



## 2018-19 Program Review – Career Education

### **Program Overview**

Please verify the mission statement for your program. If there is no mission statement listed, please add it here.

The mission of the Fire Science Program is to provide students with a comprehensive learning experience that will serve as a gateway for successful careers as first responders in public safety organizations across the United States.

List your Faculty and/or Staff

Demond Simmons, David Brue, Quentin McWhorther, Sean Gascie, Wellington Jackson, Gil Cody, Damon Covington, Felicia Bryant and Julie Green.

The Program Goals below are from your most recent Program Review or APU. If none are listed, please add your most recent program goals. Then, indicate the status of this goal, and which College and District goal your program goal aligns to. If your goal has been completed, please answer the follow up question regarding how you measured the achievement of this goal.

1. Update the Fire Technology degree option—completed.
2. Add three certificate of achievement options—completed.
3. Add additional State Fire Training courses to curriculum—completed.
4. Partner with the Oakland Unified School District—completed.
5. Create a digital platform for marketing the program with an outside entity—in progress.
6. Recertify the Firefighter I Academy with State Fire Training—in progress.
7. Hire additional faculty and staff—in progress.
8. Purchase required equipment for the Firefighter I Academy—completed.

Describe your current utilization of facilities, including labs and other space

On campus: two classrooms and a shared office cubicle. Off campus: one classroom and training tower that belong to the City of Oakland and its fire department.

## **Career Education**

Using the [LaunchBoard](#) what are the job placement rates for your program for the past three years? (What % of your graduates have secured employment in the field within 3 months of leaving the program?). Note: you will need to establish a username and password for the LaunchBoard if you don't already have one.

<b>2014-15 Job Placement %</b>	<b>% Employed in the field within 3 months</b>	<b>2015-16 Job Placement %</b>	<b>% Employed in the field within 3 months</b>	<b>2016-17 Job Placement %</b>	<b>% Employed in the field within 3 months</b>
No data for Fire Science		No data for Fire Science		No data for Fire Science	

Using the [LaunchBoard](#), what are the projected job openings in your discipline for the next three years?

Fire Science: projected opening for all positions 2015 – 2020 = 420

How is your discipline or program responding with regard to changes in labor market demand?

The demand for firefighters is moderately high in the Bay Area region—the program currently offers seven fire science courses. Starting Fall 2019, we have added an additional 10 other courses that will allow current fire service personnel an opportunity to work on two-year degree and certificate of achievement options.

Do you have an industry advisory board in place?

Yes.

Has your industry advisory board met regularly (at least once per quarter or semester)?

Yes.

Please list of your industry advisory board members.

Demond Simmons, Judon Cherry, Erik Logan, Charleton Lightfoot, and Felicia Wanzo-Bryant.

Please describe the number of activities and recommendations resulting from advisory committee meetings that have occurred in the past three years. What information was presented that required changes to be made to your program?

1. Update all Fire Science courses (completed).
2. Partner with an outside agency to increase the number of non-traditional students in the program (currently working with a vendor to develop a digital recruitment platform).
3. Add degree and certificate options (completed).
4. Partner with State Fire Training in an effort to offer Level II/III certification courses through the college (completed).
5. Offer professional development workshops and symposiums (first event is slated for May 2019).

Does your program require state or national licensing? If yes, please specify. What is your college's set standard passing rate for this exam or license? If yes, what is the name of the exam or License? State the set standard pass rate.

Yes. Students in the fire academy (FISCI 211) have yet to participate in the state's mandatory computer based testing program. We are slated to receive accreditation in Fall 2019.

Do your students participate in other third party certifications? If so, please provide their success rates (include the % of completing students successfully getting certified). If yes, what is the third party certification? State the set standard pass rate

N/A.

Is your program working with a Deputy Sector Navigator?

No.

If yes, briefly describe your program's work with the Deputy Sector Navigator.

