

2014-2015 Instructional Program Review

Program Name: **Fire Technology**

Program Contact: **Marshall, Keith**

Academic Year: **2014-2015**

Status: **Submitted for review**

Updated on: **03/25/2015 04:39 PM**

1. Description of Program

Provide a brief description of the program and how it supports the college's **College Mission and Diversity Statements, Institutional Priorities, 2013/14-2015/16, 5 in 5 College Strategies, Spring 2011**, and other **Institutional Program Planning** as appropriate.

The Fire Technology program prepares students to meet the high standards required to pursue a career in the fire service as a firefighter, an emergency medical technician, or a member of related fire protection services. Those standards are developed and determined by the State Board of Fire Services. The methods of instruction and standards are validated by the International Fire Service Training Association. Classes are designed to provide the student with the information needed to meet the fire-related performance objectives required by the National Fire Protection Association Standard NFPA 1001.

It is important to note that in 2016 the State Board of Fire Services has mandated that Fire training meet the standards approved by both the International Fire Service Accreditation Congress and the Fire Service Professional Qualification Organization. The Fire Technology staff and faculty have been adapting and following the procedures to be able to make the transition by the deadline of January 2016.

Through the expertise of our faculty, and exposure to professional fire service personnel, students can expect to be trained in the latest theories and techniques of fire technology, firefighting skills, and emergency medical training. Our program has served as a model for other community colleges and fire academies to look to and pattern from. This commitment enables and ensures that we are meeting the goals of the 5 in 5 College Strategies priorities.

2. Student Learning and Program Data

A. Discuss Student Learning Outcomes Assessment

1. Reflect on recent SLO assessment results for courses offered by the program. Identify trends and discuss areas in need of improvement.

The SLO assessment for Spring 2014 indicates that students are learning and are able to demonstrate a success in the SLOs of between 76% and 100% in the areas surveyed through the assessment tools. This success has validated our expectation of the program and course SLOs.

Examples:

FIRE 714 AA - Wildland FF

SLO#1 76.19% SLO#2 90.48% SLO#3 90.48% SLO#4 76.19%

FIRE 725 JA - Apparatus and Equipment

SLO#1 100% SLO#2 100% SLO#3 82.35%

FIRE 745 AA - Fire Protection Systems

SLO#1 95% SLO#2 95%

2. Comment on the success rates in the program SLOs that are aligned with specific course SLOs. What do the program SLO and course data reveal about students completing the program? Identify trends and discuss areas in need of improvement. Is the alignment between course and program SLOs appropriate and informative? See **course-to-program SLO alignment mapping**.

According to the data and SLO alignment the course SLOs match up with the program SLOs the majority of the time. It would seem beneficial to observe the same classes over a period of time to get a perspective that would show a more comprehensive comparison. The percentages seem to reflect the expectation.

Those SLOs that show a lower than 85% rate will be examined and reviewed to determine if changes need to be made.

3. Evaluate the program SLOs in relation to survey data from the degree and certificate award earners survey. What does the survey data reveal about the effectiveness of the program SLOs? Identify trends and discuss areas in need of improvement.

In reviewing the award earners survey the results show that not all course SLOs within the Fire Technology program meet all program SLOs. Further examination reveals that the different courses have fundamental nuances that cause some to be skill and equipment based. Others are more in line with concepts and personal development. This is not alarming as these different classes have measurable SLOs that define and reveal the concepts that are important to the success of the student within that particular discipline.

The results show that the important concepts are achieving the marks that are expected and can be demonstrated through the final examination and the survey evaluations completed by students at the end of the semester regarding those particular classes.

4. Describe any additional methods used to assess program SLOs and reflect on the results of those assessments.

None.

5. For any courses in the program that satisfy a GE requirement, which GE SLOs are supported or reinforced by the course SLOs? What do assessment results for the course SLOs reveal about student attainment of the GE SLOs? See **GE SLO Alignment Summary Report** or **All Courses GE SLO Alignment Data**.

FIRE 715 is the only course that satisfies a GE requirement. The GE SLOs that are supported are effective communication and critical thinking.

B. Student Success Indicators

1. Review **Student Success and Core Program Indicators** and discuss any differences in student success indicators across demographic variables. Also refer to the **College Index** and other relevant sections of the **Educational Master Plan: Update, 2012**, e.g., Student Outcomes and Student Outcomes: Transfer. Basic Skills programs should also refer to **ARCC** data.

