

Comprehensive Program Review Report



Program Review - Fire Technology

Program Summary

2022-2023

Prepared by: Rick Smith, Fire Technology Coordinator

What are the strengths of your area?: The Fire Technology Program has many strengths, which include, but are not limited to:

- Student success is up program-wide, from 81.8% in 20-21, to 891% in 21-22.
- Our courses are commensurate with those offered by other Community Colleges nation-wide, making them easily portable for students transferring into or out of our district.
- We work closely with our Veteran's Office coordinating credits earned through military service that are applicable to our program and graduation requirements. I have also become involved with the LGBTQ+ Workgroup on campus, to assure that we are meeting the needs of this community of students.
- Many of our courses are designed and regulated by the Office of the State Fire Marshal, Training Division, and are required by fire departments throughout California for entry level as well as promotional positions.
- The State Board of Fire Services issued a five-year reaccreditation for the program in August, 2020.
- Fire 270, the Basic Fire Academy, had 46 cadets in 2022, the most ever. This included 6 female cadets.
- We successfully implemented and proctored the new evaluation process for Academy cadets as required by the State Fire Marshal for the fourth year, improving our delivery of this challenging process. Additionally, we were able to provide this testing to local fire departments as requested.
- We have the support of an active and involved advisory committee, though meetings this year have been impacted by the pandemic.
- We enjoy excellent cooperation with, and share some facilities and equipment with, the Porterville College Fire Technology Program.
- We participate in several outreach opportunities to publicize and attract attention to our program. Though these were also impacted by the pandemic, some of them returned during the year, and others continue to be added.
- Important equipment maintenance needs were met during this year, including Self Contained Breathing Apparatus (SCBA) testing, and hydro testing for SCBA air bottles.
- We were allowed access to Visalia Fire Department facilities.
- Additional female instructors were added to our cadre of instructors.
- Student Material Fees were adjusted to meet the new State Fire Training Fee Schedule

What improvements are needed?: The fire Technology Program has a number of areas that could be improved, which include the following:

- Fire 270 does not attract enough female students, though the most recent class had 6, the most ever. This, unfortunately, reflects the male dominance of this industry, particularly in the local area.
- We do not attract enough Black students.
- To help with the previous two points, we need to find instructors from these demographic groups.
- We have no full-time faculty teaching in the program. Instructors for many of our offerings must be approved by the State Fire Marshal's Office to teach their courses. This limits the pool of available instructors.
- The program needs access to more comprehensive facilities to properly administer instruction and required skills evaluation for academy cadets. Specifically, and most urgently, our current training facility, which is co-operated with Kings County Fire Department, is impacted by High Speed Rail construction, and will soon be unusable. This facility hosts a significant portion of our instruction, and a suitable replacement must be provided.
- Student success among specific demographic groups in all classes must be continually monitored.
- The hiring, retention and scheduling of assistant instructors in the academy is challenged by the low pay of this

position and competition from overtime in their departments.

Describe any external opportunities or challenges.: Implementation of the paramedic program currently in the design stage will provide additional opportunities for our students and a more focused candidate pool for hiring by local paramedic departments. The need for new training facility has grown more urgent with the High Speed Rail impacts on our current training facility on Houston Avenue. Kings County Fire Department is planning a new facility located near and financed by the Santa Rosa Rancheria, but there is no firm start date for this new facility.

The continued expansion of the EMT offerings, with the potential to host an EMT course at the Hanford Center, would help prepare academy candidates.

We should develop an Instructional Services Agreement to offer to local fire departments.

We must proactively take steps to foster an Antiracist and Antidiscrimination environment throughout our program delivery.

The Covid-19 pandemic has challenged our advisory committee participation.

We can enhance our current Firefighter 1 Academy with the integration of the new Firefighter 2 curriculum, as is the case with approximately 60% of the fire academies in California Community Colleges. This will provide a better product to our students and industry as well as moderately boost FTES and, perhaps, placement of our program graduates in careers.