N/A

What programs similar to yours exist in the surrounding area or at nearby East bay colleges? (Micro region in [LaunchBoard](#))

Chabot, Los Positas, Contra Costa College, and Los Medanos.

In which ways is your program collaborating with other community colleges in the region?

1. Bay Area Regional Joint Venture/Public Safety—shared equipment and fire related props—best practices in instructional delivery—working with State Fire Training to establish objectives outlined in their Blueprint 2020 strategic plan.

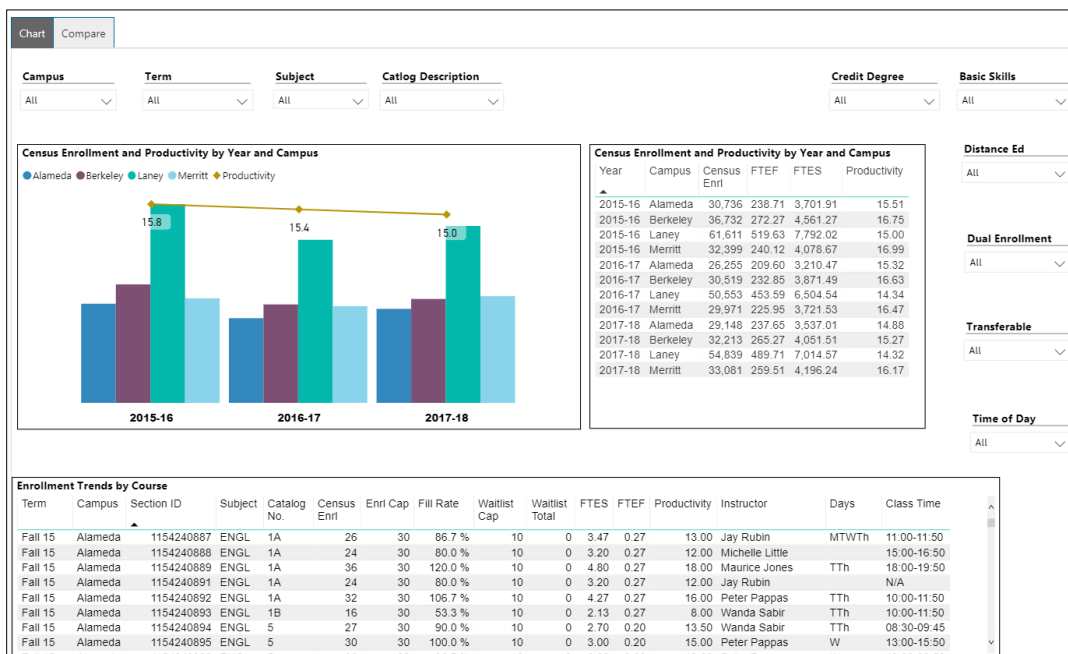
Please list and briefly describe the grant name, granting agency, and the goals of each grant as it relates to you discipline/department/program

N/A

How is your program using Strong Workforce Funds?

Funds are being used to purchase equipment/supplies to assist with course delivery, and to satisfy requirements for our Firefighter I Academy accreditation. In addition, funds are being used to update curriculum, add hybrid courses, and hire instructional aides for FISCO 211.

## Enrollment Trends



## Enrollment Trends Power BI dashboard

Note: Please consider the most recent 3 years when answering the questions below.

Set the filters above to your discipline, and discuss enrollment trends over the past three years

Enrollment in fire science courses range from 16 – 29 students for the past three years. FISC1 211 has a maximum enrollment number of 25 students per section due to the mandated student/instructor ratio for the lab portion of the course.

Set the filter above to consider whether the time of day each course is offered meets the needs of students.

Are courses scheduled in a manner that meets student needs and demands? How do you know?

Yes. Through casual discussions, many students work during the day time. Additionally, we offer dual enrollment courses with students from Oakland Unified School District. As a result, many of our courses are offered during evening hours. Starting in Fall 2019, all fire science courses, except FISCI 211, will be offered in the hybrid format.

