El Camino Community College

PROGRAM REVIEW 2019

Industry and Technology Division

Fire and Emergency Technology

DEAN:
David Gonzalez

CONTRIBUTOR:
Ryan Carey

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SECTION 1
Overview of the Program

A) Provide a brief narrative description of the current program, including the program's mission statement and the students it serves. Also include in this section any program highlights and/or accomplishments, as well as the most critical needs of the program.

The mission of the Fire and Emergency Technology (FTEC) program is to prepare students for entry level employment and career advancement opportunities in the fire service and emergency medical services industries. Upon successful completion of the EMT, Paramedic, or Fire Academy programs, students will be prepared to enter the work force in the capacity in which they are certified.

Students are welcomed from all over the South Bay, Greater Los Angeles area, California, nation, and other countries to the El Camino College (ECC) Fire and Emergency Technology program. Most students will begin their pathway with the Emergency Medical Technician (EMT) program which offers successful students the opportunity to take the National Registry of EMTs computer-based exam after completing the program within one semester. Students are then able to obtain an EMT medical license from the state of their application. The ECC EMT program offers 15 courses each year which includes Winter, Spring, Summer, Fall, evenings, and Saturdays. The dedicated ECC EMT faculty and staff maintain positive relationships with private ambulance companies, fire departments, hospitals, and other important stakeholders to ensure student preparedness and training will translate to job opportunities once certified and licensed.

The El Camino College Paramedic Training Program is a cooperative joint program between ECC and the Los Angeles County Department of Health Services, Emergency Medical Services Agency (EMSA), Paramedic Training Institute (PTI). In addition to providing the highest quality pre-hospital education available, PTI emphasis is on personal and professional growth, integrity, and professionalism. PTI provides the student multiple small group sessions, simulations, skills practice and one-on-one training during didactic instruction.

The ECC Fire Academy is a California State Fire Marshal (CSFM) Firefighter 1 approved academy. The core content has been consistent in meeting the highest level of firefighter training. The requirements for physical fitness for each recruit are both strenuous and demanding and only exceeded by the academic standards where excellence is expected, not requested. Graduates of the El Camino Fire Academy have been hired throughout the county, state and nation. They have been trained to the highest standard and are ready to serve you in your time of need.

B) Describe the degrees and/or certificates offered by the program.

The Fire and Emergency Technology program has several fire service educational pathways that students can select from including three Certificate of Achievements and two Associate Degree options (see Appendix A):

Certificate of Achievement

1) **Fire and Emergency Technology:** Issued upon completion of the eight core Fire and Emergency Technology courses which includes FTEC: 1, 2, 3, 5, 6, 10, 20, and FTEC 144 (27 units total).

2) **Fire Academy:** Issued upon completion of the ECC Fire Academy and FTEC: 1, 6, 15, and FTEC 144 (27 units total).

3) **Paramedical Technician:** Issued upon completion of the ECC Paramedic Training Institute (PTI) program which includes FTEC: 130, 131, 132, 133, 134, 135, 136, 137, 138, and FTEC 139 (33 units total).

Associate of Science

Issued upon completion of either the **Fire and Emergency Technology** or **Paramedical Technician** Certificate of Achievement in addition to the general education courses required for an Associate degree at El Camino College.

CSFM Fire Academy

California State Fire Marshal (CSFM) Firefighter I Certificate is issued upon completion of the El Camino College Fire Academy (15 units).

EMT Training

EMT course completion certificates are issued to students who successfully complete the course (6.5 units). Students are then eligible to take the National Registry of Emergency Medical Technicians test, which once passed, allows them to receive an EMT license in the state(s) of their choosing.

Paramedic Training

These courses are conducted at Los Angeles County Paramedic Training Institute. The courses are available to students after they complete a CSFM Fire Academy. Professional Fire Departments may sponsor students without pre-requisites. Paramedic course completion certificates are issued to students who successfully complete the program (33 units). Students are then eligible to take the National Registry of Emergency Medical Technician Paramedics test, which once passed, allows them to receive a Paramedic license in the state(s) of their choosing.

Continuing Education for Professional Firefighters

These courses are California State Fire Marshal (CSFM) approved and offered upon request from Fire Departments throughout Southern California.

C) Explain how the program fulfills the college's mission and aligns with the strategic initiatives.

The mission of El Camino College is to make a positive difference in people's lives by providing a comprehensive educational programs and services that promote student learning and success in collaboration with our diverse communities.

The El Camino College Fire and Emergency Technology program contributes to the Mission of the college and aligns with the Strategic Initiatives. To make a positive difference through an excellent comprehensive effective educational program that promotes student learning and success, we collaborate with local fire departments, emergency medical facilities, ambulance companies, volunteer organizations, along with many other diverse community stakeholders. The FTEC program utilizes simulations and modern technologies in the classroom to promote innovation by transforming, strengthening, and inspiring our community to excel through learning. Safety, diversity, duty, respect, integrity, and accountability are values echoed throughout the course offerings in order to instill the characteristics of lifelong learners who will be ready and able to perform the duties of an emergency responders in and around our communities.

A – STUDENT LEARNING

Student learning in the FTEC program is supported through dedicated faculty and staff that utilize effective instructional methods including simulations, role-play, tactical decision-making games, computer-based programs utilizing reference databases, videos, and additional resources for student learning. The EMT, Paramedic, and Fire Academy programs all utilize the El Camino College website to provide regularly updated information and resources to help FTEC students with their pathway to success.

B – STUDENT SUCCESS & SUPPORT

Students that enroll in any of the Fire and Emergency Technology Courses are provided with regularly updated information about academic support, CalWORKs, Cooperative Agencies Resources for Education (CARE), Career Center services, Extended Opportunity Program & Services (EOPS), Financial Aid, First Year Experience (FYE), Guardian Scholars Program, Health Center services, Learning Resource Center services, Special Resource Center services, Transfer Center services, Warrior Food Pantry, and the Veterans Services Program. The information is regularly posted in each of the FTEC classrooms, shared online, and available as handouts provided to the instructors for distribution throughout the student population within the FTEC program. The Public Safety Club invites any interested ECC students to meet professionals working in emergency response careers and communicate directly with them regarding expectations and qualifications of career opportunities.

C – COLLABORATION

Collaboration is maintained with local fire, Emergency Medical Services (EMS), and law enforcement agencies to ensure that students are exposed to current professionals and the expected outcomes of the industry. This is accomplished by maintaining a diverse pool of instructors and consultants that help facilitate the learning environment and maintain positive relationships with local fire and EMS agencies throughout the South Bay. The newly added Public Safety Director position which oversees the Fire and Emergency Technology program has established working relationships along with the college administrators to effectively work with local Fire and EMS agencies to meet our programs needs and goals.

D – COMMUNITY RESPONSIVENESS

Community responsiveness is demonstrated through maintaining relationships with many local hospitals, ambulance providers, fire departments and other local, county, state, and federal emergency responders. Throughout the Fire Academy, EMT, and Paramedical training programs students interact frequently with these community and industry partners in order to provide exceptional educational and workforce training to the students.

E – INSTITUTIONAL EFFECTIVENESS

Institutional Effectiveness is developed and established through regular program review, ongoing SLO assessment, and curriculum updates.

F – MODERNIZATION

There is a need for a new fire academy facility that includes new training props and expanded classroom and training areas. An El Camino College Public Safety Training Center vision came to reality this year when ten million dollars was earmarked from the California state's budget to support the planning and building.

D) Discuss the status of recommendations from your previous program review (see Appendix B):

1. **Recommendation:** Hire a full-time clerical assistant.
   Status: Not started.
   Notes/Comments: This request has not been funded.

2. **Recommendation:** New Fire Academy facilities and buildings
   Status: Pending
   Notes/Comments: The El Camino College Public Safety Training Center is currently in the planning phase of development.

SECTION 2
Analysis of Research Data

A) Head count of students in the program

The current enrollment count for the most recent assessed academic year of 2017-2018 is 2,647 which is a four-year high for the Fire and Emergency Technology program (see Appendix C).

B) Course grade distribution

Success rates below 70% of each FTEC course per year (see Appendix E)

2018: FTEC-1, FTEC-5, FTEC-6
2017: FTEC-1, FTEC-4, FTEC-5, FTEC-6, FTEC-11, FTEC-20
2016: FTEC-1, FTEC-4, FTEC-5, FTEC-20, FTEC-144
2015: FTEC-1, FTEC-4, FTEC-5, FTEC-6, FTEC-20, FTEC-144

FTEC-1: Fire Protection Organization (7 courses total <70% between 2015-2018)
FTEC-4: Fire Company Organization and Management (3 courses total <70% between 2015-2018)
FTEC-5: Fire Behavior and Combustion (6 courses total <70% between 2015-2018)
FTEC-6: Building Construction for Fire Protection (4 courses total <70% between 2015-2018)
FTEC-11: Arson Detection and Control (1 course total <70% between 2015-2018)
FTEC-20: Fire Protection Equipment and Systems (4 courses total <70% between 2015-2018)
FTEC-144: Emergency Medical Technician (4 courses total <70% between 2015-2018)

FTEC-1 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.

