Program Review Academic year 2011-2012

Fire and Emergency Technology

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I. Overview

A. Description of Program

The Fire and Emergency Technology Department at El Camino College was initiated in 1977 in response to a need expressed by the Fire Chiefs of the South Bay Fire Departments. It was called the Fire Science program and began with four classes in four sections for the Fall semester, 1977. The primary purpose of the program at this time was to upgrade employed fire personnel. The mission statement for the FETC program is to offer quality, comprehensive educational and training services to ensure the educational and vocational success of students from our diverse community.

By 1983 Cooperative Career Education, an Associate in Arts degree and Emergency Medical Technician (EMT-1) had been added to the curriculum. The classes offered were expanded to Fire Science 1, 2, 3, 4, 5, 6, 7,95bcd and all became transferable to California State University at Los Angeles. 1. At about this period a change in the student population of the program was noted. The students had become primarily pre-employment students and were taking the classes to prepare for the job of professional firefighter.

At the decades end, a Certificate of Completion and a Certificate of Competence were available to students who completed the eight core classes. The name of the program became Fire and Emergency Technology and students in the EMT-1 classes were offered certification as a Los Angeles County Emergency Medical Technician upon successfully passing the L.A. County examination.

In 1989, El Camino College took the South Bay Fire Academy in Inglewood under its auspices. The college rented the Academy site from the City of Inglewood and the instructors became employees of the college. The name was changed to The Los Angeles Regional Fire Academy at El Camino College and Community College credit was issued to graduates. 2. The academy students were generally a mix of already hired new firefighters and El Camino College Fire Technology students. By 1992, the Academy classes were almost exclusively pre-employment students. The local Fire Departments realized the advantages of hiring personnel who had already proved themselves by passing the rigorous training and many began to restrict their recruiting to Community College Academy graduates. In response to requests from the El Camino College Fire and Emergency Technology Advisory Committee, ten California State Fire Officer Training courses were added in 1993. Completion of these courses, together with a rather large fee, allows a student to become a certified “State of California Fire Officer”.

As a result of the Inglewood Fire Department merging with Los Angeles County Fire Department in 2001, the Academy grounds became surplus property and the College was in danger of losing our Academy location. El Camino College, through the “Partnership for Excellence” grant funding, purchased the Academy grounds, buildings and equipment.
In 2004, after the cancellation of a previously approved State grant, the college purchased an internationally recognized “Flash Chamber” for the Academy.3 In addition to the four Academies each year, over 500 local professional firefighters have received this specialized training. The El Camino Fire Academy is also used regularly by Police Departments for high angle training and the United States Coast Guard for Homeland Security classes.

Current Program

Currently the FETC program has 3 full time faculty, two on campus and one at the Fire Academy. Due to the complexity of the Fire Academy and EMT offerings FTEC has an additional 11 part time faculty.

The Fire and Emergency Technology program has several fire service educational goals that students can select depending upon their own choices and abilities:

1. **Certificate of Completion**
   Issued upon completion of the eight core classes.4
   Associate of Science
   Issued upon completion of the eight core and the general education classes
   Basic Fire Academy
   California State Fire Marshal certificate issued upon completion of the 400 hour course.
   Fire Paramedic Training
   These courses are conducted at Los Angeles County Paramedic Training Institute. The class is available to students after they complete the Fire Academy. Professional Fire Departments may sponsor students without prerequisites.

Matriculation to a Bachelor of Arts Program
Only Cal State Los Angeles offers a Bachelor degree in Fire Tech however, both Long Beach and Dominguez Hills offer Public Admin majors that articulate with our program.
Continuing Education for Professional Firefighters.
These classes are California State Fire Marshal Officer classes and are offered only upon request from the Department Advisory Committee.
'In-Service Training' for Professional Firefighters.
This training is presented by board approved on-duty firefighters through a FTES sharing program.

B. Status of Previous Recommendations

Previous Recommendations

1. Replace the retiring full time instructor in the FTEC program. (This has been approved and the position announced)

Status: Accomplished

2. Improvements in Female restroom and changing facilities at the Fire Academy

Status: Not accomplished due to lack of funding. . Will be resubmitted in Plan Builder.

3. Update the technology for the dedicated Fire Technology and Emergency classrooms to include a DVD projector.

Status: Accomplished

4. Provide a cover for the Fire Apparatus at the Academy.

Status: Not accomplished due to lack of funding.

5. Provide space for the campus Fire Engine inside the new Emergency Preparedness building at the campus.

Status: Construction is in progress, completion estimated March 2014

6. Change the required eight "Core Classes" to include the Fire Hydraulics class.

Status: Accomplished

Previous major needs

A major need concerns facilities for women at the Fire Academy. Currently women recruits are required to use the projection room to change clothes. We have a requirement of 60 seconds to change into fire combat clothing and return to formation. The women must travel an extra 20 yards and climb stairs and are often unable to meet the time standard.

The Academy woman's rest room is tiny and accommodates a single person. Women of large size must use the men's restroom. During our graduations (Four times a year) the line to the women's restroom becomes so long we close the men's restroom to males, quickly clean the restroom and open it to females for 30 minutes.

Status: No change with the exception of renting a Porta Potty for use on graduation days.

We need permanently mounted DVD projectors in the classroom. We have an extensive video- tape, slide and transparency collection and we would like to update our technology to DVD and Power Point.

Status: Funding was approved for purchase of a duplication machine and new DVD materials and purchase orders submitted.

We depend upon the generosity of local Fire Departments who have provided our Fire Apparatus by donation. All of the Engines in current use sit outside in the weather. This severely decreases both apparatus and fire hose life-spans.

Status: No change for Engines housed at the Fire Academy. Construction is scheduled for the new Emergency Preparedness Building which will accommodate the on-campus Engine with completion expected in March 2014.

II. Analysis of Institutional Research Data

A. Course grade distribution; success and retention rates

The course grade distribution, success rate and retention rate data as provided by Institutional Research shows that in FTEC the distribution of grades remains constant across the surveyed years. The success and retention rates for FTEC exceeded the Division and College rates by a significant degree for each year surveyed.

In analyzing the data it was noted that of all the FTEC sections, FTEC 1 had the worst success rate of all offerings. This may be due to the fact that this is the first class in the discipline and attracts a high number of students who are new to College and may not understand the demands of success. Another statistic that needs explanation is the success/retention rates for FTEC 140 and 141. This is the EMT class and due to State/County requirements the 'passing grade' is a B or better.

B. Enrollment statistics, fill rates

The data shows 34% of the FTEC students are in the age range of 18-24.
The data shows 94% of the FTEC students are Male.
The data shows 48% of the FTEC students are White
The data shows 15% of the FTEC students are enrolled Full-time.
The data shows 10% are in pursuit of a Degree or Certification.
The data shows 18% intend to transfer.

The data provided by IR for seat counts and fill rates do not reflect the actual circumstances due to the inclusion of 'In-Service' training sections. These sections do not have a 'set' seat count and as a result are arbitrarily assigned a seat count of 99.9. When dealing with a small Fire Department such as Hermosa Beach, the seat count could be as low as 10.

In actual observations of all on-campus FTEC offerings over the survey years, the sections were all fully enrolled with waiting lists of 10 students with additional 10 or more students hoping to add.

C. Improvement Rates

FTEC 9 has shown over the surveyed years an average of 96.1 success rate and a 96.6 retention rate.

D. Recommendations

1. FTEC 1 needs to be 'targeted' for improving the success rate. Due to the large number of 'first semester' students more emphasis may need to put on the basics of collegiate success strategies. Class time could be provided for Counseling to conduct some workshops to guide the new students for better success.
2. FTEC needs to work more closely with IR to come up with more representative data for the next review. The complexities of FTEC make it very difficult for IR to apply the basic data concepts used throughout the college.

III. Curriculum-Course, Content, and Articulation

FTEC is currently satisfied with our course offerings. As part of complying with Title 5 regulations a large number of our catalogue offerings were 'in-activated'. These sections were special offerings designed to meet the needs of local area Fire Departments and were only offered when a local agency requested the class be put on. The Curriculum Committee can, if needed, activate a section with as little as 6 weeks notice.

All of the FTEC courses have been reviewed in the last 5 years.
The core classes in FTEC are aligned with the curriculum for the CSU system and are fully transferable.
At this time a new course is in the Curriculum Review process. FTEC 3, Firefighter Safety and Survival is a new class mandated by the State Fire Marshal for inclusion as part of the core classes for the degree.
Currently all courses required for the Degree and Certificate are offered during the two year cycle.
FTEC 60A is currently in course review by Craig Neumann.

