**CTE Program Narrative**

**NAME OF COLLEGE: Bakersfield College**

**CONTACT:** Catherine Jones

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**DATE:** April 27, 2020

**DIVISION:** Engineering/Industrial Technology

**FACULTY:** Catherine Jones

**PROGRAM NAME:** Occupational Safety and Risk Management

**REASON FOR APPROVAL REQUEST (Check One):**

[x]  New Program Proposal

[x]  Program Revision Proposal (Substantial or TOP Code Changes)

[ ] Locally Approved

**TYPE OF DEGREE:**

 [x]  Certificate of Achievement

 [ ]  Associate of Arts

 [ ]  Associate of Science

 [ ]  Associate of Arts for Transfer

 [ ]  Associate of Science for Transfer

[ ]  Other

**TRANSFER APPLICABILITY:** Yes [ ]  No [x]

**ATTACHMENTS/INFORMATION REQUIRED:**

 Labor/Job Market Data and Analysis

 Advisory Committee Meeting Minutes

 List of Advisory Committee Members

 Employer Survey, if applicable

1. **Statement of Program Goals and Objectives**

*Identify the goals and objectives of the program. For CTE programs, the statement must include the main competencies students will have achieved that are required for a specific occupation. The statement must, at a minimum, clearly indicate the specific occupations or fields the program will prepare students to enter and the basic occupational competencies students will acquire.*

*If the program is selective, describe relevant entry criteria and the selection process for admission to the program. Specify all mandatory fees that students will incur for the program aside from the ordinary course enrollment fee.*

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| This OSRM COA offers working professionals the opportunity to increase their education and advance their career in the occupational safety and risk management profession. The objectives of this program are to provide students who are currently working in the profession, or who are newly assigned safety/risk management duties with the necessary educational base to better perform their job duties.Program Learning Outcomes:1. Students will demonstrate competency in risk assessment and the measurement, analysis, and interpretation of health and safety data.2. Students will be able to design and provide appropriate safety education and training.3. Students will be able to design and apply appropriate risk control methods, procedures, and programs incorporating current regulations and utilizing appropriate technology.4. Students will demonstrate knowledge of contemporary occupational safety and risk management issues within the local, regional and societal context and apply the applicable regulatory framework. |

1. **Catalog Description**

*Enter exactly as it will appear in the catalog, including program outcomes. The description must also*

* *Convey the certificate’s goals(s) and objectives*
* *Provide an overview of the knowledge and skills that students who complete the requirements must demonstrate (student learning outcomes)*
* *List all prerequisite skills or enrollment limitations*
* *Mention any risks, such as occupations that are inherently competitive or low-salaried and/or occupational areas where inexperienced graduates are not generally hired.*
* *For CTE programs, the description must list the potential careers students may enter upon completion.*
* *Convey what the student may expect as an outcome*

*If applicable, reference accrediting and/or licensing standards. If there is a widely recognized certification provided by a professional association, specify whether the program will fully prepare completers for the recognized professional certification.*

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| The Certificate of Achievement in Occupational Safety and Risk Management provides broad based professional preparation in the field of occupational safety and risk management. Safety professionals strive to protect people, property, and the environment using hazard identification and risk control techniques, working to balance safety and compliance with production and profit. The curriculum uses scientific foundations and regulatory frameworks and includes courses in occupational safety, occupational health, risk management, and environmental health. To Achieve the Certificate of Achievement: Upon completion of the following courses with at least a ‘C’ grade in each course, the student will be awarded a Certificate of Achievement. |

1. **Program Requirements**

*The program requirements must be consistent with the catalog description. The number of units, specific course requirements and the sequence of the courses must be coherent, complete and appropriate. Display the program requirements in a table format that includes all courses required for completion of the program (core requirements and required or restricted electives), subtotal of core units, and total program units. For each course, indicate the course department number, course title, and unit value.*

Program requirements and sequence:

**Required Courses:**

**BIOLB18 - Essentials of Human Anatomy and Physiology** **4**

**OSRMB10 - Occupational Safety** **3**

**OSRMB12 - Occupational Health** **3**

**OSRMB16 - Managing Employee Safety and Health** **3**

**OSRMB18 - Occupational Regulations and Regulators** **3**

**OSRMB20 - Environmental Health and Hazardous Materials** **3**

**OSRMB26 - Risk Management** **3**

**PHSCB12 - Physical Science** **4**

**Total Credits** **26**

Sequence:

