Missouri Department of Higher Education

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NEW PROGRAM PROPOSAL FORM

Sponsoring Institution(s): University of Central Missouri

Program Title: Accelerated BS MS Occupational Safety

Degree/Certificate: combined BS and MS

Options: none

Delivery Site(s): Warrensburg, Lee's Summit, online

CIP Classification: 150701

*CIP code can be cross-referenced with programs offered in your region on MDHE's program inventory highered.mo.gov/ProgramInventory/search.jsp

Implementation Date: August 2016

Cooperative Partners: none

*If this is a collaborative program, form CL must be included with this proposal

AUTHORIZATION:

Dr. Kim Andrews / Vice Provost for Academic Prog & Services 03/29/2016

Name/Title of Institutional Officer Signature Date

Leigh Ann Blunt, Ed.D., CSP; Department Chair 660-543-4963

Person to Contact for More Information Telephone

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STUDENT ENROLLMENT PROJECTIONS

Year	1	2	3	4	5
Full Time	5	8	13	18	23
Part Time	0	0	2	2	2
Total	5	8	15	20	25

Please provide a rationale regarding how student enrollment projections were calculated:

We have several students in the program who have already indicated a desire to get into an accelerated degree program. These estimates are conservative, but we have more than 5 graduates from our undergraduate programs that move directly into the MS degree and many that come back for an MS degree after they start working. We anticipate the number to steadily increase based on the cost/benefit of completing both at the same time with the option of finishing the MS degree online. Most students will want to finish as quickly as possible, but there will be a couple who will take employment after the undergraduate courses are complete and will take the graduate courses part time while working.

Provide a **rationale** for proposing this program, including **evidence of market demand and societal need supported by research:**

This program combines existing degrees. We currently have 316 undergraduate majors and 84 majors in the MS Occupational Safety Management degree. The demand is already proven as stand-alone degrees. This opportunity to earn both in a shortened timeline will attract students looking to maximize earning potential and minimize cost. We have 100% employment in the MS degree, and a 96% employment rate in the BS degree (formerly called Safety Management, but now Occupational Safety with 3 options), and 100% employment in the BS Occupational Safety and Health (ABET accredited). The National Institute for Occupational Safety and

Health (NIOSH) published the National Assessment of the Occupational Safety and Health Workforce in October of 2011, and the key finding determined that "based on current trends, future national demand for occupational safety and health services will significantly outstrip the number of professionals with the necessary training, education, and experience to provide such services" (http://www.cdc.gov/niosh/oshworkforce/#report).

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Program Duplication

Program duplication: This accelerated degree program is a combination of two existing degree programs, both of which are unique in the state. The undergraduate and graduate degrees can still be earned separately, this option simply offers an accelerated path to earning both, saving time and expense.

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PROGRAM STRUCTURE

A. Total credits required for graduation: 140

B. Residency requirements, if any: none

C. General education: Total credits: 42

Courses (specific courses OR distribution area and credits):

Course Number	Credits	Course Title
CTE 3060	3	Technical Writing
MATH 1111	3	College Algebra
Env Mgmt Option		
BIOL 1005/1006	4	Intro to Environmental Science (3) with Environ Science/Ecology lab (1)
CHEM 1103	3	Intro to Sciences: Chemistry
GEOG 2101	3	Intro to Sustainability
GEOG 2300	2	Acquiring & Managing Spatial Info
Safety Mgmt Option		
CHEM 1103	3	Intro to Sciences: Chemistry
Choose 1 of following	4-5	
PHYS 1104		Intro to Sciences: Physics (4)
PHYS 1101		College Physics (4)
PHYS 2121		University Physics (5)
BIOL 1005/1006		Intro to Environmental Science (3) with Environ Science/Ecology lab (1)
Occ Health Mgt Option		
CHEM 1104	4	Intro to the Sciences: Chemistry
BIOL 2010	3	Human Biology
PHYS 1003	3	Intro to the Sciences: Phyiscs
		These are the gen ed courses required for all students and the courses required
		within each option. The remaining hours of general education are not
		specifically dictated and students choose their courses in each category.

D. Major requirements: Total credits: 98

**indicates a grade of C or better is required in the course*

Course Number	Credits	Course Title
UG Core Courses		
SAFE 1000 *	1	Exploring the Safety Sciences
SAFE 2900	3	Applied Sciences for Professional Studies
SAFE 3000 *	3	Principles of Accident Causation and Prevention

