
Number of Graduates in Proposed Program	X	0	15	25	25	25
Total # of Declared Majors in Proposed Program	X	15	30	50	50	50

Departmental Data – For All Programs Within the Department						
Total Department Faculty FTE *(as reported in Faculty table above)*	22.5	22.5	22.5	22.5	22.5	22.5
Total Department Student FTE *(Based on Fall Third Week)*	132	147	157	182	182	182
Student FTE per Faculty FTE *(ratio of Total Department Faculty FTE and Total Department Student FTE above)*	7:1	6.53:1	6.97:1	8.08:1	8.08:1	8.08:1
Program accreditation-required ratio of Student FTE/Faculty FTE, if applicable: (Provide ratio here:_____)	-	-	-	-	-	-

Expansion of Existing Program

This is essentially a new degree aimed at a new audience even though it does have some common elements with the Civil and Environmental Engineering curriculum.

Section III: Need

Program Need

The proposal was submitted as part of the Engineering Initiave and was approved by Dean of Engineering and the Technology Initiative Advisory Board (TIAB) for funding. The decision to create this MS program online was to accommodate working professionals, in and out-of-state students, and to allow more flexibility for the working professional.

According to the American Institute of Steel Construction, three independent movements are converging to radically alter the manner in which infrastructure systems are designed and constructed. These factors represent the emergence of: 1) design/build projects, 2) 3-dimensional Building Information Modeling (BIM) software; and 3) sustainable/resilient development requirements. These factors have transformed the often contentious nature of architect-engineer-contentious dynamics into a more seamless collaborative team effort. This integrated approach has already begun to revolutionize the delivery of projects designed and constructed to meet client needs for timely delivery of high quality, economically sensitive projects that minimize environmental and energy impacts.

In speaking with several local construction firms we believe the demand for project managers with engineering backgrounds will continue to grow. In light of 2015 legislation raising the gas tax for infrastructure improvements and the law allowing local communities the option of raising sales taxes to help pay for transit, we believe the combination of transportation and construction engineering will represent a growth area for us. This is also part of a national movement with a few large universities already moving to address the long-term needs for individuals in this area.

Labor Market Demand
The creation of the Construction Engineering would not decrease our student base in the current Civil and Environmental Engineering degree since this degree will target working professionals interested in the Construction Engineering industry.

Student Demand
Currently our department offers four construction related courses that will be used in the Construction Engineering program. These courses are well populated by our existing students. In speaking with several local construction firms we believe the demand for project managers with engineering backgrounds will continue to grow. Working with the UOnline program, they are helping to identify additional target audiences based on the results from the UOnline's Viable Market Study.

Similar Programs
The Engineering Initiative proposal has been funded, faculty hires will be made from new faculty lines, and the degree will not affect our current student-base since the new degree will attract a different clientele.

Collaboration with and Impact on Other USHE Institutions
There will be no impact on the other USHE Institutions.

Benefits
This degree will benefit the community and state by attracting students and building the University of Utah's reputation. The ability to offer online courses and attract students across the state, providing rural areas access to higher education. Furthermore, it will help build a national reputation as a leader in engineering education.

Consistency with Institutional Mission
The University of Utah contributes to the quality of life and economic development at the local, state, and national levels. http://academic-senate.utah.edu/wp-content/uploads/sites/6/2015/03/20121105-Agenda.pdf.*)* This proposed program fits extremely well with the mission of the institution by providing graduates ready to build the critical infrastructure background required to improve the quality of life and promote economic development. It is one more piece of the vital STEM workforce requirement.

Section IV: Program and Student Assessment

Program Assessment
The Masters of Science program in Construction Engineering at the University of Utah prepares students for successful careers in engineering related to design/build construction and project management. Specifically, graduates will be educated in the heavy and highway construction, underground utilities, and building structural frame segments of the construction industry. Graduate training is designed to instill independent and critical thinking, develop problem solving technical skills, and provide the foundation for life-long learning.

Program graduates will have:

1. An understanding of competencies within well-defined principles of construction engineering at levels clearly exceeding undergraduate expectations.