FTEC-5 and FTEC-6 were recently added to the list of required courses to complete as a prerequisite to entering the ECC Fire Academy (FTEC-15).

FTEC-4, FTEC-5, FTEC-6, and FTEC-20 courses all involve advanced firefighting concepts that are challenging for under-prepared students that may underestimate the degree of seriousness involved in firefighting and the depth and breadth of knowledge involved in comprehension of concepts and ideas.

FTEC-144 is the Emergency Medical Technician (EMT) course and due to National, State, and County requirements the EMT course requires all students to complete: a background check, immunizations, 170 hours of total instruction, a 12-hour ambulance ride-along, and a 12-hour hospital clinical all of which must be completed within one semester.

C) Success rates

Discuss your program's success rates, addressing any issues of student equity and how your program is addressing any performance gaps. Describe any demographic success characteristics and set a success standard for your program.

The current overall success rate of the FTEC program is 87% (see Appendix F). That rate has increased from 80% since 2014-15 academic year. The success of female students in the FTEC program have increased from 66% in 2014-15 academic year to 80% currently. The success of male students in the FTEC program have increased from 82% since 2014-15 academic year to 87%.

D) Retention rates - *if applicable, include retention based on placement method*

The current retention rate of the FTEC program is 90% (see Appendix C).
- Winter terms have increased from 87% in 2016-17 academic year to 94% currently.
- Spring terms have increased from 86% in 2014-15 academic year to 91% currently.
- Summer terms have increased from 85% in 2014-15 academic year to 95% currently.
- Fall terms have decreased from 88% in 2014-15 academic year to 86% currently.

E) A comparison of success and retention rates in face-to-face classes with distance education classes

There are two FTEC courses that have been taught online, FTEC-1: Fire Protection Organization and FTEC-6: Building Construction for Fire Protection (see Appendix E).

FTEC-1 has been taught online 9 times since Fall term in 2015. 7 out of the 9 times the FTEC-1 course has been assessed at below 70% success rate was from the online course offerings. The FTEC-1 face-to-face class offerings has only dropped below 70% success rate one time in the four-year cycle in Spring term of 2015. In this case face-to-face FTEC-1 courses have been more successful.

FTEC-6 has been taught 4 times since Fall term of 2017. 2 of the 4 times the FTEC-6 course has been assessed at below 70% success rate was from the online course offerings. The FTEC-6 face-to-face class offerings dropped below 70% success rate the other 2 or the 4 times. FTEC-6 online course and face-to-face course had similar success and course completion rates.

F) Enrollment statistics with section and seat counts and fill rates

Enrollment, sections and fill rates are as follows in the FTEC program (see Appendix C):

YEAR	Enrollment	Sections Offered	Fill Rate
2017-18	2,647	80	90%
2016-17	2,107	73	83%
2015-16	2,152	78	84%
2014-15	2,270	78	87%

The FTEC program currently offers 80 courses within an academic year which is up from 2014-15 academic year's 78 courses (see Appendix C). The fill rates have gone from 87% in 2014-15 academic year to 90% currently.

G) Scheduling of courses (day vs. night, days offered, and sequence)

Fill rates by time of day in the FTEC program are as follows (see Appendix C):

YEAR	DAY	EVENING	ONLINE/UNKNOWN	WEEKEND
2017-18	87%	80%	94%	87%
2016-17	83%	91%	81%	89%
2015-16	90%	86%	79%	77%
2014-15	98%	91%	79%	83%

Currently all times of course offerings in the FTEC program are above 80%. An effort to reestablish courses offered during various day, evening, weekend, and online modalities has allowed more access to success for our FTEC students over the last four years.

H) Improvement Rates (Course success by placement method, if applicable)

N/A

I) Additional data compiled by faculty.

The FTEC program had 1,522 students during the 2017-18 academic year, the following are statistics derived from that student population (see Appendix G):

- 31% of the FTEC students were between 20-24 years old.
- 28% of the FTEC students were between 30-49 years old.
- 18% of the FTEC students were between 17-19 years old.
- 15% of the FTEC students were between 25-29 years old.
- 6% of the FTEC students were more than 50 years old.
- 33.8% of the FTEC students were enrolled full-time.
- 20.2% of the FTEC students were female.
- 44% of the FTEC students were Hispanic.
- 32% of the FTEC students were White.
- 10% of the FTEC students were African American.
- 7% of the FTEC students were Asian.
- 5% of the FTEC students were two or more ethnicities.

J) Enumerate any related recommendations.

Review current FTEC-1 and FTEC-6 course curriculum and establish baseline expectations and teaching objectives that meet the standards of both the face-to-face and online offerings.
Review the FTEC program syllabi to ensure grading scales are appropriate and adjust assignment grading weight as needed to provide for more equitable grade distribution in alignment with learning outcomes.

SECTION 3
Curriculum

Review and discuss the curriculum work done in the program during the past four years, including the following:

A) Provide the curriculum course review timeline to ensure all courses are reviewed at least once every 6 years.

See Appendix H for current FTEC program curriculum course review timeline.

B) Explain any course additions to current course offerings.

FTEC-15: Fire Academy added two prerequisites for entrance including FTEC-3: Fundamentals of Personal Fire Safety and Survival, and FTEC-5 Fire Behavior and Combustion to meet regional standards and reduce injuries on the training fireground.

FTEC: 71, 72, 73, 74, 75, 76, 77, 78, 80A, and FTEC 80B were all created to meet the regional South Bay Fire Chiefs needs of offering California Fire Service Training and Education System (CFSTES) certifying courses to current professional Firefighters. Torrance Fire Department has been using these courses for development and promotion of their staff over the last year.

FTEC-120: Emergency Medical Foundations course prepares students for prehospital assessment and care for patients of all ages with a variety of medical conditions. This course is recommended for any students interested in emergency medicine including: EMTs, Paramedics, Nurses, Physician Assistants, and Medical Doctors.

FTEC-142: EMT Refresher is being reactivated to offer recertification opportunities to any currently licensed EMT's looking to maintain their certification for an additional two years.

FTEC-144: Emergency Medical Technician increased its units from 6.0 to 6.5 units due to a mandated increase of lecture and lab hours from the California State Emergency Medical Services Agency.

C) Explain any course deletions and inactivation's from current course offerings.

There are no course deletions in the FTEC program for the 2019-20 academic year.

D) Describe the courses and number of sections offered in distance education. (Distance education includes hybrid classes.)

There are two FTEC courses that have been taught online, FTEC-1: Fire Protection Organization and FTEC-6: Building Construction for Fire Protection (see Appendix E). Both courses have been offered during all four terms and are currently scheduled to be offered at least 3 times each academic year online.

E) Discuss how well the courses, degrees, or certificates meet students' transfer or career training needs.

1. **Have all courses that are required for your program's degrees and certificates been offered during the last two years? If not, has the program established a course offering cycle?**

   Yes

2. **Are there any concerns regarding program courses and their articulation to courses at other educational institutions?**

   No

3. **How many students earn degrees and/or certificates in your program? Set an attainable, measurable goal related to student completion of the program's degrees/certificates.**

FTEC program AS and Certificate of Achievement awards (see Appendix J):

YEAR	AS	COA (FTEC)	COA (Fire Academy)	COA (Paramedic)
2017-18	31	16	19	87
2016-17	38	14	4	68
2015-16	27	6	3	2
2014-15	36	10	1	1

An attainable, measurable goal related to student completions for the FTEC program in future academic years, based on the past four years of data is as follows:

FTEC GOAL for 2018-19 academic year: 32 total AS degrees, 110 total Certificates
FTEC GOAL for 2019-20 academic year: 35 total AS degrees, 115 total Certificates
FTEC GOAL for 2020-21 academic year: 38 total AS degrees, 120 total Certificates
FTEC GOAL for 2021-22 academic year: 41 total AS degrees, 125 total Certificates
FTEC GOAL for 2022-23 academic year: 45 total AS degrees, 130 total Certificates

4. **Are any licensure/certification exams required for program completion or career entry? If so, what is the pass rate among graduates? Set an attainable, measurable goal for pass rates and identify any applicable performance benchmarks set by regulatory agencies.**

   Yes, both the EMT and Paramedic programs require certification exams to be successfully passed prior to licensure within the industry. The EMT program has improved its first time National Registry of EMTs (NREMT) pass rate to 74% currently from 69% in 2014. The Paramedic programs first time pass rate remains at 86% annually.

F) Enumerate any related recommendations.

FTEC program staff needs to coordinate with counselors to ensure students are informed on how and when to petition for Certificates, Degrees, and Graduation.

SECTION 4
Assessment of Student and Program Learning Outcomes (SLOs & PLOs)

A) Provide a copy of your alignment grid, which shows how course, program, and institutional learning outcomes are aligned.