Due to new requirements by EMS the lecture hours for FTEC 140 need to be increased so this course will be submitted Fall 2011 to CCC for this and course review at the same time.
FTEC 7, 8, 14, 152 are currently in the process of being inactivated.
See Appendix D for the Curriculum-Course Review Timeline Tables.

IV. Student Learning Outcomes (SLO's)

The FTEC Department has written and submitted proposals for Student Learning Outcomes for each of our courses. All courses have at least one SLO and 4 courses are currently assessed.
The FTEC 4 year Timeline for Course and Program Level SLO assessments is in Appendix E.

FTEC 1 Fire Protection Organization

The Student will be able to identify a minimum of three fire protection career opportunities and the skills and training needed.

FTEC 2 Fire Prevention Technology

The Student will be able to define the historical fire problem and progress of fire prevention in the United States.

FTEC 3 Firefighter Safety and Survival

The Student will be able to define and describe the need for cultural and behavioral change within the emergency services relating to safety, incorporating leadership, supervision, accountability and personal responsibility.

(Currently in Curriculum review)

FTEC 4 Fire Company Organization and Management

The Student will be able to identify 3 styles of Leadership.

FTEC 5 Fire Behavior and Combustion

The Student will be able to identify the 3 physical states of matter and their physical properties.

FTEC 6 Building Construction for the Fire Service

The Student will be able to identify the 5 types of building construction.

FTEC 7 Fire Protection Engineering

The Student will be able to calculate the water flow for fire protection systems in buildings.

FTEC 8 Fire Service Hydraulics

The Student will be able to define friction loss and the factors that influence friction loss.

FTEC 9 Fire Apparatus and Equipment

The Student will be able to identify and describe the four major types of aerial apparatus in terms of their operational characteristics.

FTEC 10 Hazmat First Responder Role

The Student will be able to identify the role of the First Responder.

FTEC 11 Arson Detection

The Student will be able to identify legal search methods and procedures to follow when investigating a fire.

FTEC 14 Applied Science for Fire protection

The Student will be able to calculate how many electrically operated fire tools and appliances can be operated from a mobile generator or from an AC current outlet on a fire apparatus.

FTEC 19 Fire Service Entrance Preparation

The Student will be able to identify a minimum of three types of entrance exams.

FTEC 20 Fire Protection Equipment & Systems

The Student will be able to identify a minimum of four types of sprinkler systems.

FETC 60A Hazardous Materials: Basic Chemistry

Given a Periodic Table, the student will demonstrate the technique for calculating the atomic weight of a given element.

FTEC 60B Hazardous Materials: Applied Chemistry

Students enrolled in this course will formulate a plan to analyze an unknown solid material.

FTEC 60D Hazardous Materials: Tactical Field Operations

Given a simulated hazardous materials emergency, students will assess the type of emergency (solid, liquid, or gas), and design a decontamination plan.

FTEC 60F Hazardous Materials: Special Hazmat Mitigation Techniques

Given a simulated liquid leak in a railroad tank car, students will compare and contrast the methods used for stopping the leak.

FTEC 60G Hazardous Materials: Hazmat Field Operations

Given a simulated hazardous materials emergency, students will select the appropriate operational guidelines.

FTEC 130 Basic Prehospital Care Principles

Students will be able to compare and contrast the major components and functions of the upper and lower airway.

FTEC 131 Field Assessing and Reporting

Given a simulated medical emergency patient, the student will be able to successfully evaluate the components in a primary patient survey.

FTEC 132 Prehospital Care Pharmacology

Students completing this course will be able to successfully choose the routes by which selected drugs can be administrated.

FTEC 133 Basic and Advanced Life Support

Students completing this course will evaluate the most common reasons for an obstructed airway, and will describe the appropriate action(s) to clear the airway

FTEC 134 Medical Emergencies

Students completing this course will be able to successfully choose the appropriate field treatment for a patient with an altered level of consciousness.

FTEC 135 Traumatic Emergencies

Students successfully completing this course will be able to select the appropriate field treatment for an impaled object.

FTEC 136 Special Patient Emergencies

Students completing this course will be able to successfully differentiate among the three stages of labor.

FTEC 137 Legal Aspects of EMS

Students successfully completing this course will categorize the information that should be included on all paramedic field reports, and will complete a field report for a medical emergency.

FTEC 138 Paramedic Clinical Internship

Students successfully completing this course will be able to compare the proper lung auscultation methods, and will demonstrate this skill. The student will then correctly interpret the findings.

FTEC 139 Paramedic Field Internship

Students successfully completing this course will collect, analyze, and transmit emergency medical data using a radio system. The student will then demonstrate this ability at a simulated emergency medical incident.

FTEC 150 Fire Fighter In-Service Training

Student will place a master stream appliance in service. The student will choose the correct length of hose; select the required equipment; and calculate the appropriate nozzle size.

FTEC Program SLO

The Student will meet minimum qualifications and the needed entry skills for a career with the Fire Service.

FETC 1, 9, 10, and 11 were assessed and as a result the following changes were implemented:
FTEC 1, Student success on this assessment is 81%
additional lecture time will be devoted to private industry jobs.
FTEC 9, Student success on this assessment is 83%
no changes needed.
FTEC 10, Student success on this assessment is 78%
test questions to be rewritten to be more specific.
FTEC 11, Student success on this assessment is 80%
additional lecture time will be devoted to legal aspects.

Due to the large number of courses still needing to be assessed the FTEC program would have to be considered still in the development level.

By Fall 2012 all of the FTEC courses will be assessed and the resulting changes implemented. At this point FTEC will be at the proficiency level.

The summary of the assessment results shows a high degree of student success overall. Some minor changes such as devoteing more lecture time to certain subjects have been implemented and will be assessed in the future to determine the effectiveness of the changes.

V. Facilities, Equipment, and Technology

The FTEC on-campus courses are conducted in TA 254 and 255. These classrooms were upgraded to 'Smart' classrooms with the installation of an overhead projector and a podium equipped with a computer, a monitor, an amplifier, and a combination DVD and VCR player. Office space on the same floor is provided for the FT faculty.
FTEC 15 (Basic Fire Academy) is conducted on the grounds of the Fire Academy located at 240 W. Beach Ave in Inglewood. This facility consists of a classroom/administration building, an Environmental building for live fires, a 5 story Hose tower, a 'Flash Chamber' and a 'Backdraft Chamber'. Currently the Fire Academy has 3 Fire Engines donated by local agencies plus the Emergency Preparedness Engine that previously was housed on-campus. In addition the Fire Academy has 2 portable air filling stations used for filling the breathing air bottles used in firefighting operations. The classroom has been upgraded to a 'Smart' classroom.
Currently the technology used at both facilities consists of PowerPoint presentations, instructional DVD's and antiquated instructional VHS tapes.
Fire Paramedic Training is conducted at the Los Angeles County Paramedic Training Institute in the city of Commerce. This facility and the equipment and technology is owned/operated by the Los Angeles County Department of Health.
'In-Service Training' for Professional Firefighters is conducted at the local area Fire Departments Training facilities utilizing their equipment and technology.

The on-campus classrooms are scheduled to be moved into the renovated MCS building with dedicated 'Smart' classrooms, office space, and storage space. From a 'facilities' standpoint this will serve FTEC well into the future. Currently on order are new DVD's and a DVD duplication machine for copying the old VHS tapes into DVD's.

Recommendations

The Fire Academy is in need of some major upgrades and maintenance. The wear and tear of conducting 4 of Fire Academy classes per semester has taken its toll on the facilities.

1. A previous recommendation to provide adequate facilities for women at the Fire Academy have not been addressed. Restroom facilities for both men and women are not adequate to meet the needs of the current usage. Estimated cost: $75,000 to $150,000

2. The physical infrastructure of the Fire Academy needs to be addressed for long term preventative maintenance needs.
Estimated yearly cost: $25,000 to $50,000

3. Currently the Fire Engines have to be stored outdoors, subject to the elements. These Engines were ‘old’ when donated to the Fire Academy but due to being housed indoors they were in reasonably good shape. Currently they are becoming a maintenance issue due to the elements. A previous recommendation asked for a ‘covering’, be it a permanent carport type or simply a cover. No action has been taken.
Estimated cost: Carport, $50,000 Cover, $20,000

4. The Environmental Building was ‘relined’ due to heavy fire damage a couple years ago but is currently showing signs of needing to be done again.
Estimated cost: Yearly preventative maintenance $25,000

5. Both the Flash Chambers and the Backdraft Chambers are in need of consideration for repair or replacement. Minor on-going maintenance such as welding repairs will prolong the service life of both chambers.
Estimated cost: $20,000 repair, $75,000 to $100,000 replacement.