The current enrollment capacity of 50 for Fire 270 has proven to be difficult to administer and may be unsustainable. Structural changes in delivery will be implemented in the coming year. Continuous evaluation of the effectiveness of trying to maintain this number of students must be ongoing, with a possible reduction if changes are not effective.

Inflation, particularly in the lumber market, presents significant challenges to the program. Some of these lumber prices increased over 400% during the pandemic, and the rising inflation rate of the previous several months has complicated this concern. Fortunately, I receive a modest above-base increase to assist with this for 22-23, but this increase has resulted in deferred maintenance and replacement for some equipment. I believe that budget lines that have remained the same since at least 2015 should be reviewed and adjusted to more accurately reflect the cost of running the program.

During the past year, we delivered state capstone testing for local fire departments, as per our status as an Accredited Regional Training Program. Though the departments paid the state fees for these tests, we did not charge them for my time. If these requests become more common, we should seek reimbursement for expenses related to delivery of these tests. It should be noted that in some cases, this expense could be waived in consideration of the use of certain fire department facilities or equipment.

Overall SLO Achievement: SLO achievement is meeting goals for all courses examined thus far. Each course will be examined before the year's end, and SLO criteria adjusted as needed to reflect the most current and relevant objectives for the courses.

Changes Based on SLO Achievement: All courses are meeting their target outcomes. We will work to be certain that our outcome goals are valid and relevant, and adjust them as needed. Overall, for a department comprised solely of adjunct faculty, I am pleased with the results.

Overall PLO Achievement: Current PLO achievement meets expected outcomes. PLOs have been reviewed, and it is anticipated that further review and changes to them will occur, particularly as we move forward into an expanded version of our fire academy.

Changes Based on PLO Achievement: PLOs have been reviewed, and it is anticipated that further review and changes to them will occur, particularly as we move forward into an expanded version of our fire academy.

Outcome cycle evaluation: The department seems to be making satisfactory progress within the three-year assessment cycle in a majority of its courses.

Action: 2022-2023 Implementation of an Instructional Services Agreement with fire departments located within the district.

Design and implement an Instructional Services Agreement whereby a portion of FTES funding is passed through to local fire departments and college credit awarded to their employees for training provided while on the job by the fire department.

Leave Blank:

Implementation Timeline: 2022 - 2023

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Identify related course/program outcomes: District Objective 2.2 Increase the number of students who earn an associate degree or certificate annually.

District Objective 2.4, Increase Career Technical Education course success rates and program completion annually.

Person(s) Responsible (Name and Position): Rick Smith, Fire Technology Coordinator

Rationale (With supporting data): Some fire departments within the district receive permission from the district to enter into

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Instructional Services Agreements with Monterey Peninsula College, whereby a portion of FTES funding is passed through to the department for training that is provided in the course of employment by department instructors. Employees earn college credits, which can be used toward the awarding of degrees and/or certificates, and the college increases FTES and the associated funding. There is strong interest in other departments for this type of program to be implemented here at COS.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2021-2022

08/25/2021

Status: Continue Action Next Year

This action is continued. It is complex and requires more time to develop and implement.

Impact on District Objectives/Unit Outcomes (Not Required):

Link Actions to District Objectives

District Objectives: 2018-2021

District Objective 2.2 - Increase the number of students who transfer to a four-year institution by 10 percent over three years

District Objective 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points

District Objectives: 2021-2025

District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

Action: 22-23 Review and raise hourly pay for Assistant Instructors

Pay for Assist Instructors is low, resulting in challenges finding and scheduling these necessary employees.

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Implementation Timeline: 2022 - 2023

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Rick Smith, Fire Technology Coordinator

Rationale (With supporting data): Many of our topics, particularly manipulative skills, require the use of several Assistant Instructors to provide both effective instruction, and safety oversight for our students. These student to instructor ratios and qualifications are established by State Fire Training and are compulsory. It is often difficult to schedule these in sufficient numbers because the pay is so low. It is simply not worth it for our assistants, who are all active-duty firefighters and therefore spend a significant time away from home, to come to the college for an evening for the pay offered. The current pay for an assistant is roughly half that of the lead instructor; my recommendation is to make it 75% of the lead rate.