See Appendix K for the current FTEC program alignment grid.

B) Provide a timeline for your course and program level SLO assessments.

See Appendix L for the current FTEC program SLO assessments and alignment grid.

C) Summarize the SLO and PLO assessment results over the past four years and describe how those results led to improved student learning. Analyze and describe those changes. Provide specific examples.

FTEC program SLO and PLO assessment results show improvement over the last four years. Part of the reason is due to understanding the correlation of adequate and targeted assessments with actual improvements in student learning through varied teaching method, delivery and technology.

D) Describe how you have improved your SLO/PLO assessment process and engaged in dialogue about assessment results.

SLO/PLO assessment process can be improved upon with adjunct faculty within the department. Often times course grades are submitted, and adjunct faculty fail to report SLO data feedback or fail to enter the results directly into TracDat.

E) Enumerate any related recommendations.

Adjunct faculty need more information regarding their role in SLOs and contributions as faculty to the improvement of our collection of data and feedback to ensure success within our FTEC program classrooms and training grounds for our students.

SECTION 5
Analysis of Student Feedback

Provide a copy of any feedback reports generated by Institutional Research and Planning or your program. Review and discuss student feedback collected during the past four years including any surveys, focus groups, and/or interviews.

A) Describe the results of the student survey in each of the following areas:

See Appendix M for the current FTEC program student survey that was conducted in 2019.

1. Student Support

Student support is highly rated throughout the FTEC program. Out of 263 students surveyed, over 94% either Strongly agreed or Agreed (A) with and less than 1% in each category Disagreed (D) with the following:

- Instructors in this program have helped me achieve my academic goals (96%A / <1%D).
- Instructors in this program have helped me stay on track (95%A / <1%D)
- Instructors in this program provide opportunities to participate in class (97%A / <1%D).
- I have felt a sense of community within this program (95%A / <1%D).
- Student contributions have been valued by instructors in this program (94%A / <1%D).
- Instructors in this program ensure student safety at all times (98%A / <1%D).
- Instructors in this program are well prepared and arrive to class on time (96%A / <1%D).
- Instructors in this program are respectful and professional (99%A / <1%D).

As professional firefighters and emergency responders, the FTEC program faculty take great pride in providing excellent instructional delivery. **It is worth noting that the two highest Agreed upon Student Support fields listed above include FTEC instructors that are respectful and professional while ensuring student safety at all times**.

2. Curriculum

FTEC curriculum fields surveyed 251 students, over 85% either Strongly agreed or Agreed (A) with and less than 6% in each category Disagreed (D) with the following:

- There is an appropriate range of courses offered in this program (92%A / 4%D).
- Courses were scheduled on days and times that were convenient (85%A / 6%D).
- I've been able to register for the classes I need within the program (89%A / 5%D).
- The courses in this program have helped me meet my academic goals (96%A / <1%D).

In addition to Firefighting, EMT, and Paramedic courses and certificates:
- 90% of FTEC students are interested in Emergency Management courses and certificates
- 86% of FTEC students are interested in Wildland Firefighting courses and certificates
- 46% of FTEC students are interested in Administration of Justice courses and certificates

- 73% of students agreed that there is a variety of extracurricular activities related to this program on campus, 21% neither agreed or disagreed, and 6% disagreed. The newly formed Public Safety Club was formed in Fall term of 2019 and has involved faculty from both Fire and Emergency Technology and Administration of Justice as advisors. This has become a successful club involving more than 60 students and provides them with opportunities to meet with emergency responders and learn about career opportunities and pathways.

3. Facilities, Equipment, and technology

FTEC facilities, equipment, and technology fields surveyed 254 students, over 85% either Strongly agreed or Agreed (A) with and less than 4% in each category Disagreed (D) with the following:

- The buildings and classrooms used by this program are satisfactory (*only 30 of the 254 students assessed were at the ECC Fire Academy*- 94%A / 3%D).
- I am satisfied with the equipment used in this program (93%A / 3%D).
- I am satisfied with the computers/software used in this program (86%A / 4%D).
- The equipment is well maintained, clean, and works properly (92%A / 2%D).
- I am satisfied with the program websites and online resources (88%A / 3%D).
- 71% of FTEC students surveyed are interested in online FTEC program courses.

4. Program Objectives

A group of 246 FTEC program students were asked if they were aware of the course outcomes- what they should be able to learn and what skills I should possess after completing courses in the program. Their responses were as follows:
- 73% Strongly Agreed (180 FTEC program students)
- 25% Agreed (61 FTEC program students)
- 1% Neither Agreed nor Disagreed

B) Discuss the implications of the survey results for the program.

FTEC faculty and counselors need to spend more time defining, and explaining the various pathways through FTEC programs. Marketing materials and targeted marketing efforts need to be made to diverse groups of potential/future students with clear outcome definitions.

C) Discuss the results of other relevant surveys.

The Public Safety Club official formed in the Fall term of 2019 and conducted an initial survey of its 60 student members which found the following:

- 18% are pursuing Certificates, 15% are pursuing Associates Degrees, 50% are pursuing bachelor's Degrees, 15% are pursuing master's Degrees, and 2% are pursuing an MD/PhD

D) Enumerate any related recommendations. N/A

SECTION 6
Facilities and Equipment

A) Describe and assess the existing program facilities and equipment.

The current ECC Fire Academy is in need of much repair. The facility itself is aging and needs hundreds of thousands of dollars invested over the next decade if further operations continue. There is 10 million dollars that has been allocated by the State of California to help in further development of the ECC Public Safety Training Center which includes the modernization and potential relocation of the ECC Fire Academy (see Appendix N).

B) Explain the immediate (1-2 years) needs related to facilities and equipment. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

- Fire Academy Shipping Containers ($7,000) Shipping containers are needed for safe and secure storage of firefighting equipment.

- Fire Academy Fire Tools ($10,000) Fire tools break down over time and become hazardous, these tools would replace out-of-service old tools.

- Fire Academy Hose and Appliances ($7,000) Fire hose and appliances leak and break down over time and require replacement.

- Fire Academy Safety Maintenance on Live Fire Props ($7,000) Live fire training props must be properly maintained to ensure safe environments for fire academy students.

C) Explain the long-range (2-4+ years) needs related to facilities and equipment. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

- Build a new joint service Public Safety Training Center for El Camino College ($10,000,000). This is a recommendation that is continued from 2015 and is supported by the college, advisory members, and program stakeholders.

D) Enumerate specific recommendations based on the information provided above, as well as any related recommendations (e.g., creating and budgeting for a cycle for ongoing maintenance, repair, and replacement).

1) Public Safety Training Center ($10,000,000)
2) Shipping Containers ($7,000)
3) Fire Tools ($10,000)
4) Fire Hose ($7,000)
5) Live Fire Prop Safety Maintenance ($7,000)

SECTION 7
Technology and Software

A) Describe and assess the adequacy and currency of the technology and software used by the program.

The FTEC programs adequacy and currency of the technology and software is up to date, but lacking hardware. Within the EMT program PREZI online presentations are being used in the classroom by faculty along with Kahoot! EMT students currently borrow laptop computers from other programs to allow for completion of multiple computer-based module assessments that are required to take through the 170-hour EMT program (see Appendix N).

B) Explain the immediate (1-2 years) needs related to technology and software. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

Purchase 40 Chromebooks or equivalent with charging/security carts for EMT computer-based testing ($60,000).

C) Explain the long-range (2-4+ years) needs related to technology and software. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

Develop plans for an onsite computer lab including in the future ECC Public Safety Training Center.

D) Enumerate specific recommendations based on the information provided above, as well as any related recommendations (e.g., creating and budgeting for a cycle for ongoing maintenance, repair, and replacement).

1) 40 Laptop Computers with Carts ($60,000)

SECTION 8
Staffing

A) Describe the program's current staffing, including faculty, administration, and classified staff.

Director of Public Safety: Jeff Baumunk, (3) Full-time Fire Technology Faculty: Kevin Huben (Paramedic Program), Ryan Carey (EMT Program), Joshua Boies (Fire Academy), (28) Adjunct Faculty, (42) Temporary Non-Classified Workers, (2) Part-time clerical assistants.

B) Explain and justify the program's staffing needs in the immediate (1-2 years) and long-term (2-4+ years). Provide cost estimates and explain how the position/s will help the program better meet its goals.

Hire one full-time clerical support staff for the Fire and Emergency Technology programs: EMT, Paramedic, and Fire Academy. Having one person that is accountable for all the connecting points of the FTEC program with further assist in student support and clearly defined pathways of success (see Appendix N).

There is also a need to hire a part-time fire apparatus diesel mechanic for upkeep and maintenance on all ECC Fire Academy apparatus.

C) Enumerate specific recommendations based on the information provided above, as well as any related recommendations.