#### **Semester 1**

**BIOLB18 - Essentials of Human Anatomy and Physiology 4**

**OSRMB10 - Occupational Safety 3**

**OSRMB18 - Environmental, Health, and Safety Law and Administration 3**

**Total Credits: 10**

#### **Semester 2**

**OSRMB16 - Managing Employee Safety and Health 3**

**OSRMB12 – Occupational Health 3**

**PHSCB12 - Physical Science 4**

**Total Credits: 10**

#### **Semester 3**

**OSRMB20 - Environmental Health and Hazardous Materials 3**

**OSRMB26 - Risk Management 3**

**Total Credits: 6**

1. **Master Planning** (Background and Rationale)

*Given the stated goals and objectives, address the role the proposed program will fulfill in the college’s mission and curriculum offerings. This discussion may include some history of the program proposal origins, a description of the program purpose, and/or the program’s relevancy for the region and college.*

*The proposal must demonstrate a need for the program that meets the stated goals and objectives in the region the college proposes to serve with the certificate. A proposed new certificate must not cause undue competition with an existing program at another college.*

*If any expenditures for facilities, equipment or library and learning resources are planned, please explain the specific needs in this section.*

*If the program is to be offered in close cooperation with one or more specific employers, a discussion of the relationship must be provided.*

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| The core mission of Bakersfield College is to provide opportunities for students from diverse backgrounds to obtain Associate degrees and transfer preparation to Baccalaureate programs. The programs and learning environment is intended to foster student’s ability to think critically, communicate effectively, and demonstrate competency and skills necessary to engage productively in their communities and the world. The OSRM program aligns with this mission by meeting an existing local need for providing students with career development and professional advancement. Bakersfield College launched its Baccalaureate program in Industrial Automation with strong support from industry partners. Recognizing that the majority of those partners also have safety, risk management, and compliance issues as integral components of their operations, many of the same industry partners also support the creation of the OSRM program and serve on the OSRM advisory committee. |

1. **Need for Program**
	1. Enrollment and Completer Projections

*Address and justify the number of projected students or “annual completers” to be awarded the certificate each year after the program is fully established.*

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| Once the program is fully established, approximately 20 annual completers are projected. This program is strongly supported by local industry. The local labor market is strong with potential Kern County employers existing in the following industries: * Aerospace & Defense
* Agriculture
* Construction
* Energy & Natural Resource
* Government
* Transportation
* Manufacturing
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* 1. Labor Market Information (LMI)

*Summarize the Labor Market Information (LMI) and employment outlook (Including citation for the source of the data) for students exiting the program.*

*Enter table or chart as a separate attachment.*

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| The following information on job outlook for the occupational safety and health profession comes directly from The Bureau of Labor Statistics, Occupational Outlook Handbook. The BLS data was last modified January, 30 2018."Employment of occupational health and safety specialists and technicians is expected to increase 9 percent during the 2016 to 2026 decade, about as fast as the average for all occupations, reflecting a balance of continuing public demand for a safe and healthy work environment against the desire for smaller government and fewer regulations. Emergency preparedness will continue to increase in importance, creating demand for these workers. More specialists will be needed to cope with technological advances in safety equipment and threats, changing regulations, and increasing public expectations. In private industry, employment growth will reflect overall business growth and continuing self-enforcement of government and company regulations and policies.Over the past two decades, insurance and worker’s compensation costs have risen and have become a financial concern for many employers and insurance companies. As a result, job growth should be good for those specializing in loss prevention, especially in construction safety and in ergonomics.""Median annual earnings of occupational health and safety specialists and technicians were $54,920 in May 2016. The middle 50 percent earned between $48,820 and $70,920. The lowest 10 percent earned less than $41,320, and the highest 10 percent earned more than $104,4600. |

* 1. Employer Survey (if applicable)

*When strong LMI data is not available, an employer survey may be submitted. Provide a copy of the survey, including the number of those surveyed, number of responses, and a summary of the results. The survey must address the extent to which the proposed degree or certificate will be valued by employers.*

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| na |

1. **Place of Program in Curriculum/Similar Programs**

*Review the college’s existing program inventory, then address the following questions:*