6. The two portable filling stations for the breathing air bottles need repair and certification. Due to age and parts availability issues they may not be usable. A permanent, fixed air filling station needs to be installed.
Estimated cost: $50,000 to $75,000.

VI. Staffing

Current Staffing

Currently the FETC program has 3 full time faculty; two on campus and one at the Fire Academy. Due to the complexity of the Fire Academy and EMT offerings FTEC has an additional 11 part time faculty.

Current Needs

Currently all authorized positions are filled.

Future Needs

At this time it appears FTEC staffing will remain static with no anticipated retirements.

Recommendations

As was recommended in the previous review, the program is in need of an additional Full time Faculty with a specialty in EMT. The EMT courses are oversubscribed each semester and the current staffing does not allow the consideration of additional sections. Also the EMT program requires large amounts of interaction with the certifying agencies. Currently this is being done by a part time faculty member.

Due to the complexity and demands of multiple programs running within the mantle of FTEC, a full time secretary would greatly increase the efficiency of the Department. This position could handle the immense amount of reporting requirements required by Local and State agencies.

VII. Planning

Changes and/or Trends Impacting the Program

Due to budget cuts the Fire Academy has had to drop the Part-time Academy. This effectively cuts in half the number of graduates we can offer to the region employers. This leaves the Fire Academy facility unused for half the semester but the fixed costs continue.

The on-campus offerings have also been cut by one course per semester due to budget cuts. This may have long term implications on students getting all of the required courses for the degree/certificate in a two year cycle.

The State Fire Marshall and the Department of Health Services continue to increase not only the mandatory courses but increase the numbers of hours required for certification. It is anticipated that this trend will continue into the foreseeable future.

Direction of the Program

The on-going need for Firefighters, Paramedics, EMT's and other Fire related occupations in our region is primarily based on retirements. Currently employers are riding out the current economy by delaying the hiring of replacements for retirees. This is a position that can be maintained only for a few years before the number of unfilled positions causes burdensome levels of overtime. At this point hiring will accelerate.

Presently all of our courses are fully enrolled with full waiting lists and additional students wishing to add in the double digits. The waiting time from application to admittance to the Fire Academy is running two semesters.

Vision of the Program

The vision of the FTEC program is to prepare the Firefighters, Paramedics, EMTs and other First Responders to be able to meet the ever changing demands of the future. This will be accomplished by adopting new technologies and content into the FTEC program offerings.

Goals

The goals and objectives of the FTEC program are aligned the mission statement and the Strategic Initiatives of the College. We will continue to prepare the workforce of the future by providing a quality program that will allow our students achieve their personal goals of employment, promotion and articulation. By implementing and analyzing the results of our SLO's our program will continue to evolve. Close collaboration with our Advisory Committee will enable us to respond to changing Industry needs for our students.

VIII. Conclusion and Summary

Prioritized Recommendations

1. **Hiring one additional full time faculty with a specialty in EMT.**
   Currently the EMT program does not have a full time faculty member whose primary responsibility is to EMT. All of the EMT sections have to turn away students, even with offering EMT during Summer. The demand for EMT's and Paramedics (Paramedics have to first be certified as an EMT) will grow 17.5% during the period of 2006 to 2016 according to IR. A full time faculty member would be able to not only coordinate the program but to teach additional offerings and thus grow the program.
   Estimated yearly cost: $100,000

2. **Hiring a full time secretary for the FTEC Dept.**
   Currently a part time secretary handles all of the requirements of enrolling and administrating the selection process for the Fire Academy. In addition this part time secretary handles all of the State Fire Marshall Certifications (15 per student) issued to Fire Academy Graduates. A full time position would be able to not only fulfill these tasks but also all of the secretarial needs of the Paramedic, EMT and Fire programs. Prior to El Camino taking over the Fire Academy, the Inglewood Fire Department had a full time secretary physically at the Fire Academy to handle just the requirements generated by the Academy business.
   Estimated yearly cost: $50,000

3. **Female facilities at the Fire Academy.**
   Currently the Fire Academy has only one Male/Female restroom for use by females. This restroom was originally designed for the exclusive use of the Training Chief. As such it is a very small Executive restroom without the physical room to change clothes. For female Fire Academy students this becomes an issue when they have to change in and out of their uniform for their physical training uniform. All

students are required to complete this change in 60 seconds. Female students can use the projection room but this requires and addition 20 yards of travel including stairs. The inadequacy of the restrooms is most evident on graduation day. It is not uncommon for females to outnumber males on this day. Present practice is to rent a Porta Potty for the use of the males and to dedicate the existing restrooms to female use. This is a very unsatisfactory solution and does not address the day to day needs of the female students. A renovation of the existing building to provide a separate restroom and locker room for females use would possibly cost between $75,000 and $150,000.

4. **Breathing Air Filling Station.**

Currently the breathing air bottles for use in the Self Contained Breathing Apparatus used for all fire ground operations are filled using a portable War surplus compressor. The maintenance company has advised that parts are no longer available if/when it breaks again. The El Segundo Fire Department donated a trailerable diesel operated filling station that not only is extremely old but must go through a 'certification' process to determine the safety of the output of compressed air.

Prior to the annexation of the Inglewood Fire Department the breathing air bottles for the Fire Academy were filled at Inglewood Fire Station 1 utilizing their permanently installed filling station. This is the 'standard' for the industry. Permanent filling stations are safer, more efficient and require less maintenance. The estimated cost of a permanently installed Air Filling Station is between $50,000 and $75,000.

5. **Carport or Cover for Fire Engines.**

Currently the Fire Engines at the Fire Academy have to park outside all year long. These Engines were old when donated but well maintained as a result of being housed indoors. Sitting outside at the Fire Academy exposed to the elements is accelerating the decline of the equipment. It is impractical based on the 'footprint' of the Academy grounds to build a building to house the Engines. An acceptable alternative is to construct a drive thru carport or cover to shield the Engines from the elements. A permanent carport would be preferable to a cover that would require frequent replacement due to the elements. The estimated cost of a carport would be $50,000 and a cover would be $20,000.

6. **Annual Building Maintenance**

Currently the aging physical plant of the Fire Academy is showing its age. Up to now repairs were only undertaken when it was impossible to put them off. An ongoing preventative maintenance program would greatly increase the expected life time of the facility. Some of this work could be done by the Facilities personnel and some of it would best be contracted out. The estimated budget for yearly maintenance would be between $25, 00 and $50,000 a year.

7. **Maintenance of the Environmental Building.**

Currently one of the most important and defining aspects of the El Camino Fire Academy versus other Fire Academy's is our ability to conduct live fire training inside our Environmental Building. This provides our student with real life fire experience. But this comes at a cost to the building. The interior surfaces experience high temperature and thermal shock by being heated by fire and rapidly cooled by water. A number of years ago the repair/maintenance of the damage to the building had been deferred for too long resulting in very extensive and costly repairs. The interior of the building is starting to show these signs again and a preventative maintenance program will ensure many years of continued use before major repairs are needed again. The estimated budget for yearly maintenance would be approximately $25,000 per year.

8. **Flash and Backdraft Chambers**

Currently the Fire Academy is fortunate to have both a Flash Chamber and a Backdraft Chamber. These props allow us to provide real life training for our students in life/death situations encountered on the job. This training is so life like and valuable that local agency Fire Departments come to the Fire Academy to train on them. As with the Environmental Building the stresses put on these props are great. With a program of preventive maintenance the life cycle of these props could be extended. The frequency of repairs would be dependent on how much usage the chambers were subjected to over the course of a year. The cost of currently needed repairs and a yearly maintenance program would be between $10,000 and $20,000. Replacement of these props would be in the range of $75,000 to $100,000 a piece.

Summary

The FTEC program at El Camino, including all of its elements, is considered by Fire Service personnel to be one of the Premier programs. Our graduates of both our on-campus classes and the Fire Academy are eagerly sought by the local agencies. With programs at other colleges declining and their students coming to us, we could realistically increase our offerings by 50% in the next 5 years. Unfortunately due to the physical constraints of the Fire Academy property we cannot increase our classes unless we offer a summer Academy. With the continued support of Administration the FTEC Department will do its best to provide our community with the best graduates we can.