1) Hire one full-time clerical support staff for the FTEC program ($56,000 annually)
2) Hire one part-time fire apparatus diesel mechanic for the Fire Academy ($10,000 annually)

SECTION 9
Direction and Vision

A) Describe relevant changes within the academic field/industry. How will these changes impact the program in the next four years?

Employment of Emergency Medical Technicians (EMTs) and Paramedics is projected to grow 7 percent from 2018 to 2028, faster than the average for all occupations. Emergencies such as car crashes, natural disasters, and acts of violence will continue to require the skills of EMTs and Paramedics (see Appendix R).

Employment of Firefighters is projected to grow 5 percent from 2018 to 2028, about as fast as the average for all occupations. Physically fit applicants with paramedic training will have the best job prospects (see Appendix S).

B) Explain the direction and vision of the program and how you plan to achieve it.

DIRECTION

The direction of the FTEC program is to assess and recognize current and expected trends in the fire and emergency response fields. In addition to firefighter, fire prevention, Paramedic, and EMT jobs; future jobs that include Emergency Management and hybrid training with other disciplines including Administration of Justice to cater to the needs of our students should be evaluated and aligned with current employment trends and requirements.

VISION

The vision of the FTEC Program is to prepare students for careers in Emergency Medical Services, firefighting, fire prevention, and emergency response. This is accomplished by committing to student success, maintaining safe learning environments at all times, staying current with regulations, and collaborating on a regular basis with our industry partners to ensure their requirements are met.

C) Enumerate specific recommendations based on the information provided above, as well as any related recommendations.

N/A

SECTION 10
Prioritized Recommendations

A) Provide a single, prioritized list of recommendations and needs for your program/ department (drawn from your recommendations in sections 2-8). Include cost estimates and list the college strategic initiative that supports each recommendation. Use the following chart format to organize your recommendations.

	Recommendations	Cost Estimate	Strategic Initiatives
1.	Public Safety Training Center	$10000000	B
2.	Hire one Full-time FTEC program Clerical Assistant	$56000	B
3.	Purchase 40 Laptops with Carts	$60000	B
4.	Purchase Fire Equipment Shipping Containers	$7000	B
5.	Purchase Fire Tools	$10000	A
6.	Purchase Fire Hose and Appliances	$7000	A
7.	Safety Maintenance on Live Fire Training Props	$7000	F
8.	Hire one Part-time Fire Apparatus Diesel Mechanic	$10000	F
9.			
10.			

B) Explain why the list is prioritized in this way.

The FTEC program PRP requests have been evaluated by the Director of Public Safety and all full-time FTEC faculty to ensure for effectiveness and efficiency based on student learning needs and outcomes (see Appendix N).

APPENDIX D
CAREER AND TECHNICAL EDUCATION (CTE) SUPPLEMENTAL QUESTIONS

CTE programs must conduct a full program review every 4 years. The comprehensive program review includes responses to the CTE supplemental questions below. Every two years (once between full program reviews) these supplemental questions must be answered and submitted to Academic Affairs for posting on the College website.

Use labor market data, advisory committee input/feedback, and institutional and program-level data to respond to the following questions:

1. **How strong is the occupational demand for the program?** *In your response, describe any changes in demand over the past 5 years and discuss the occupational outlook for next 5 years. Provide applicable labor market data (e.g., US Bureau of Labor Statistics, Employment Development Department) that address state and local needs.*

   In the state of California Emergency Medical Technicians (EMTs) and Paramedics make a median hourly wage of $15.68 and median annual income of $32,600. The highest paying county for EMT and Paramedic jobs in the state are found in Monterey County with a median hourly wage of $29.12 and median annual income of $60,566 (see Appendix O). Firefighters in California make a median hourly wage of $37.07 and median annual income of $77,097. The highest paying county for Firefighter jobs in the state are found in San Benito and Santa Clara Counties with a median hourly wage of $55.53 and median annual income of $115, 491 (see Appendix P).

   Los Angeles County pays EMTs and Paramedics a median hourly wage of $14.88 and median annual income of $30,958, and Firefighters $45.96 median hourly wages and $95,587 annual income (see Appendix O and Appendix P).

   Demand for Firefighters, EMTs, and Paramedics in the nation will remain higher than average over the next ten years. Nationally employment of EMTs and Paramedics is projected to grow 7 percent from 2018 to 2028 (see Appendix Q). Nationally employment of Firefighters is projected to grow 5 percent from 2018 to 2028 (see Appendix R).

2. **How does the program address needs that are not met by similar programs in the region?** *In your response, identify any distinctive components of the program (e.g., curriculum, facilities, resources) and/or describe any unique contributions the program or its students/graduates make to the community served.*

   National, state, county, city, and private Emergency Medical Services (EMS) and Firefighting agencies utilize El Camino College for supplying nearly 60 Fire Academy recruits in addition to over 300 students annually who receive in-service training course completions.

The El Camino College (ECC) EMT program produces more than 200 EMT students that become eligible to take the National Registry of EMTs (NREMT) certifying exam, many move on to become State/County licensed and employable as ambulance attendants, and emergency department EMTs.

The ECC Paramedic program produces nearly 100 Paramedic students that become eligible to take the National Registry of EMT-Paramedics certifying exam, which more than 86% of the Fire and Emergency Technology (FTEC) program students pass on the first attempt and 90% of those students move into positive job placement.

Appendix S provides the Standard Occupational Classification (SOC) alignment for all of the ECC FTEC program courses which ensures course transferability and articulation with other colleges.

3. **What are the completion, success, and employment rates for students in the program?** *In your response, identify the standards set by the program and discuss any factors that may impact completion, success, and employment rates among students in the program. Describe the status of any action plans for maintaining/improving rates relative to such benchmarks.*

   The ECC institutional course completion rate is 84.1%, the FTEC program is above the college average at 91.6% (see Appendix E). The ECC institutional success rate is 71.6%, the FTEC program is at 87% success rate (see Appendix F). FTEC program fill rates ranged from 87% - 90% from 2014-2018 (see Appendix C). Over 90% of the successful ECC Paramedic students that complete NREMT certification and state licensure are hired in industry related positions.

4. **List any licensure/certification exam(s) required for entry into the workforce in the field of study and report the most recent pass rate(s) among program graduates.** *In your response, identify any applicable performance benchmarks set by regulatory agencies and describe the status of any action plans for maintaining/improving pass rates relative to such benchmarks.*

   The ECC FTEC program provides firefighter, EMT and Paramedic candidates with full industry offerings in certifications including California State Fire Marshal (CSFM) Firefighter I Academy, EMT certification, Paramedic certification, FTEC program Certificate of Achievement (COA) offerings and AS Degrees in both Fire Technology and Paramedical Technician options. Appendix T outlines national and CA state EMS licensure costs.

   The Paramedic program (FTEC: 130, 131, 132, 133, 134, 135, 136, 137, 138, and FTEC-139) NREMT-Paramedic first time pass rates over the last four years have been above 84% with the most recent at 86% (NREMT-Paramedic pass rate data from https://emsa.ca.gov).

   The ECC EMT program (FTEC-144) most recently has a 74% (NREMT pass rate data from dhs.lacounty.gov/wps/portal/dhs/ems).

5. **Are the students satisfied with their preparation for employment? Are the employers in the field satisfied with the level of preparation of program graduates?** *Use data from student surveys, employer surveys, and other sources of employment feedback to justify your response.*

   Student support is outstanding throughout the FTEC program, according to our students. Out of 263 students surveyed, over 94% either Strongly agreed or Agreed (A) with and less than 1% in each category Disagreed (D) with the following survey fields (see Appendix M):

   - Instructors in this program have helped me achieve my academic goals (96%A / <1%D).
   - Instructors in this program have helped me stay on track (95%A / <1%D)
   - Instructors in this program provide opportunities to participate in class (97%A / <1%D).
   - I have felt a sense of community within this program (95%A / <1%D).
   - Student contributions have been valued by instructors in this program (94%A / <1%D).
   - Instructors in this program ensure student safety at all times (98%A / <1%D).
   - Instructors in this program are well prepared and arrive to class on time (96%A / <1%D).
   - Instructors in this program are respectful and professional (99%A / <1%D).
   - The courses in this program have helped me meet my academic goals (96%A / <1%D).

   The ECC FTEC program has been increasing overall program Certificate of Achievement (COA) awards from a low of 11 awarded in 2015 to 122 awarded in 2018 (see Appendix J).

   AS Degrees in the FTEC Program have been steady over the last four years ranging from 33 in 2014 to 28 in 2018, and a low of 23 AS Degrees awarded in 2015 (see Appendix J).

6. **Is the advisory committee satisfied with the level of preparation of program graduates? How has advisory committee input and feedback been used in the past two years to ensure employer needs are met by the program?** *Describe the status and impact of any advisory committee recommendations.*

   The FTEC program advisory committee members and stakeholders continue to support the planning, development, and building of the ECC Public Safety Training Center. Support for reactivating an EMT refresher course at ECC for continuing education will provide local EMTs with opportunities to get recertified every two years as required by California. Firefighter, EMT, and Paramedic positions have been added to the bulletin boards in the FTEC program classrooms and announcements have been made through digital platforms.