Describe effective and innovative teaching strategies used by faculty to increase student learning and engagement.

2. Canvas eLearning tool to enhance course objectives and to evaluate student learning more readily.
3. Case study methodology to bridge the theoretical learning experience with that of the practitioner.
4. Fire science students visit fire stations where practical applications/demonstrations are performed by fire service personnel.
5. Simulation software programs are used in fire science courses to assess student competencies.

How is technology used by the discipline, department?

1. Fire science courses use the Canvas platform to support course plans.
2. Software programs are used for emergency simulation decision making exercises.
3. Professional videos used to support class discussions on topics/themes.

How does the discipline, department, or program maintain the integrity and consistency of academic standards with all methods of delivery, including face to face, hybrid, and Distance Education courses?

1. Instructors develop and follow course plans throughout the semester.
2. Roll call taken a minimum of two times for the online portion of hybrid courses.
3. All formative and summative exams are stored in a secure location prior to administration.

### **Curriculum**

Please review your course outlines of record in CurricUNet Meta to determine if they have been updated or deactivated in the past three years. Specify when your department will update each one, within the next three years.

All courses were updated during the Fall 2018 semester.

### **CurriQunet Meta**

Please summarize the Discipline, Department or program of study plans for curriculum plans for improvement. Below, please provide details for individual course improvement. Add plans for new courses here.

All fire science courses have been updated to meet National Fire Protection Association (NFPA), State Fire Training, and Fire & Emergency Services in Higher Education (FESHE) recommendations/mandates.

All courses follow national standards—updates to national course plans are on a five-year cycle.

## **Assessment – Instructional**

### Student Learning Outcomes Assessment

List your Student Learning Outcomes

FISCI 201—Describe career opportunities in the fire protection field; discuss and describe early traditions and history of the fire service; and explain the types of fire department resources and describe the function of fire service organizations.

FISCI 202—Identify and explain the responsibility for fire prevention inspections; identify and explain the importance of report preparation in fire prevention efforts; and identify and describe hazards of use, storage, and transfer of flammable liquids/gases/toxic materials.

FISCI 203—Describe fire inspection practices that are applicable based on occupancy type; describe building construction features in legacy and modern construction; and describe hazards to firefighters during the construction, renovation, and demolition of a building.

FISCI 204—Identify principles of modern fire behavior; explain the three physical states of matter and how each is affected by fire; and describe signs, causes, and effects of rapid-fire development.

FISCI 205—List and explain types, components, and operation of fire protection systems; identify and explain water supply requirements, distribution systems, and testing for public and private fire protection; and compare/contrast detection, alarm, and supervisory devices, smoke control devices and hardware.

FISCI 206—Explain how to select, maintain, and test detection devices; explain how to assess for fire and health dangers and implement operation of exit drills in the home and workplace; and describe safety considerations for firefighters when dealing with emergency situations.

FISCI 211—Demonstrate proper use of radio communication systems; demonstrate proper use of hand tools and equipment; and demonstrate proper fire extinguishing techniques using appropriate suppression tools.



Were there any obstacles experienced during assessment? What worked well? (Mainly based on evidence in the report, attach other evidence as necessary)

Unable to obtain data from fire science instructors to assess student learning outcomes for fire related courses.

What percent of your programs have been assessed? (mainly based on evidence in the report, attach other evidence as necessary; note: a complete program assessment means all Program Learning Outcomes (PLOs) have been assessed for that program)

0%

How has your dept worked together on assessment (planning together)? Describe how your dept works well on assessment? Describe things that went well or obstacles. What aspects of assessment work went especially well in your department and what improvements are most needed?

Three fire science courses will be assessed during the Spring 2019 semester. Instructors have received digital files on how to complete the assessment—additionally, Heather Caselle has offered to assist with training.

Collaboration

Instructors communicate via email regarding which student learning outcomes will be assessed each semester.