IX. CTE Program Review

1. The occupational demand for graduates of the FTEC program is primarily driven by the retirements of active personnel in these occupations. According to the data provided by IR, the employment sector served by FTEC is expected to increase by 17.5% from 2006 to 2016.

2. Within the District boundaries are numerous Local agencies and County agencies along with private industry that needs trained first responders. The FTEC program addresses this need by supplying approximately 100 graduates of the Fire Academy each year and providing in-service training to 547 students per year.

3. Within the State are numerous Local agencies and County agencies along with private industry that needs trained first responders. The FTEC program addresses this need by supplying approximately 100 graduates of the Fire Academy each year and providing in-service training to 547 students per year.

4. The FTEC program at El Camino stands apart from other programs in that we provide a ‘total package’…..AS degree, EMT Certification, Paramedic Certification, Fire Academy Certification.

5. Student satisfaction with our program is evidenced by the extremes they go through to be a part of our program. We have enrolled student who have come from as far south as San Diego to as far north as Santa Barbara. An example of Employer satisfaction is the fact that in a recent graduating class of new recruits for Los Angeles City Fire Department the top three graduates were El Camino students.

6. Completion success in FTEC can be difficult to measure due to the fact that some students will become employed after just getting their AS. Others may go through the whole process, AS degree, EMT Certification, Paramedic Certification, Fire Academy Certification and still not end up employed in the field. We have not found an accurate or easy way to track the employment rates for our students due to the fact that many leave the area in pursuit of employment.

7. The FTEC Advisory Board consists of the South Bay Fire Chiefs. This group not only includes all of the local agency Chiefs but also L.A. City FD and L.A.Co.FD and the Chief for Chevron refining. Also attending are representatives for numerous State agencies. We are very fortunate that this body meets once a month and El Camino has a seat at the table. We get monthly input on issues instead of having to wait for a once a year meeting. This group keeps us up to date on numerous issues that touch upon the training we provide.

Appendix A

Course Grade Distribution and Success/Retention Rates														
Fall 2006 to Fall 2009														
Fire and Emergency Technology														
Fall 2006														
Course	**A**	**B**	**C**	**CR**	**D**	**F**	**I**	**NC**	**DR** **DR**	**W**	**Total Grades**		**Retention Rate**	
FTEC-1	31	40	27	0	13	12	0	0	0	25	148	66.2%	83.1%	
	20.9%	27.0%	18.2%	0.0%	8.8%	8.1%	0.0%	0.0%	0.0%	16.9%				
FTEC-10	6	15	5	0	0	1	0	0	0	9	36	72.2%	75.0%	
	16.7%	41.7%	13.9%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	25.0%				
FTEC-128	6	12	9	0	3	5	0	0	0	0	35	77.1%	100.0%	
	17.1%	34.3%	25.7%	0.0%	8.6%	14.3%	0.0%	0.0%	0.0%	0.0%				
FTEC-130	9	20	5	0	1	1	0	0	0	1	37	91.9%	97.3%	
	24.3%	54.1%	13.5%	0.0%	2.7%	2.7%	0.0%	0.0%	0.0%	2.7%				
FTEC-131	5	23	5	0	1	2	0	0	0	1	37	89.2%	97.3%	
	13.5%	62.2%	13.5%	0.0%	2.7%	5.4%	0.0%	0.0%	0.0%	2.7%				
FTEC-132	11	9	14	0	0	1	0	0	0	2	37	91.9%	94.6%	
	29.7%	24.3%	37.8%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	5.4%				
FTEC-133	8	17	6	0	1	2	0	0	0	2	36	86.1%	94.4%	
	22.2%	47.2%	16.7%	0.0%	2.8%	5.6%	0.0%	0.0%	0.0%	5.6%				
FTEC-134	5	14	12	0	0	3	0	0	0	3	37	83.8%	91.9%	
	13.5%	37.8%	32.4%	0.0%	0.0%	8.1%	0.0%	0.0%	0.0%	8.1%				
FTEC-135	3	9	19	0	0	1	0	0	0	6	38	81.6%	84.2%	
	7.9%	23.7%	50.0%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	15.8%				
FTEC-136	5	17	9	0	0	1	0	0	0	6	38	81.6%	84.2%	
	13.2%	44.7%	23.7%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	15.8%				
FTEC-137	5	21	4	0	1	1	0	0	0	9	41	73.2%	78.0%	
	12.2%	51.2%	9.8%	0.0%	2.4%	2.4%	0.0%	0.0%	0.0%	22.0%				
FTEC-138	0	0	0	30	0	0	0	4	0	0	34	88.2%	100.0%	

FTEC 139	0.0%	0.0%	0.0%	88.2%	0.0%	0.0%	0.0%	11.8%	0.0%	0.0%				
FTEC-140	55	30	10	0	6	15	0	0	0	35	151	62.9%	76.8%	
	36.4%	19.9%	6.6%	0.0%	4.0%	9.9%	0.0%	0.0%	0.0%	23.2%				
FTEC-141	62	31	6	0	1	14	0	0	0	33	147	67.3%	77.6%	
	42.2%	21.1%	4.1%	0.0%	0.7%	9.5%	0.0%	0.0%	0.0%	22.4%				
FTEC-142ABCD	5	0	0	0	0	0	0	0	0	8	13	38.5%	38.5%	
	38.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	61.5%				
FTEC-15	28	14	0	0	0	3	0	0	0	4	49	85.7%	91.8%	
	57.1%	28.6%	0.0%	0.0%	0.0%	6.1%	0.0%	0.0%	0.0%	8.2%				
FTEC-150	0	0	0	228	0	0	0	32	0	0	260	87.7%	100.0%	
	0.0%	0.0%	0.0%	87.7%	0.0%	0.0%	0.0%	12.3%	0.0%	0.0%				
FTEC-152	0	0	0	56	0	0	0	0	0	0	56	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-19	4	7	2	0	4	5	0	0	0	2	24	54.2%	91.7%	
	16.7%	29.2%	8.3%	0.0%	16.7%	20.8%	0.0%	0.0%	0.0%	8.3%				
FTEC-20	6	11	7	0	1	0	0	0	0	8	33	72.7%	75.8%	
	18.2%	33.3%	21.2%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	24.2%				
FTEC-4	1	9	14	0	3	3	0	0	0	6	36	66.7%	83.3%	
	2.8%	25.0%	38.9%	0.0%	8.3%	8.3%	0.0%	0.0%	0.0%	16.7%				
FTEC-5	5	14	10	0	5	3	0	0	0	5	42	69.0%	88.1%	
	11.9%	33.3%	23.8%	0.0%	11.9%	7.1%	0.0%	0.0%	0.0%	11.9%				
FTEC-60A	0	0	0	24	0	0	0	0	0	0	24	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60B	0	0	0	24	0	0	0	0	0	0	24	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60C	0	0	0	34	0	0	0	0	0	0	34	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60D	0	0	0	34	0	0	0	1	0	0	35	97.1%	100.0%	
	0.0%	0.0%	0.0%	97.1%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%				
FTEC-60F	0	0	0	29	0	0	0	0	0	0	29	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-8	2	3	3	0	1	2	0	0	0	14	25	32.0%	44.0%	
	8.0%	12.0%	12.0%	0.0%	4.0%	8.0%	0.0%	0.0%	0.0%	56.0%				
FTEC-9	27	20	4	0	2	1	0	0	0	1	55	92.7%	98.2%	
	49.1%	36.4%	7.3%	0.0%	3.6%	1.8%	0.0%	0.0%	0.0%	1.8%				
FTEC-95ABCD	1	0	0	0	0	0	0	0	0	1	2	50.0%	50.0%	
	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%				