Specifically, I propose that the Salary Range be adjusted from Range 33 (27.49/hour) to Range 43 (35.09/hour).

Priority: High

Safety Issue: Yes

External Mandate: Yes

Safety/Mandate Explanation: The presence of these assistants is mandated by our accrediting agency. If we cannot provide the required student to instructor ration, our ability to provide this instruction is compromised and our accreditation is threatened.

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Update on Action

Updates

Update Year: 2022 - 2023

09/13/2022

Status: Continue Action Next Year

No action was taken on this during 21-22, and it remains a priority. I have provided more comprehensive cost information, which I believe will be helpful in determining the feasibility of this action during the coming year.

Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Adjustment to Base Budget - Increase pay for Professional Experts used as assistant instructors to Step 43, 35.09/hour.

This will increase Budget Line 11000-304042-24500 by an additional \$2500. (Active)

Why is this resource required for this action?: We currently have difficulty attracting these necessary instructors because of the relatively low pay.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 2500

Link Actions to District Objectives

District Objectives: 2021-2025

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.

Action: Base budget increase to meet basic needs of program.

Increase the base budget for the program.

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Implementation Timeline: 2021 - 2022

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Rick Smith, Fire Technology Coordinator

Rationale (With supporting data): The base budget for this program has changed modestly since my hire in 2015. Meanwhile, the cost of materials and supplies has increased substantially, with some needed supplies having very volatile prices that have led to some wild swings in past years. Examples include lumber, and the necessity to purchase and have delivered cars to use for automobile rescue training. Additionally, much of our equipment (Chain and circular saws, breathing apparatus, air cylinders, fire extinguishers, etc) require annual maintenance, for which no budget line is provided. This results in the existing materials and supplies budget being used for this, reducing the amount available for these materials and supplies.

Though I am grateful for the \$2500 increase in this budget year, an additional \$2500 increase would help prevent larger budget requests in future years, as more equipment purchases would be possible within the budget, as well as necessary maintenance for equipment.

Priority: High

Safety Issue: Yes

External Mandate: Yes

Safety/Mandate Explanation: Maintenance and upkeep, as well as the use of high-quality tools and equipment is essential to provide safe training for our students. Much of this maintenance is required by OSHA or other regulatory agencies.

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Update on Action

Updates

Update Year: 2022 - 2023

09/13/2022

Status: Continue Action Next Year

Though a modest above-base request was approved, I believe the base budget should be adjusted to reflect current economic realities.

Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Adjustment to Base Budget - The base budget for this program has changed modestly since my hire in 2015. Meanwhile, the cost of materials and supplies has increased substantially, with some needed supplies having very volatile prices that have led to some wild swings in past years. Examples include lumber, and the necessity to purchase and have delivered cars to use for automobile rescue training. Additionally, much of our equipment (Chain and circular saws, breathing apparatus, air cylinders, fire extinguishers, etc) require annual maintenance, for which no budget line is provided. This results in the existing materials and supplies budget being used for this, reducing the amount available for these materials and supplies.

While the additional base budget increase was appreciated last year, to provide adequate funding for larger classes that the academy has in recent times combined with the increased cost, an additional \$2500 is requested for base budget augmentation. This will insure the equipment is maintained appropriately for the safety of our cadets. (Active)

Why is this resource required for this action?: To provide a safe environment for the cadets through appropriately maintaining equipment.

Notes (optional): Increase Instructional Materials and Supplies (43100) to \$8,500.

Cost of Request (Nothing will be funded over the amount listed.): 2500

Link Actions to District Objectives

District Objectives: 2021-2025

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.

Action: Create outreach program for college athletes and veterans.

Expand the current cooperation with the Veteran's Office, and establish new outreach to athletic programs, for the purpose of enlightening their students on firefighting as a career.