Leadership Roles

As the program director, I typically take the lead on SLO assessments.

#### Planning Process

Instructors communicate assessment plans at the beginning of each semester. By the midpoint of the semester, I check in with all instructors regarding SLO assessment efforts.

#### Dept meetings for Collaboration

See above.

#### Data Analysis

Starting Spring 2019, fire science instructors will meet with the program director at the end of the semester to discuss SLO assessments. Based on results, we will make additions and deletions to teaching methodologies to courses in the program.

What were the most important things your department learned from assessment? Did implementation of your action plans result in better student learning? In other words, how has your department used the results of assessment to improve student learning and/or curriculum? Please be as detailed as possible.

N/A.

Does your department participate in the assessment of multidisciplinary programs? If Yes, Describe your department's participation and what you learned from the assessment of the program that was applicable to your own discipline.

No.

Does your department participate in your college's Institutional Learning Outcomes (ILOs) assessment? If Yes, Please describe your departments participation in assessing Institutional Learning Outcomes.

No.

What support does your department need from administrators, assessment coordinators and/or your campus assessment committee to continue to make progress in assessment of outcomes and implementation of action plans?

Provide SLO assessment training for part time instructors.  
Continued monetary allocations to support growth in all fire science course offerings.

Please verify the mission statement for your program. If there is no mission statement listed, please add it here.

The mission of the Fire Science Program is to provide students with a comprehensive learning experience that will serve as a gateway for successful careers as first responders in public safety organizations across the United States.

### **[Course Completion Power BI Dashboard](#)**

Consider your course completion rates over the past three years (% of student who earned a grade of "C" or better).

Use the filters on the top and right of the graphs to disaggregate your program or discipline data. When disaggregated, are there any groups whose course completion rate falls more than 3% points below the

discipline average? If so, indicate yes and explain what your department is doing to address the disproportionate impact for the group.

Fire Science three-year completion percentages = 93, 84, and 90 respectively. No demographic group falls 3% below the average completion ratio.

Consider your course completion rates over the past three years by mode of instruction. What do you observe?

Face-to-Face

Fire Science: completion ratio that is much higher than percentages for the college as a whole.

Hybrid

N/A.

100% Online

N/A.

Dual Enrollment

Fire Science: N/A.

Day time

Fire Science: N/A.

Evening

Fire Science: 84% - 93%.

How do the course completion rates for your program or discipline compare to your college's Institution-Set Standard for course completion?

See above commentary.

How do the department's Hybrid course completion rates compare to the college course completion standard?

N/A

Are there differences in course completion rates between face to face and Distance Education/hybrid courses? If so, how does the discipline, department or program deal with this situation? How do you assess the overall effectiveness of Distance Education/hybrid course?

N/A

Describe the course retention rates over the last three years. If your college has an Institution-Set Standard for course retention, how does your program or discipline course retention rates compare to the standard?

For Fire Science, the retention rate over three years ranges from 87% - 95%. Rates are above the retention rates for the college as a whole.

What has the discipline, department, or program done to improve course completion and retention rates?

In an effort to increase the retention rate in the Fire Science program, we have increased the number of classes that we offer, added hybrid sections, and added degree/certificate options.

## **Degrees & Certificates Conferred**

### **Degrees & Certificates Power BI dashboard**

What has the discipline, department, or program done to improve the number of degrees and certificates awarded? Include the number of degrees and certificates awarded by year, for the past three years.

Fire Science—insufficient data on number of degree and certificates awarded.

See above section regarding efforts to increase degree and certificates awarded. In addition, we are working with code alignment teams on campus to fix our MIS data.

Over the next 3 years, will you be focusing on increasing the number of degrees and certificates awarded?

Yes!

What is planned for the next 3 years to increase the number of certificates and degrees awarded?

Fire Science—partner with local fire departments—offer hybrid and fully online courses—market the degree/certificate options through several mediums.