Course Totals	290	336	171	459	43	76	0	37	0	181	1,593	**78.8%**	**88.6%**
	18.2%	21.1%	10.7%	28.8%	2.7%	4.8%	0.0%	2.3%	0.0%	11.4%			
Division Total/Avg	1,392	1,060	609	576	159	328	25	37	0	876	5,062	**71.8%**	**82.7%**
	27.5%	20.9%	12.0%	11.4%	3.1%	6.5%	0.5%	0.7%	0.0%	17.3%			
College Total/Avg	15,458	11,582	8,382	4,421	2,809	4,891	345	1,318	0	14,220	63,426	**62.8%**	**77.6%**
	24.4%	18.3%	13.2%	7.0%	4.4%	7.7%	0.5%	2.1%	0.0%	22.4%			
Fall 2007													
Course	**A**	**B**	**C**	**CR**	**D**	**F**	**I**	**NC**	**DR DR**	**W**	**Total Grades**		**Retention Rate**
FTEC-1	17	45	35	0	21	17	0	0	2	15	152	63.8%	88.8%
	11.2%	29.6%	23.0%	0.0%	13.8%	11.2%	0.0%	0.0%	1.3%	9.9%			
FTEC-10	9	10	8	0	0	3	0	0	0	1	31	87.1%	96.8%
	29.0%	32.3%	25.8%	0.0%	0.0%	9.7%	0.0%	0.0%	0.0%	3.2%			
FTEC-128	11	23	14	0	3	8	0	0	0	5	64	75.0%	92.2%
	17.2%	35.9%	21.9%	0.0%	4.7%	12.5%	0.0%	0.0%	0.0%	7.8%			
FTEC-130	5	18	7	0	1	1	0	0	0	0	32	93.8%	100.0%
	15.6%	56.3%	21.9%	0.0%	3.1%	3.1%	0.0%	0.0%	0.0%	0.0%			
FTEC-131	8	18	4	0	0	0	0	0	0	0	30	100.0%	100.0%
	26.7%	60.0%	13.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
FTEC-132	7	15	6	0	1	1	0	0	0	0	30	93.3%	100.0%
	23.3%	50.0%	20.0%	0.0%	3.3%	3.3%	0.0%	0.0%	0.0%	0.0%			
FTEC-133	6	14	7	0	1	0	0	0	0	0	28	96.4%	100.0%
	21.4%	50.0%	25.0%	0.0%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%			
FTEC-134	1	8	15	0	1	1	0	0	0	0	26	92.3%	100.0%
	3.8%	30.8%	57.7%	0.0%	3.8%	3.8%	0.0%	0.0%	0.0%	0.0%			
FTEC-135	10	13	1	0	0	0	0	0	0	0	24	100.0%	100.0%
	41.7%	54.2%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
FTEC-136	6	14	4	0	0	0	0	0	0	0	24	100.0%	100.0%
	25.0%	58.3%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
FTEC-137	1	16	7	0	0	0	0	0	0	0	24	100.0%	100.0%
	4.2%	66.7%	29.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

FTEC-138	0	0	0	0	0	0	0	9	0	0	9	0.0%	100.0%	
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%				
FTEC-139	0	0	0	27	0	0	0	8	0	0	35	77.1%	100.0%	
	0.0%	0.0%	0.0%	77.1%	0.0%	0.0%	0.0%	22.9%	0.0%	0.0%				
FTEC-140	31	24	12	0	4	39	0	0	0	29	139	48.2%	79.1%	
	22.3%	17.3%	8.6%	0.0%	2.9%	28.1%	0.0%	0.0%	0.0%	20.9%				
FTEC-141	51	10	4	0	0	43	0	0	0	27	135	48.1%	80.0%	
	37.8%	7.4%	3.0%	0.0%	0.0%	31.9%	0.0%	0.0%	0.0%	20.0%				
FTEC-142ABCD	10	1	2	0	1	1	0	0	1	2	18	72.2%	83.3%	
	55.6%	5.6%	11.1%	0.0%	5.6%	5.6%	0.0%	0.0%	5.6%	11.1%				
FTEC-15	40	9	0	0	0	0	0	0	0	1	50	98.0%	98.0%	
	80.0%	18.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%				
FTEC-150	0	0	0	313	0	0	0	18	0	0	331	94.6%	100.0%	
	0.0%	0.0%	0.0%	94.6%	0.0%	0.0%	0.0%	5.4%	0.0%	0.0%				
FTEC-20	9	12	6	0	0	2	0	0	1	2	32	84.4%	90.6%	
	28.1%	37.5%	18.8%	0.0%	0.0%	6.3%	0.0%	0.0%	3.1%	6.3%				
FTEC-4	2	2	4	0	3	3	0	0	0	9	23	34.8%	60.9%	
	8.7%	8.7%	17.4%	0.0%	13.0%	13.0%	0.0%	0.0%	0.0%	39.1%				
FTEC-5	10	10	7	0	2	3	0	0	0	7	39	69.2%	82.1%	
	25.6%	25.6%	17.9%	0.0%	5.1%	7.7%	0.0%	0.0%	0.0%	17.9%				
FTEC-6	8	12	6	0	0	2	0	0	0	5	33	78.8%	84.8%	
	24.2%	36.4%	18.2%	0.0%	0.0%	6.1%	0.0%	0.0%	0.0%	15.2%				
FTEC-60A	0	0	0	24	0	0	0	0	0	0	24	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60B	0	0	0	24	0	0	0	0	0	0	24	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60C	0	0	0	14	0	0	0	0	0	0	14	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60D	0	0	0	14	0	0	0	0	0	0	14	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60G	0	0	0	11	0	0	0	0	0	0	11	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-8	3	2	2	0	3	1	0	0	1	5	17	41.2%	64.7%	
	17.6%	11.8%	11.8%	0.0%	17.6%	5.9%	0.0%	0.0%	5.9%	29.4%				
FTEC-9	17	16	11	0	0	1	0	0	0	2	47	93.6%	95.7%	
	36.2%	34.0%	23.4%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	4.3%				

Course Totals	262	292	162	427	41	126	0	35	5	110	1,460	**78.3%**	**92.1%**
	17.9%	20.0%	11.1%	29.2%	2.8%	8.6%	0.0%	2.4%	0.3%	7.5%			
Division Total/Avg	1,521	1,081	610	551	159	379	32	37	154	711	5,235	**71.9%**	**83.5%**
	29.1%	20.6%	11.7%	10.5%	3.0%	7.2%	0.6%	0.7%	2.9%	13.6%			
College Total/Avg	16,244	11,674	8,356	4,788	2,743	5,030	360	1,322	2,566	12,270	65,353	**62.8%**	**77.3%**
	24.9%	17.9%	12.8%	7.3%	4.2%	7.7%	0.6%	2.0%	3.9%	18.8%			
Fall 2008													
Course	**A**	**B**	**C**	**P**	**D**	**F**	**I**	**NP**	**DR DR**	**W**	**Total Grades**		**Retention Rate**
FTEC-1	17	39	33	0	25	34	0	0	3	15	166	53.6%	89.2%
	10.2%	23.5%	19.9%	0.0%	15.1%	20.5%	0.0%	0.0%	1.8%	9.0%			
FTEC-10	3	14	13	0	3	1	0	0	0	1	35	85.7%	97.1%
	8.6%	40.0%	37.1%	0.0%	8.6%	2.9%	0.0%	0.0%	0.0%	2.9%			
FTEC-128	4	16	27	0	8	45	0	0	0	0	100	47.0%	100.0%
	4.0%	16.0%	27.0%	0.0%	8.0%	45.0%	0.0%	0.0%	0.0%	0.0%			
FTEC-130	24	29	12	0	0	2	0	0	0	1	68	95.6%	98.5%
	35.3%	42.6%	17.6%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	1.5%			
FTEC-131	6	48	11	0	0	2	0	0	0	1	68	95.6%	98.5%
	8.8%	70.6%	16.2%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	1.5%			
FTEC-132	27	24	13	0	0	3	0	0	0	1	68	94.1%	98.5%
	39.7%	35.3%	19.1%	0.0%	0.0%	4.4%	0.0%	0.0%	0.0%	1.5%			
FTEC-133	15	39	7	0	3	3	0	0	0	1	68	89.7%	98.5%
	22.1%	57.4%	10.3%	0.0%	4.4%	4.4%	0.0%	0.0%	0.0%	1.5%			
FTEC-134	10	27	23	0	0	7	0	0	0	1	68	88.2%	98.5%
	14.7%	39.7%	33.8%	0.0%	0.0%	10.3%	0.0%	0.0%	0.0%	1.5%			
FTEC-135	16	32	11	0	0	8	0	0	0	1	68	86.8%	98.5%
	23.5%	47.1%	16.2%	0.0%	0.0%	11.8%	0.0%	0.0%	0.0%	1.5%			
FTEC-136	10	38	11	0	0	8	0	0	0	1	68	86.8%	98.5%
	14.7%	55.9%	16.2%	0.0%	0.0%	11.8%	0.0%	0.0%	0.0%	1.5%			
FTEC-137	11	35	12	0	0	9	0	0	0	1	68	85.3%	98.5%
	16.2%	51.5%	17.6%	0.0%	0.0%	13.2%	0.0%	0.0%	0.0%	1.5%			