2. The ability to apply their understanding to the design, analysis and construction of infrastructure systems.

3. Effective oral and written technical communication skills.

4. The skills and understanding required for life-long learning and professional development.

5. An understanding of ethical responsibilities related to society and civic engagement.

Expected Standards of Performance

Program Outcomes will be routinely monitored by the Industry Advisory Board to maintain relevancy with practicing construction professionals. Likewise, course contents will be developed that contribute to these outcomes. It is expected that our graduates will maintain a 3.0 GPA, choosing classes with the help of their faculty advisor that will prepare them for the marketplace.

Section V: Finance

Department Budget

This budget is an estimate and does not reflect any salary increases to faculty since it is not determined at this time.

Three-Year Budget Projection							
Departmental Data	Current Departmental Budget – Prior to New Program Implementation	Departmental Budget					
		Year 1		Year 2		Year 3	
		Addition to Budget	Total Budget	Addition to Budget	Total Budget	Addition to Budget	Total Budget
Personnel Expense							
Salaries and Wages	2,164,973	342,000	2,421,973	0	2,421,973	0	2,421,973
Benefits	669,008	118,070	780,278	0	780,278	0	780,278
Total Personnel Expense	$2,833,981	$460,070	$3,202,251	$0	$3,202,251	$0	$3,202,251
Non-Personnel Expense							
Travel	1,000	0	1,000	0	1,000	0	1,000
Capital	0	0	0	0	0	0	0
Library	0	0	0	0	0	0	0
Current Expense	84,100	19,930	104,030	0	104,030	0	104,030
Total Non-Personnel Expense	85,100	19,930	105,030	0	105,030	0	105,030
Total Expense *(Personnel + Current)*	$2,919,081	$480,070	$3,207,281	$0	$3,207,281	$0	$3,207,281
Departmental Funding							
Appropriated Fund	2,443,576	480,000	3,307,281	0	2,443,576	0	2,443,576
Other:	13,813	0	13,813	0	13,813	0	13,813
Special Legislative Appropriation	0	0	0	0	0	0	0
Grants and Contracts	0	0	0	0	0	0	0
Special Fees / Differential Tuition	376,432	0	376,432	0	376,432	0	376,432
Total Revenue	$2,833,821	$480,000	$3,307,281	$0	$3,307,281	$0	$3,307,281
Difference							

Revenue-Expense	$-85,260	$0	$6,540	$0	$6,540	$0	$6,540
Departmental Instructional Cost / Student Credit Hour* *(as reported in institutional Cost Study for "current" and using the same Cost Study Definition for "projected")*	$	$	$	$	$	$	$

** Projected Instructional Cost/Student Credit Hour data contained in this chart are to be used in the Third-Year Follow-Up Report and Cyclical Reviews required by R411.*

Funding Sources

The Engineering Initiative will fund this program along with differential tuition generated by engineering courses.

Reallocation

No reallocation is necessary.

Impact on Existing Budgets

None. This program will be managed without diverting existing budget into operations.

Section VI: Program Curriculum

All Program Courses (with New Courses in Bold)

Students will take a subset of the classes listed below for a total of 30 credits to graduate. The courses will be offered on a yearly or every-other-year rotation based on enrollments and student graduation needs.

Course Prefix and Number	Title	Credit Hours
CVEEN 6840	Construction Finance and Accounting	3
CVEEN 6855	Commercial Construction	3
CVEEN 6860	Residential Construction	3
CVEEN 6865	Principles of Design-Build Project Delivery	3
CVEEN 6870	Design-Build Contract & Risk Management	3
CVEEN 6875	Environmental Regulations	3
CVEEN 6880	Façade Engineering II	3
CVEEN 6885	Utilities Construction and Rehabilitation	3
CVEEN 6890	Advanced Computer-Aided Construction	3
	Entrepreneurial Engineering	3
CVEEN 6810	Cost Estimating	3
CVEEN 6820	Project Scheduling	3
CVEEN 6830	Project Management	3
CVEEN 6850	Engineering Law and Contracts	3
CVEEN 5500	Sustainable Materials	3
	Sub-Total	30
Elective Courses		
Sub-Total		
Track/Options (if applicable)		
Sub-Total		
	Total Number of Credits	30

Program Schedule

A tentative schedule of new classes is provided.