* *Do any active inventory records need to be made inactive or changed in connection with the approval or the proposed program? If yes, please specify.*
* *Does the program replace any existing program(s) on the college’s inventory? Provide relevant details if this program is related to the termination or scaling down of another program(s).*
* *What related programs are offered by the college?*

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| This program does not change or replace any existing programs.  |

1. **Similar Programs at Other Colleges in Service Area**

*List similar programs offered at other colleges within the Central/Mother Lode Region that may be adversely impacted. Enter ‘none’ if there are no similar programs.*

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| **College** | **Program** |
| n/a |  |

**Supporting documentation required**

**Labor Market Information**

*In a separate attachment, provide current Labor Market Information showing that jobs are available for program completers within the local service area. Statewide or national LMI may be included as supplementary support but evidence of need in the specific college service area or region is also necessary.*

**List of Members of Advisory Committee**

*This list must include advisory committee member names, job titles, and affiliations.*

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| **Name** | **Title** | **Affiliation** |
| David Garza | District HSE Manager | PCL Industries |
| Joe Barifi | Manager Environmental Health & Safety, and Professor | Aera Energy/CSUB |
| Joel Sherman | Director Environmental Health & Safety, Compliance, and Workers’ Compensation | Grimmway Farms |
| John Pryor | Principal | Risk Management Consultant |
| Ben Laverty III | President | California Safety Training Corp |
| Jeff Rasmussen | President | Kern County Farm Bureau |
| Paul Niemer | Safety/Personnel Development Director  | Sierra Pacific Industries |
| Jose Perez | Sr. Manager Environmental Heath and Safety | Wonderful Company |
| Vicky Furnish | Environmental Specialist | Southern California Edison |
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**Recommendation of Advisory Committee** (Meeting Minutes)

*In a separate attachment, provide minutes of the advisory committee meetings at which the program was discussed and approved, with relevant areas highlighted, as well as a summary of the advisory committee recommendations.*



**Occupational Safety and Risk Management**

Advisory Committee Meeting

4/12/2019

Minutes

**I. Committee Introductions:**

On Conference call: David Garza, Joe Bariffi, John Pryor, Isabel Bravo

Follow-Up Offline: Vicky Furnish, Jose Perez, Ben Laverty

**II. Program Enrollment Update**

13 currently declared OSRM as major

1 to graduate in May 2019

2-3 to graduate next May 2020

Lost 5 students to jobs and 2 to Columbia Southern

**III. Internships**

Students interviewed with:

* Granite
* Grimmway
* Trinity
* PCL
* Aera
* Wonderful (not internship)

2 students placed, 2 more pending

Working on making more contacts, several business expressed interest at the recent Career Expo. Joe mentioned offering workshops to assist students with interview skills, Catherine will follow up. John reported that Campbell sold Bolthouse and the prior Bolthouse administrator has returned. This might be an opportunity to create a better working partnership with Bolthouse.

**IV. Courses/Textbooks**

The current semester is OSRM B16 Managing Employee Safety and Health, which was taught last Spring and OSRM B26 Risk Management and OSRM B20 Environmental Health and Hazardous Materials, which are being taught for the first time. That completes the core program development – all six courses have been taught at least once. Each fall will be occupational safety, occupational health, and occupational regulations and regulators.

Catherine discussed the effort to reduce textbook costs and have been able to reduce it to two required textbooks. One is for the occupational health class, the other is for risk management. The risk management text is a custom order that is working very well. Materials for other courses are agency materials, regulations, open-source publications, etc. Vicky Furnish was able to obtain consent to copy a hazardous materials handbook which is being used in OSRM B20.

**V. Equipment**

Primary equipment purchasing is complete and the program has obtained the basics as well as some nice equipment. Respirators, sampling equipment, PID, noise dosimeter, hazardous dust meter, WBGT, misc. PPE, and a 4-gas meter. Joe mentioned possibly being able to obtain air-line equip and colorimetric tubes if needed. Isabel mentioned respirator fit testing equipment and electricity test equipment. Catherine advised the fit testing kit is in progress (a fit test kit was ordered, but not delivered correctly). Voltmeter ammeter will be ordered. Catherine will work with Joe on possibly coordinating a class demo of a port-a-count machine

**VI. Non-Credit Courses**

Working with KCCD business center to develop non-credit courses. NFPA70e is the top priority with several other safety related courses. They would be offered through KCCD independent and separate from the OSRM degree program. The courses would be geared toward industry through the business center.

