

Fall 2012 Program Review - Annual Update by Section

As of: 5/14/2013 04:29 PM EST

Discipline/Program/Area Name

Fire Technology (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Technical Education Division (PR)]

Fire Technology

Includes Fire Technology, Wildland Fire Technology and Firefighter I Academy

Academic Year

Fire Technology (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Technical Education Division (PR)]

2012

Name of person leading this review.

Fire Technology (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Technical Education Division (PR)]

Thomas Hutchison

Names of all participants in this review.

Fire Technology (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Technical Education Division (PR)]

Thomas Hutchison, Bill Bailey and Bruce Schmidt

Please review the five year headcount and FTES enrollment data provided on [Program Review website](#). Comment on trends and how they affect your program.

Fire Technology (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Technical Education Division (PR)]

Since the peak enrollment at AVC in 2008-09 the head count in the Fire Technology program increased 2.7% in 2009-10, another 2.7% in 2010-11 and declined of 7% in 2011-12. This resulted in a net decline of -1.9% below the 2008-09 levels yet an 18.1% growth over the 2007-08 levels. When compared with the College decline in

-26.1%, the Fire Technology program performed well overall. When compared with the data with the Technology Program the total Division numbers are skewed due to the inclusion of the Administration of Justice program into the division. The decline in numbers in the 2011-12 academic year is in all probability due to reduction in course offerings as we had to turn away more students than normal in the 2011-12 Academic year.

Using the student achievement data provided on the [Program Review website](#), please comment on any similarities or differences in success, retention, and persistence between race, gender, and location/method of delivery groups. Please comment on all three (success, persistence, and retention). Identify which trends and achievement gaps will be addressed in the current academic year.

Fire Technology (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Technical Education Division (PR)]

Looking at student success rates for the District for female students during the period of 2007-08 to 2011-12 academic years ranged between 69 to 72% for women and 68 to 69% for male students. During this same period of time the Tech Ed. Division reflected a success rate for female students between 75 to 79% and male students between 74% to 77%. When compared to the Fire Technology program which showed success rates for female students between 74% and 88% and male students between 79% and 82%. These success rates for female FTEC students indicated that in:

Academic year	District success rate	Tech Ed rate and difference over Dist.	FTEC Rate & difference over TE/ Dist.
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For females	For females		
2007-2008	69% base	78% +9%	88% +10%/ +19%
2008-2009	69 % base	79% +10%	84% +5%/ +15%
2009-2010	70 % base	75% +5%	87% +12%/ +17%
2010-2011	71 % base	78% +7%	74% -4%/ +3%
2011-2102	72 % base	76% +4%	81% +%5/ +9%

These success rates indicate that female students in fire Technology overall have a greater success rate than the district and Tech Ed. division overall. With the exception of the 2010-2011 academic year where there was a drop in the success rate. During this year we saw a large influx of general education students that were taking technical courses and were not prepared for the rigors of the courses and generally they performed poorly. Overall female students enrolled in FTEC classes perform better academically than male students as they overall have a stronger desire to succeed in a predominately male dominated field.

For male students we see similar performance:

Academic year	District success rate	Tech Ed rate & difference over Dist.	FTEC Rate & difference over TE/ Dist.
For males	For males		
2007-2008	68% base	74% +9%	81% +7%/+13%
2008-2009	68% base	76% +10%	81% +5%/+13%
2009-2010	69% base	77% +5%	81% +4%/+12%
2010-2011	68% base	76% +7%	82% +6%/+14%
2011-2102	69% base	75% +4%	79% +4%/+10%

Overall the success rate for Male students in Fire Technology has shown consistent success rates higher than the District and Tech Ed division.

In the area off success by ethnicity/race we see similar success rates when compared to District and Division the chart below indicates FTEC retention rates when compared with the District and Division. (values expressed are % point + or -)

Year	AIKN	Asian	Black/AA	PI	White	M/C/SA	Other/UK
2007-08	Tec.+13 Dist.+21	Tec.+5 Dist.+12	Tec.+14 Dist.+19	Tec.+38 Dist.+30	Tec.+6 Dist.+9	Tec.+4 Dist.+12	Tec.+3 Dist.+9
2008-09	Tec.+2 Dist.+3	Tec.+15 Dist.+22	Tec.-1 Dist.+3	Tec.+13 Dist.+31	Tec.+8 Dist.+14	Tec.-1 Dist.+12	Tec.+0 Dist.+11
2009-10	Tec.-2 Dist.+21	Tec.+15 Dist.+15	Tec.-5 Dist.+3	Tec.+13 Dist.+26	Tec.+5 Dist.+12	Tec.+4 Dist.+10	Tec.+7 Dist.+14
2010-11	Tec.+3 Dist.+8	Tec.+0 Dist.+1	Tec.+0 Dist.+6	Tec.+9 Dist.+22	Tec.+0 Dist.+5	Tec.+6 Dist.+13	Tec.+8 Dist.+14
2011-12	Tec.+9 Dist.+8	Tec.+6 Dist.+15	Tec.-1 Dist.+2	Tec.+2 Dist.+17	Tec.+3 Dist.+7	Tec.+3 Dist.+8	Tec.+9 Dist.+16