Fall-odd years CVEEN 6840 CVEEN 6860 CVEEN 6810	Spring-even years CVEEN 6855 CVEEN 6830	Summer-even years CVEEN 6875 Entrepreneurial Engineering
Fall-even years CVEEN 6865	Spring-odd years CVEEN 6880	Summer-odd years CVEEN 6870

CVEEN 6890 CVEEN 6820	CVEEN 6885 CVEEN 6850	

Section VII: Faculty

A search Committees have been created, and Advisory Board members are being invited to participate so a detailed job description can be created and hired. New faculty hires will be recording online classes, mentoring with the Center for Teaching and Learning Education, and finalizing the curriculum for the Construction Engineering degree.

THE UNIVERSITY OF UTAH

J. Willard Marriott Library
295 South 1500 East Salt Lake City, Utah 84112 (801) 581-8558

November 11, 2015

Michael E. Barber, Ph.D.
Professor and Chair
Department of Civil and Environmental Engineering
College of Engineering
110 Central Campus Drive, Room 2000
Salt Lake City, Utah 84112

Re: New Graduate Programs in Construction Engineering

Dear Professor Barber:

This letter communicates Marriot Library support for the proposed Master of Science in Construction Engineering program and also the Graduate Certificate Program in Construction Engineering within the Department of Civil and Environmental Engineering.

For many years, the Marriott Library has successfully provided strong support to the Department of Civil and Environmental Engineering. The Library has also provided support for programs closely related construction engineering, such as architecture and business.

In construction engineering, the Marriott Library maintains extensive holdings of important scholarly journals, including the *Journal of Construction Engineering and Management,* the *Journal of Management in Engineering,* and the *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction* from the American Society of Civil Engineers. Other vital journals provided by the Marriott Library include, *Cement and Concrete Research; Building and Environment; Construction and Building Materials; Automation in Construction;;* the *Journal of Building Physics;* the *Journal of Constructional Steel Research; Building Services Engineering Research & Technology; Journal of Advanced Concrete Technology;* the *PCI Journal; Engineering, Construction, and Architectural Management; Stahlbau; Construction Manager;* the *International Journal of Project Management; Cost Engineering; Construction Law International;* and other similar publications. Moreover, as the scholarly communication landscape evolves, new options may exist beyond subscriptions for providing access to journal literature, and we would like to work with faculty to evaluate the most workable preferences for providing periodical literature to support the new program.

The Marriott Library annually purchases a selection of new English language scholarly books in construction engineering and management. The Library also encourages faculty to work with librarians to strengthen book collections in subject areas where it may be necessary.

We feel that Marriott Library collections are very strong in indexes, abstracts, and databases supporting the new program. The University of Utah maintains subscriptions to the following relevant databases:

1. Scopus (includes Compendex)
2. Web of Science
3. Civil Engineering Database
4. Academic Search Premier
5. Dissertations & Theses: Full Text
6. Materials Research Database
7. Business Source Complete
8. GeoRef
9. Factiva
10. Avery index to Architectural Periodicals

The Library also has significant resources to support the multimedia communication projects that students in the new program may be undertaking. Students may take advantage of the software packages available in the Knowledge Commons as well as the expertise and equipment available in the Library.

Student difficulties in locating materials often stem not from collection weaknesses, but from the complexities of using a large research library. We offer class presentations and one-to-one consultations with library specialists who will help students find the most relevant works and suggest the most appropriate search strategies.

We look forward to working with the faculty and students in this new program.

Sincerely,

Rick Anderson, Associate Dean
Collections and Scholarly Communication
J. Willard Marriott Library

THE UNIVERSITY OF UTAH

Department of Civil & Environmental Engineering
110 South Central Campus Drive, Suite 2000 Salt Lake City, Utah 84112 (801)581-6931

November 20, 2015

Graduate Council
University of Utah

Re: Department of Civil and Environmental Engineering Support for Construction Engineering

Graduate Council:

The Engineering Initiative funding was requested and awarded by the legislature based upon proposals submitted last December that listed the requests and how many additional graduates would be produced corresponding to each investment of new Engineering Initiative money. The Department of Civil and Environmental Engineering submitted a proposal for funding that would establish an online MS degree in Construction Engineering. This proposal was supported by the College of Engineering, and has subsequently been awarded funding for new faculty and staff positions. This was confirmed in a letter from Dean Richard Brown. Therefore, to my knowledge, it has the full support of the College and the Department.