Student Success Indicators	11-12	12-13	13-14
Success %	84.3%	87.6%	86.9%

These success indicators appear to be within the normalized range. The differences appear to be insignificant when compared across the

span of years.

2. Discuss any differences in student success indicators across modes of delivery (on-campus versus distance education). Refer to **Delivery Mode Course Comparison**.

Not applicable to this program.

C. Program Efficiency Indicators. Do we deliver programs efficiently given our resources?

Summarize trends in program efficiency as indicated in the **Student Success and Core Program Indicators** (LOAD, Full-time and Part-time FTEF, etc.)

The FT Program is staffed by adjunct part-time faculty. It would appear that the efficiency of this is high. Many of our instructors are still employed as full-time fire professionals and the remainder, are recently retired professionals from the agencies in San Mateo County. Student success appears to be high when compared to the college as a whole.

3. Career Technical Education

D. Additional Career Technical Education Data - CTE programs only. (This information is required by California Ed. Code 78016.)

1. Review the program's **Gainful Employment Disclosure Data**, **External Community**, and other institutional research or labor market data as applicable. Explain how the program meets a documented labor market demand without unnecessary duplication of other training programs in the area. Summarize student outcomes in terms of degrees, certificates, and employment. Identify areas of accomplishment and areas of concern.

The Fire Service requires applicants to test through a series of exams. These are written, physical, oral, and medical in nature. Because of the competitiveness it is virtually impossible to determine the gainful employment rate for this program. The students do not often report their success in obtaining jobs with fire agencies.

2. Review and update the program's Advisory Committee information. Provide the date of most recent advisory committee meeting.

For several years the Advisory Committee for the FT program has been the San Mateo County Fire Training Officers division of the SM County Fire Chiefs. As of this year a new advisory committee has formed with three (3) representative Chiefs from different agencies within San Mateo County. The group has met two (2) times this year, the most recent on 3/16/2015.

4. Additional Factors

Discuss additional factors as applicable that impact the program, including changes in student populations, state-wide initiatives, transfer requirements, advisory committee recommendations, legal mandates, workforce development and employment opportunities, community needs. See **Institutional Research** as needed.

Recent trends indicate a slight reduction in the number of students registering in some of the FT classes. Our program requirements for the Fire Fighter 1 Academy have caused an increase in the number of hours required to present the required curriculum. This increase to 12 units has provided the student with the number of elective units required to complement the core required classes for the major. Consequently, the elective courses that we offer are seeing a reduction in registration.

Due to the aforementioned changes at the State and National levels for the certification of Fire Service programs. Many changes have been researched and some have been implemented while other are due to make the implementation date in the next few years.

5. Planning

A. Results of Program Plans and Actions

Describe results, including measurable outcomes, from plans and actions in recent program reviews.

Fire Technology classes continue to be popular and draw a high number of students. The student success rates can be found on the program review website under Fire Technology. I believe the success speaks for itself. We have a high number of students that continue through the program.

B. Program Vision

What is the program's *vision* for sustaining and improving student learning and success over the next three years? Make connections to the **College Mission and Diversity Statements, Institutional Priorities, 2013/14-2015/16**, and other **Institutional Program Planning** as appropriate. Address discussion in the Student Learning and Program Data section: SLO assessment results and trends in student success indicators.

[Note: Specific plans to be implemented in the next year should be entered in C of the Planning section.

CTE programs must address changes in the context of completion and employment rates, anticipated labor demand, and any overlap with similar programs in the area as noted in D1 and D2 of the Career Technical Education section.]

The vision of the program remains consistent with that of the past. Because of the continued demand for high achieving individuals with fire science and fire academy training the trend will continue in it's current direction. Long term planning to achieve higher levels of education are now being explored by the fire service profession. The aforementioned Advisory Committee are examining the concepts and feasibility of that currently.

One trend that has been evident and seems to be on the upswing is the number of students enrolled in the FT program that enter with the four year degree. There seems to be a larger number than in the past.

1. To guide future faculty and staff development initiatives, describe the professional activities that would be most effective in carrying out the program's vision to improve student learning and success.

Adjunct Faculty working within the FT department are current or recent retirees. The development of these individuals is accomplished through the working agencies and through classes offered to enhance the instructor's effectiveness. Through the survey and evaluation process the coordinator determines the need for additional work. Several members attended the workshop required to maintain the certification to teach the California State Fire Marshal approved courses. All instructors have attended and completed an Ethics in the Classroom course that is required by the California Fire Marshal's State Training requirements for instructors.

2. To guide future collaboration across student services, learning support centers, and instructional programs, describe the interactions that would help the program to improve student success.

Student success rates are still on track and are within the parameters set forth in the institutional plan. Further success could be accomplished however; additional time and evaluation would be required to meet this goal.

3. To guide the **Institutional Planning Budget Committee (IPBC)** in long-range planning, identify any major changes in resource needs anticipated during the next three years. Examples: faculty retirements, equipment obsolescence, space allocation.

See the Resource Requests section below to enter itemized resource requests for next year.

Leave sections blank if no major changes are anticipated.

Faculty

The adjunct faculty that are currently in place seem to be highly effective. As stated in earlier portions of this document many are current employees within the agencies of the fire service in the bay area.

One improvement that could benefit the department would be the hours of coordination. As in the past several PRs I am requesting serious consideration to that increase. Realizing that a full time position has not been considered I am requesting consideration of an additional part-time coordinator position. The reason for this increase is the change and increase in the need for re-development of our Fire Academy and EMT program. An additional coordinator would allow for the separation of the daily classes from the Fire Academy and EMT sections. The Fire Academy has two separate classes that are presented. One each semester for the "pre-service" academy and in the fall the recruit academy for the San Mateo County Fire Service. The effectiveness of the position would improve greatly with an additional person. Several meetings occur each month within the jurisdiction for both the Fire and EMT that could be attended. More effective evaluation of adjuncts as well as student evaluations could be conducted. The success of the program certainly seems to justify the increase. By having two part-time coordinators the workload could be divided into "workforce coordinator" for Fire Academy and EMT, and program coordinator for the remainder of courses. Both of these programs are successful but demand a great deal of attention. It is difficult and frankly impossible to attend the necessary meetings and still maintain the needs of the rest of the program. Two part-time positions would allow that segregation so that a more effective use of the resources could be accomplished. I have spoken to Dean Kathy Ross regarding this and she seemed to be in support of such a request.

Equipment and Technology

Below please find several items that need to be considered for replacement or purchase. The request of these items in many instances is directly related to safety concerns for the students and faculty. Because the FT program deals with manipulative skills as well as academic growth, the equipment replacement is necessary to keep current and safe equipment for use.

For EMT training- The use of this equipment is essential for the success of the EMT program. These items are needed to adequately train and meet the Federal and State of California Standards for certification. Without this equipment our program will fall behind and suffer. We could also lose our ability to offer the classes by decertification of the program.

Instructional Materials

The use of this equipment is essential for the success of the EMT program. These items are needed to adequately train and meet the Federal and State of California Standards for certification. Without this equipment our program will fall behind and suffer. We could also lose our ability to offer the classes by decertification of the program.

Classified Staff

Facilities

Facilities are needed for students to practice the different skills necessary to develop and perfect their proficiency. Using various tools and ladders as an example are common training techniques that we have repeated throughout the many years of the success of the program. Previously the use of the buildings around B-23, B-25, and B-27 for ladders and other tool instruction were used. With the demolition of these buildings it has become apparent that a need for a training facility for this purpose is needed. Utilizing the "older" buildings on campus was accomplished without much concern. The newer buildings are more vulnerable to damage and signs of wear if used for this purpose. A plan needs to be developed to provide an area useful for the purpose and durable enough to withstand that type of use.

C. Program Plans and Actions to Improve Student Success

Prioritize the plans to be carried out next year to sustain and improve student success. Briefly describe each plan and how it supports the **Institutional Priorities, 2013/14-2015/16**. For each plan, list actions and measurable outcomes. (Plans may extend beyond a single year.)

Continue with current actions and evaluations.

6. Resource Requests

Itemized Resource Requests

List the resources needed for ongoing program operation.

Faculty

NOTE: To make a faculty position request, complete **Full-time Faculty Position Request Form** and notify your Dean. This request is separate from the program review.

Full-time faculty requests	Number of positions

Equipment and Technology

Please See below

Description	Cost

Office Copier/Fax

This is the total yearly cost needed to pay for the lease contract of the Xerox WorkCentre Pro shared by ADMJ and FIRE. Access to a secure copier is included in the ADMJ program's security protocols as monitored

\$5000
(Total)

\$2500
(ADMJ)

Workgroup Color Laser Printer

A new color laser printer was installed on February 14, 2014. The fee established will cover the maintenance as well as toner cartridge replacement. This printer is located in the program suite and shared by ADMJ and FIRE.

\$1000
(Total)

\$500
(ADMJ)

1.EMT resources needed as identified in earlier section.

Item #	Description	Price	Tax	Quantity	Extended
TR250000	Airway mgmt. trainer	1,715.95	126.70	1	1844.65
TR 180	Simulaids OB manikin	504.95	37.87	1	542.82
Total					2387.47

Item Number	BTM's Description	U/M	Price	Qty Ord	Extended Price
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TRAINING MANIKINS

652951	MANIKIN 3 YEAR OLD WITH CARRY CASE KYLE 2951	EA	\$ 291.85	1	\$ 291.85
3611-25060	Resusci Baby First Aid, incl Mask, Shields, Disp Airway, Blanket, Pulse Bulb, Wipes, Guide	EA	\$ 390.75	1	\$ 390.75

SUB \$ 682.60

TAX \$ 63.14

TOTAL \$ 745.74

Item Number	BTM's Description	U/M	Price	Qty Ord	Extended Price
HARE TRACTION SPLINTS					
SI008A	DYNA MED HARE TRACTION SPLINT ADULT	EA	\$ 266.85	3	\$ 800.55
				SUB	\$ 800.55
				TAX	\$ 74.05
				TOTAL	\$ 874.60

2.

L.N. CURTIS AND SONS

By PAUL KURPINSKY

QUANTITY	UNIT	PART NUMBER	DESCRIPTION	UNIT PRICE	TOTAL PRICE
10	EA	M2002LR USFS	SPEC LAR SZ FOREST FIRE SHELTER 5100606LAR	320.00	3200.00
2			* W/ BLUE POUCH W/BELT LOOPS AND PLASTIC LINER	295.00	590.00
10	EA	.		124.00	1240.00
2		M2002 USFS	SPEC REG SZ FOREST FIRE SHELTER 5100606REG	53.25	106.50
1			* W/ BLUE POUCH W/BELT LOOPS AND PLASTIC LINER	42.00	42.00
Last	EA	.			5178.50
Page	EA	18715X100PFN NAFH	1.5X100' CPLD 1.5NH PLA		479.02
	EA	187SPEC TYPE 1 SJ HOSE			5657.52
		ATNFND TFT	1.5NHFX1.5NHMX1NHM FRSTRY TEE VLV		
		FB42 AKR	FIRE BROOM		
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****PRICE INCLUDES SHIPPING TO YOUR DEPARTMENT****

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****THANK YOU FOR THE OPPORTUNITY TO QUOTE****

Sub Total Sales Tax Total

3. Miscellaneous Tool replacement- This item is one that is placed in the PR each semester to replace miscellaneous tools that are used in the course of the semester for multiple discipline training. (Axes, Shovels, Sledge hammers, and various other hand tools). These are used to demonstrate and develop technique for use. The use of these tools causes wear and once determined to no longer be safe they are taken out of service and either repaired or replaced. Estimated need - \$2000

Instructional Material

Description	Cost
Consumable materials for EMT (Bandages, gauze, tubing, etc.)	
Parts to repair equipment (ladders, chainsaws, materials for props)	\$3000
2- Laptops (current ones are 5-6 years old)	\$3000
7.	

Classified Staff

Description	Cost

Facilities

For immediate or routine facilities requests, submit a CSM Facility Project Request Form.

Description	Cost

7. Program Maintenance

A. Course Outline Updates

Review the **course outline update record**. List the courses that will be updated in the next academic year. For each course that will be updated, provide a faculty contact and the planned submission month. See the **Committee on Instruction website** for **course submission instructions**. Contact your division's **COI representatives** if you have questions about submission deadlines.
Career and Technical Education courses must be updated every two years.

Courses to be updated	Faculty contact	Submission month
CTE courses to be updated no later than December 2016	Michelle Schneider	

Because the standards for Fire Technology are from both the State and National Level the updates for those do change periodically. The changes are implemented in a timely manner and are then presented to the COI via the Program Services Coordinator for review and approval. All classes are updated as scheduled whether or not changes have been made.

The new Fire Academy will be run as an experimental course for no more than three semesters. A permanent number will be assigned no later than Fall 2017.

B. Website Review

Review the program's website(s) annually and update as needed.

Faculty contact(s)	Date of next review/update
Michelle Schneider	Reviewed and updated annually

C. SLO Assessment Contacts

Faculty contact(s)	Date of next review/update
Michelle Schneider	

