

## NWCCU Minor Change Form

**Institution:** University of Utah

**Proposal Name:** Bachelor of Science, Construction Engineering

**Mission and Core Themes:** The Department of Civil and Environmental Engineering will add a Construction Engineering BS, online MS, and online Graduate Certificate. Our department mission to “Provide high quality education in engineering and leadership, life-long learning opportunities, and innovation for the benefit of the State of Utah and the world” remains the same when adding these degrees and certificate.

**Educational Offerings:** 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. In addition to four current engineering management class offerings, the department plans to create eight additional courses that will include 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.

**Planning:** 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. There is a national trend towards 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 as this degree will bridge that gap.

The decision to create the new degree came as a result of contact with large construction firms who confirm the demand for project managers with engineering backgrounds. These firms support this effort. The BS in Construction Engineering will go through ABET Accreditation. The Civil Engineering Department has also been working with the College of Engineering Dean’s Office and support offices across campus to promote the best degree/education options for Construction Engineering.

New faculty hires and degree approval should be complete by Fall 2016. Our goal is to start this Construction Engineering program Fall 2016.

**Budget:** All funds for this degree has been allocated through the Engineering Initiative funds as allocated by the Technology Initiative Advisory Board (TIAB). The department overall income for 2016 fiscal year is \$2,834,000 for appropriated funds and an estimated \$2.9 million in expenses. Once faculty positions have been filled, anticipated by August 2016, the department will receive \$450,000 in additional funds through the Initiative funds. This would bring the estimated budget to \$3.3 million and an estimated \$3.3 million in expenses. There will be no additional funds after the first year. The additional expenditures will include a tenure line faculty position, two career-line faculty positions, an academic advisor, 3 adjunct instructors, and software for the program. The department views that the institution will bring in additional income as the enrollment is not limited to the Salt Lake Valley and neighboring areas.

**Student Services:** The University of Utah offers a strong support system for student services. Students will receive established support from the department faculty and staff. The addition of this degree will not affect the current student body, but bring additional awareness and exposure to the University of Utah and elevate the department’s reputation as we provide highly trained and qualified new hires into industry.

**Physical Facilities:** No change is needed to our current facility and equipment.

**Library and Information Resources:** The Library has verified it has sufficient resources available to provide for any faculty or student needs.

**Faculty:** For the eight new additional courses, the Engineering Initiative provides the funds to hire three new full-time faculty, one tenure-track and two career-line lecturers. The two career-line positions will be posted and hired from industry professionals. Also approved in the Engineering Initiative, are the addition of one staff and one teaching assistant. These new hires will assist the current staff in achieving the department's mission.