



UNC CHARLOTTE

Office of Academic Affairs

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February 19, 2018

Dr. Richard Leeman
Faculty President
UNC Charlotte

Dear Rich,

In accordance with the procedure concerning degree name changes, I am forwarding a request from The William States Lee College of Engineering to change the names of the following:

BSET in Fire Safety Engineering Technology (current) to
BSET in Fire and Safety Engineering Technology

Master's in Fire Protection and Administration (current) to
MS in Fire Protection and Safety Management

The justification for the change is attached. In accordance with the procedure (<http://provost.uncc.edu/policies/degree-name-changes>) I ask that you consult with the Undergraduate Course and Curriculum Committee and the Graduate Council and following those consultations that the name changes be considered for faculty approval at the subsequent Faculty Executive Committee and Faculty Council meetings.

Sincerely,

A handwritten signature in black ink, appearing to read "Joan F. Lorden".

Joan F. Lorden
Provost and Vice Chancellor for Academic Affairs

Attachment

cc: Bob Johnson, Dean, The William States Lee College of Engineering
Matt Wyse, Faculty Governance Assistant





UNC CHARLOTTE

The WILLIAM STATES LEE COLLEGE of ENGINEERING

Department of Engineering Technology & Construction Management

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Memorandum

To: Dr. Robert Johnson, Dean
William States Lee College of Engineering

From: Anthony L. Brizendine, Chair *ARB*
Department of Engineering Technology & Construction Management (ETCM)

Date: January 25, 2018

Re: CIP Code and Program Name Changes in ETCM

Per our conversation and upon the unanimous vote of the ETCM Faculty, please find CIP code and Name Change Requests for the following programs:

- 1) Master of Fire Protection & Administration (MFPA) CIP code Change and Name Change to MS in Fire Protection and Safety Management (Desired Effective Date: Fall Semester, 2018)
- 2) BSET Fire Safety Engineering Technology CIP code Change and name change to BSET Fire and Safety Engineering Technology (Desired Effective Date: Fall Semester, 2018)
- 3) Master of Science Applied Energy & Electromechanical Systems (ENER) CIP code Change Request (Desired Effective Date: Fall Semester, 2018)

Table 1 provides a summary of the request. Description of the requested changes and rationale are provided after the summary table. The CIP code changes better align our Fire & Safety programs for ABET accreditation. ABET is the nonprofit, non-governmental organization recognized by the Council for Higher Education Accreditation (CHEA) to accredit college and university programs in the disciplines of applied and natural science, computing, engineering and engineering technology in the United States.

We intend to pursue ABET accreditation for the BSET Fire and Safety Engineering Technology program following approval of these changes and a recently initiated curriculum proposal change that is working through the faculty governance approval process this semester with a requested fall 2018 implementation date. Content in safety management, ergonomics, environmental protection, and systems safety design to appeal to a broader, more diverse student population while meeting industry needs is being formalized in the curriculum. The evolving emphasis in

safety management better aligns the program to meet the safety management needs of the Greater Charlotte region and beyond for safety professionals and reflects the market needs for which our graduates are now being recruited and hired. The CIP code change to our graduate energy program aligns the program with expectations of our industry partners looking to employ alumni of the program.

Table 1. Summary of Requested CIP Code and Program Name Changes

Current Program Name	Current CIP Code	Requested Program Name	Requested CIP Code
BSET Fire Safety Engineering Technology	43.0202 Fire Services Administration	BSET Fire and Safety Engineering Technology	15.9999 Engineering Technologies and Engineering-Related Fields, Other
Master of Fire Protection & Administration	43.0299 Fire Protection, other	MS in Fire Protection & Safety Management	15.9999 Engineering Technologies and Engineering-Related Fields, Other
Master of Science Applied Energy & Electromechanical Systems (ENER)	15.0503 Energy Management and Systems Technology / Technician.	No Change	14.9999 Engineering, other

Detail for CIP Code 43.0202 Title: Fire Services Administration. **Definition:** A program focusing on the principles, theory, and practices associated with the management of fire operations, firefighting services, and community fire issues. Includes instruction in fire protection history and theory, incident command leadership, administration of public fire organizations, labor relations, emergency medical services management, fire emergency response strategies and mitigation, legal and regulatory responsibilities, budgeting, public relations, and organizational leadership.

Detail for CIP Code 43.0299 Title: Fire Protection, Other. **Definition:** Any instructional program in fire protection not listed above.

Detail for CIP Code 15.9999 Title: Engineering Technologies and Engineering-Related Fields, Other. **Definition:** Any instructional program in engineering technologies and engineering-related fields not listed above.

Detail for CIP Code 15.0503 Title: Energy Management and Systems Technology/Technician. **Definition:** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing energy-efficient systems or monitoring energy use. Includes instruction in principles of energy conservation, instrumentation calibration, monitoring systems and test procedures, energy loss inspection procedures, energy conservation techniques, and report preparation.

Detail for CIP Code 14.9999 Title: Engineering, Other. **Definition:** Any instructional program in engineering not listed above. *Examples: [Sustainable/Renewable Energy Engineering]*

BSET Fire Safety Engineering Technology CIP Code Change Request
Includes name change to BSET Fire & Safety Engineering Technology

The Fire Safety Engineering Technology (FSET) program is currently listed as CIP code 43.0202 Homeland Security, Law Enforcement, Firefighting and Related Protective Services. A change to CIP code 15.9999 Engineering Technologies and Engineering-Related Fields, Other is requested with a program name change to BSET Fire and Safety Engineering Technology to more adequately reflect the program emphasis.