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Implementation Timeline: 2021 - 2022

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Rick Smith, Fire Technology Coordinator

Rationale (With supporting data): I believe strongly in the need to increase participation in the program by female and black students. I feel that opening ties to these important student subcultures (athletes and veterans) will help to spread the message of firefighting as a career choice, and make help create interest in students who have never previously this as a career.

Priority: High

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Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation: I believe that diversification of our students will help to meet the Chancellor's call to action respecting diversity and equity.

Update on Action

Updates

Update Year: 2022 - 2023

09/13/2022

Status: Continue Action Next Year

This objective was not met, and is important enough to continue into next year.

Impact on District Objectives/Unit Outcomes (Not Required):

Link Actions to District Objectives

District Objectives: 2021-2025

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.

Action: New Equipment Purchases

We the need for new and replacement equipment that have gone unmet with regular budget funds due to extremely high commodity costs, increased state fees, and inflationary pressure. For the safety of our cadets and staff, it is imperative that we maintain equipment that is well-maintained, adequate for the training at hand, and used in current industry.

These needs include: an additional ladder, SCBA Cylinders, Rescue air bag lifting kit, High lift rescue jacks, Stihl Chain Saws, Stihl Rescue Cut-off saws,

1-Thermal Imaging Camera, and appropriate tax and shipping.

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Implementation Timeline: 2022 - 2023

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Rick Smith, Fire Technology Coordinator

Rationale (With supporting data): Our program makes use of many different types of fire equipment, some of which has reached the end of its useful life, plus new equipment needed to meet changing requirements and industry trends. It is imperative that we provide equipment that is safe and relevant to what students will use in their careers. This action includes some equipment whose replacement or purchase has been deferred due to outside economic influences over the previous three years.

Priority: High

Safety Issue: Yes

External Mandate: Yes

Safety/Mandate Explanation: The use of up-to-date, safe, and well maintained equipment is essential for the safety of our students and staff. All equipment is necessary to meet the mandated instructional content of our accrediting agency.

Resources Description

Equipment - Instructional - 1- 35 foot aluminum extension ladder.....\$1555

10-SCBA Cylinders.....\$12862

1-Rescue air bag lifting kit.....\$3722

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2-High lift rescue jacks.....\$675
2- Stihl Chain Saws.....\$1300
2-Stihl Rescue Cut-off saws.....\$1500
Tax and shipping.....\$5000
Total _____\$26614

(Active)

Why is this resource required for this action?: To provide our students instruction in the most current and relevant fire service techniques, practices, and equipment, we must use the same equipment that fire departments use. Some of this equipment is to replace equipment that has reached the end of its useful life, and some will increase our ability to meet the needs of our industry for trained candidates for employment.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 26614

Equipment - Instructional - Thermal Imaging Camera (Active)

Why is this resource required for this action?: This purchase provides needed equipment that is not in our inventory for teaching fire academy cadets the most current and effective rescue techniques using technology that is standard in all local fire departments.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 16500

Link Actions to District Objectives

District Objectives: 2021-2025

District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.

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District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.

Action: Integrate Firefighter 2 curriculum into Firefighter 1 Academy.

Develop a new course that combines the existing Firefighter 1 course with the updated Firefighter 2 curriculum.

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Implementation Timeline: 2022 - 2023

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Rick Smith, Fire Technology Coordinator

Rationale (With supporting data): There is already some overlap between the two courses, and setting up a new course which allows our students to achieve both objectives at the same time will provide a better product to the student and a more complete candidate for employment to our local industry. Over half of the colleges with Fire Technology Programs in California have already completed this merger.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Link Actions to District Objectives

District Objectives: 2021-2025

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District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

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Action: Fire Investigation 1 Course

Hire an instructor and schedule a Fire Investigation 1 course.

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Implementation Timeline: 2022 - 2023

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Identify related course/program outcomes: Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

Person(s) Responsible (Name and Position): Rick Smith, Fire Technology Coordinator

Rationale (With supporting data): Years ago, we offered a Fire Investigation course. This course was revamped by the state, and we haven't offered it since. The revamped course has made it through curriculum review, and we should hire an instructor and offer the course.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Link Actions to District Objectives

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