### **Engagement**

Discuss how faculty and staff have engaged in institutional efforts such as committees, presentations, and departmental activities. Please list the committees that full-time faculty participate in.

Demond Simmons—represents the program at High School recruitment events—assisted with the TOP code project—currently working with other public safety faculty on the proposed drone program and the new public safety facility.

Discuss how faculty and staff have engaged in community activities, partnerships and/or collaborations.

Various faculty members are involved in outreach programs geared toward recruiting non-traditional students into the fire service.

Demond Simmons—attends State Fire Training advisory meetings in Sacramento—attends professional development/education planning for fire science curriculum at the National Fire Academy in Maryland—represents the College at the Regional Joint Venture Public Safety meetings throughout the Bay area—and is working with a private vendor to increase the program's digital presence for recruitment purposes.

Discuss how adjunct faculty members are included in departmental training, discussions, and decision-making.

Several faculty members are advisory board members for the program. All faculty are encouraged to share best practices and identify collaboration opportunities that enhances the reputation and learning opportunities within the program.



**Prioritized Resource Requests Summary**

In the boxes below, please add resource requests for your program. If there are no resource requested, leave the boxes blank.

<b>Resource Category</b>	<b>Description/Justification</b>	<b>Estimated Annual Salary Costs</b>	<b>Estimated Annual Benefits Costs</b>	<b>Total Estimated Cost</b>
<b>Personnel: Classified Staff</b>				
<b>Personnel: Student Worker</b>	Need student workers for FISC 211—mandate require a 10:1 (student/teacher) ratio for the lab portion of both courses.	\$4320 for FISC 211	\$0	\$4320
<b>Personnel: Part Time Faculty</b>	Need two instructional aides for FISC 211—mandate requires a 10:1 (student/teacher) ratio for the lab portion of both courses.	\$30,000 for FISC 211	2166.00	32166.00
<b>Personnel: Full Time Faculty</b>	N/A			

<b>Resource Category</b>	<b>Description/Justification</b>	<b>Total Estimated Cost</b>
<b>Professional Development: Department wide PD needed</b>	Attend fire service related professional development conferences	\$5000
<b>Professional Development: Personal/Individual PD needed</b>		

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**Prioritized Resource Requests Summary - Continued**

<b>Resource Category</b>	<b>Description/Justification</b>	<b>Total Estimated Cost</b>
<b>Supplies: Software</b>	Digital Combustion software for company and chief officer fire courses	\$1000
<b>Supplies: Books, Magazines, and/or Periodicals</b>	N/A	
<b>Supplies: Instructional Supplies</b>	N/A	
<b>Supplies: Non-Instructional Supplies</b>	N/A	
<b>Supplies: Library Collections</b>	N/A	

<b>Resource Category</b>	<b>Description/Justification</b>	<b>Total Estimated Cost</b>
<b>Technology &amp; Equipment: New</b>	Miscellaneous tools and equipment for FISC1 211	\$150,000
<b>Technology &amp; Equipment:</b>	Fire Science 211—replacement SCBA's, turnout gear,	\$250,000

<b>Replacement</b>	helmets, ladders, and vehicle extrication equipment	
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**Prioritized Resource Requests Summary - Continued**

<b>Resource Category</b>	<b>Description/Justification</b>	<b>Total Estimated Cost</b>
<b>Facilities: Classrooms</b>	Two dedicated classrooms.	\$0
<b>Facilities: Offices</b>	One dedicated office space	\$0
<b>Facilities: Labs</b>	N/A	
<b>Facilities: Other</b>	N/A	

<b>Resource Category</b>	<b>Description/Justification</b>	<b>Total Estimated Cost</b>
<b>Library: Library materials</b>	N/A	
<b>Library: Library collections</b>	N/A	

<b>Resource Category</b>	<b>Description/Justification</b>	<b>Total Estimated Cost</b>
<b>OTHER</b>	N/A	