   California Education Code 78016 requires that the review process for CTE programs includes the review and comments of a program's advisory committee.

   a. Advisory committee membership list and credentials (see Appendix U).
   b. Meeting minutes or other documentation to demonstrate that the CTE program review process has met the Education Code requirement (see Appendix V and Appendix W).

Fire Academy Certificate of Achievement

For Gainful Employment program information, please visit www.elcamino.edu/academics/indtech/fireacademy

A Certificate of Achievement will be granted upon completion of all program requirements. At least 50 percent of the courses required for the certificate must be completed at El Camino College.

Required Courses: 27 units

- FTEC 1 - Fire Protection Organization 3 units
- FTEC 6 - Building Construction for Fire Protection 3 units
- FTEC 15 - Fire Academy 15 units
- FTEC 144 - Emergency Medical Technician 6.5 units

Total Units: 27

Other requirements:

1. Pass a Fire Fighter Physical Agility Test (FPAT) or Candidate Physical Agility Test (CPAT) within the last 6 months as required by the California State Fire Marshal's Office.
2. Pass the El Camino College Fire Physical Qualification Test.
3. Pass a physical examination according to the National Fire Protection Association (NFPA) Standard #1582.

Fire and Emergency Technology Certificate of Achievement

For Gainful Employment program information, please visit www.elcamino.edu/academics/indtech/fireacademy

A Certificate of Achievement will be granted upon completion of all program requirements. At least 50 percent of the courses required for the certificate must be completed at El Camino College.

Required Courses: 27 units

- FTEC 1 - Fire Protection Organization 3 units
- FTEC 2 - Fire Prevention Technology 3 units
- FTEC 3 - Fundamentals of Personal Fire Safety and Survival 3 units
- FTEC 5 - Fire Behavior and Combustion 3 units
- FTEC 6 - Building Construction for Fire Protection 3 units
- FTEC 10 - Hazardous Materials 3 units
- FTEC 20 - Fire Protection Equipment and Systems 3 units
- FTEC 144 - Emergency Medical Technician 6.5 units

Total Units: 27

Paramedical Technician Certificate of Achievement

In order to be eligible for the Paramedical Technician certificate, the student must first complete the following requirements:

1. Provide verification of Emergency Medical Technician-1 (EMT-1) certification within the last 12 months
2. Provide verification of at least 6 months experience as an EMT-1 in a pre-hospital setting
3. Complete Fire and Emergency Technology 15 or equivalent
4. Pass a medical examination according to the National Fire Protection Association (NFPA) Standard #1582
5. Furnish proof of rubella immunity, Tuberculosis (TB) test and Hepatitis B vaccine

In addition to the program prerequisites, it is recommended that students be eligible, through assessment or coursework, for ENGL 1A and MATH 80.

For Gainful Employment program information, please visit www.elcamino.edu/academics/indtech/fireacademy

Required Courses (after meeting above requirements):

A Certificate of Achievement will be granted upon completion of all program requirements. At least 50 percent of the courses required for the certificate must be completed at El Camino College.

Required Courses: 33 units

- FTEC 130 - Basic Prehospital Care Principles 2 units
- FTEC 131 - Field Assessing and Reporting 1.5 units
- FTEC 132 - Prehospital Care Pharmacology 1.5 units
- FTEC 133 - Basic and Advanced Life Support 6.5 units
- FTEC 134 - Medical Emergencies 4 units
- FTEC 135 - Traumatic Emergencies 2 units
- FTEC 136 - Special Patient Emergencies 2 units
- FTEC 137 - Emergency Medical Services (EMS)/Legal Aspects/Documentation 2 units
- FTEC 138 - Paramedic Clinical Internship 3 units
- FTEC 139 - Paramedic Field Internship 8.5 units

Total Units: 33

Recommended Electives:

ANAT 30 and any college chemistry course with a laboratory

Fire and Emergency, AS

Industry and Technology Division
www.elcamino.edu/academics/indtech

The fire and emergency technology program prepares students for entry-level employment and job upgrades in fire services and emergency medical fields. By completing the degree or certificate requirements, students will gain the ability to apply the principles of fire combat, fire protection organization, fire prevention, fire behavior, and building construction. Students will also gain proficiency in emergency medical assistance and in the handling of hazardous materials and emergency vehicles and apparatus. Competencies will be assessed regularly in compliance with the California State Firefighter I Standards and with the Los Angeles County certification process for emergency medical technicians and paramedics.

Note: Since employment as a fire fighter requires passing stringent physical and agility exams, persons considering such a career should ascertain that they meet those requirements.
For Gainful Employment program information, please visit www.elcamino.edu/academics/indtech/fireacademy

Fire and Emergency Technology Option:

Required Core: 27 units

- FTEC 1 - Fire Protection Organization 3 units
- FTEC 2 - Fire Prevention Technology 3 units
- FTEC 3 - Fundamentals of Personal Fire Safety and Survival 3 units
- FTEC 5 - Fire Behavior and Combustion 3 units
- FTEC 6 - Building Construction for Fire Protection 3 units
- FTEC 10 - Hazardous Materials 3 units
- FTEC 20 - Fire Protection Equipment and Systems 3 units
- FTEC 144 - Emergency Medical Technician 6.5 units

Total Units: 27

Recommended Electives:

- FTEC 4 - Fire Company Organization and Management 3 units
- FTEC 9 - Fire Apparatus and Equipment 3 units
- FTEC 11 - Arson Detection and Control 3 units
- PE 280 - Exercise and Nutrition Programs for Fitness and Weight Management 3 units

Paramedical Technician Option:

In order to be eligible for the Paramedical Technician Option, the student must first complete the following requirements:

1. Provide verification of Emergency Medical Technician-1 (EMT-1) certification within the last 12 months;
2. Provide verification of at least 6 months experience as an EMT-1 in a pre-hospital setting;
3. Complete FTEC 15 or equivalent;
4. Pass a medical examination according to the National Fire Protection Association (NFPA) Standard #1582;
5. Furnish proof of rubella immunity, Tuberculosis (TB) test and Hepatitis B vaccine.

In addition to the program prerequisites, it is recommended that students be eligible, through assessment or coursework, for ENGL 1A and MATH 80.

Required Courses (after meeting above requirements):

Required Core: 33 units

- FTEC 130 - Basic Prehospital Care Principles 2 units
- FTEC 131 - Field Assessing and Reporting 1.5 units
- FTEC 132 - Prehospital Care Pharmacology 1.5 units
- FTEC 133 - Basic and Advanced Life Support 6.5 units
- FTEC 134 - Medical Emergencies 4 units
- FTEC 135 - Traumatic Emergencies 2 units
- FTEC 136 - Special Patient Emergencies 2 units
- FTEC 137 - Emergency Medical Services (EMS)/Legal Aspects/Documentation 2 units
- FTEC 138 - Paramedic Clinical Internship 3 units
- FTEC 139 - Paramedic Field Internship 8.5 units

Total Units: 33

Recommended Electives:

ANAT 30 and any college chemistry course with a laboratory

Preparation for the Fire and Emergency Technology Transfer Major

For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

X. Prioritized Recommendations

1. **Hire a full time clerical assistant** *cost:* $56,000 *SI:* C, D, E

Currently a part time assistant handles all of the requirements of enrollment and administration of the selection process for the Fire Academy. In addition this part time assistant handles all of the California State Fire Marshall Certificates (15 per student) issued to Fire Academy graduates. A full time position would be able to not only fulfill these tasks, but also handle all of the clerical needs of the Paramedic, EMT, and Fire Technology programs.

2. **New Fire Academy facilities and buildings** *cost:* $8,000,000 *SI:* A, B, C, D, E, F

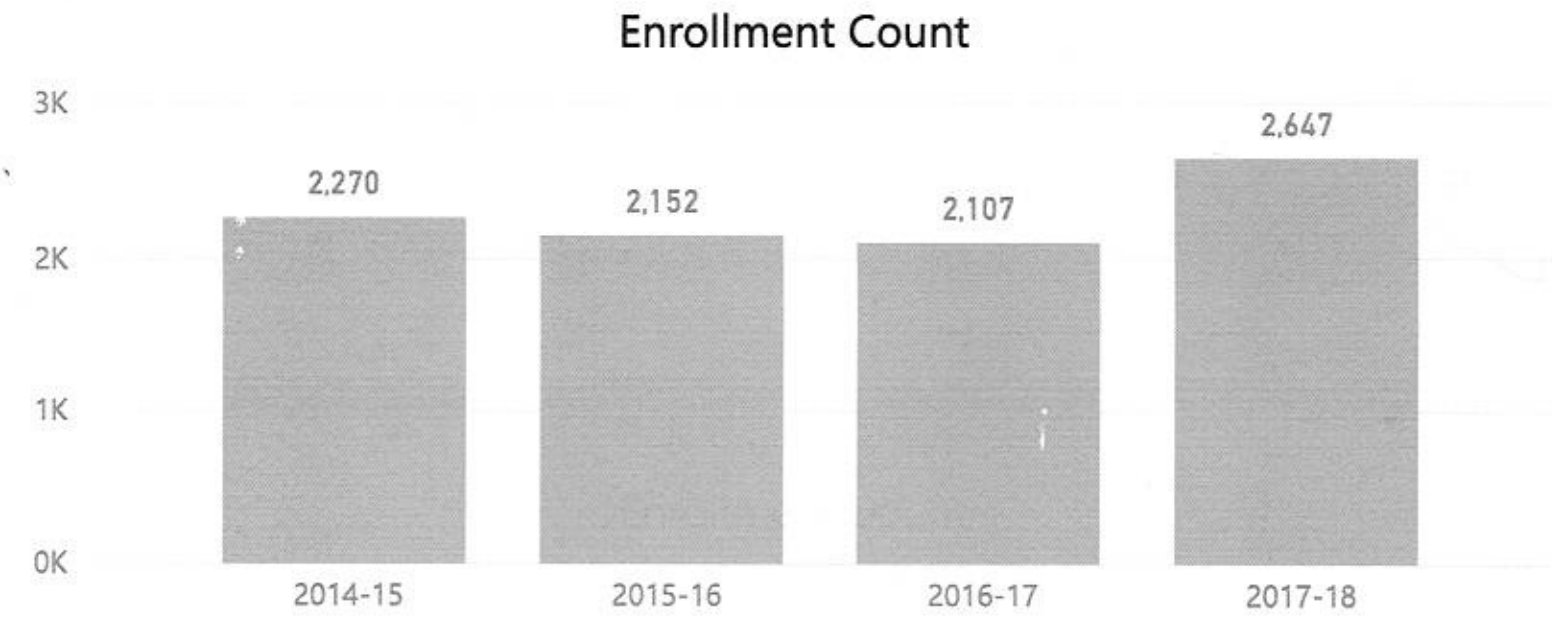
The current El Camino Fire Academy is deteriorating and in need of significant repairs and annual maintenance, division level proposals are being made to request a new Fire Academy that would cost approximately $8 million, and correlate to all 6 of the ECC strategic initiatives. In addition to the buildings needing updates, a new flash chamber and backdraft chamber are needed in order to provide required state live fire training. Carports or covers for all the fire engines should be factored into the proposal as well.

SUMMARY

In support of all the FTEC Programs, the addition of a full time clerical assistant will help with collaborations, community responsiveness and institutional effectiveness. A new Fire Academy will allow for further industry and community collaborations, provide students with opportunities to develop relationships with industry partners and operate under safe and controlled training environments. The Fire Academy would be developed with multiple use classrooms and training facilities that would benefit students by exposing them to ongoing career training.

(Page 15 from 2015 FTEC Program Review)

Appendix C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2K
1K
0K
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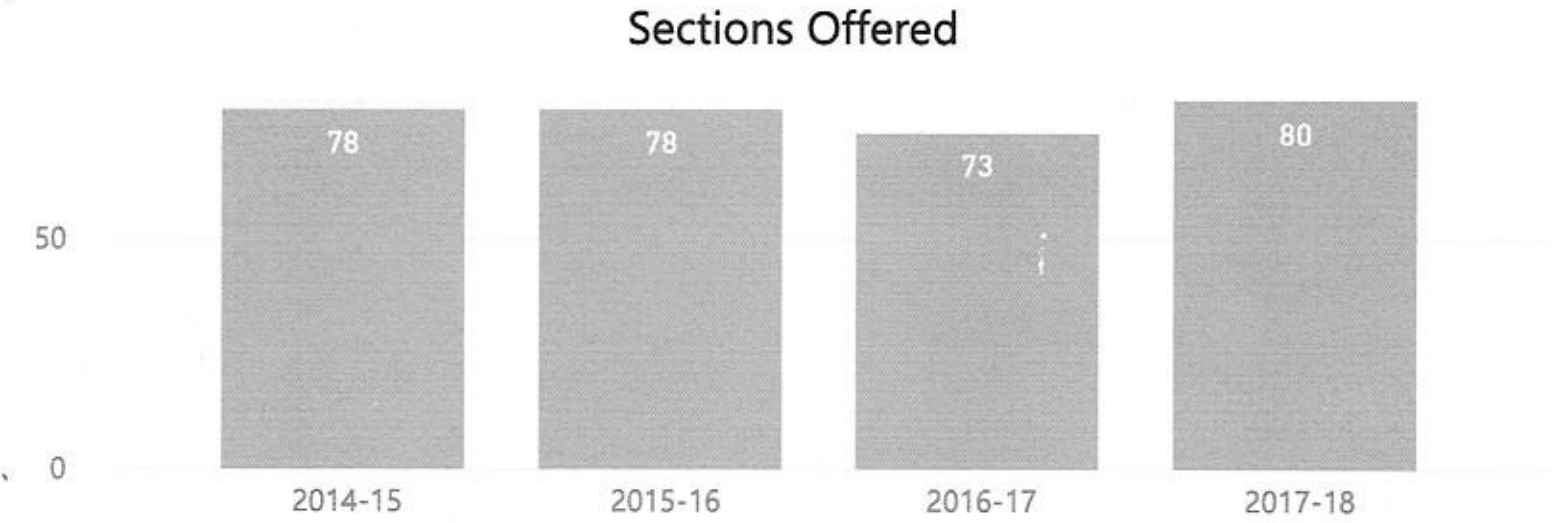
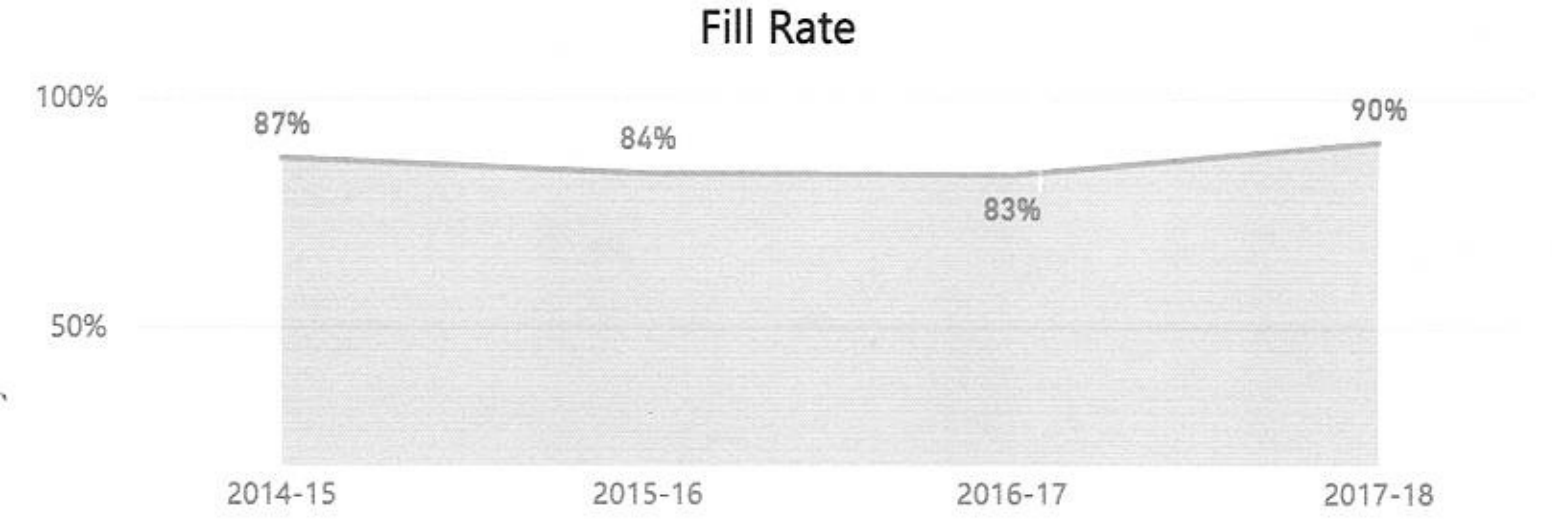
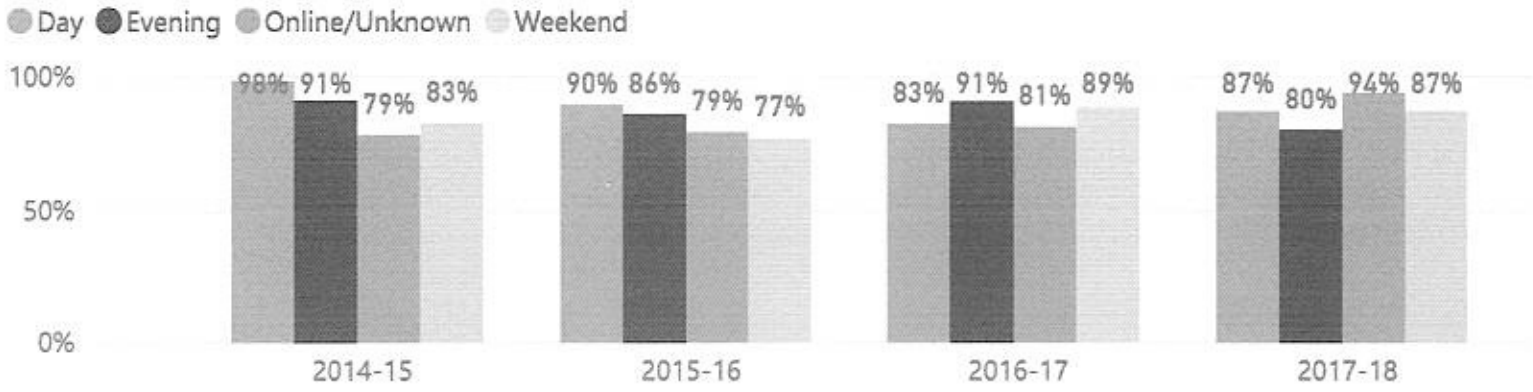
2,152
2,107
2,647
2014-15
2015-16
2016-17
2017-18