- AIKN =American Indian/AK Native
- PI= Pacific Islander
- M/C/SA= Mexican/Central or South American

Achievement gaps of 10% are present with Asian students and the rest of the general population. We believe this is due to the relatively low numbers and their individual highly competitive drive. The other significant difference is with Black/African American students whose overall success ranges 2% to 30% lower than all other groups except Pacific Islanders which exceed all other groups. The FTEC program consistently refers students to student services for them to seek additional skills development to enhance their success.

Student retention shows that overall FTEC retention rates based on Ethnicity are ranging 90% to 98% during the all Academic years in the data. Tech Ed. retention rates during the same period reflect a spread of 89% to 93% and the District ranges 86% to 91% for the same period of time. When examining the same data for gender retention for females range 86 to 99 and male is 93% to 95%

Retention by Race

Year	AlAKN	Asian	Black/AA	PI	White	M/C/SA	Other/UK
2007-08	FT. 100%	FT. 100%	FT. 95%	FT. 100%	FT. 97%	FT. 94%	FT. 94%
	Tec 96%	Tec. 94%	Tec. 84%	Tec. 92%	Tec. 92%	Tec. 93%	Tec. 91%
	Dist.67%	Dist. 76%	Dist. 55%	Dist. 70%	Dist. 75%	Dist. 68%	Dist. 67%
2008-09	FT. 92%	FT. 100%	FT. 91%	FT. 100%	FT. 97%	FT. 95%	FT. 94%
	Tec. 91%	Tec. 94%	Tec. 80%	Tec. 93%	Tec. 93%	Tec. 92%	Tec. 92%
	Dist. 69%	Dist. 78%	Dist. 55%	Dist. 69%	Dist. 76%	Dist. 69%	Dist. 69%
2009-10	FT. 95%	FT. 95%	FT. 92%	FT. 100%	FT. 98%	FT. 93%	FT. 97%
	Tec. 95%	Tec. 92%	Tec. 92%	Tec. 97%	Tec. 94%	Tec. 92%	Tec. 92%
	Dist. 69%	Dist. 80%	Dist. 57%	Dist. 74%	Dist. 77%	Dist. 71%	Dist. 67%
2010-11	FT. 100%	FT. 97%	FT. 86%	FT. 100%	FT. 95%	FT. 97%	FT. 95%
	Tec. 90%	Tec. 94%	Tec. 89%	Tec. 98%	Tec. 93%	Tec. 93%	Tec. 91%
	Dist. 70%	Dist. 82%	Dist. 59%	Dist. 78%	Dist. 78%	Dist.73%	Dist. 65%
2011-12	FT. 95%	FT. 98%	FT. 90%	FT. 100%	FT. 93%	FT. 94%	FT. 96%
	Tec. 93%	Tec. 97%	Tec. 85%	Tec. 98%	Tec. 93%	Tec. 93%	Tec. 90%
	Dist. 71%	Dist. 86%	Dist. 58%	Dist. 72%	Dist. 77%	Dist.73%	Dist. 68%

Looking at retention by race Fire Technology is doing well when compared with the Division and District.

When looking at persistence an interesting trend is found that indicates a lack of persistence by students from spring returning to fall semester in all sampled years. In examining this trend it can be attributed the summer employment period for Wildland Firefighters which traditionally runs between late may early June through late October early November. Students are electing to work as seasonal Firefighters to gain valuable work experience for when they compete for a permanent career job either as a Wildland or Municipal firefighter.

Analyze changes in student achievement and achievement gaps over the past five years. Cite examples of using data during that time as the basis for resource allocation (e.g. human, facilities/physical, technology, financial, professional development) or making other changes that resulted in improvements in student achievement.

Fire Technology (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Technical Education Division (PR)]

The most significant achievement gap on the Fire Technology program appears to be success for African American students. Gender wise there is a large gap in the number of female students in the program as compared to male

students. The female students appear to be better performers academically and more persistent. The Fire Service is actively looking for skilled qualified females and those that are successful are generally hired soon after completion of the program. I plan to contact Dr. Grishman to seek help in improving the African American group of student's performance in the classroom and to seek assistance in recruitment of females into the fire technology program.