SAFE 3070	3	Safety Leadership
SAFE 3120 *	3	Industrial Hygiene
SAFE 3430 *	3	Industrial Hazard Control
SAFE 4000	3	Ergonomics in Safety and Health
SAFE 4010	3	Accident Investigation
SAFE 4025	3	Worker's Compensation and Legal Aspects of Safety
SAFE 4035	3	Safety Program Management
SAFE 4055 *	3	Safety Capstone Experience
SAFE 4140	3	Safety and Health Laboratory
SAFE 4215	3	Transportation & Storage of Hazardous Materials
SAFE 4425	3	Safety and Health Legislation & Standards
SAFE 4435	3	Environmental Compliance
SAFE 4560	3	Systems Safety
SAFE 4850	3	Industrial Fire Protection
SAFE 4940	3	Statistical Analysis for Risk Management
SAFE 4990 *	4	Internship in Safety Sciences
Option 1 Courses		Environmental Management Option
SAFE 4160	3	Industrial Ventilation
SAFE 4440	3	Air Quality and Pollution Prevention
SAFE 4445	3	Water Quality & Waste Water Management
SAFE 4450	3	Environmental Remediation
Approved Elective	3	Any SAFE course not already required in the core or the option
Option 2 Courses		Safety Management Option
SAFE 4515	3	High Hazard Industries
SAFE 3015	3	Emergency Preparedness
SAFE 4510	3	Loss Control
Approved Electives	6	Any SAFE course not already required in the core or the option
Option 3 Courses		Occupational Health Management Option
CHEM 1604 *	4	Elementary Organic and Biochemistry
BIOL 2010 *	3	Human Biology
SAFE 4515	3	High Hazard Industries
SAFE 4160	3	Industrial Ventilation
SAFE 4150	2	Noise Measurements
Graduate Core Courses		
SAFE 5010	3	Org, Administration and Supervision of Safety Programs
SAFE 5120	3	Principles of Industrial Hygiene
SAFE 5430	3	Occupational Hazard Management
SAFE 5450	3	Sustainability and Safety
SAFE 5530	3	Loss Control and Risk Management
SAFE 5940	3	Research in Safety Sciences I
SAFE 6930	3	Research in Safety Sciences II
Graduate Electives	6	Choose any two – all are 3 credit hours
SAFE 5015		Emergency Planning and Operations
SAFE 5020		Societal Impact of Disasters
SAFE 5125		Advanced Industrial Hygiene
SAFE 5170		Industrial Toxicology
SAFE 5180		Principles of Epidemiology

SAFE 5800		Managing Fire Risk
SAFE 6920		EHS Seminar
SAFE 6940		Internship in Safety Sciences
SAFE 6950		Thesis

E. Free elective credits:
0
(Sum of C, D, and E should equal A.)

F. Requirements for thesis, internship or other capstone experience:
Students are required to complete SAFE 4055 Safety Capstone Experience as part of the undergraduate degree requirements. Students must also complete an internship at the undergraduate level, and may elect to do another internship as part of their graduate approved electives. All students will complete SAFE 6930 Research in Safety Sciences II, which requires the full development and execution of a research project and paper. Students may elect to formalize the paper in a thesis course, which also requires that they prepare and submit a paper from their research for publication to a peer-reviewed journal.

G. Any unique features such as interdepartmental cooperation:
NA

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PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

Institution Name University of Central Missouri
Program Name Accelerated BS MS Occupational Safety
Date February 11, 2016

(Although all of the following guidelines may not be applicable to the proposed program, please carefully consider the elements in each area and respond as completely as possible in the format below. Quantification of performance goals should be included wherever possible.)

1. Student Preparation

- Any special admissions procedures or student qualifications required for this program which exceed regular university admissions, standards, e.g., ACT score, completion of core curriculum, portfolio, personal interview, etc. Please note if no special preparation will be required.
  Students seeking admission into the accelerated degree are required to be a declared major in Occuaptional Safety (any option) and have completed SAFE 3430 Industrial Hazard Control and SAFE 3120 Industrial Hygiene with the grade of C or better in both, and have a major GPA of at least a 3.0. To accomplish this, student must complete pre-requisite course work that includes 7 hours of SAFE courses, college algebra, and chemistry. Additonally, admission requires a cumulative GPA of 2.5 or higher, which is the current undergraduate GPA necessary for admission into the stand alone MS Occupational Safety Mangement degree.

- Characteristics of a specific population to be served, if applicable.
  The program serves central Missouri and the surrounding area by providing a expeditious path for outstanding students to earn an undergraduate and graduate degree in one accelerated program. It provides the additional opportunity of allowing a student to finish the graduate portion of the degree online should they identify a job opportunity, allowing them the flexibility to move and continue towards degree completion.

2. Faculty Characteristics

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.
  Faculty must have a minimum of an MS degree with educational and or work experience in occupational safety and health or a closely related area. Faculty are required to seek professional certification and/or a doctorate prior to tenure.

- Estimated percentage of credit hours that will be assigned to full time faculty. Please use the term "full time faculty" (and not FTE) in your descriptions here.

Full time faculty teach a minimum of 90% of the credit hours in the combined degree.

- Expectations for professional activities, special student contact, teaching/learning innovation.
  Faculty teaching in the program are expected to meet the same set of criteria necessary to tach courses in the current BS and MS programs in safety sciences. Faculty are expected to maintain scholarly activity through publications and presentations, participate in professional society activities, advise students, maintain their technical currency, engage in service to the university and the profession, assist with accreditation efforts, and focus on teaching excellence.