Sections Offered
50
0
78
78
73
80
2014-15
2015-16
2016-17
2017-18


Fill Rate
100%
50%
87%
84%
83%
90%
2014-15
2015-16
2016-17
2017-18

Fill Rate by Time of Day



Section Count by Time of Day

Enrollment Data

This page shows enrollment data, including enrollment, sections offered and fill rates (the ratio of total enrolled and total seats available). It also shows fill rates and sections offered by time of day.

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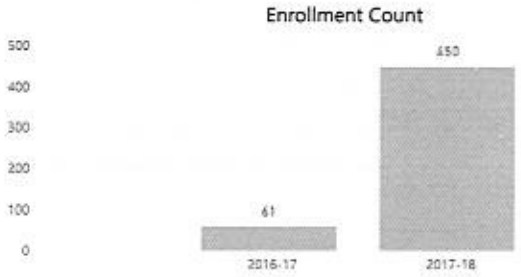
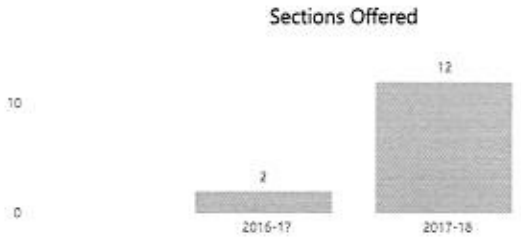
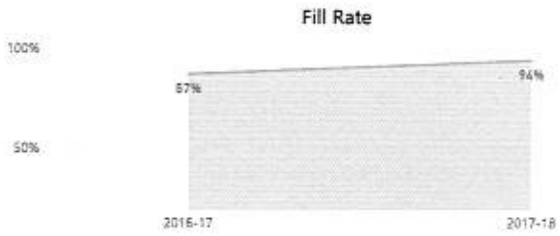
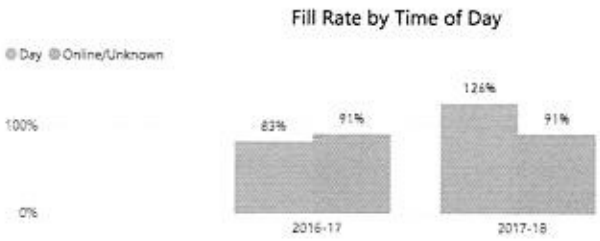


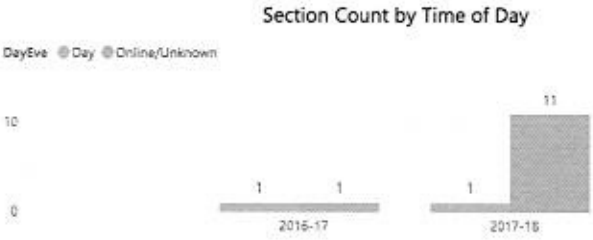




Programs for Program Review

Fire and Emergency Technolo...





Enrollment Data
This page shows enrollment data, including enrollment, sections offered and fill rates (the ratio of total enrolled and total seats available). It also shows fill rates and sections offered by time of day.
Programs for Program Review
Fire and Emergency Technolo...
Terms
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Spring
Winter
Navigation
HOME
Success
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Awards
Enroll...
Enrollment Count
1,000
800
600
400
200
0
837
754
845
955
2014-15
2015-16
2016-17
2017-18
Sections Offered
20
0
28
27
26
27
2014-15
2015-16
2016-17
2017-18
Fill Rate
100%
50%
86%
84%
86%
91%
2014-15
2015-16
2016-17
2017-18
Fill Rate by Time of Day
Day
Evening
Online/Unknown
Weekend
100%
50%
0%
86%
88%
76%
83%
83%
78%
89%
78%
91%
73%
77%
84%
84%
91%
2014-15
2015-16
2016-17
2017-18
Section Count by Time of Day
DayEve
Day
Evening
Online/Unknown
Weekend
10
0
10
6
11
1
11
6
9
1
10
5
10
1
12
3
12
2
2014-15
2015-16
2016-17
2017-18

Enrollment Data

This page shows enrollment data, including enrollment, sections offered and fill rates (the ratio of total enrolled and total seats available). It also shows fill rates and sections offered by time of day.

Programs for Program Review: Fire and Emergency Technolo...

Terms: Fall, Summer, Spring, Winter

Navigation

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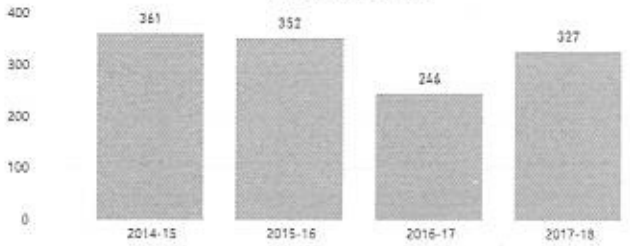
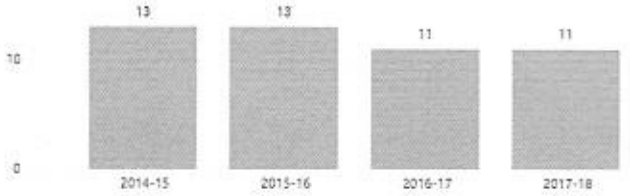
- Awards
- Enroll...