**VII. Certificate of Completion**

There has been interest from students and administration in creating a certificate of completion for OSRM. Initially, the advisory committee was not fully supportive of a certificate option as it does not provide a clear career entry path. However, for those students who already have a degree, and for those who are already currently employed, a certificate option would provide value. Therefore, the committee agreed to support an OSRM certificate. It will be comprised of the same core courses, which would enable students to achieve some college credit.

**VIII. Online Program**

Catherine reported there is increasing interest within administration to develop AS degrees that can be obtained online. The OSRM program was approached to determine if it could be offered online. The committee was in agreement that safety is not suitable for a fully online platform. The interpersonal engagement and hands-on component is essential.

**IX. Columbia Southern**

Catherine will continue to support student transfer to Columbia Southern despite the current administration’s reluctance to sign an articulation agreement. In addition, she will follow up with Eastern Kentucky, Montana Tech, and possibly others as online program options for baccalaureate degrees.

**Job Outlook**

The following information on job outlook for the occupational safety and health profession comes directly from The Bureau of Labor Statistics, Occupational Outlook Handbook. The BLS data was last modified January, 30 2018.

"Employment of occupational health and safety specialists and technicians is expected to increase 9 percent during the 2016 to 2026 decade, about as fast as the average for all occupations, reflecting a balance of continuing public demand for a safe and healthy work environment against the desire for smaller government and fewer regulations. Emergency preparedness will continue to increase in importance, creating demand for these workers. More specialists will be needed to cope with technological advances in safety equipment and threats, changing regulations, and increasing public expectations. In private industry, employment growth will reflect overall business growth and continuing self-enforcement of government and company regulations and policies.

Over the past two decades, insurance and worker’s compensation costs have risen and have become a financial concern for many employers and insurance companies. As a result, job growth should be good for those specializing in loss prevention, especially in construction safety and in ergonomics."

**Potential Salary**

"Median annual earnings of occupational health and safety specialists and technicians were $54,920 in May 2016. The middle 50 percent earned between $48,820 and $70,920. The lowest 10 percent earned less than $41,320, and the highest 10 percent earned more than $104,4600. Median annual earnings in the industries employing the largest numbers of occupational health and safety specialists and technicians in May 2016 were:

* Federal Government $68,890
* Management, scientific, and technical consulting services $63,130
* General medical and surgical hospitals $59,200
* Local government $52,110
* State government $49,690

Most occupational health and safety specialists and technicians work in large private firms or for Federal, State, and local governments, most of which generally offer benefits more generous than those offered by smaller firms."

Commentary from the American Society of Safety Professionals (ASSE): http://www.asse.org/professionalaffairs/job-outlook/

The information from the BLS Occupational Outlook Handbook is good news for the safety profession. Job growth is in line with many other professions - industry, government, and the education sector will all continue to hire SH&E professionals.

According to BLS, there will be job opportunities for new SH&E professionals to enter the field as older professionals retire. For decades, ASSE has expressed concern that a large number of individuals will begin to retire from the safety profession, leaving a gap in the SH&E workforce. This, in theory, is because many people started their careers in safety after the Occupational Safety and Health Act of 1970. The legislation brought an increasing amount of attention on workplace safety and many people seized the opportunity to enter a profession that was in high-demand by companies at the time. Now, almost 40 years later, many of the people that entered the profession around 1970 will, and have, started to retire. As these veteran safety professionals leave the field, it will create a demand for new SH&E professionals. Members of ASSE have long expressed concern that the supply of SH&E professionals will not be able to keep with demand once veteran SH&E professionals start to retire in large numbers.

**Subfields and Emerging Specialty Areas**

The kind of work that a safety professional does varies widely depending on each individual’s education, experience, and unique passions to protect people, property and the environment. Below are a few subfields and emerging specialty areas that SH&E professionals concentrate on to put a unique spin on their careers!

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| --- | --- |
| Emergency ManagementEngineeringEngineering TechnologyEnvironmentalEnvironmental EngineeringEnvironmental HealthErgonomicsFire ProtectionFire Protection and Safety | Fire Protection and EngineeringFire ScienceHealth PhysicsIndustrial HygieneMining EngineeringPublic HealthPublic SafetyRisk ManagementSecurity |

ASSE has also identified specific industries or fields where safety professionals often work. Within ASSE, these groups are called Practice Specialties and they include: