

Santa Rosa Junior College

Program Resource Planning Process

Fire Technology 2016

1.1a Mission

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The mission of the Department of Public Safety is to provide an education and training environment which fulfills the diverse needs found within the professions involved in public safety. This environment promotes the opportunity for intellectual, social and occupational growth in three major areas:

- 1) A comprehensive pre-employment curriculum leading towards an associate degree and/or transfer to a four year institution.;
- 2) Basic Academy programs for state and federal mandated certificate programs; and
- 3) In service training programs which provide current and professional course offerings reflecting the needs of the professions.

The mission of the Fire Technology Program is threefold:

- 1) To offer an enhanced Firefighter I Academy as an Accredited Regional Training Program (ARTP) through State Fire Training including Firefighter I and II certification testing to all local fire agencies.
- 2). To provide for high quality Certificate and Degree programs that adhere to the Fire and Emergency Services Higher Education model as developed by the National Fire Academy (NFA) and adopted by the NFA and State Fire Training which will enhance opportunities for employment and advancement in the Fire Service.
- 3). To offer California Fire Service Training and Education System (CFSTES) courses to allow "In Service" students to obtain certification for advancement and promotions.

1.1b Mission Alignment

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The Board of Trustees adopted Policy 1.1 which updated the District's Mission and Values Statements as follows:

SRJC passionately cultivates learning through the creative, intellectual, physical, social, emotional, aesthetic and ethical development of our diverse community.

- *We focus on student learning by preparing students for transfer; by providing responsive career and technical education; and by improving students' foundational skills.*
- *We provide a comprehensive range of student development programs and services that support student success and enrich student lives.*
- *We support the economic vitality, social equity and environmental stewardship of our region.*
- *We promote personal and professional growth and cultivate joy at work and in lifelong learning.*
- *We foster critical and reflective civic engagement and thoughtful participation in diverse local and global communities.*
- *We regularly assess, self-reflect, adapt, and continuously improve.*

Some examples that demonstrate the consistency of the Fire Program with this Mission and its values are as follows.

- By providing the opportunity to achieve a Degree in Fire Technology, students specifically meet the curriculum necessary to transfer to a four year "2 + 2" Fire Program as is offered by CSU Los Angeles, Long Beach and Sacramento. In addition, through the delivery of a Fire Academy that meets State Fire Training (SFT), the International Fire Service Accreditation Congress (IFSAC), and Fire Service Professional Qualifications (Pro-Board) requirements, students are provided foundational skills that meet national standards.
- By providing "In-Service" coursework that focuses on allowing students to obtain certificates necessary to promote in the field, we provide an development path that allows them the opportunity to succeed in their chosen field.
- That the ethnicity in our programs has grown to mirror the District, our diversity has increased almost 50% over the last few years and that over 20% of our graduates are hired demonstrates the vitality and equity of our program. That we have ceased running our academy off-site avoiding travel (and carbon emissions) has supported our efforts to become more environmentally responsible and sustainable.
- Within our program, continuous learning is strongly supported and as an example our Admin. Assistant recently obtained her Bachelor's Degree while the Director serves on the Statewide Education Advisory Committee (STEAC) and is Vice President of the California Fire Technology Director's Association (CFTDA).
- As a Career Technical Education program that requires the active participation of local fire agencies to be successful, civic involvement is critical to this goal. To that end, the Director serves as the Secretary (and Past President) of the Sonoma County Fire Chief's Association (SCFCA), is also the current Secretary for the Sonoma Fire Training & Operations (TO's) group and is a member of the county California Incident Command Certification System (CICCS) committee. The program also has a standing report item on the agenda's of the SCFCA as well as TO's meetings. The director also regularly presents and attends civic meetings and is Vice President of the Healdsburg Kiwanis Club.
- All offered coursework has been assessed and

where noted, self-improvements implemented. Through a regular feedback process in the fire academy, we are able to conduct a continuous improvement process in that setting that has led to consistently high remarks from our recruits and students. This was also reinforced in the reaccreditation report prepared by SFT last year.

1.1c Description

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The Fire Technology program is taught by one full-time faculty, 38 adjunct faculty, 64 Professional Experts and over 50 volunteers that are coordinated by a full-time Director and supported by a part-time Administrative Assistant and Fire Academy Coordinator. Assistance with logistical needs are provided by a Professional Expert who works as a materials handler on an "as-needed" basis. Courses are offered at Petaluma, Santa Rosa, and the Windsor campuses. Academy courses are offered at the Public Safety Training Center (PSTC) in Windsor.

The Fire Program is divided into three areas; the Fire Certificate/Degree program, the Firefighter I Academies and "In-service" courses for those seeking enhanced skills and training already employed. The certificate and degree programs are centered around 6 "Core" courses which follow the Fire and Emergency Services Higher Education (FESHE) model developed by the National Fire Academy and adopted by the State Board of Fire Services. These courses are offered mainly at the Petaluma campus but also Santa Rosa and Windsor. "In-service" courses (which also serve as electives) are offered mostly at the PSTC. The Firefighter I Academies are offered in the extended format (Tuesdays and Thursdays 6PM-10PM and Saturdays and Sundays 8-5) in both the fall and spring semesters. In the spring, an "Intensive" academy is also conducted which occurs Monday through Friday, 8-5 over a 12 week period.

To assist students meet the experience component necessary to obtain a Firefighter I Certificate from the State Board of Fire Services, an Internship program has been established with the Work Experience (WE) Program. Through a cooperative working relationship with WE, Fire Adjunct Instructors who have an interest in supervising interns work as Adjuncts in that program as well. This provides an opportunity for Academy graduates who are not affiliated with a fire agency to be placed in a local fire department and complete the 1 year experience component required to obtain their Firefighter I Certificate.

The program also works with the Sonoma County Fire Department to deliver a Volunteer Fire Skills Academy and with the California Department of Forestry and Fire Protection (CALFIRE) to deliver a Wildland Firefighter Academy.

For those Fire Technology students who meet specific scholastic and economic criteria, scholarships are available. Those include the Victor Pozzi, the Chief Carl O. Heynen,, the Chief Winnfield Smith, the Brian Fletcher and the Women at Ground Zero Scholarships.

1.1d Hours of Office Operation and Service by Location

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The Fire Technology Program operates from 0800-2200 hours Monday through Friday and Saturday and Sunday 0800-1700. In-service courses are offered during the weekday and on Friday evenings and weekends. Firefighter I Academies are offered in two formats (M-F 0800-1700 hours and Tues, Thurs, 1800-2200 hours and Saturdays and Sundays from 0800-1700. All Fire Academies also include one 48 hour "shift" conducted during the wildland component of the academy to replicate the work schedule used by fire departments throughout the state.

Semester length "Core" courses are offered both during business hours (0900-1200) and in the evening (1900-2200) to accommodate both full time students and those who work during the day.

Department office/administrative support are available at the PSTC from 0800-1630 hours Monday through Friday. The Director, Administrative Assistant for Fire Technology and Academy Coordinator have their offices at the PSTC. The Program full-time faculty at Petaluma has designated office hours Monday through Friday. Adjunct Faculty has designated office hours before their assigned classes at Petaluma, Santa Rosa and the PSTC.

1.2 Program/Unit Context and Environmental Scan

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From a Program Context and Environmental Scan perspective, there are several trends that have emerged over the last few years that have impacted our program. They are the alignment process that is occurring at State Fire Training (SFT) and the expanded use of partnerships with local fire agencies.

As an Accredited regional Training Program (ARTP) through State Fire Training (SFT), the program is required to adhere to the policies and curriculum developed by that institution. Accordingly, the Firefighter I Academy (FFI) and the vast majority of the "In-Service" courses we offer are those developed by the California Fire Service Training & Education System (CFESTES) under the auspices of SFT. Most of these courses serve a specific educational path to allow fire service personal to obtain certification as a Company Officer, Fire Inspector and Chief Officer to name but a few. Over the last several years, the demand for these courses has increased significantly. The reasons for this are twofold.

The first is due to a major effort being implemented at SFT to align these paths with national standards. As the courses that create these new paths are adopted, it has also triggered a transition period prior to retiring the existing ones. For those fire personnel who are in a current path, it has become necessary for them to complete the required courses before they are retired or risk having to start the path again from the very beginning using the new curriculum.

It should also be noted that as these alignment efforts create new courses, the continued success of our program will rely on our ability to keep our curriculum current in order to remain relevant to fire education. As of this time, a concerted effort to write and obtain the approvals for the eight new courses required for a SFT *Company Officer* certificate has been completed and all have been approved by the college with most also approved by the Chancellor's office. These efforts will not only enhance the quality of our program, but keep it aligned with SFT policies and procedures. This will be especially relevant in regards to the FFI academy which will be discussed in more detail below.

The second is due to a surge of retirements occurring in the fire service. This has created a corresponding increase of promotional opportunities and since most agencies require candidates to possess applicable SFT certifications to be eligible for promotional tests (i.e. Company Officer Certification for Fire Captain), the demand for these classes has increased. It is for these reasons that we have scheduled most of the courses required for the SFT Company Officer certification to be available to students within a single calendar year. However, with the mandate to reduce our course offerings to address the District's structural deficit, our ability to continue this practice will be jeopardized and may result in our student's becoming disenfranchised and seeking these courses elsewhere. This has the potential to create a "snowball" effect and it is my belief, will lead to a significant loss of enrollment for other courses and have a very adverse effect on the program.

Partnerships with local agencies have also played an important role in the delivery of our program. Three years ago, the partnership we enjoyed for years with CALFIRE was renewed in order to deliver the wildland component of the Firefighter I academy. Since that time, this arrangement has proven to be so successful that the Sonoma County Fire Chief's inquired if this section of the academy could be opened to outside students. To that end, the curriculum was developed and approved as a "stand alone" course (Fire 206). Upon completion, students receive a CALFIRE "Basic Firefighter Certificate" and become eligible for employment as Seasonal Firefighters. Since its inception, an average of 24% of the students have received jobs as Seasonal Firefighters making it one of our most successful offerings. It has also interesting to note that many of the students who attend this class come from other college fire programs who do not offer such a course.

Last fall began our third year offering the Volunteer Fire Skills program through a contract with the Sonoma County Fire Department. The companion course is held in the spring with this rotation continuing each year. Because a student must be a volunteer with a fire agency to attend, they are eligible for scholarships through the California Firefighter's Association (CSFA). With most also receiving stipends for their volunteer response activities, the program serves as an effective path to part-time employment. I am happy to report that enrollment continues to grow and has increased almost 100% from our first year with seven fire agencies participating (up from two) in 2015.

As mentioned above, of all the alignment efforts being undertaken by SFT, none will have more of an impact on our program than the changes that are occurring to the FFI curriculum. This can be attributed to two somewhat related forces that have come into play.

The first are the physical changes to the FFI. While the updated COR has been approved and our first academy delivering the new curriculum has concluded, it has become quite a challenge to obtain the props necessary to conduct the mandatory skills tests (to be addressed in more detail later).

The second are the efforts by SFT to obtain reciprocity for FFI certification with two outside accreditation institutions; the International Fire Service Accreditation Congress (IFSAC) and the National Board on Fire Service Professional Qualifications (Pro Board). As the two organizations that accredit fire programs in most other states, SFT has long recognized the benefits of aligning their certificate programs with IFSAC & Pro Board. Some of these benefits include; transportability for the students, expanding employment opportunities to a national level and promoting student success. Since accreditation by these organizations rests on our ability to deliver an exam process that meets specific criteria, much of our efforts in 2015 have centered on restructuring our testing to meet these requirements. Now that we have completed an academy and have a test "under our belt", we have found it necessary to increase the process from 7 to 32 hours and almost double the staff involved which will obviously increase our labor costs.

Our students can also expect to bear some addition costs associated with IFSAC and Pro Board certification. An \$18 charge to the third party vendor who delivers the on-line written exam has been implemented. And when a student submits their application to SFT upon completion of the work experience component (one year after completing the academy), they can expect to pay an additional \$130-\$150 for the IFSAC/Pro-Board Certificates.

It should however, be noted that with these changes, there is a significant benefit to our program. As reciprocity will make it more difficult for smaller agencies to conduct FFI certification testing, it creates an opportunity for SRJC to offer the testing (and a preparation component) as a "Stand Alone" class and become a regional testing center to local fire agencies which represents a significant marketing opportunity. Effective last fall, a FFI Practice and Test class was approved by the college and is available for delivery for local fire agencies. In addition, because fire agencies will need to use the program to conduct testing for other certificates such as Firefighter II, there will be a need in the near future for a "Stand Alone" Firefighter II certification test classes which is being written at this time.

The last item relative to this section involves the reaccreditation of our program. As an ARTP, the program is accredited by SFT and I am happy to report that effective May 22 of 2015, the last hurdle in our reaccreditation was completed when the State Board of Fire Services approved ours.

We continue to maintain a good relationship with local fire agencies (employers) to run our programs. In addition to using them as an integral part of our Fire Academies, 15 agencies participate in our Internship program where academy graduates serve terms with local departments to provide supplemental staffing.

2.1a Budget Needs

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The budget of the Fire Technology program is broken down into the three Categories; the 2000, 4000 and 5000. For the purposes of this section, only the 4000 and 5000 categories will be discussed here.

Budget Category 4000

The 4000 category covers the costs of instructional supplies and is broken down into the following accounts: 4110-textbooks, 4111-textbooks (fee based), 4390-other supplies, 4391 instructional supplies (fee based), 4510-graphic arts, 4511-graphic arts (fee based).

In this category, the account that is central to the operation of the academy and is most utilized is the 4390. Uses for this account include propane to operate our car fire prop, wood products used for the ventilation and forcible entry units as well as the live fire exercise. In the 2015 PRPP, it was anticipated that the expenditures in this category would increase as we implemented the 2013 Firefighter I (FFI) curriculum due to the significant increase in manipulative training including the introduction of new skills requiring new props and materials. Now that we have completed an academy using this curriculum, we have found the quantity of materials required has roughly doubled. Although we have made some saving through a more aggressive use of competitive vendors, it has become obvious we will need a significant boost to this budget category. To that end, we would request \$17,800 for FY 2016-17.

Budget Category 5000

The 5000 category covers the costs of guest lectures, consultants, equipment maintenance, leases and rentals and is broken into the following accounts: 5110-lecturers/speakers/etc., 5190-other consultant services, 5191-consultant services (fee based), 5630-equipment rental/leases, 5640-facilities rental/leases and 5659-other equipment repair. In this category, the accounts that are central to the operation of the academy are the 5190 and the 5659

The 5659 covers costs such as refilling of extinguishers for fire extinguisher training, ladder testing, hydrostatic testing and repairs of our SCBA bottles, air testing and maintenance for our compressor, maintenance and supplies for our power tools and maintenance and repairs for our fire apparatus. As with the 4390 account, expenditures did increase as we implemented the new FFI curriculum which approximately doubled the skills hours, increasing wear and tear on all our equipment and ultimately our repair costs. To that end, just over halfway into the FY, we are \$5731 over the \$6600 budgeted. Although some of these are one-time costs (\$700 in engine repairs, \$800 for compressor repairs and \$1700 for SCBA repairs), it is reflective of the heavy use our equipment receives and the need to increase this budget significantly. To that end, I would request \$13,200 for 2016/17.

The 5190 account addresses costs associated with services including contracts, permits, consultants and vehicles delivered (and removed) for auto extrication. For the 2016/17 FY we are requesting \$16,088.25. This will cover the \$9878.25 for the two contract classes with the County (107A & 107B) and \$4,000 for the three CALFIRE Wildland units delivered in the FFI Academy (which also includes the three Fire 206 courses as they are run concurrently with the fire academies) for a total of \$13,878.25. It will also cover the \$2,100 to cover the costs of the 21 vehicles (7 vehicles per academy) for the auto extrication units and \$110 for the annual Air Pollution notification fee.

For the 5191 account, as a fee based service, the only identifiable cost is for the "Fit Tests" provided for our students by the County. Given a cost of approximately \$30 per student and a maximum student count of 105, \$3,150 is being requested.

From a savings perspective, we continue to benefit in the 5640 category by avoiding the cost encumbered from having to lease the Santa Rosa Fire Department training facility for the FFI Academies. Due to the improvements that have been made at the PSTC, we are in our third year of operating exclusively out of this facility which has resulted in an annual savings of close to \$25,000. Providing the remaining PSTC projects and props necessary to deliver the new certification testing are completed, it will make the program "facilities self-sufficient" and avoid having to enter into any future lease contracts.

We have also benefited from savings on the contract costs we have historically incurred with Cal Fire for the delivery of the Wildland unit in the FFI Academy and Fire 206. Because of an internal review occurring within the State, they have suspended billing for the delivery of instruction. While this has resulted in annual savings of \$3,000 for the last two years, we are currently working with CalFire and Purchasing on a new contract template and it is anticipated to have a contract in place for the 2016/17 FY.

It should be noted that the program continues to aggressively seek donations and grants to offset the extensive equipment needs of the Fire I Academies. For example, we were recently donated a fire engine from the City of San Mateo which will allow us to retire another that has experienced mechanical problems. The County of Sonoma also recently donated 12 SCBA's and Rohnert Park approximately 1000 feet of 2-1/2" hose. If we were required to have purchased these items, the costs would be in excess of \$30,000.

I would end by speaking to the new FFI certification testing process and its financial implications for the program. We have been extremely fortunate to be the recipient of several CETA grants that have moved us much closer to a position to have those props necessary to operate the academy and meet the new curriculum. This included a \$139,000 grant for an interior gas burn prop and \$44,228 for a Flash-Over prop which has moved us much closer to achieving this goal. Given the success we have had, we hope to be finished obtaining this equipment by this time in 2017.

2.1b Budget Requests

Rank	Location	SP	M	Amount	Brief Rationale
0001	Windsor	07	00	\$71,192.00	Professional Experts/Instructional Assistants, Fire Academy Coordinator, Materials Handlers
0001	Windsor	07	07	\$84,935.00	Textbooks and other instructional supplies.
0001	Windsor	07	07	\$17,800.00	4390 Account: Supplies to operate academies including: propane, burn & ventilation materials, sheetrock, smoke fluid, fire exting. agent, etc
0001	Windsor	07	07	\$13,200.00	5659 Account: Services including: fire exting service/hydro, compressor maint, Ladder testing & repairs, etc.
0001	Windsor	07	07	\$16,088.00	5190 Account to include: contracts with County & Calfire, vehicles for auto ex., and Air Permit
0001	Windsor	07	07	\$3,150.00	5191 Account to include: Fit tests costs with County (fee based)

2.2a Current Classified Positions

Position	Hr/Wk	Mo/Yr	Job Duties
Administrative Assistant III	24.00	12.00	Provides detailed administrative and clerical support for Director/chair. Manages complex projects as assigned such as contributing to the budget development process, monitoring budgets and faculty load monitoring. Prepares curriculum outlines and documents.

			Administrative Assistant III provides administrative support for payroll utilizing .40 FTE.
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2.2b Current Management/Confidential Positions

Position	Hr/Wk	Mo/Yr	Job Duties
Director of Fire Technology	50.00	12.00	Under the direction of the Dean of the Public Safety Training Center, is responsible for coordinating the Certificate/Degree course work at the Petaluma and Santa Rosa campuses and entry level/in-service programs at the PSTC Windsor. Additionally, the Director manages and oversees the fire academies and is responsible for curriculum development and continued currency of courses in the Fire Technology program.

2.2c Current STNC/Student Worker Positions

Position	Hr/Wk	Mo/Yr	Job Duties
64 Evaluators (Professional Experts)	45.90	12.00	Responsible for explanation, demonstration, supervision, evaluation and documentation of discipline specific subject matter and related skills under the direct supervision of lead instructor.
7 Fire Recruit Training Officers	7.00	10.00	Counsels recruits regarding professional matters; supervises and monitors recruit discipline; supervises other Professional Experts as needed.
1 RTO (Fire Academy Coordinator)	18.00	9.00	Provide the scheduling, oversight, discipline and physical resources necessary to operate the Fire Academy.
1 P/T Materials Handler (Prof. Expert)	20.00	12.00	Maintain academy equipment, refill air bottles, deliver instructional supplies, re-build instructional props, repair hose and other equipment, conduct skills testing, etc.

2.2d Adequacy and Effectiveness of Staffing

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Currently, the Fire Technology Program consists of a Director, a Part Time Administrative Assistant (.60FTE), a Full-time Instructor, a Recruit Training Officer who serves as the Fire Academy Coordinator, 40 Adjunct Faculty, 7 Recruit Training Officers and approximately 64 Professional Experts (1 of whom also serves as a Materials Handler). With this staffing, we operate 3 Fire Academies and average 27 course sections each semester.

While the program as a whole has the staffing necessary to deliver instruction, the Fire Academies are not staffed adequately for the size and scope of our Program. This is due to several reasons; (1) the operation of two concurrent academies in the spring semester, (2) the adoption of a new curriculum and certification testing process that has greatly increased the hours; and, (3) the lack of a F/T Administrative Assistant and dedicated Academy Coordinator.

Providing assistance for our Fire Academy Coordinator would greatly help us manage our program, especially in light of the changes that have occurred to the curriculum and the certification testing process that we will be required to administer as an Accredited Regional Training Program (ARTP) Although we have made enormous strides with a Coordinator funded through the 2333 (Prof. Expert) account, it has stressed the funds available in that account. To that end, two half-time Instructional Assistant III positions have been approved and are in the process of being filled at this time. This has advantages over a single F/T in that it creates greater depth in staffing, provides the ability to draw on a

second person when labor intensive activities (such as testing) occur and provides a greater pool of applicants to draw from since most applicants are PERS retirees who are ineligible to work in this position full time.

It should be noted that with the retirement of our one F/T instructor in 2013, the instructor hired to replace him is in her second year in the tenure review process.

2.2e Classified, STNC, Management Staffing Requests

Rank	Location	SP	M	Current Title	Proposed Title	Type
0001	Windsor	08	07	N/A	Lab Assistant III	Classified

2.3a Current Contract Faculty Positions

Position	Description
FT Fire Tech	Contract Faculty - The program budgeted one, full-time faculty member. Recruitment was completed in 2014 and the position is currently working at 100% load and in their second year of Tenure Review.

2.3b Full-Time and Part-Time Ratios

Discipline	FTEF Reg	% Reg Load	FTEF Adj	% Adj Load	Description
Fire Technology	1.0000	100.0000	3.1300	313.0000	F

2.3c Faculty Within Retirement Range

2.3c Faculty within Retirement Range

After a rather lengthy transition period which saw the retirement in 2011 of 3 long serving Adjunct Faculty (12, 25 & 28 years respectively), a 27 year Adjunct Faculty in 2012 and our one F/T Faculty in 2013, we have reached a period of staffing stability in the program. This leaves the Program Director as the only person in the program within retirement age.

2.3d Analysis of Faculty Staffing Needs and Rationale to Support Requests

2.3d Analysis of Faculty Staffing Needs

While there are an abundance of fire personnel in the county, it is becoming more difficult to recruit qualified personnel for the program. This is mainly a result of the new requirements being implemented by State Fire Training (SFT) for those staff who work in the Firefighter I Academies. At a minimum, all *existing* staff need to complete four specialized SFT courses to work in the academy. This will not only make it difficult to keep existing faculty, but also hire new personnel. To address this challenge the program will be offering these four courses in the Spring 2016 semester. To allow staff the time to attend, we have cancelled our Extended Fire Academy which is normally run concurrently with the Intensive academy in the Spring. Without doing so, the courses would conflict with academy instruction and staff would not have been able to attend. It is important to note that this represents a one-time event and the concurrent Extended and Intensive academies will resume in Spring of 2017.

The Program interviews annually to maintain our adjunct faculty pool. The one exception was in 2014 when our efforts were directed to hiring and interviewing for our F/T faculty position. However, our greatest challenge remains attracting qualified On-line instructors. With this segment of instruction representing the largest areas of growth, there has been a concerted effort to seek qualified on-line developers/instructors. Over the last four years, six On-line instructors have been hired only to have all but two resign once they found how laborious the approval's process is. The good news is the one hired in 2015 is in the process of developing the course and it is anticipated it will be delivered in Fall of 2016.

While we usually can provide an adequate pool of Adjuncts and Professional Experts, a growing challenge we face is the availability of staff during fire season. As drought conditions persist and fire season extends into late November and early December, the availability of instructors as well "In-Service" students tends to diminish. This will obviously make it very challenging to not only offer, but fill many of our fall courses. After having to cancel several "In-Service" classes last fall due to the long fire season and anticipating another extended season this year, we purposely scaled back our fall "In-Service" offerings which was eerily clairvoyant as the 2015 fire season turned out to be the largest and most damaging in State history. To that end, if this pattern persists, it may also become problematic to operate the fire academy in the fall which would be a "game changer" for the program and the way we operate.

2.3e Faculty Staffing Requests

Rank	Location	SP	M	Discipline	SLO Assessment Rationale
0001	ALL	00	00		

2.4b Rationale for Instructional and Non-Instructional Equipment, Technology, and Software

2.4b Rational for Instructional Equipment

The majority of the instructional equipment used in the program is dedicated for use in the Firefighter I (FFI) academy. With the recent adoption of the State Fire Training (SFT) mandated certification testing process comes a need for new equipment and instructional props to administer the test. In addition, as an Accredited Regional Training Program, we are also required to deliver testing for the other certification paths offered through SFT. This includes Firefighter II (FFII) which was recently approved and we plan to offer next year. To that end, it will be necessary to obtain the props needed for that testing process which have also been included here. Please refer to the prioritized list below for our equipment/instructional aid needs.

1. SCBA Bottles: While we have been fortunate to have received generous donations of SCBA's from fire agencies, it comes with a built-in problem. For the last 20 years, most manufacturers of SCBA's have transitioned from steel and aluminum air bottles to composites for their weight savings. However, because of their design, composite bottles have a service life of 15 years. Since almost every bottle that is donated to the program already has at least 10 years of use, they very quickly become unusable. To that end, over the last few years, we have been working to replace our entire inventory of composite bottles (over 110). As a unit required to meet our accreditation with State Fire Training, it is essential these are replaced in a timely manner so this training is not interrupted.

2. Misc. Instructional Aids (Ladders, Hose and Hose Tester): As an Accredited Regional Training Program through State Fire Training, we are required to deliver Firefighter I & II training and testing activities. In the Fire Academy two of the critical "Core" topics conducted are ladders and hose. Because both of these are manipulative based, the instructional aids used in their delivery receive an inordinate amount of wear which shortens their life span. This situation is made worse by the fact the vast majority of these items have considerable wear when they are donated to the program, further shortening their life cycle. Subsequently, it has become necessary to replace both on a regular basis (which is critical in the case of ladders since an equipment failure would almost certainly result in a student injury). To maintain an adequate inventory, three 20' extension ladders and 20 lengths of wildland hose and 15 lengths of structure hose are requested.

In the FFII curriculum, one of the skills that students must be trained to, as well as demonstrate in the skills test is the ability to test fire hose (topic 5-5). Central to this activity is the use of a specialized hose testing machine which we will need to purchase. To emphasize the importance of obtaining one, without the ability to deliver this topic, we will not meet one of the terms of our accreditation which reinforces the urgency of this situation.

3. Structure Collapse Prop: Also found in the FFII curriculum is a requirement to demonstrate the ability to "Assist Rescue Team Operations" (Skill 4-2). Whereas this represents an entirely new skill, it also necessitates obtaining a specialized structural collapse (or similar) prop. To that end, it is requested one be purchased for the program.

4. Ice Machine: As to be expected, firefighting requires a considerable amount of physical exertion and on warm days, it is essential instructional staff monitor our students to keep their core body temperature at safe levels. This is not only a moral responsibility, but is mandated by section 3395 of Title 8 of the California Code of Regulations (Heat Illness Prevention Plans). It has been proven that to help keep students cool and meet the terms of T-8, one of the most effective mediums is the use of ice to cool drinks but also to provide ice-packs that can be applied directly to the body if symptoms of heat illness arise. With the absence of an ice machine on the PSTC grounds, it is not possible to do this. To this end, a commercial ice machine is being requested to not only help provide a reasonable degree of safety, but meet the intentions of T-8. It should also be noted that considerable sums are spent on purchase "chemical" cold packs for sprains and other minor muscular-skeleton injuries to students. An added benefit to obtaining an ice machine would be to use real ice packs instead and save the costs of the chem packs. This would also be keeping with the District's Sustainability initiative as it would keep several cases of these packs out of the land-fill each semester. Lastly, it would also benefit the Police and Ranger academies and "In-Service" programs for a total of over 1300 students each year.

5. Bleacher Seats: With the adoption of the new FFI curriculum the hours of lab activities has been increased significantly (over 100 hours). With this increase students spend considerable more time observing manipulative skills in the field as well as practicing them. As our class sizes have increased, we have found it difficult for all to be able to observe instruction due to their vision being obscured by other students. To alleviate this problem, portable bleacher (tip and roll) are requested to provide seating areas which can be moved around to the different instructional stations. By allowing the students to sit, it also helps to minimize fatigue and makes them more prepared for the physicality of the lesson. From a safety perspective, the bleachers will also be beneficial as they will aid in the students recovery from activities that require more exertion.

At our Advisory meeting on April 7, 2016 a list of these items will be presented to the committee to approve in support of their purchase through the use of grant or college funds.

While these items represent a significant investment in our program, it should be added that historically, we have been very fortunate in obtaining equipment donations that have enhanced our program and greatly supplemented our equipment costs. For example, in the last year alone, we have received over \$4000 worth of hazardous materials equipment from the Sonoma County Haz-Mat Team, 12 brand new breathing apparatus from Sonoma County Fire worth approximately \$30,000 and a fire engine from the City of San Mateo.

2.4c Instructional Equipment and Software Requests

Rank	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact
0001	Windsor	01	07	SCBA Air Cylinders	50	\$442.00	\$24,673.25	R.Collins	PSTC	R.Collins
0001	ALL	00	07	Structure Collapse Prop	1	\$38,000.00	\$38,000.00	R.Collins	PSTC	R.Collins
0002	Windsor	01	07	Ladders	3	\$900.00	\$2,700.00	R.Collins	PSTC	R.Collins
0003	Windsor	00	07	Hose (Wildland & Structure)	25	\$706.00	\$28,240.00	R.Collins	PSTC	R.Collins
0004	Windsor	01	07	Hose Tester	1	\$2,341.54	\$2,341.54	R.Collins	PSTC	R.Collins
0005	Windsor	00	07	Ice Machine	1	\$4,884.81	\$4,884.81	R.Collins	PSTC	R.Collins
0006	Windsor	01	07	Portable Bleachers	3	\$976.00	\$3,469.96	R.Collins	PSTC	R.Collins
0007	Windsor	00	00		0	\$0.00	\$0.00			

2.4d Non-Instructional Equipment, Software, and Technology Requests

Rank	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact
0001	Windsor	06	07	Portable Bleachers	3	\$976.00	\$9,500.00	R.Collins	PSTC	R.Collins

2.5a Minor Facilities Requests

Rank	Location	SP	M	Time Frame	Building	Room Number	Est. Cost	Description
0001	Windsor	06	07	Urgent	PSTC	Install exterior lighting on fire tower	\$2,000.00	Install 3 exterior lights to provide adequate illumination for exterior evolutions at night
0001	Windsor	01	07	Urgent	PSTC	Enclosure for Fire Extinguisher pan	\$15,000.00	Concrete or cinderblock enclosure to prevent agent from contaminating soil.
0001	Windsor	06	01	Urgent	PSTC	Fire Tower Interior Lights	\$500.00	Repair interior lights in fire tower (work order submitted)
0004	Windsor	01	01	1 Year	PSTC	None	\$0.00	None

2.5b Analysis of Existing Facilities

2.5b Analysis of Existing Facilities

In our analysis of the existing facilities, the greatest need that has been identified is to make those site improvements necessary to conduct all Firefighter I Academies and Firefighter II certification testing at the PSTC.

Thanks to the support of the Board Facilities Committee and the Facilities /Operations Department (Fac/Ops), improvements have steadily occurred at the PSTC which have allowed our program to achieve this goal despite the demands associated with the changes to the new FFI curriculum. For example, since 2012 the following facilities requests made in our PRPP have been accomplished. They include:

- Installation of a 500 gallon propane tank to operate our car fire prop.
- Installation of a 40 foot shipping container to store instructional equipment.
- Delivery of a Bauer Air Compressor to fill SCBA bottles.
- An Auto Extrication Pad and Storage Shed.
- The installation of a Carport to store our fire engines, hose and misc. equipment.
- A student shade structure to meet the Heat Illness Prevention requirements of T-8, sec. 3395d (under construction at this time).
- Construction of a Ventilation Roof Prop that has been in service since Fall 2015.
- Constructon of a Fire Sprinkler prop to allow students to perform the skill of ontroling water flow from a sprinkler system (5-13.3).
- Construction of a steel ladder cart to store and transport our ladders throughout the PSTC.
- Installation of an Interior Gas Prop (currently underway) to perform the interior fire attack skill (5-3.10).
- Procuring a propane burn pan to meet the fire extinguisher training requirements in the new curriculum.

As these improvements have allowed us to move all units of the fire academy from the Santa Rosa Fire Department Training Tower (SRFDTT) to the PSTC, for the second year in a row, we have avoided having to lease grounds from the Santa Rosa Fire Department. While it was our hope these improvements would satisfy our facility needs, we have recently learned that with the changes to the new Firefighter I and II curriculum and the certification testing process, the following instructional aids/improvements will be necessary. These include:

- Constructing a non-combustible enclosure around the fire extinguisher burn pan to contain the dry chemical discharged from the extinguishers and prevent contamination to District and adjacent properties.

- Procuring a structural collapse prop to allow students to conduct the "Assist Rescue Operations Team" (Skill 4-2) necessary to meet the FFII certification testing requirements

As Accredited Regional Training Programs (ARTPs) we are required by SFT to obtain them. This has taken on a new sense of urgency and was confirmed when a request was made to SFT to allow ARTP's some flexibility as they require significant investment and may take some time to purchase. In their response SFT reported at the November 2015 Fire Tech Directors meeting that future accreditation site visits would include ARTP's demonstrating they possess these items as identified in the FFI & FFII course plans.

Given the site constraints at the PSTC, as these aids are added to the Fire Academy, it will almost certainly lead to more conflicts with other programs as the use of the facilities by the Fire academy becomes more intensive. One option that may alleviate this problem is the availability of the 20 acre Pozzi parcel that borders the PSTC. This presents a one time opportunity to remedy the site constraints we are experiencing. Given Mr. Pozzi's strong support of the Fire Program, it would be fitting that a facility that honors his legacy be established.

It would also serve to remedy another problem. As the State moves into it's fifth drought year, there is an increased emphasis to reduce the use of water used by the program. In addition to being consistent with the District's Sustainability Initiative, the practice of water conservation only makes sense. However, given the hose evolutions which we are *required* to conduct as part of our curriculum, we have no choice but to use significant quantities. For example, it is not unusual to use approximately 150,000 gallons during the month when hose instruction is delivered. One solution would be to purchase the Pozzi property and construct fire training grounds that utilize a closed loop system where water is stored in underground tanks, pumped to hydrants dedicated solely to hose evolutions and which drain back to the tanks after the water is discharged. Such facilities have been constructed at other programs throughout the state and used most successfully.

In addition to the space needed to conduct our manipulative training, it has become apparent that there is an increased demand for classroom space at the PSTC. This limitation has only become more acute as the popularity of our programs has grown and with the introduction of new courses such as the Volunteer Fire Skills Program. Because this need has already been articulated in the *Public Safety Training Center Advanced Laboratory and Office Complex* report dated May, 2005, the reader is encouraged to reference that document for additional information relative to the need for classroom facilities.

3.1 Develop Financial Resources

3.1 Develop Financial Resources

It has been a continuing goal within the Fire program to pursue a variety of resources (both funds and equipment) that are consistent with district goals. This has included some of the following practices:

- Evaluating the number of Professional Experts needed to safely assist with delivery of manipulative skills for the fire academy.

- Implementing facility improvements at the PSTC to operate the academy at that site and eliminate the cost of leasing the Santa Rosa Fire Training Tower (also lower labor costs).
- Agressively pursue grant opportunities to obtain the instructional equipment necessary to deliver instruction. This includes over \$200,000 in CETA grants and \$35,000 in IELM funds over the last four years.
- Enter into Instruction Service Agreements that share instructor resources and reduce the cost of instruction to the District
- Allow fire agencies to use our facilities in return for assisting with instruction and providing resources on equipment dependent scenario days
- Actively pursuing donated equipment to minimize our equipment budget.

While donations far remain the largest source of our equipment, in the future we will continue to rely on Perkins (CETA) funding to purchase that we cannot obtain through donations. We will also continue to pursue other potential oportunities such as the *Institutional Education and Library Materials (IELM)* grants.

3.2 Serve our Diverse Communities

3.2 Serving our Diverse Communities

The program continuously is evaluating methods to better serve or diverse communities. One of the more inclusive ways to accomplish his is by having faculty that reflects this. To that end, I feel we have had some success.

For example, last year we completed a recruitment for our one F/T faculty. In an effort to be sensitive to the diverse needs of our students, one of the five criteria established in our application selection rubric is diversity. The outcome was the recruitment and hiring of the progam's first full time female instructor.

Among the best practices used to attract candidates for this position included advertising our Job Announcement (JA) on the following websites (HR Dept. Fall 2013 Recruiting Sources doc):

- AsiansinHigherEd.com
- BlacksinHigherEd.com
- HispanicsinHigherEd.com
- LGBTinHigherEd.com, and
- California Community Colleges Faculty and Staff Diversity Registry

The program has also been very successful recruiting female Adjunct instructors which now comprise 20% of our adjunct staff (as compared to representing only 3% of F/T firefighters in Sonoma County).

The overall break down of the background of our staff is as follows:

We presently (Spring 2015) have 38 Fire Technology Instructors employed:

1 FT Instructor – (Female)

30 Male Adjunct Instructors – 26 White, 2 Latinos, 1 Asian, 1 Pacific Islander

Female Adjunct Instructors - 8 White

The ages of our Adjuncts faculty ages range from the 20's to the early 60's.

It is also worth noting that in 2013, a concerted effort was made to promote female enrollment in the program by having two female Adjuncts attend Career Fairs at local high schools including Elsie Allen High, Piner High School, Bolinas High School, Roseland Middle School and Sonoma State University.

3.3 Cultivate a Healthy Organization

3.3 Cultivate a Healthy Organization

One of the most effect ways to develop an environment based on collegiality is to create a fun working environment. Some ways this has been accomplished is by the following:

- Creating a "Song of the Day" to generate a light environment and promote nostalgia.
- Having "Hot Dog" days where we have picnics with Classified and Managers
- Having trivia contests twice a year.

Recruiting and hiring of the best candidates has always been a goal of the program. With the vast majority of instruction being delivered by Adjuncts, most of our hires come from local fire agencies whom are well know because of the intimate nature of fire services in this county. This allows us to identify and hire candidates who are recognized experts in their respective fields which helps maintain quality instructional deliver.

Student Health and Wellness is promoted through three of our courses. In Fire 208, 12 hours are spent on physical training and the importance of health in a firefighting career. This is followed by the Fire Academy where 28 hours of physical training occurs including a PT midterm and final which must be passed in order to graduate.

To obtain a degree or certificate, students must complete Fire 78 (Fire and Emergency Services Safety and Survival) which includes a component on Health and Wellness .

In our efforts to increase safety planning and overall emergency preparedness, over the past year, the program has done the following:

- Conducted fire extinguisher training
- Participated in the District's "Great Shakeout" exercise in Fall 2014

- Attended ATC-20 Training sponsored by the District February 25, 2015
- Directed new staff to the FEMA website to take the I-100 & I-700 courses
- Updated PSTC emergency checklists for Earthquakes.

Once all staff have taken the FEMA training, a Standardized Emergency Management System (SEMS) course will be conducted to satisfy all Federal and State emergency preparedness training requirements.

3.4 Safety and Emergency Preparedness

3.4 Safety and Emergency Preparedness

A number of activities have been occurring with the fire program in this regard over the last few years.

Injury, Illness and Prevention Program (IIPP): In response to a weakness we identified with the *Heat Illness Plan* provision of the IIPP, in conjunction with Fac/Ops, we recently had a shade structure erected (T-8, 3395 (d)1).

In our efforts to increase safety planning and overall emergency preparedness, over the past year, we have also accomplished the following:

- Conducted fire extinguisher training
- Participated in the District's "Great Shakeout" exercise in Fall 2014
- Attended ATC-20 Training sponsored by the District February 25, 2015
- Directed new staff to the FEMA website to take the I-100 & I-700 courses
- Updated PSTC emergency checklists for Earthquakes.

We are also currently developing an "Active Shooter" checklist as well.

Once all staff have taken the FEMA training, a Standardized Emergency Management System (SEMS) course will be conducted to satisfy all Federal and State emergency preparedness training requirements.

The Building coordinators for the PSTC are Tim Bell as primary and Randy Collins as (alternate). This includes all buildings 100-900 at the PSTC.

3.5 Establish a Culture of Sustainability

3.5 Sustainable Practices

Since August of 2010, the following sustainable practices have been implemented in the program:

- All print materials surplus in the program are recycled when possible. Assignments, handouts, tests and other documents have been reformatted and printed two sided to use less paper.
- Beginning in Spring of 2014, all of the student materials for our "In-Service" State Fire Training Classes (SFT) have become available electronically. This has allowed us to have the students download them to their laptops, I-pads or other electronic readers (students still have the option of printing a hard copy). The classes account for between 30 and 40% of our offerings each semester.
- With all academy classes now conducted at the PSTC, we have eliminated trips to the Santa Rosa Fire Department Training Tower (16 mile round trip).
- The program is also in the process of transitioning from composite to aluminum SCBA air bottles that have an indefinite service life as opposed to the composite cylinders currently used that are obsolete after 15 years and cannot be recycled (the only reason composite bottles are used in the first place is because they have been donated).
- The program is also making use of 3-5 gallon water coolers for student hydration to minimize the use of bottled water (for a summary of the problems go to: <http://greenliving.nationalgeographic.com/water-bottle-pollution-2947.html>)
- Beginning in fall of 2015, the academy will be moving to a paper free evaluation process known as EVALs.NET

For future practices, the program is examining the possibility of implementing a computerized (paperless) testing system similar to what is used in the Police Academy and EMC program. However, it is hindered by the operation of the fire academy at a remote location which makes implementing such a program unlikely. This represents another benefit of moving the academy to the PSTC and why this project remains a high priority.

4.1a Course Student Learning Outcomes Assessment

4.1a Course Level Student Learning Outcomes (SLOs)

At this time, all courses possess SLOs. In addition, all courses that are offered have had their SLO's assessed.

It should be noted that one of the benefits of completing our SLO assessments was to help prepare our program for our accreditation with State Fire Training which was completed in May of 2015 and resulted in a unanimous affirmative vote by the State Board of Fire Services. This accreditation will be good until 2020.

Another outcome of our assessments was to learn that in several classes students already possessed a cognitive understanding of many of the objectives covered in the class gained through either their job environments or by having the material covered in another related class. With this background, we now query each class as to their background and if we find certain material already covered (as found in the COR), we alter the schedule to devote more time on other topics that are found to challenge the students.

On a final note, it is worth mention that beginning in 2017, it will be necessary to conduct SLO assessments on a majority of our "In-Service" courses. This is a result of a alignment process at State Fire Training that resulted in the curriculum being re-written. As they have all been approved by the District, once they begin being offered in 2017, the assessments will need to be conducted.

4.1b Program Student Learning Outcomes Assessment

4.1b Program Level Student Learning Outcomes (SLOs)

In the Fire Technology program, there are three degree's/certificates that require assessment. They include:

- Fire Technology Degree
- Fire Technology Certificate
- Firefighter I Academy

As of the writing of the 2015 PRPP, all three have been assessed with the next plan for assessment scheduled for 2020.

As identified with the course assessments, one of the outcomes of the program assessments is that it allowed us to identify redundancies in some of our programs. While some of this is unavoidable as the programs follow either FESHE, SFT or IFSAC/Pro-Board course plans, we do query our students when these areas of over-lap are reached and if they demonstrate a through understanding of the material, we use the time to reinforce more challenging topics which ultimately improves the learning experience.

4.1c Student Learning Outcomes Reporting

Type	Name	Student Assessment Implemented	Assessment Results Analyzed	Change Implemented
Course	Fire 107A - Vol Fire Skills	Fall 2014	Fall 2014	Fall 2014
Course	Fire 107B Ad Vol Fire Skills	Spring 2015	Spring 2015	Spring 2016
Course	Fire 200.1- Training Inst. 1A	Spring 2014	Spring 2014	Spring 2015
Course	Fire 200.2- Training Inst. 1B	Spring 2014	Spring 2014	Spring 2015
Course	Fire 200.3 - Training Inst. 1C	Fall 2015	Fall 2016	N/A
Course	Fire 201 Fire Prev for Co Offi	Fall 2013	Fall 2013	Spring 2014
Course	Fire 202 - Ethical Leadership	Summer 2015	N/A	N/A
Course	Fire 203 - Fire Management	Fall 2013	Fall 2013	Spring 2013
Course	Fire 204.A- Fire Command 1A	Spring 2013	Fall 2013	Spring 2014
Course	Fire 204.B- Fire Command 1B	Fall 2013	Fall 2013	Spring 2014
Course	Fire 204.C - Fire Command 1C	Fall 2013	Fall 2013	Spring 2014
Course	Fire 206- Wildland Fire Acad	Spring 2014	Spring 2014	Fall 2014
Course	Fire 208 - Intro to FFI Acad	Spring 2014	Summer 2014	Fall 2014
Course	Fire 208.1 - FFI Academy	Spring 2013	Spring 2013	Fall 2013
Course	Fire 209 Investigation 1A	Spring 2014	Spring 2014	Fall 2014

Course	Fire 212 - Rescue Systems	N/A	N/A	N/A
Course	Fire 241 - Driver Operator 1A	Spring 2014	Spring 2014	Spring 2016
Course	Fire 258 - Driver Operator 1B	Spring 2014	Spring 2014	Spring 2016
Course	Fire 259 ICS 200	N/A	N/A	N/A
Course	Fire 56 - Fire Hydraulics	N/A	N/A	N/A
Course	Fire 61 - Fire Investigation	Spring 2014	Spring 2014	Spring 2015
Course	Fire 71 - Fire Protection Org	Spring 2013	Spring 2013	Fall 2014
Course	Fire 72 - Fire Behavior	Spring 2013	Fall 2013	Spring 2014
Course	Fire 73 - Fire Prevention Tech	Spring 2014	Spring 2014	Fall 2014
Course	Fire 74 - Fire Prot Sys& Equip	Spring 2013	Spring 2013	Fall 2013
Course	Fire 76 - Building Constructio	Spring 2013	Spring 2013	Fall 2013
Course	Fire 77 - Haz Mat	Fall 2013	Spring 2013	Fall 2013
Course	Fire 78 - Fire Safety & Surviv	Fall 2013	Fall 2013	Spring 2014

4.2a Key Courses or Services that address Institutional Outcomes

Course/Service	1a	1b	1c	2a	2b	2c	2d	3a	3b	4a	4b	5	6a	6b	6c	7
FIRE 107A		X		X		X		X	X		X		X		X	X
FIRE 107B		X		X		X		X	X		X		X		X	X
FIRE 200.1	X	X	X	X	X		X	X	X	X	X	X		X	X	X
FIRE 200.2	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
FIRE 200.3	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
FIRE 201		X	X	X	X		X	X	X	X	X	X	X	X	X	X
FIRE 202			X	X		X	X	X	X	X	X	X	X	X	X	X
FIRE 203	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 204.A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 204.B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 204.C	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
FIRE 206	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 208	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 208.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 209		X	X		X	X		X	X	X	X	X	X			X
FIRE 241		X	X	X	X		X	X	X	X	X	X	X	X	X	X
FIRE 258	X	X	X	X	X		X	X	X	X	X	X				X
FIRE 259		X	X	X	X			X	X	X	X	X	X	X	X	X
FIRE 56	X	X	X	X			X	X		X	X	X				X
FIRE 61	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 71	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 72	X	X	X	X	X		X	X	X	X	X	X	X			X
FIRE 73	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 74	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 76	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 77	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FIRE 78	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

4.2b Narrative (Optional)

4.2b Narrative (Optional)

It is safe to say that over the past three years, there has been considerable dialogue regarding SLO and their Assessments in the Fire Program. The reason for this lies primarily in the fact there is only one F/T instructor in the program so the majority of the assessments had to be performed by Adjuncts. Compounding this challenge was retirement of the F/T instructor and the need to have the balance of the assessments performed by other Adjuncts. To provide the background necessary to conduct these, several workshops were conducted for Adjunct staff but due to the irregular schedules most work in the real jobs in the fire service, most training sessions were held one on one.

While the initial response by most staff was skepticism, after reviewing the reasoning behind them and the potential benefits, we eventually received 100% compliance. Needless to say, it was an extremely time consuming task and I am glad it has been completed successfully. A summary of these assessments and who was responsible can be found below.

Fire Program 6-Year Cycle SLO Assessment Plan

Course	SLO #s	Participating Faculty	Semester Initiated or to Be Initiated	Semester Completed	Comments	Year of Next Assessment
Fire 56	1,2,3,4		N/A		Not Offered	
Fire 61	1,2,3,4	Stan Fernandez	Spring 2014	Spring 2014	Cancelled S 2016 Low En	Spring 2020
Fire 71	1,2,3	Jeff Allen/Mike Angeli/Ken Sebastiani	Spring 2013	Spring 2013		Spring 2019
Fire 72	1,2,3,4,5	Tzahal Avraham	Spring 2013	Spring 2013		Spring 2019
Fire 73	1,2,3	Paula Dueweke/Curt Newsom	Fall 2013	Fall 2013		Fall 2019
Fire 74	1,2,3	Michael Angeli/Curt Newsom	Fall 2013	Fall 2013		Fall 2019
Fire 76	1,2	Curt Newsom	Fall 2013	Fall 2013		Fall 2019
Fire 77	1,2,3,4,5	Eleanor Ratliff/Linda Collister	Fall 2013	Fall 2013		Fall 2019
Fire 78	1,2,3,4	Michael Haberski	Spring 2013	Spring 2013		Spring 2019
Fire 107A	1,2,3	Dan Bull	Fall 2014	Fall 2014	Contract Class thru So. Co.	Fall 2020
Fire 107B	1,2,3,4	Dan Bull	Spring 2015	Spring 2015	Contract Class thru So. Co	Spring 2021
Fire 200.1	1,2	Ken Sebastiani	Spring 2014	Spring 2014		Spring 2020
Fire 200.2	1,2	Ken Sebastiani	Spring 2014	Spring 2014		Spring 2020
Fire 200.3	1,2,3	Curt Newsom	Fall 2015	Fall 2015		Fall 2020
Fire 201	1,2,3	Paula Dueweke	Spring 2013	Spring 2013		Spring 2019
Fire 202	1,2,3	Curt Newsom	Summer 2016	Summer 2016		Summer 2021
Fire 203	1,2,3,4	Jack Piccinini	Spring 2013	Spring 2013		Spring 2019
Fire 204A	1,2,3	Jack Piccinini	Spring 2013	Spring 2013		Spring 2019
Fire 204B	1,2,3	Jack Piccinini	Spring 2013	Spring 2013		Spring 2019

Fire 204C	1,2,3	Kim Thompson	Fall 2012	Spring 2013		Spring 2019
Fire 206	1,2,3	Randy Collins	Spring 2014	Spring 2014		Spring 2020
Fire 208	1,3	Gina Caruso/Cori Rickert	Spring 2014	Spring 2014		Spring 2020
Fire 208	2	Gina Caruso/Cori Rickert	Spring 2014	Summer 14		Summer 20
Fire 208.1	1,2,3,4,5	Randy Collins	Spring 2013	Spring 2013		Spring 2019
Fire 209	1,2,3	Stan Fernandez	Spring 2014	Spring 2014		Spring 2020
Fire 212	1,2,3,4		N/A		Not Offered	
Fire 241	1	Sean Grinnell	Spring 2014	Spring 2014		Spring 2020
Fire 241	2,3,4,5	Sean Grinnell	Fall 2014			Fall 2020
Fire 258	1,2,3	Sean Grinnell	Spring 2014	Spring 2014		Spring 2020
Fire 259					Course Inactive	
Fire 260					Course Inactive	
Fire 708	1	Jeff Snow	Spring 2014	Spring 2014	Course used only by EMC	Spring 2020

5.0 Performance Measures

5.0 Performance Measures

The most significant *non-academic* performance measures is our ability to remain current with the accreditation standards as established by State Fire Training (SFT). This has taken on an entirely new sense of urgency with the implementation of the new Firefighter I (FFI) curriculum and testing process, the new Firefighter II curriculum and the new Company Officer certification track. These have been identified here as *non-academic* due to the procedures that must be developed, staff training that must occur and acquisition of instructional aids that must all be completed before course delivery can occur. Speaking more specifically, it is estimated each staff member involved in the academy will need to attend 24 hours of evaluator training, detailed policies for testing will need to be developed and close to \$150,000 of instructional aids (props) will need to be purchased and installed.

Another measure of non-academic services we provide is reflected by our ability to offer certifications for a variety of firefighting skills above and beyond what is required for a FFI certificate. This is conducted not only to enhance the skill level of the students, but to make them more marketable in what is generally considered a very competitive job environment. It also helps our program stand out among those offered at other community colleges. Most of these certifications are Fire Service Training

Education Program (FSTEP) and National Wildfire Coordinating Group (NWCG) courses. A list of the certificates are as follows:

- Incident Command System (ICS) 200 (FSTEP)
- Auto Extrication (16 Hr FSTEP)
- Firefighter Safety and Survival (16 Hr FSTEP)
- S-130 (NWCG)
- S-131 (NWCG)
- L-180 (NWCG)
- S-190 (NWCG), and
- CalFire Basic Firefighter Certificate

Because the CalFire basic firefighter certificate is a prerequisite for employment as a Seasonal Firefighter with Cal Fire (the largest fire agency in the State), this represents a significant enhancement in that any fire academy graduate can immediately be hired by that agency and for our last 4 academies approximately 20% have been employed in that capacity by that agency.

Similar to the enhancements received in the Fire Academy, completion of our Volunteer Fire Skills program also allows students to receive the following certificates:

- Incident Command System (ICS) 200 (FSTEP)
- Confined Space Awareness (8 Hr FSTEP)
- Hazardous Materials First Responder Operational (20 Hr Calif. Specialized Training Institute).
- S-130 (NWCG)
- S-131 (NWCG)
- L-180 (NWCG), and
- S-190 (NWCG)

5.1 Effective Class Schedule: Course Offerings, Times, Locations, and Delivery Modes (annual)

5.1 Effective Class Schedule: Course Offerings, Times, Locations, and Delivery Modes (annual)

The Fire Technology provides a balanced class schedule convenient to students with day, evening, Friday, and weekend courses. A list of our offerings is shown below:

Summer 2015 Schedule

Fire 208 - 1 section (2 SAT & SUN 8am-5pm)
71 – 1 section (M & W 5:30-10:30 PM)
section (by appointment)
sections (by appointment)

Fire
Fire 708 - 1
Fire 991 - 2-3

Spring 2015 Schedule:

Fire 71 – 4 sections (M 7-10pm,T 7-10,F 9am-12pm,TBA On-Line)
 Fire 72 – 2 sections (TH 7-10pm and On-line)
 Fire 73 – 1 section (T 7-10pm)
 Fire 74 – 2 sections (M 7-10pm and On-line) Fire 76
 – 1 section (TH 9am-12pm)
 Fire 77 – 1 section (W 7-10pm cancelled low enrollment)
 Fire 78 – 1 section (M 7-10) Fire
 107B - 1 section (W 7-10, Sat 8-5)
 Fire 200.1 – 1 section (F 8:30am-5pm) Fire
 200.2 - 1 section (F 8:30am-5 pm) Fire
 201 - 1 section (F 8:30am- 5 pm)
 Fire 203 – 1 section (M-F 8am-5pm)
 Fire 204A – 1 section (F 6-10pm, S 8am-5pm, SUN 8am-5pm)
 Fire 204B – 1 section (F 6-10pm, S 8am-5pm, SUN 8am-5pm)
 Fire 204C – 1 section (F 6-10pm, S 8am-5pm, SUN 8am-5pm)
 Fire 206 – 2 sections (M-F 8-5)
 Fire 208 – 2 sections (2 SAT & SUN 8AM-5PM)
 Fire 208.1 – 2 sections (Int 8am-5pm M-F & Ext T & TH 6-10pm, SAT 8am-5pm, SUN 8am-5pm) Fire
 209 - 1 section (M-F 8-5) Fire
 241 – 1 section (F 6-10pm, S 8am-5pm, SUN 8am-5pm) Fire 258 – 1
 Section (F 6-10pm, S 8am-5pm, SUN 8am-5pm) Fire 708 – 1 section (by
 appointment) Fire 991 - 3 to 5 sections by
 appointment

Fall 2015 Schedule

Fire 71 - 3 sections (M 7-10 pm, W-130-430pm, TBA On-line)
 Fire 72 - 2 sections (TH 7-10 pm, TBA On-line)
 Fire 73 - 1 sections (T 7pm-10pm) Fire 74
 - 1 sections (M 7-10pm) Fire 76 - 1
 section (T 130-430 pm)
 Fire 77 - 1 section (W 7-10pm)
 Fire 78 – 1 section (M 7-10) Fire
 107A - 1 section (W 7-10, Sat 8-5) Fire
 201- 1 section (F 8-5) Fire 200.3 – 1
 section (W 8-5) Fire 203 - 1
 section (M-F 8-5) Fire 206 1
 section (M-F 8-6) Fire 208 – 2
 sections (2 SAT & SUN 8AM-5PM) Fire 208.1 1
 section (T & TH 6-10pm, SAT & SUN 8-5pm) Fire 209 - 1 section (F 6-
 10, Sat, Sun 8-5) Fire 708 – 1 section (by
 appointment) Fire 991 - 3 to 5 sections (by
 appointment)

To provide a balanced offering for working students, almost all core courses required for the degree or certificate program are offered both during the day and evening. Conversely, for "In-service" courses, because our primary population is working firefighters, these are offered during the day. The one

exception to this is for our Fire 204 A & B courses which we also offer in the evening/weekend to serve volunteer firefighters and not conflict with their employment.

In regards to their geographic distribution, all degree and certificate core courses are offered both at Petaluma and in Windsor. Most "In-service" courses are offered in Windsor with two offered in Petaluma

As a result of the drought conditions and extended fire seasons we have experienced for the last several years, we have experienced a serious reduction in our fall "In - Service" enrollment. This led to a number of courses being cancelled in Fall 2014. Because of the adverse effect this has on our students, with the concurrence of our Advisory committee, we have made a conscious decision to cut back four of our fall "In-Service" offerings. It is worth noting that if these drought conditions and the accompanying extended fire seasons become the new norm, it will require a radical new approach on how we offer any fall courses including the Firefighter I academy.

Currently, we offer Fire 71 and 72 both Distance Ed (DE-On-line) and classroom versions with Fire 74 available in a hybrid format in the Spring only. Finding new instructors to develop and instruct On-Line courses continues to be a challenge. As identified in section 3, it is one of our goals to make all of our core courses available on-line within 3 years.

In terms of our ability to serve our students, I feel we do a decent job balancing the hours, location and format. Eighteen months ago, we updated our 5 Year Course Plan and suggested sequence of courses to clearly identify a two year articulation path for our degree and certificate students.

Please refer to sections 5.2a & b for a record of student headcounts for the last three years.

5.2a Enrollment Efficiency

5.1 Student Headcounts

Santa Rosa Campus

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Tech (FIRE)	17	80	183	10	153	161	14	160	132	12	160

Petaluma Campus (Includes Rohnert Park and Sonoma)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Tech (FIRE)	34	244	279	23	185	197	33	183	220	33	151

Other Locations (Includes the PSTC, Windsor, and other locations)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Tech (FIRE)	72	432	403	62	329	403	79	339	372	41	168

ALL Locations (Combined totals from ALL locations in the District)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Tech (FIRE)	123	756	865	95	667	761	126	682	724	86	479

5.2a Enrollment Efficiency

Over the last 4 years, the program has averaged an enrollment efficiency of 84.7% (not including summer). In the writer's opinion, one reason why this has not been higher is due to a lack of on-line courses which have always been popular. As discussed in 2.3d, the program continues to aggressively seek on-line instructors but has been challenged by a lack of response.

It is also apparent that there has been a general downward trend in our efficiency. We have attributed one reason to a marked increase in the number of course offerings, particularly in the California Fire Service Training and Education System (CFSTES) classes. For example, since Fall of 2010, our offerings of these courses has increased 47%. As classes required for specific certifications, the demand has been strong from career firefighters who wish to promote. To that end, we have been asked by our local fire agencies to offer them in order to provide a qualified pool of candidates to fill the vacancies of those retiring from the profession.

Another trend that will impact enrollment is the retirement of the CFSTES Fire Officer certification track on December 31, 2016 and its replacement with a new Company Officer track on January 1, 2017. This is expected to spike our enrollment in this track over the next year and create a temporary drop when the new track courses begin to be offered.

Santa Rosa Campus

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Tech (FIRE)	0.0%	86.3%	79.5%	0.0%	81.2%	67.5%	0.0%	71.4%	62.4%	0.0%	89.4%

Petaluma Campus (Includes Rohnert Park and Sonoma)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2012
Fire Tech (FIRE)	75.6%	93.8%	88.6%	51.1%	86.0%	73.0%	73.3%	73.2%	77.5%	73.3%	64.6%

Other Locations (Includes the PSTC, Windsor, and other locations)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Tech (FIRE)	84.6%	95.0%	78.4%	75.7%	85.0%	73.1%	88.6%	74.3%	82.7%	55.0%	65.8%

ALL Locations (Combined totals from ALL locations in the District)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Tech (FIRE)	80.9%	93.6%	82.0%	66.1%	84.4%	71.9%	82.6%	73.3%	77.2%	64.7%	71.5%

5.2b Average Class Size

5.2b Average Class Size

As can be observed by the tables below, our average class size has trended slightly downward.

Santa Rosa Campus

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Tech (FIRE)	0.0	69.0	39.8	0.0	46.0	33.8	0.0	37.5	35.3	0.0	50.7

Petaluma Campus (Includes Rohnert Park and Sonoma)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Tech (FIRE)	34.0	40.7	34.9	23.0	37.0	28.1	33.0	30.5	27.5	33.0	25.8

Other Locations (Includes the PSTC, Windsor, and other locations)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Tech (FIRE)	27.5	30.1	22.7	26.5	26.2	21.9	31.0	21.4	20.2	22.0	19.8

ALL Locations (Combined totals from ALL locations in the District)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Tech (FIRE)	29.7	35.5	28.9	25.3	32.2	25.3	31.7	26.4	23.8	27.5	27.4

5.3 Instructional Productivity

5.3 Instructional Productivity (annual)

As can be seen by the figures below, the program has consistently exceed the college goal of 18.7 for Instructional Productivity. Much of this can be attributed to the attendance in the Fire Academies which are almost always reach capacity.

Santa Rosa Campus

Fire Tech (FIRE)		X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
	FTES	1.17	8.17	17.93	0.63	15.50	1587	0.93	16.20	12.77	0.90	16.10
	FTEF	0.00	0.30	0.80	0.00	0.60	0.80	0.00	0.80	0.60	0.00	0.70
	Ratio	0.00	27.22	22.42	0.00	25.83	193	0.00	20.25	21.23	0.00	23.00

Petaluma Campus (Includes Rohnert Park and Sonoma)

Fire Tech (FIRE)		X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
	FTES	3.69	24.40	27.90	2.47	18.50	19.70	3.55	17.43	20.81	3.55	14.39
	FTEF	0.21	1.20	1.60	0.21	1.00	1.40	0.21	1.15	1.46	0.21	1.08
	Ratio	17.60	20.33	17.44	11.79	18.50	14.07	16.91	15.17	14.26	16.91	13.34

Other Locations (Includes the PSTC, Windsor, and other locations)

Fire Tech (FIRE)		X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
	FTES	6.65	49.50	64.66	3.30	44.19	65.51	2.10	47.93	70.24	1.50	35.69
	FTEF	0.00	1.46	1.44	0.21	1.27	1.86	0.03	1.40	3.29	0.05	1.63
	Ratio	0.00	33.81	44.81	16.04	34.69	35.19	82.50	34.26	21.36	32.83	21.84

ALL Locations (Combined totals from ALL locations in the District)

Fire Tech (FIRE)		X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
	FTES	11.51	82.07	110.50	6.40	78.19	101.08	6.57	81.55	103.81	5.95	66.18
	FTEF	0.21	2.96	3.84	0.42	2.87	4.06	0.23	3.35	5.35	0.26	3.41
	Ratio	54.89	27.69	28.75	15.42	27.21	24.89	27.97	24.36	19.41	23.29	19.39

5.4 Curriculum Currency

5.4 Curriculum Currency (annual)

I am pleased to report that effective last Spring, all curriculum has been updated and are current.

5.5 Successful Program Completion

5.5 Successful Program Completion (annual)

To complete the Fire Technology program with either a Certificate or Major, most students pursue an option that includes the Fire Academy (Fire 208.1). Although this route provides for a very balanced and thorough learning experience, it does create some logistic challenges due to the need to complete the 3

Academy prerequisite courses including Fire 208 before the enrollment deadline for the Fire Academies of June 1st and October 1st (well before the normal enrollment deadlines for Fall and Spring). One scheduling change we made several years ago was to realign the Fire 208 prerequisite to occur very early in the semester. This allows the student who successfully completes the course to enroll in the fire academy the next semester. Prior to this change, the deadline had elapsed and the student had to wait another 6 months before being eligible to enroll.

In addition to the resources available to our students, with 36 Adjunct instructors (most of whom are employed in the fire service) available to provide guidance and counseling, it is not unusual for them to assist the students out of the normal class hours. For example, instructors routinely offer the use of the facilities of their local fire agencies to provide remediation opportunities. The Fire Technology program takes a tremendous amount of pride on this high level of collaboration.

Fire Technology Certificates awarded in 2014 are 10, down significantly from 60 in 2013. However, it should be noted that large swings have historically occurred with these awards. For example, 16 were awarded in 2010, 24 in 2011 and 45 in 2012. The average number of annual awards for the last five year period was 31.

Firefighter I Academy Certificates awarded in 2014 are 89, down slightly from 92 in 2013 (3%).

Major/Degrees (AS Degree in Fire Technology) awarded in 2014 are 43, up slightly (10%) from 39 in 2013.

5.6 Student Success

5.6a Retention

The retention rate for the FT Program for 2014 is 86.53% which is higher than the overall District rate. This can be attributed to several factors. First, the passing grade for the Firefighter I Academy is 80% which raises most student's GPA's. In addition, many students are already employed in the field and subsequently, their prerequisite knowledge of the subject matter is higher. Lastly, many are sponsored by fire agencies or have scholarships that have set high minimum academic standards to qualify. For a breakdown of retention by semester, please refer to the tables below.

Santa Rosa Campus

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	94.1%	67.9%	80.0%	80.0%	72.5%	68.3%	71.4%	71.9%	71.2%	100.0%	73.1%

Petaluma Campus (Includes Rohnert Park and Sonoma)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	87.1%	79.4%	80.0%	100.0%	85.9%	82.7%	97.0%	84.2%	86.4%	90.6%	83.1%

Other Locations (Includes the PSTC, Windsor, and other locations)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	81.5%	86.3%	93.0%	65.4%	87.7%	87.3%	90.3%	89.0%	91.2%	90.9%	87.4%

ALL Locations (Combined totals from ALL locations in the District)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	85.3%	81.7%	88.4%	76.5%	83.5%	81.8%	89.9%	83.4%	86.0%	92.4%	81.2%

5.6b Successful Course Completion

The successful course completion rate for the FT program in 2014 was 84.70% which is up slightly from 84% average for the previous 3 year average). Compared to the District rate, our the FT success rate is significantly higher.

Santa Rosa Campus

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	88.2%	64.1%	76.6%	80.0%	71.2%	67.7%	71.4%	69.4%	70.5%	100.0%	70.0%

Petaluma Campus (Includes Rohnert Park and Sonoma)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	87.1%	76.5%	85.8%	100.0%	84.3%	79.7%	97.0%	80.3%	80.9%	90.6%	78.6%

Other Locations (Includes the PSTC, Windsor, and other locations)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	75.9%	84.9%	92.1%	63.5%	83.6%	86.5%	88.7%	87.7%	90.6%	90.9%	85.5%

ALL Locations (Combined totals from ALL locations in the District)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	81.4%	79.5%	86.5%	75.3%	80.8%	80.4%	89.0%	81.0%	83.9%	92.4%	78.0%

5.6c Grade Point Average

The Grade Point Average for Fire Technology over the last three years has been 2.70 (down slightly from 2.77 for the previous 3 year period). Our FFI Academies GPA tend to trend higher as the minimum passing grade is 3.00. It should be noted that these figures are influenced by the 200 series classes (State Fire Training Courses) which are all Pass/Fail.

Santa Rosa Campus

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	2.60	2.20	3.11	3.81	3.00	3.08	3.00	2.93	3.23	3.41	2.93

Petaluma Campus (Includes Rohnert Park and Sonoma)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	3.13	2.96	3.24	3.83	3.13	2.90	3.13	2.69	2.47	3.58	2.08

Other Locations (Includes the PSTC, Windsor, and other locations)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	0.79	2.69	2.53	3.02	2.67	2.55	2.66	2.19	2.25	0.00	2.51

ALL Locations (Combined totals from ALL locations in the District)

Discipline	X2011	F2011	S2012	X2012	F2012	S2013	X2013	F2013	S2014	X2014	F2014
Fire Technology (FIRE)	1.97	2.72	2.86	3.40	2.88	2.73	2.97	2.49	2.44	2.78	2.52

5.7 Student Access

5.7 Student Access (every third year)

5.7a Ethnicity

With the exception of White and Latino students in the program, the ethnicity in Fire Tech (FT) trends to two percentage points to the District as a whole. For example, at the District level, White students comprise 56% of the student population, whereas within the FT program, the percentage is 72% (up slightly from 2013). The second largest group is the Latino at 19% which remains strong from a significant jump of 11% in 2012. Overall, our trends reflect those occurring in the general student population.

ALL Locations (Combined totals from ALL locations in the District - Source 2014 Fact Book)

Fire Tech (FIRE)	Ethnicity	2011-12	Percent	2012-13	Percent	2013-14	Percent	2014-15	Percent
	White	1156	72.4%	958	68.5%	997	69.3%	899	72.2%
	Asian	25	1.6%	26	1.9%	22	1.5%	7	0.6%
	Black	14	0.9%	18	1.3%	17	1.2%	16	1.3%
	Hispanic	126	7.9%	152	10.9%	278	19.3%	237	19.0%
	Native American	9	0.6%	8	0.6%	13	0.9%	5	0.4%
	Pacific Islander	7	0.4%	6	0.4%	5	0.3%	4	0.3%
	Filipino	13	0.8%	6	0.4%	4	0.3%	5	0.4%
	Other Non-White	0	0.0%	0	0.0%	59	4.1%	64	5.1%
	Decline to state	247	15.5%	224	16.0%	44	3.1%	9	0.7%
	ALL Ethnicities	1597	100.0%	1398	100.0%	1439	100.0%	1246	100.0%

5.7b Gender

The percentage of students enrolled by gender within the Fire Tech (FT) program is nearly the opposite as that of the District as a whole. The District's numbers indicate females outnumber males approximately 54 to 45% while in the FT program, males comprise 90.2% of the population (up slightly from 89% in 2013). The number of females rose almost 2 percentage points to 9.2% (from 7.3% in 2013). These numbers reflect an industry that has a male dominated work force. This has long been recognized in the industry as well as the in FT programs throughout the California Community College system and is being continually evaluated for improvement.

In the FT program, two strategies have been implemented to help foster a change to this trend. First, as alluded in Section 3.2, a significant number of our instruction staff are female (20%) with the rationale it will make the program more attractive to female students. The second is a concerted effort being made to promote female enrollment by attending Career Fairs at local high schools. For example, in 2013, FT personnel attended Career Fairs at Elsie Allen High, Bolinas High School, Sonoma State and Roseland Middle School. In addition, program staff have also attended the District Career Fair held each spring for the last 4 years.

ALL Locations (Combined totals from ALL locations in the District)

Fire Tech (FIRE)	Gender	2011-12	Percent	2012-13	Percent	2013-14	Percent	2014-15	Percent
	Male	1453	91.0%	1256	89.8%	1272	89.4%	1124	90.2%
	Female	125	7.8%	130	9.3%	105	7.3%	115	9.2%
	Unknown	19	1.2%	12	0.9%	62	4.3%	7	0.6%
	ALL Genders	1597	100.0%	1398	100.0%	1439	100.0%	1246	100.0%

5.7c Age students in each Discipline at first census broken down by age .

ALL Locations (Combined totals from ALL locations in the District)

Fire Tech (FIRE)	Age Range	2011-12	Percent	2012-13	Percent	2013-14	Percent	2014-15	Percent
	0 thru 18	116	7.3%	118	8.4%	151	10.5%	137	11.0%
	19 and 20	352	22.1%	295	21.1%	317	22.0%	219	17.6%
	21 thru 25	579	36.3%	497	35.6%	481	33.4%	462	37.1%
	26 thru 30	317	19.9%	267	19.1%	251	17.5%	229	18.4%
	31 thru 35	113	7.1%	130	9.3%	125	8.7%	115	9.2%

	36 thru 40	63	3.9%	40	2.9%	47	3.3%	43	3.5%
	41 thru 45	39	2.4%	26	1.9%	35	2.4%	17	1.4%
	46 thru 50	7	0.4%	13	0.9%	17	1.2%	6	0.5%
	51 thru 60	10	0.6%	11	0.8%	14	1.1%	15	1.2%
	61 plus	1	0.1%	1	0.1%	1	0.1%	3	0.2%
	ALL Ages	1596	100.0%	1397	100.0%	1438	100.0%	1246	100.0%

5.8 Curriculum Offered Within Reasonable Time Frame

5.8 Curriculum Offered Within Reasonable Time Frame (respond every third year)

The Fire Technology Program at SRJC offers all of its required Core classes each semester – Fire 71, Fire 72, Fire 73, Fire 74, Fire 76, Fire 77 and Fire 78. In addition, during the summer we offer Fire 71. We also we offer in the Fall and Spring semesters such electives as, Fire Command, Training Instructor, Fire Investigation, Fire Management and Driver Operator for students who are currently employed with fire agencies. This is important as it allows employed firefighters to obtain their Fire Officer Certificate within a one year period.

The total number of sections offered is 30 for the Spring semester and 26 for the Fall for an average of 28 (an increase of approx. 40% since 2010). Each semester includes the Firefighter I Academies (2 sections offered in the Spring semester and 1 Section offered in the Fall) and Fire Technology Occupational Work Experience Internships.

Two years ago, a fire year rotational plan (with two optional paths) was updated to ensure course offerings were sufficient to allow a student to complete our certificate and degree programs within two years.

5.9a Curriculum Responsiveness

5.9 Curriculum Responsiveness (every third year)

The Fire Technology major at SRJC provides practical and technical instruction to meet the requirements of various fire service agencies at the local, state, and federal levels. The Course Curriculum meets the State Fire Training (SFT) requirements for our accreditation as an Accredited Regional Training Program (ARTP) Fire Academy. Our Core classes (Fire 71, 72, 73, 74, 76, 77 and 78) are aligned with the Fire and Emergency Services Higher Education (FESHE) model and meet current transfer requirements at the CSU.

One of the most obvious examples of our curriculum responsiveness has been the changes being made to the SFT courses we offer as an ARTP. Since 2011, SFT has been updating the curriculum for each of their professional development tracks to align with National Fire Protection Association (NFPA) standards. To keep our curriculum current, over the last year, the entire Course Outline of Record (COR) for the Firefighter I Academy (FFI) was rewritten and approved to meet the new SFT course plan including the certification testing process required at the termination of the academy.

In addition, when it was learned the SFT Fire Officer track was being retired at the end of 2016, it created a surge in enrollment of students striving to complete this coursework before this deadline. It

has also created a need to develop and obtain approval of the curriculum for the eight new courses that comprise the new track (described below).

One unexpected outcome of this alignment process has been the interest by local fire agencies for the program to implement the SFT certification testing process for Firefighter II (FFII). Although traditionally conducted by local fire agencies, because this testing process must be conducted by an ARTP, we have been approached by local fire agencies to begin offering the testing component. This concept was also supported by our Advisory Committee who voted for us to begin implementing the testing at our April 2015 meeting.

Amongst the composition of the Fire Technology Advisory Committee, of the fourteen members, all are employed in the fire service in Sonoma, Marin, Mendocino or Napa Counties. Of these members, two serve as adjunct faculty.

At our Advisory meetings, we review the changes to our course offering (including curriculum) and receive the approval of the committee prior to implementing any changes and bringing them to the Curriculum Committee for their approval. For example, at our April 2015 meeting, the committee reviewed and approved the proposed Course Outline of Record for the following courses:

- Fire 219: Intermediate Fire Behavior
- Fire 270.1: Incident Command Operations for Company Officers
- Fire 270.2: Wildland Incident Operations for Company Officers
- Fire 270.3: Hazardous Materials Incident Commander
- Fire 271.1: Human Resource Management for Company Officers
- Fire 271.2: Fire Administration for Company Officers
- Fire 272: Fire Inspections and Investigations for Company Officers
- Fire 273.1: Fire Service Instructor I

It is anticipated that all these courses will be approved by the District's curriculum committee by October 2015.

Another curriculum path we have pursued is the implementation of a Volunteer Fire Skills certificate program. Given the large number of Volunteer Firefighters in the County, there is a genuine need for such a path. To that end, the Sonoma County Dept. of Fire and Emergency Services agreed to partner with our program to deliver to their 15 Volunteer Fire Companies and we are now in the second semester offering the program. It should also be noted that an outline of this program has been adopted by the California State Firefighter's Association to deliver to other Volunteer Fire departments outside of the County so our program in many ways has been a leader in this field at the statewide level.

5.9b Alignment with High Schools (Tech-Prep ONLY)

5.9b Alignment with High Schools (Tech-Prep ONLY every third year)

Fire 71 can be taken by High School Students through their enrichment program and is available on-line. Marin and Sonoma counties host Explorer Programs that are also linked with our Firefighter I Academy curriculum. Articulation does occur with our prerequisite courses to enter our Firefighter I Academy, such as EMS 100 – First Responder, CPR and Advanced First Aid.

While a dialogue has also been initiated with the Napa High school ROP program (of which the Fire Tech Director sits as a member of their Advisory Committee), it appears the on-line Fire 71 on-line course may prove the best venue for maintaining a nexus with the program.

To promote this alignment, the Program Director serves on the Advisory Committee for the Napa ROP program and has attended every one of their meetings since 2011.

5.10 Alignment with Transfer Institutions (Transfer Majors ONLY)

5.10a Alignment with Transfer Institutions (Transfer Majors ONLY, every third year)

Our Fire Technology 70 series courses all transfer to lower division units at CSU Sacramento, Long Beach and Los Angeles (Fire Administration Degrees). Columbia Southern on-line program (www.columbiasouthern.edu), Brandman University (www.brandman.edu/irvine), Southern Illinois University (www.siufire@siu.edu) and Kaplan University represent private have on-line programs that also accept our core Fire Technology units as lower division transfer units towards a Bachelor's degree in Fire Science.

5.11a Labor Market Demand (Occupational Programs ONLY)

5.11a Labor Market Demand (Occupational Programs ONLY, every second year)

Over the past 5 years there has been a surge of Fire service retirements throughout California. This is due in part to the retirement package known as 3% at 50 which has allowed firefighters to retire at age 50 with up to 90% of their current salary. This has opened the application process to many of our graduates and it appears that this trend will continue for the next few years.

According to the labor market web site www.labormarketinfo.edd.ca.gov California's labor market projections (2010-2018), the Fire Service will experience a 10% growth in employment with the Bureau of Labor and Statistics projecting the nationwide number of firefighter openings to increase 18% by 2018 with most agencies slowly returning to fiscal health. It should be noted that approximately 70% of our Academy students serve as volunteer firefighters which often lead to a paid positions.

However, one of the most encouraging statistics is that with the recent curriculum changes to the Fire Academy (Fire 208.1), students now receive a *Calfire Basic Firefighter* certificate upon successful completion of the academy. This has led to 20% of the graduates in the last three academies being hired

by Cal Fire. In addition, Santa Rosa Fire department recently hired six academy graduates which supports the above mentioned trend.

Within our region (North Bay/Sacramento), Solano, American River and Sierra College also offer degrees in the same discipline.

5.11b Academic Standards

5.11b Academic Standards (every third year)

Our program continues to struggle with the need to adopt higher standards for reading and writing skills. Recently, we have revised the fire academy screening course (Fire 208) to include a more rigorous English component in order to acquire an adequate amount of data to convince the District Curriculum Committee to permit a prerequisite of English 100 for the Fire Academy (Fire 208.1) It is interesting to note that this was dropped as a prerequisite several years ago for lack of this very data.

It was with great interest to learn that this spring the Curriculum Review Committee has approved the expansion of their prerequisite pilot to allow adding Basic Skills courses without the burdensome statistical validation process. To that end, we will be pursuing requesting English 100 as a prerequisite for the Fire Academy.

6.1 Progress and Accomplishments Since Last Program/Unit Review

Rank	Location	SP	M	Goal	Objective	Time Frame	Progress to Date
0000	Windsor	04	00	Construct/obtain structure collapse prop to deliver FFII testing	Find prop, obtain grant funding, clear through purchasing, install	Completion by Dec 2016	Currently identifying product vendors
0001	Windsor	02	06	Obtain reaccreditation as a regional training center with SFT	Obtain approvals from State Board of Fire Services	Jan 2013-May 2015	Occurred May 2015, Accreditation approval letter issued June 2015
0001	Windsor	05	07	Construct training ground to reclaim fire flows for reuse	Obtain "Pozzi" property, include in SRJC Master Plan	ASAP given drought	College currently in discussion to obtain property
0001	Windsor	01	06	Implemented 2013 FFI Curriculum and IFSAC/Pro-Board certification testing	Approve curriculum, train staff to new lessons & test process, conduct beta test	Jan 2015-Dec 2015	All objectives completed
0001	Windsor	02	07	Train all staff to meet new SFT Skills Evaluator requirements	Schedule training with SFT, arrange for location & facility, notify staff	By April 5, 2016	Training has been scheuled, staff contacted and enrolled
0002	Windsor	01	06	Expand Volunteer Fire Skills Program t to all volunteer fire agencies	Recruit at volunteer agencies and solicit local Fire Chiefs	Continuous	Class Promoted at monthly Chief's and TO's meeting. Class is currently full
0002	Windsor	08	06	Write COR and obtain approval for stand-alone FFI test course	Develop curriculum , obtain approval, begin scheduling	by Fall 2016	Course approved, to be added to schedule once requested by industry
0003	Windsor	04	07	Install interior gas prop in burn room to conduct Skills Testing	Solicit Bids, Obtain grant funding, award bid, coordinate construction	Complete by April 1 2016	Bid awarded, in design phase, Feb Delivery, March construction
0003	Windsor	01	06	Implment EVAL's,net in the Fire Academy	Improve WiFi at PSTC, Obtain funding for IPADs, conduct staff training	By Fall 2015	All objectives completed
0004	Windsor	04	01	Provide a permanent structure to conduct Fire Academy ventilation unit	Complete Roof-Vent Prop unit	Nov 2012-Dec 2015	Completed Oct 24, 2015
0004	Windsor	08	06	Write COR and obtain approval for stand-alone FFII test course	Develop curriculum, obtain approval, begin scheduling	By Spring 2017	Curriculum currently being written
0005	Windsor	01	07	Provide facity to conduct Live Burn/Fire Behavior Unit	Obtain Drager Phase I Flashover Prop	Jan1-June 30, 2015	Prop delivered Sept 2015, Staff Training Completed Dec 2015
0005	Windsor	04	07	Construct/Obtain Pan to Conduct Fire Extinguisher Training	Solicit bids, obtain grant funding , award bid coordinated construction	April 2015-June 2016	Bid awarded, in design phase, construction mid-April
0006	Windsor	01	03	During each calendar year, continue to offer all courses required for State Fire Officer Certificate	Write curriculum, obtain CC approval and Chancellor's office approval	Beging offering Jan 1, 2017	Courses are approved, delivery scheduled for spring 2017
0007	ALL	04	06	Hire min. one Adjunct to develop On-line course(s)	Recruit, conduct hiring, conduct background, begin on-line training	Continuous	Inst. hired Fall 2015, course delivery to begin Fall 2016

6.2a Program/Unit Conclusions

Location	Program/Unit Conclusions
Windsor	<p>In the analysis performed of our program, we examined the demand for existing classes, as well as solicited feedback from our students, our advisory committee and local fire agencies. Based on this feedback, we have concluded that the demands on our program will be centered in the following areas:</p> <ul style="list-style-type: none"> - Conducting the Firefighter I Academy to the 2013 curriculum including the certification testing process, - Implementing a "stand-alone" Firefighter I Certification Test class to allow staff trained by outside agencies to take the certification test. - Developing and offering a "stand alone" Firefighter II Certification Test class to allow staff trained by outside agencies to take the cert. test. - Offering the new SFT Company Fire Officer track courses and Certification testing. <p>The greatest challenge to Implementing these programs will be obtaining the resources (both personnel and facilities) to do so. While we have been extremely fortunate to be the recipient of grants which have allowed us to obtain and/or build the props need for the academies, we have run out of the room at the PSTC to situate them. Without the space needed for these props we will be unable to deliver the course work and testing that is required for local agencies which will create an enormous problem in our ability to meet industry needs.</p> <p>Another concern is the implications of long term drought on the program which has created two problems. The first relates to the quantity of water that must be used to meet academy curricula. Given the hose and fire stream evolutions we are required to perform, over 200,000 gallons of water is used for each academy. The solution to this problem is to construct training grounds that collect the water in underground tanks for reuse.</p> <p>The second pertains to many of our instructional staff who work as firefighters. As they become committed to major incidents and as fire season expands into November, their availability is jeopardized and without sufficient staff, we may have to cancel the academy. An argument can be made for exclusively using retired staff to alleviate this problem but this would also create an imbalance of instruction and with firefighting tactics changing significantly, this would be detrimental to instruction and the academy.</p>

6.2b PRPP Editor Feedback - Optional

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6.3a Annual Unit Plan

Rank	Location	SP	M	Goal	Objective	Time Frame	Resources Required
0001	Windsor	01	07	Finish those site improvements needed to operate academy at the PSTC	Complete interior gas prop project, install fire extinguisher prop, construct structure collapse prop	Dec 31, 2016	Admin approval, support of Facilities Dept.
0002	Windsor	02	06	Develop and obtain approvals for FFII Test class	Write curriculum, obtain approvals and instructional props	Dec 31, 2016	Funding for props (grants)
0003	Windsor	08	01	During each calendar year, continue to offer all courses required for State Fire Officer Certificate	Obtain CC approval for any courses updated by State Fire Training	Dec 31, 2015	Admin approval to offer additional courses
0004	Windsor	04	06	Fully implement EVALs.net (admin functions) intoFFI Academy	Train Program AA to the program and its implementation	Dec 31, 2016	Provide staff the time to learn program
0005	ALL	08	06	Expand offerings of Volunteer Skills with other So. Co. Fire Agencies	Begin program to promote with Fire Chief's Association	Dec 31, 2013	Approval of Business Services to expand program
0006	ALL	08	06	Hire an additional Adjunct to develop On-line course(s)	Query existing Adjunct pool & other Fire Tech Directors of recruitment, conduct interviews, make selection, complete background process	Continuous	Admin approval & HR support
0007	ALL	08	05	Implement Intro to Public Safety concurrent enrollment class at El Molino High	Write curriculum, obtain approvals, obtain funding for instructor salaries from CTE	Dec 31, 2016	Find template curriculum to aid in developing class