When the FSET program was implemented in the fall of 1999, 100% of the students were firefighters and the curriculum was geared to meet the needs of that specific group. Over time the demographic of the student enrollment has changed and the number of students who are firefighters or who aspire to be firefighters has dwindled. In addition, a significant number of our students now enter into work fields other than the fire service. These fields are physics and chemistry supported building fire protection design, fire modeling supported fire re-creation, fire suppression system design, or other related occupations including health and safety or risk management. The curriculum has also transformed over time to better prepare the students for the occupations they now enter. These curriculum changes and the resultant change in classroom content has brought the fire safety engineering technology program to a point where it is more closely aligned with the other Engineering Technology programs within the department. Program content has become broader to include occupational safety and safety management.

This CIP code/name change, coupled with a curriculum proposal change that is working through the faculty governance curriculum review process for approval this semester with a fall 2018 implementation date, will align our Fire & Safety program for ABET accreditation which we intend to pursue following approval of the CIP code / name change. The Fire Protection concentration is aligned for Engineering Technology Accreditation Commission (ETAC) of ABET accreditation while the Occupational Safety concentration can seek Applied and Natural Science Commission (ANSAC) of ABET accreditation. We have added content in safety management, ergonomics, environmental protection, and systems safety design to appeal to a broader, more diverse student population while meeting safety management needs in the Greater Charlotte region and beyond for safety professionals. The Safety Management concentration is being reviewed by all ETCM programs for adoption.

Master of Fire Protection & Administration (MFPA) program CIP Code Change Request:
Includes name change to Master of Science in Fire Protection & Safety Management

The Master of Fire Protection and Administration (MFPA) program is currently listed as CIP code 43.0299 Fire Protection other. A change to CIP code 15.9999 Engineering Technologies and Engineering-Related Fields, Other is proposed with a program name change to Master of Science in Fire Protection and Safety Management to more adequately reflect the program emphasis.

The MFPA provides a technical curriculum for those who are in the field of fire protection. With the existing CIP code of 43.0299, it does not reflect the technical content that is present in the

MFPA as the CIP codes designated 43 are under the heading of firefighting and technology. Having the MFPA under the 43 CIP code also precludes the program from being considered as a STEM designated program which limits our potential student pool. Increasingly, many foreign governments and industries will not provide support for participation in programs that are not STEM designated. Having the MFPA program included in the STEM designated Degree programs will open the door to more international students. Students on an F-1 visa (non-immigrant student) may apply for Optional Practical Training (OPT) to gain work experience in the US. This regular OPT is for a 12 month period. Students completing degrees in designated STEM fields may apply for a 24 month OPT extension. We are concurrently processing curriculum proposals to further align the program with the STEM orientation sought by current students, prospective students, faculty and industry. Lastly, the change in CIP code will align the MFPA with the other STEM program designations in the Department.

Master of Science Applied Energy & Electromechanical Systems (ENER) program CIP Code Change Request

The Master of Science Applied Energy & Electromechanical Systems (ENER) program CIP code is currently listed as 15.0503 Energy Management and Systems Technology/Technician. A change to CIP code 14.9999 Engineering, other is requested to accurately reflect the focus and evolving nature of the program offering. A change to the current CIP code designation of 15.0503 Energy Management and Systems Technology/Technician is necessary to more accurately reflect the current status of the program offering as it is currently being delivered. CIP code 14.9999 Engineering, other is the best match for the program for several reasons. The National Center For Education Statistics (NCES) website which defines the 14.9999 code gives as an illustrative example “Sustainable/Renewable Energy Engineering”, a reasonable match for our Applied Energy program. Other universities with similar programs, such as UMass, Tennessee, Colorado State, have classified their energy programs as 14.9999.

This degree serves the College of Engineering as the only COE stand-alone masters level energy degree offering (other than energy concentrations offered by other departments). An engineering CIP code more accurately reflects the multidisciplinary, collaborative and applied engineering nature of the program delivered, as well as the research performed by the program’s faculty and students. Faculty delivering the program hold graduate faculty status, most with terminal degrees in engineering, and many with professional engineering registration.

Typical job titles of program graduates include job titles such as Applications Engineer, Senior Product Design Engineer, Senior Design Engineer, and Test Engineer. These job titles are more consistent with and more accurately represented by the word “Engineering” in the CIP code than by the word “Technician” in the current CIP code title.

University Energy Production & Infrastructure (EPIC) partners such as Duke Energy and Framatome (formerly Areva NP) have indicated their desire and need for the program to have an engineering CIP code designation to provide the value necessary to their respective organizations. Many of our partners desire an engineering program designation to match their organizational needs in serving and promoting employees on the engineering licensure path. This

misalignment of CIP code and actual program content continues to hamper enrollment growth and has resulted in the loss of prospective students (both domestic and international) to the ENER program. The requested change in CIP code better serves our industry stakeholders.

The words technology and technician in our current CIP code description deters some applicants, employers and partners. An Engineering CIP code more accurately describes the program being delivered and would further enhance recruitment, both internationally and domestically. For working professionals, often the requirement for company approval and financial support is an engineering program.