FTEC-138	0	0	0	25	0	0	0	10	0	0	35	71.4%	100.0%	
	0.0%	0.0%	0.0%	71.4%	0.0%	0.0%	0.0%	28.6%	0.0%	0.0%				
FTEC-139	0	0	0	21	0	0	0	3	0	0	24	87.5%	100.0%	
	0.0%	0.0%	0.0%	87.5%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%				
FTEC-140	12	65	6	0	5	26	0	0	0	48	162	51.2%	70.4%	
	7.4%	40.1%	3.7%	0.0%	3.1%	16.0%	0.0%	0.0%	0.0%	29.6%				
FTEC-141	71	10	15	0	7	7	2	0	0	51	163	58.9%	68.7%	
	43.6%	6.1%	9.2%	0.0%	4.3%	4.3%	1.2%	0.0%	0.0%	31.3%				
FTEC-142ABCD	15	0	0	0	0	9	0	0	0	3	27	55.6%	88.9%	
	55.6%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	11.1%				
FTEC-15	39	13	0	0	0	1	0	0	2	1	56	92.9%	94.6%	
	69.6%	23.2%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	3.6%	1.8%				
FTEC-150	0	0	0	747	0	0	0	66	0	0	813	91.9%	100.0%	
	0.0%	0.0%	0.0%	91.9%	0.0%	0.0%	0.0%	8.1%	0.0%	0.0%				
FTEC-19	6	11	7	0	3	2	0	0	3	7	39	61.5%	74.4%	
	15.4%	28.2%	17.9%	0.0%	7.7%	5.1%	0.0%	0.0%	7.7%	17.9%				
FTEC-20	14	15	2	0	2	0	0	0	0	3	36	86.1%	91.7%	
	38.9%	41.7%	5.6%	0.0%	5.6%	0.0%	0.0%	0.0%	0.0%	8.3%				
FTEC-4	2	7	6	0	4	3	0	0	0	6	28	53.6%	78.6%	
	7.1%	25.0%	21.4%	0.0%	14.3%	10.7%	0.0%	0.0%	0.0%	21.4%				
FTEC-5	12	18	1	0	0	9	0	0	0	4	44	70.5%	90.9%	
	27.3%	40.9%	2.3%	0.0%	0.0%	20.5%	0.0%	0.0%	0.0%	9.1%				
FTEC-6	10	12	4	0	0	6	1	0	0	3	36	72.2%	91.7%	
	27.8%	33.3%	11.1%	0.0%	0.0%	16.7%	2.8%	0.0%	0.0%	8.3%				
FTEC-60A	0	0	0	54	0	0	0	0	0	0	54	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60B	0	0	0	52	0	0	0	0	0	0	52	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60C	0	0	0	55	0	0	0	1	0	0	56	98.2%	100.0%	
	0.0%	0.0%	0.0%	98.2%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%				
FTEC-60D	0	0	0	55	0	0	0	1	0	0	56	98.2%	100.0%	
	0.0%	0.0%	0.0%	98.2%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%				
FTEC-60F	0	0	0	73	0	0	0	1	0	0	74	98.6%	100.0%	
	0.0%	0.0%	0.0%	98.6%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%				
FTEC-60G	0	0	0	71	0	0	0	2	0	0	73	97.3%	100.0%	
	0.0%	0.0%	0.0%	97.3%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%				
FTEC-8	2	6	5	0	0	8	0	0	2	0	23	56.5%	91.3%	

	8.7%	26.1%	21.7%	0.0%	0.0%	34.8%	0.0%	0.0%	8.7%	0.0%				
FTEC-9	13	17	4	0	2	2	0	0	0	2	40	85.0%	95.0%	
	32.5%	42.5%	10.0%	0.0%	5.0%	5.0%	0.0%	0.0%	0.0%	5.0%				
Course Totals	339	515	223	1,153	62	195	3	84	10	152	2,736	**81.5%**	**94.1%**	
	12.4%	18.8%	8.2%	42.1%	2.3%	7.1%	0.1%	3.1%	0.4%	5.6%				
Division Total/Avg	1,616	1,306	675	1,252	161	561	43	84	170	680	6,548	**74.1%**	**87.0%**	
	24.7%	19.9%	10.3%	19.1%	2.5%	8.6%	0.7%	1.3%	2.6%	10.4%				
College Total/Avg	18,319	12,726	9,310	5,700	3,176	6,871	461	1,814	3,085	10,741	72,203	**63.8%**	**80.9%**	
	25.4%	17.6%	12.9%	7.9%	4.4%	9.5%	0.6%	2.5%	4.3%	14.9%				

Fall 2009														
Course	**A**	**B**	**C**	**P**	**D**	**F**	**I**	**NP**	**DR** **DR**	**W**	**Total Grades**		**Retention Rate**	
FTEC-1	31	34	31	0	8	33	0	0	6	15	158	60.8%	86.7%	
	19.6%	21.5%	19.6%	0.0%	5.1%	20.9%	0.0%	0.0%	3.8%	9.5%				
FTEC-10	4	15	13	0	1	5	0	0	0	3	41	78.0%	92.7%	
	9.8%	36.6%	31.7%	0.0%	2.4%	12.2%	0.0%	0.0%	0.0%	7.3%				
FTEC-128	21	24	19	0	4	13	0	0	0	0	81	79.0%	100.0%	
	25.9%	29.6%	23.5%	0.0%	4.9%	16.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-130	9	17	2	0	2	2	0	0	0	0	32	87.5%	100.0%	
	28.1%	53.1%	6.3%	0.0%	6.3%	6.3%	0.0%	0.0%	0.0%	0.0%				
FTEC-131	13	15	0	0	0	1	0	0	0	0	29	96.6%	100.0%	
	44.8%	51.7%	0.0%	0.0%	0.0%	3.4%	0.0%	0.0%	0.0%	0.0%				
FTEC-132	13	9	6	0	0	2	0	0	0	0	30	93.3%	100.0%	
	43.3%	30.0%	20.0%	0.0%	0.0%	6.7%	0.0%	0.0%	0.0%	0.0%				
FTEC-133	11	11	4	0	2	1	0	0	0	0	29	89.7%	100.0%	
	37.9%	37.9%	13.8%	0.0%	6.9%	3.4%	0.0%	0.0%	0.0%	0.0%				
FTEC-134	4	17	4	0	0	2	0	0	0	0	27	92.6%	100.0%	
	14.8%	63.0%	14.8%	0.0%	0.0%	7.4%	0.0%	0.0%	0.0%	0.0%				
FTEC-135	2	14	9	0	0	7	0	0	0	0	32	78.1%	100.0%	
	6.3%	43.8%	28.1%	0.0%	0.0%	21.9%	0.0%	0.0%	0.0%	0.0%				
FTEC-136	3	19	3	0	0	7	0	0	0	0	32	78.1%	100.0%	
	9.4%	59.4%	9.4%	0.0%	0.0%	21.9%	0.0%	0.0%	0.0%	0.0%				
FTEC-137	8	16	1	0	0	7	0	0	0	0	32	78.1%	100.0%	
	25.0%	50.0%	3.1%	0.0%	0.0%	21.9%	0.0%	0.0%	0.0%	0.0%				
FTEC-138	0	0	0	24	0	0	0	1	0	0	25	96.0%	100.0%	
	0.0%	0.0%	0.0%	96.0%	0.0%	0.0%	0.0%	4.0%	0.0%	0.0%				
FTEC-139	0	0	0	26	0	0	0	5	0	0	31	83.9%	100.0%	
	0.0%	0.0%	0.0%	83.9%	0.0%	0.0%	0.0%	16.1%	0.0%	0.0%				
FTEC-140	35	65	15	0	4	18	0	0	0	46	183	62.8%	74.9%	
	19.1%	35.5%	8.2%	0.0%	2.2%	9.8%	0.0%	0.0%	0.0%	25.1%				
FTEC-141	87	22	14	0	3	8	0	0	0	51	185	66.5%	72.4%	
	47.0%	11.9%	7.6%	0.0%	1.6%	4.3%	0.0%	0.0%	0.0%	27.6%				
FTEC-142ABCD	8	5	0	0	0	0	0	0	0	0	13	100.0%	100.0%	