I would be happy to answer any questions you have concerning this exciting new program. Thanks you for your consideration.

Sincerely,

Michael E. Barber

Michael E. Barber,
Professor and Chair of Civil and Environmental Engineering

Northwest Commission on Colleges and Universities
NWCCU

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Redmond, WA 98052-3981
425 558 4224
Fax: 425 376 0596
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August 8, 2016

Dr. Dave Kieda
Dean, The Graduate School
University of Utah
201 South President's Circle
Salt Lake City, UT 84112

Dear Dr. Kieda:

This is in reply to electronic correspondence received in our office on May 2, 2016, requesting approval from the Northwest Commission on Colleges and Universities (NWCCU) for University of Utah to add a Bachelor of Science (BS) degree program in Construction Engineering to its education offerings, effective August 2016. The BS degree program in Construction Engineering requires 127.5 credits to completion and will be delivered using a distance education instructional modality. Approval to offer this new degree program was obtained through the University of Utah Undergraduate/Graduate Council on December 20, 2015, the Academic Senate on March 7, 2016, and the Board of Trustees on April 12, 2016.

The Departmental Curriculum Committee, in response to local, state, regional, and national demands, developed the BS degree program in Construction Engineering. All funds identified to offer this new degree program have been allocated through the University's Engineering Initiative. With new funding, the University of Utah will add one tenure track faculty position, two career-line faculty positions, an academic advisor, three adjunct faculty instructors, and purchase new software for the program. The University of Utah has existing capacity and facilities to support students enrolling in the BS degree program in Construction Engineering.

The Commission has approved the abovementioned change as a *minor change* under Commission Policy, *Substantive Change*. Accordingly, the addition of the Bachelor of Science degree program in Construction Engineering is now included under the accreditation of University of Utah.

Thank you for keeping the Northwest Commission on Colleges and Universities apprised of developments and initiatives at University of Utah. If you have questions, please do not hesitate to contact me.

Sincerely,

Valerie W. Martinez
Associate Vice President

c: Dr. David W. Pershing, President
Dr. Sandra E. Elman, President, NWCCU

THE UNIVERSITY OF UTAH

Richard B. Brown
Dean of Engineering
1692 Warnock Engineering Building
72 S. Central Campus Drive
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brown@utah.edu
http://www.coe.utah.edu/~brown

November 19, 2015

Graduate Council
University of Utah

Re: College of Engineering Support for Construction Engineering

Dear Graduate Council Members:

The Engineering Initiative funding that was awarded by the legislature was based upon proposals submitted last December that listed the requests and how many additional graduates would be produced corresponding to each investment of new Engineering Initiative money. One of the compelling proposals from our College of Engineering was for a new Construction Engineering program in which the graduates would have a full, calculus-based, Civil Engineering education, as well as a focus on construction. Graduates of this program will be welcomed into an industry that is doing more and more design/build projects of large, complex buildings. I have personally verified the opportunities for such graduates by talking to large builders and respected architects locally, and the former head of Bechtel, who has a national view of construction.

The Technology Initiative Advisory Board, which allocates the Engineering Initiative funds provided by the legislature to the eight state universities, recommended awarding the U of U $1.8 M of ongoing funds based in part upon the Civil and Environmental Engineering proposal to implement a Construction Engineering BS and MS. The College's Engineering National Advisory Council and Industry Advisory Board are strongly supportive of this program. And I am personally enthusiastic about the proposed degree, and happy to support it using a portion of the new Engineering Initiative funding.

It is my understanding, based upon the CvEEN proposal, that they will produce at least 20 more BS and 15 more MS graduates per year. We expecct that Ph.D. production within the Department will also increase as a result of having more faculty. We expect that the department's national reputation will benefit from developing this innovative degree, which will also be available for distance education. I am pleased to support the proposed Master of Science graduate degree in Construction Engineering.

Sincerely,

Richard B. Brown