Provide examples from your program where assessment findings of Student Learning Outcomes (SLOs), Program Learning Outcomes (PLOs), and/or Operational Outcomes (OOs) were discussed and used to make budget decisions in the past year. This should include brief descriptions of assessment findings, when the discussions occurred, who participated, and what, if any, budget items/resources resulted.

Fire Technology (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Technical Education Division (PR)]

Discussions were held in the late fall of 2011 in reference to mastery of manipulative skills for Firefighter I lab, Rescue Systems and Fire Suppression Systems classes. The discussion centered on the need to improve student skills and knowledge in two areas, first was the forcible entry evolutions for Firefighter I and Rescue Systems. Specifically looking at acquiring a practice props for on campus use by these classes. The second included discussion with all three courses about fire extinguisher training and that it is resource intensive and expensive to put use fire extinguishers on campus. This resulted in submission of a Perkins Grant Request to purchase these props which was granted in the spring of 2012. This discussion involved Karl Smith, Robert Falb and Tom Hutchison all instructors in the program.

Analyze changes in SLO, PLO and/or OO assessment findings over the past five years. Cite examples of using data during that time as the basis for resource allocation (e.g. human, facilities/physical, technology, financial, professional development) or making other changes that resulted in the improvement of SLO, PLO and/or OO findings this past year.

Fire Technology (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Technical Education Division (PR)]

An analysis of SLOs for FTEC 111 was conducted in the Fall of 2011 and some changes were made to the SLOs. At that time it was decided to let the rest of them stand until the faculty felt that sufficient data existed to review other SLOs. No changes in resource allocations were pursued at that time.

Review the program goals and objectives related to improving outcome results and/or student achievement identified in the most recent comprehensive self study and subsequent annual update(s). List program goals and objectives for this academic year, adding new ones if needed.

Fire Technology (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Technical Education Division (PR)]

10 During the 2011-12 year several program needs were addressed particularly with regards for safety. Portable radios were purchased for field days and live fire exercises for the firefighter 1 academy and additional state of the Art Self Contained Breathing Apparatus (SCBA) through the use of Perkins funds. Additional adjunct instructors were hires to meet correct safety margins for the Firefighter 1 academy. One full time Faculty member was hired as the coordinator and Instructor for the Firefighter 1 Academy.

Goals and Objectives for this year are:

1. To complete the acquisition of training props funded through Perkins funds. Target completed by 3/2013
2. Replace safety equipment for the Wildland and Firefighter 1 programs. Target 3/2013
3. Complete service shop repairs to 17 chainsaws and 2 circular saws used by all the Fire Technology programs. Target completed by 4/15/2013.
4. Revise 3-6 courses which are in need of subject matter updates submit to AP&P by 6/1/2013.
5. Review the Articulation Agreement with CSULA for FTEC courses.

List significant new and continuing resource needs in rank order of importance. Identify the document (e.g. Educational Master Plan, action plan, state mandate, accreditation mandate) and/or data which corroborate each need.

Fire Technology (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Technical Education Division (PR)]

Significant resource needs:

1. To maintain two full time instructors in the Fire Technology Program, one focusing on the Firefighter 1 Academy and one focusing on the Wildland program with shared responsibility for overall FTEC courses and budget.

2. Maintain 13 adjunct instructors minimum to insure that Fire Marshal standards are met of the Firefighter 1 Academy, and delivery of courses in the overall FTEC curriculum.
3. Restore separate funding for supplies for both Municipal and Wildland programs and establish a equipment Maintenance budget for items such as SCBA, Compressed Air bottle static tests, Gasoline powered equipment such as chain saws, rescue system tools, generators and breathing air compressor.
4. Obtain an administrative Tech position attached to the Firefighter 1 Academy to maintain records required by State Fire Marshal (SFM) with Academy certification. This position was identified when the Academy was first certified by SFM and has been unfilled. The Academy is overdue for recertification and this position is sure to be questioned, and may cost the Academy its Certification with SFM.
5. Some form of Pumping Fire Apparatus. This need has been identified for over 7 years as a need for the Fire Program This provides hands on training for Fire Technology Students on campus. This will benefit the Firefighter 1 and Wildland Academies, Engine operations and the Wildland firefighter Engine courses. Students in the courses are not receiving a full range of manipulative and technical training without this equipment.
6. Need to insure that a new facility is in the planning stages for the Fire Technology programs, as the current building is on the demolition schedules in the future and a facility will be needed.