	61.5%	38.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-15	30	19	0	0	0	0	0	0	1	1	51	96.1%	96.1%	
	58.8%	37.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	2.0%				
FTEC-150	0	0	0	644	0	0	0	41	0	0	685	94.0%	100.0%	
	0.0%	0.0%	0.0%	94.0%	0.0%	0.0%	0.0%	6.0%	0.0%	0.0%				
FTEC-19	5	10	6	0	4	2	0	0	3	5	35	60.0%	77.1%	
	14.3%	28.6%	17.1%	0.0%	11.4%	5.7%	0.0%	0.0%	8.6%	14.3%				
FTEC-20	7	11	8	0	2	5	0	0	2	0	35	74.3%	94.3%	
	20.0%	31.4%	22.9%	0.0%	5.7%	14.3%	0.0%	0.0%	5.7%	0.0%				
FTEC-4	3	15	11	0	1	5	0	0	2	4	41	70.7%	85.4%	
	7.3%	36.6%	26.8%	0.0%	2.4%	12.2%	0.0%	0.0%	4.9%	9.8%				
FTEC-5	19	17	7	0	0	4	0	0	1	0	48	89.6%	97.9%	
	39.6%	35.4%	14.6%	0.0%	0.0%	8.3%	0.0%	0.0%	2.1%	0.0%				
FTEC-60A	0	0	0	10	0	0	0	0	0	0	10	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60B	0	0	0	11	0	0	0	0	0	0	11	100.0%	100.0%	-
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60C	0	0	0	13	0	0	0	0	0	0	13	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60D	0	0	0	14	0	0	0	1	0	0	15	93.3%	100.0%	
	0.0%	0.0%	0.0%	93.3%	0.0%	0.0%	0.0%	6.7%	0.0%	0.0%				
FTEC-60F	0	0	0	17	0	0	0	0	0	0	17	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-60G	0	0	0	17	0	0	0	0	0	0	17	100.0%	100.0%	
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
FTEC-9	20	15	2	0	1	0	0	0	0	1	39	94.9%	97.4%	
	51.3%	38.5%	5.1%	0.0%	2.6%	0.0%	0.0%	0.0%	0.0%	2.6%				

Bibliography

There are no sources in the current document.

Course Totals	333	370	155	776	32	122	0	48	15	126	1,977	**82.7%**	**92.9%**	
	16.8%	18.7%	7.8%	39.3%	1.6%	6.2%	0.0%	2.4%	0.8%	6.4%				
Division Total/Avg	1,761	1,199	634	814	168	508	28	48	148	598	5,906	**74.6%**	**87.4%**	
	29.8%	20.3%	10.7%	13.8%	2.8%	8.6%	0.5%	0.8%	2.5%	10.1%				
College Total/Avg	18,808	13,245	9,880	5,269	3,201	5,941	388	1,538	3,042	9,914	71,226	**66.3%**	**81.8%**	
	26.4%	18.6%	13.9%	7.4%	4.5%	8.3%	0.5%	2.2%	4.3%	13.9%				

Fire and Emergency Technology Retention Rates

Fall 2006 to Fall 2009	Fall 2006	Fall 2007	Fall 2008	Fall 2009
Fire and Emergency Technology	88.6%	92.1%	94.1%	92.9%
Industry & Technology	82.7%	83.5%	87.0%	87.4%
State avg - Fire and Emergency Technology	94.7%	93.1%	94.0%	94.3%

Fire and Emergency Technology Success Rates														
Fall 2006 to Fall 2009	Fall 2006	Fall 2007	Fall 2008	Fall 2009										
Fire and Emergency Technology	78.8%	78.3%	81.5%	82.7%										
Industry & Technology	71.8%	71.9%	74.1%	74.6%										
State avg - Fire and Emergency Technology	87.1%	85.5%	86.5%	85.9%										

Appendix B

Demographic and Enrollment Characteristics													
FTEC 1													
Fall 2006 to Fall 2009													
										Fall 2009		2000 Census	
Characteristic	**Category**	**Fall 2006**		**Fall 2007**		**Fall 2008**		**Fall 2009**		**ECC**		**ECC District**	
		n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
All Enrolled	Total	111	100.0%	203	100.0%	188	100.0%	83	100.0%	*27,271*	100.0%	520,376	100.0 %
Gender	Female	5	4.5%	4	2.0%	6	3.2%	2	2.4%	14,312	52.5%	264,871	50.9 %
	Male	106	95.5%	199	98.0%	182	96.8%	81	97.6%	12,953	47.5%	255,505	49.1 %
	Unknown	0	0.0%	0	0.0%	0	0.0%	0	0.0%	6	0.0%	0	0.0%
Ethnicity	African-American	7	6.3%	11	5.4%	14	7.4%	5	6.0%	4,577	16.8%	88,701	17.0 %
	Amer. Ind. or Alaskan	1	0.9%	2	1.0%	2	1.1%	1	1.2%	100	0.4%	1,219	0.2%
	Asian	7	6.3%	6	3.0%	11	5.9%	5	6.0%	4,539	16.6%	58,779	11.3 %
	Latino	28	25.2%	54	26.6%	45	23.9%	18	21.7%	9,466	34.7%	157,138	30.2 %
	Pacific Islander	5	4.5%	2	1.0%	3	1.6%	2	2.4%	257	0.9%	2,061	0.4%
	White	52	46.8%	106	52.2%	94	50.0%	40	48.2%	5,236	19.2%	197,570	38.0 %
	Unknown or Decline	11	9.9%	22	10.8%	19	10.1%	12	14.5%	3,096	11.4%	0	0.0%

Age/Age Group	Under 17	0	0.0%	0	0.0%	0	0.0%	0	0.0%	572	2.1%	139,140	26.7 %
	17	0	0.0%	0	0.0%	0	0.0%	0	0.0%	758	2.8%		
	18	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3,326	12.2%	11,840	2.3%
	19	1	0.9%	2	1.0%	3	1.6%	1	1.2%	3,678	13.5%		
	20	3	2.7%	8	3.9%	4	2.1%	2	2.4%	2,977	10.9%	5,996	1.2%
	21	3	2.7%	6	3.0%	6	3.2%	1	1.2%	2,305	8.5%	5,720	1.1%
	22	1	0.9%	6	3.0%	7	3.7%	1	1.2%	1,677	6.1%	20,233	3.9%
	23	1	0.9%	3	1.5%	6	3.2%	4	4.8%	1,347	4.9%		
	24	2	1.8%	7	3.4%	5	2.7%	2	2.4%	1,121	4.1%		
	25-29	22	19.8%	34	16.7%	47	25.0%	26	31.3%	3,398	12.5%	43,779	8.4%
	30-39	54	48.6%	69	34.0%	70	37.2%	28	33.7%	2,896	10.6%	97,447	18.7 %
	40-49	15	13.5%	44	21.7%	28	14.9%	15	18.1%	1,770	6.5%	80,126	15.4 %
	50-64	9	8.1%	24	11.8%	12	6.4%	3	3.6%	1,195	4.4%	69,852	13.4 %
	65+	0	0.0%	0	0.0%	0	0.0%	0	0.0%	251	0.9%	46,878	9.0%
Class Load	Full-time	0	0.0%	0	0.0%	0	0.0%	31	37.3%	8,560	31.4%		
	Part-time	2	1.8%	0	0.0%	1	0.5%	28	33.7%	18,675	68.5%		
	Not enrolled or N/A	109	98.2%	203	100.0%	187	99.5%	24	28.9%	36	0.1%		
Time of Classes*	Daytime	54	48.6%	116	57.1%	123	65.4%	25	30.1%	19,337	70.9%		
	Evening	57	51.4%	87	42.9%	65	34.6%	0	0.0%	5,084	18.6%		
	Unknown	0	0.0%	0	0.0%	0	0.0%	58	69.9%	2,850	10.5%		
Academic Level	College degree	45	40.5%	51	25.1%	74	39.4%	32	38.6%	3,680	13.5%		
	HS Graduate	66	59.5%	130	64.0%	114	60.6%	51	61.4%	21,533	79.0%		
	Not a HS Grad	0	0.0%	0	0.0%	0	0.0%	0	0.0%	582	2.1%		
	K-12 Special Admit	0	0.0%	0	0.0%	0	0.0%	0	0.0%	916	3.4%		
	Unknown	0	0.0%	22	10.8%	0	0.0%	0	0.0%	560	2.1%		

Educational Goal	Intend to Transfer	12	10.8%	20	9.9%	21	11.2%	7	8.4%	8,408	30.8%		
	Degree/Certif. Only	12	10.8%	18	8.9%	18	9.6%	10	12.0%	1,115	4.1%		
	Retrain/recertify	41	36.9%	94	46.3%	94	50.0%	39	47.0%	1,719	6.3%		
	Basic Skills/GED	2	1.8%	1	0.5%	1	0.5%	0	0.0%	1,262	4.6%		
	Enrichment	16	14.4%	17	8.4%	17	9.0%	12	14.5%	985	3.6%		
	Undecided	28	25.2%	52	25.6%	52	27.7%	15	18.1%	6,136	22.5%		
	Unknown	0	0.0%	1	0.5%	1	0.5%	0	0.0%	7,646	28.0%		
Additional characteristics available upon request.													