3. Enrollment Projections

- Student FTE majoring in program by the end of five years.
  25 students

- Percent of full time and part time enrollment by the end of five years.
  90% full time, 5% part time

4. Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.
  Three years: 5 per year; Five years: 10

- Special skills specific to the program.
  Students who graduate from are programs have the necessary skills to serve as environmental, health and safety managers to help protect people, property and the environment. The safety profession is a growing field requiring education and often certification to seek management and corporate level positions. Students must be able to apply the principles of math and science to develop technical solutions to occupational safety and health problems and to mitigate hazardous exposures.

- Proportion of students who will achieve licensing, certification, or registration.
  We are in process of submitting the separate degrees to ABET for accreditation, and will also submit the combined degree. Once accredited, 100% of students will achieve the Graduate Safety Practitioner designation from the Board of Certified Safety Professionals, which leads to the Certified Safety Professional certification after an additional 5 years of practice. Until we obtain accreditation, students must apply for and pass an exam to earn the Associate Safety Professional and then the Certified Safety Professional certification, both of which require working experience. It is anticipated that

at least half of the students would seek this certification as it is becoming required for many jobs in the profession.

- Performance on national and/or local assessments, e.g., percent of students scoring above the 50th percentile on normed tests; percent of students achieving minimal cut-scores on criterion-referenced tests. Include expected results on assessments of general education and on exit assessments in a particular discipline as well as the name of any nationally recognized assessments used.
  Entering undergraduates have scored an average of 21.32 composite on the ACT in the last 5 years combined, and an average of 22.21 on the ACT Science Reasoning section. In the last 5 years combined, 97% of undergraduate students scored at or above the university required score of 425 on our general education assessment. Our students do not take any national assessements as part of the program.

- Placement rates in related fields, in other fields, unemployed.
  For 2014, we had 56 students who graduated from our programs respond to the career services follow-up survey. Of these, 50 were employed, 5 were seeking contining education, and one undergraduate student was unemployed and seeking a job. The final destination success rate was 100% in our MS degrees, 100% in our BS Occupational Safety and Health degree, and 96% in our BS Safety Management degree. Additionally, by earning both the BS and MS degrees, students will earn higher salaries: for the students identified above, the salary of the BS degree ranges from $55,001-$60,000 and the salary of the MS degree ranges from $65,001-$70,000.

- Transfer rates, continuous study.
  In 2014, we had 103 students transfer into our degree programs. The remaining 322 students were not transfer students UCM.

5. Program Accreditation

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline. **If there are no plans to seek specialized accreditation, please provide a rationale.**
  As soon as we have one graduate from the degree, we can take it to ABET for accredition. We recently modified the undergraduate and graduate degree we combined for this accelerated program and anticipate having a graduate from each revised program in the next academic year. Once we have a graduate, we will take the separate degrees and the combined degree forward, with a request for evaluation due in January of a year, followed by an onsite visit the following fall semester. We currently have two ABET accredited degrees with a site visit in fall 2016 for reaccreditation.

6. Alumni and Employer Survey

- Expected satisfaction rates for alumni, *including timing and method of surveys.*

We expect overall satisfaction rates for graduates of the accelerated program to be in excess of 90% since students admitted into this program will have demonstrated high levels of academic achievement. We currently have surveys of alum for each of our degree programs. Timing of surveys would be at least once an accreditation cycle (every 4-6 years) and would be through an electronic survey tool.

- Expected satisfaction rates for employers, including timing and method of surveys.
  We expect the overall satisfaction rates for our employers to be in excess of 95%. We have an advisory board and continually seek feedback from industry to ensure our programs are meeting the needs of the employers. We will implement a survey specifically for this accelerated degree and seek feedback at least once per accreditation cycle (every 4-6 years) through an electronic survey tool. Between surveys, we will continue to utilize feedback from our advisory board and from employers, many of whom come to campus to recruit our students.

7. Institutional Characteristics

- Characteristics demonstrating why your institution is particularly well-equipped to support the program.

The program simply combines two already existing degree programs. We are unique in the state to have occupational safety degrees. Our undergraduate BS OSH is one of only 8 undergraduate degrees in safety accredited by ABET.

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Student Learning Outcomes

Student Learning Outcomes: At the time of graduation, students with a Master of Science degree in Occupational Safety Management will be able to:

- Demonstrate the ability to communicate professional verbally and in writing
- Demonstrate knowledge of professional integrity and ethical standards
- Recognize the importance of contemporary, global and societal issues as they relate to the practice of occupational safety and health
- Develop, coordinate and/or participate on multidisciplinary teams to protect people, property and the environment
- Recognize the importance of life-long learning for the purpose of enhancing discipline specific technical competencies
- Analyze injury, illness and liability trends to help establish priority direction
- Organize limited resources for optimum risk control
- Develop, implement and evaluate hazard control processes for a performance safety program