Appendix C

Demographic and Enrollment Characteristics												
FTEC1												
Fall 2006 to Fall 2009												
									Fall 2009		2000 Census	
Characteristic	**Category**	**Fall 2006**		**Fall 2007**		**Fall 2008**		**Fall 2009**		**ECC**		**ECC District**	
		n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
All Enrolled	Total	111	100.0%	203	100.0%	188	100.0%	83	100.0%	*27,271*	100.0%	520,376	100.0 %
Gender	Female	5	4.5%	4	2.0%	6	3.2%	2	2.4%	14,312	52.5%	264,871	50.9%
	Male	106	95.5%	199	98.0%	182	96.8%	81	97.6%	12,953	47.5%	255,505	49.1%
	Unknown	0	0.0%	0	0.0%	0	0.0%	0	0.0%	6	0.0%	0	0.0%
Ethnicity	African-American	7	6.3%	11	5.4%	14	7.4%	5	6.0%	4,577	16.8%	88,701	17.0%
	Amer. Ind. or Alaskan	1	0.9%	2	1.0%	2	1.1%	1	1.2%	100	0.4%	1,219	0.2%
	Asian	7	6.3%	6	3.0%	11	5.9%	5	6.0%	4,539	16.6%	58,779	11.3%
	Latino	28	25.2%	54	26.6%	45	23.9%	18	21.7%	9,466	34.7%	157,138	30.2%
	Pacific Islander	5	4.5%	2	1.0%	3	1.6%	2	2.4%	257	0.9%	2,061	0.4%
	White	52	46.8%	106	52.2%	94	50.0%	40	48.2%	5,236	19.2%	197,570	38.0%
	Unknown or Decline	11	9.9%	22	10.8%	19	10.1%	12	14.5%	3,096	11.4%	0	0.0%

Age/Age Group	Under 17	0	0.0%	0	0.0%	0	0.0%	0	0.0%	572	2.1%	139,140	26.7%
	17	0	0.0%	0	0.0%	0	0.0%	0	0.0%	758	2.8%		
	18	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3,326	12.2%	11,840	2.3%
	19	1	0.9%	2	1.0%	3	1.6%	1	1.2%	3,678	13.5%		
	20	3	2.7%	8	3.9%	4	2.1%	2	2.4%	2,977	10.9%	5,996	1.2%
	21	3	2.7%	6	3.0%	6	3.2%	1	1.2%	2,305	8.5%	5,720	1.1%
	22	1	0.9%	6	3.0%	7	3.7%	1	1.2%	1,677	6.1%	20,233	3.9%
	23	1	0.9%	3	1.5%	6	3.2%	4	4.8%	1,347	4.9%		
	24	2	1.8%	7	3.4%	5	2.7%	2	2.4%	1,121	4.1%		
	25-29	22	19.8%	34	16.7%	47	25.0%	26	31.3%	3,398	12.5%	43,779	8.4%
	30-39	54	48.6%	69	34.0%	70	37.2%	28	33.7%	2,896	10.6%	97,447	18.7%
	40-49	15	13.5%	44	21.7%	28	14.9%	15	18.1%	1,770	6.5%	80,126	15.4%
	50-64	9	8.1%	24	11.8%	12	6.4%	3	3.6%	1,195	4.4%	69,852	13.4%
	65+	0	0.0%	0	0.0%	0	0.0%	0	0.0%	251	0.9%	46,878	9.0%
Class Load	Full-time	0	0.0%	0	0.0%	0	0.0%	31	37.3%	8,560	31.4%		
	Part-time	2	1.8%	0	0.0%	1	0.5%	28	33.7%	18,675	68.5%		
	Not enrolled or N/A	109	98.2%	203	100.0%	187	99.5%	24	28.9%	36	0.1%		
Time of Classes*	Daytime	54	48.6%	116	57.1%	123	65.4%	25	30.1%	19,337	70.9%		
	Evening	57	51.4%	87	42.9%	65	34.6%	0	0.0%	5,084	18.6%		
	Unknown	0	0.0%	0	0.0%	0	0.0%	58	69.9%	2,850	10.5%		

Academic Level	College degree	45	40.5%	51	25.1%	74	39.4%	32	38.6%	3,680	13.5%		
	HS Graduate	66	59.5%	130	64.0%	114	60.6%	51	61.4%	21,533	79.0%		
	Not a HS Grad	0	0.0%	0	0.0%	0	0.0%	0	0.0%	582	2.1%		
	K-12 Special Admit	0	0.0%	0	0.0%	0	0.0%	0	0.0%	916	3.4%		
	Unknown	0	0.0%	22	10.8%	0	0.0%	0	0.0%	560	2.1%		
Educational Goal	Intend to Transfer	12	10.8%	20	9.9%	21	11.2%	7	8.4%	8,408	30.8%		
	Degree/Certif. Only	12	10.8%	18	8.9%	18	9.6%	10	12.0%	1,115	4.1%		
	Retrain/recertify.	41	36.9%	94	46.3%	94	50.0%	39	47.0%	1,719	6.3%		
	Basic Skills/GED	2	1.8%	1	0.5%	1	0.5%	0	0.0%	1,262	4.6%		
	Enrichment	16	14.4%	17	8.4%	17	9.0%	12	14.5%	985	3.6%		
	Undecided	28	25.2%	52	25.6%	52	27.7%	15	18.1%	6,136	22.5%		
	Unknown	0	0.0%	1	0.5%	1	0.5%	0	0.0%	7,646	28.0%		
Additional characteristics available upon request.													

Appendix D

1

El Camino College
College Curriculum Committee

2011 - 2012
COURSE REVIEW **INDUSTRY AND TECHNOLOGY**

	COURSE	CCC REVIEW											
		01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13
231.	Fire and Emergency Technology 131								X				
232.	Fire and Emergency Technology 132								X				
233.	Fire and Emergency Technology 133								X				
234.	Fire and Emergency Technology 134				X						X		
235.	Fire and Emergency Technology 135								X				
236.	Fire and Emergency Technology 136								X				
237.	Fire and Emergency Technology 137								X				
238.	Fire and Emergency Technology 138								X				
239.	Fire and Emergency Technology 139								X				
240.	Fire and Emergency Technology 140						X	X				X	
241.	Fire and Emergency Technology 141						X	X					
242.	Fire and Emergency Technology 142abcd									X			
243.	Fire and Emergency Technology 150									X			
244.	Fire and Emergency Technology 152	X					X				INACTIVATE		
245.	Machine Tool Technology 2			X						X			

Appendix E

SLO and Assessment Timeline: Four-Year Cycle

Program Name	Fire and Emergency Technology

SLO Assessment Timeline: Create Your 4-Year Assessment Plan

Directions: Starting in academic year 2011-2012, SLOs will be assessed over a four-year cycle at ECC. Because program review will start occurring in calendar years (i.e. Spring to Fall semester), the grid below is organized by calendar year rather than academic year. Plan out your program's assessments so that all SLOs (both course- and program-level) are assessed at least once every four years.

Year	Semester	Course-Level SLOs Assessed	Program-Level SLOs Assessed
Year 1 of 4-Year SLO Cycle *(3 years before Program Review)*	Spring Year 1	FETC 1, FETC 2	Completed Fall 2010
	Fall Year 1	FETC 4, FETC 10	
Year 2 of 4-Year SLO Cycle *(2 years before Program Review)*	Spring Year 2	FETC 9	
	Fall Year 2	FETC 5, FETC 6	

Year 3 of 4-Year SLO Cycle *(1 year before* *Program Review)*	Spring Year 3	FETC 15	
	Fall Year 3	FETC 11, FETC 19	
Year 4 of 4-Year SLO Cycle *(Year of* *Program Review)*	Spring Year 4	FTEC 140, FTEC 141	
	Fall Year 4		

***Note: Indicate which SLOs will be assessed in the timeline by indicating the number or title of the SLO.**