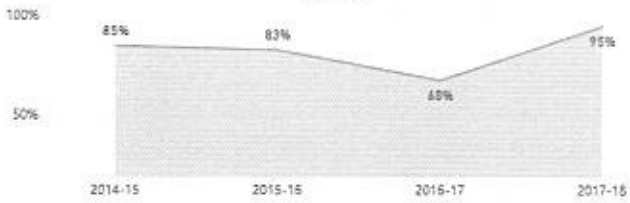
Enrollment Count



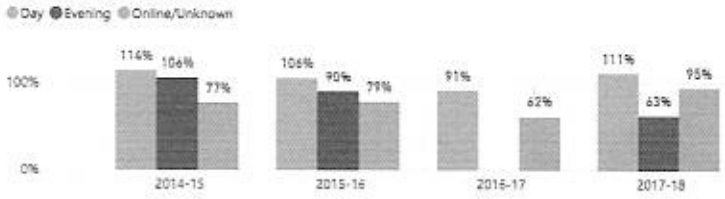
Sections Offered



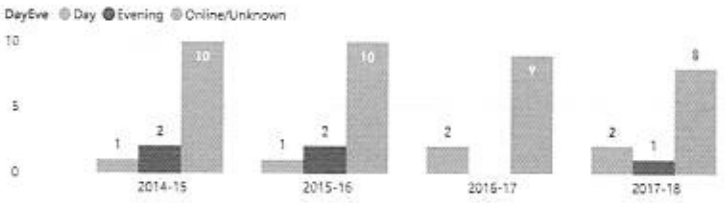
Fill Rate

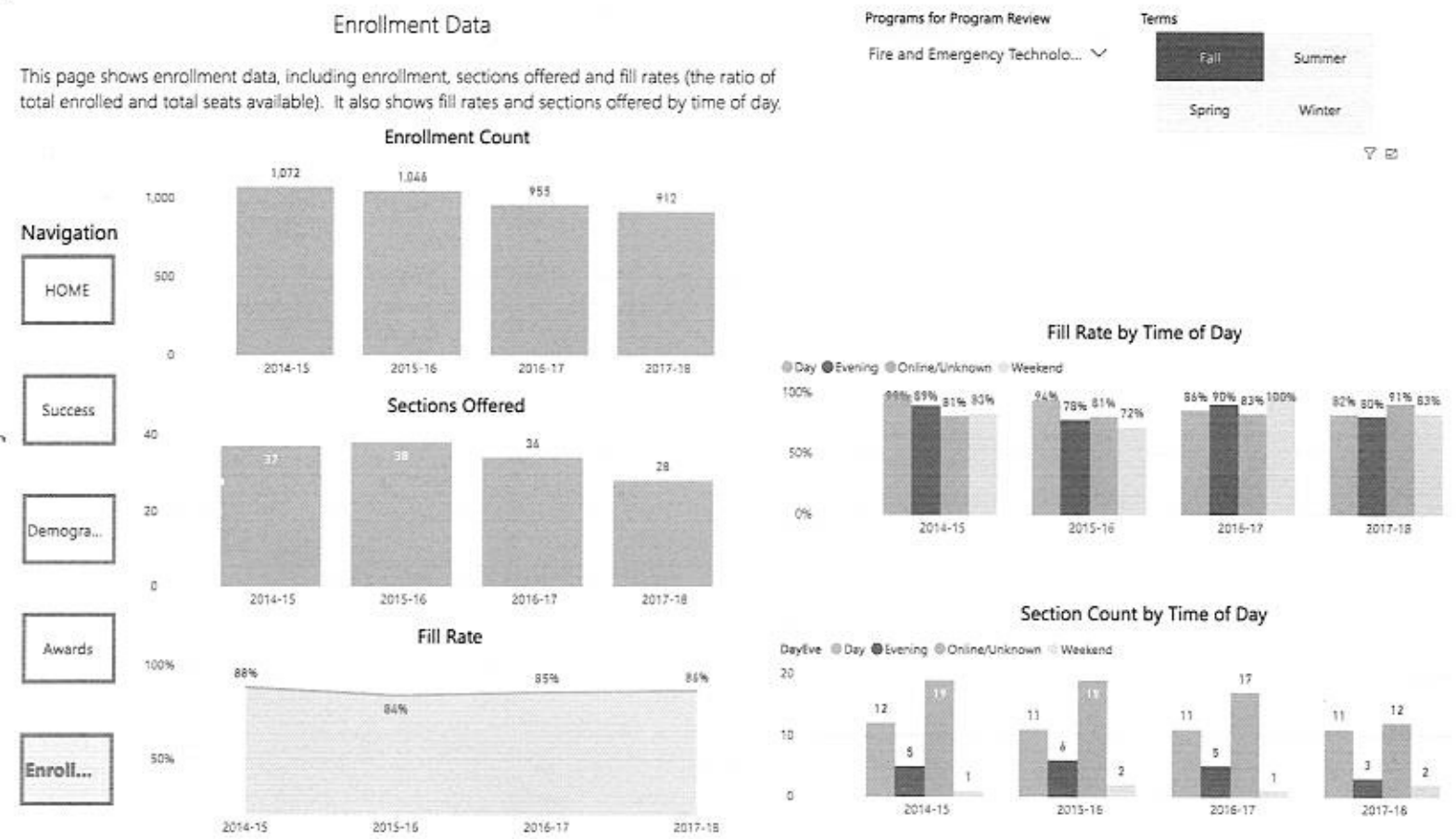


Fill Rate by Time of Day



Section Count by Time of Day




Enrollment Data
This page shows enrollment data, including enrollment, sections offered and fill rates (the ratio of total enrolled and total seats available). It also shows fill rates and sections offered by time of day.
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Fire and Emergency Technolo...
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Enroll...
Enrollment Count
1,072
1,046
955
912
2014-15
2015-16
2016-17
2017-18
Sections Offered
37
38
34
28
Fill Rate
88%
84%
85%
86%
Fill Rate by Time of Day
Day
Evening
Online/Unknown
Weekend
Section Count by Time of Day
DayEve

Appendix E

Course	Term	Instructional Method	A	B	C	D	F	Pass	No Pass	W	Total	Success Rate	Course Completion Rate
FTEC-1	2018/WI	Online	17	6	2	1	0	0	0	1	27	92.6%	96.3%
FTEC-130	2018/WI	On Campus	5	12	14	0	0	0	0	0	31	100.0%	100.0%
FTEC-131	2018/WI	On Campus	13	14	4	0	0	0	0	0	31	100.0%	100.0%
FTEC-132	2018/WI	On Campus	14	12	5	0	0	0	0	0	31	100.0%	100.0%
FTEC-133	2018/WI	On Campus	4	21	6	0	0	0	0	0	31	100.0%	100.0%
FTEC-134	2018/WI	On Campus	9	16	6	0	0	0	0	0	31	100.0%	100.0%
FTEC-135	2018/WI	On Campus	14	17	0	0	0	0	0	0	31	100.0%	100.0%
FTEC-136	2018/WI	On Campus	4	21	6	0	0	0	0	0	31	100.0%	100.0%
FTEC-137	2018/WI	On Campus	5	12	14	0	0	0	0	0	31	100.0%	100.0%
FTEC-139	2018/WI	On Campus	0	0	0	0	0	27	1	0	28	96.4%	100.0%
FTEC-144	2018/WI	On Campus	20	4	11	2	1	0	0	6	44	79.5%	86.4%
FTEC-150	2018/WI	On Campus	0	0	0	0	0	93	0	0	93	100.0%	100.0%
FTEC-6	2018/WI	Online	28	5	2	0	0	0	0	3	38	92.1%	92.1%
FTEC-1	2018/SP	On Campus	29	20	4	2	6	0	0	14	75	70.7%	81.3%
FTEC-1	2018/SP	Online	11	5	4	0	5	0	0	6	31	64.5%	80.6%
FTEC-10	2018/SP	On Campus	9	17	3	1	0	0	0	3	33	87.9%	90.9%
FTEC-11	2018/SP	On Campus	2	2	4	0	0	0	0	1	9	88.9%	88.9%
FTEC-130	2018/SP	On Campus	5	16	9	0	2	0	0	0	32	93.8%	100.0%
FTEC-131	2018/SP	On Campus	17	9	4	0	0	0	0	3	33	90.9%	90.9%
FTEC-132	2018/SP	On Campus	10	14	6	0	0	0	0	2	32	93.8%	93.8%
FTEC-133	2018/SP	On Campus	7	14	8	0	0	0	0	3	32	90.6%	90.6%
FTEC-134	2018/SP	On Campus	3	13	9	2	2	0	0	3	32	78.1%	90.6%
FTEC-135	2018/SP	On Campus	1	18	6	0	0	0	0	7	32	78.1%	78.1%
FTEC-136	2018/SP	On Campus	4	11	10	0	0	0	0	7	32	78.1%	78.1%
FTEC-137	2018/SP	On Campus	9	8	8	0	0	0	0	7	32	78.1%	78.1%
FTEC-138	2018/SP	On Campus	0	0	0	0	0	55	1	0	56	98.2%	100.0%
FTEC-139	2018/SP	On Campus	0	0	0	0	0	29	2	0	31	93.5%	100.0%
FTEC-144	2018/SP	On Campus	43	29	46	0	2	0	0	48	168	70.2%	71.4%
FTEC-15	2018/SP	On Campus	18	5	0	0	0	0	0	1	24	95.8%	95.8%
FTEC-150	2018/SP	On Campus	0	0	0	0	0	85	0	0	85	100.0%	100.0%
FTEC-2	2018/SP	On Campus	24	10	3	0	0	0	0	5	42	88.1%	88.1%
FTEC-20	2018/SP	On Campus	2	10	14	2	1	0	0	1	30	86.7%	96.7%
FTEC-3	2018/SP	On Campus	14	9	3	0	0	0	0	0	26	100.0%	100.0%
FTEC-5	2018/SP	On Campus	0	14	5	4	2	0	0	5	30	63.3%	83.3%
FTEC-6	2018/SP	On Campus	14	18	17	5	8	0	0	12	74	66.2%	83.8%
FTEC-6	2018/SP	Online	15	6	9	6	5	0	0	7	48	62.5%	85.4%
FTEC-71	2018/SP	On Campus	23	0	0	0	3	0	0	0	26	88.5%	100.0%

Course	Term	Instructional Method	A	B	C	D	F	Pass	No Pass	W	Total	Success Rate	Course Completion Rate
FTEC-1	2017/SP	On Campus	16	18	14	4	2	0	0	6	60	80.0%	90.0%
FTEC-1	2017/SP	Online	10	7	2	1	1	0	0	11	32	59.4%	65.6%
FTEC-10	2017/SP	On Campus	3	15	13	0	2	0	0	2	35	88.6%	94.3%
FTEC-11	2017/SP	On Campus	7	0	4	3	2	0	0	3	19	57.9%	84.2%
FTEC-130	2017/SP	On Campus	10	16	5	0	0	0	0	0	31	100.0%	100.0%
FTEC-131	2017/SP	On Campus	24	6	1	0	0	0	0	0	31	100.0%	100.0%
FTEC-132	2017/SP	On Campus	10	18	1	0	2	0	0	0	31	93.5%	100.0%
FTEC-133	2017/SP	On Campus	7	17	5	0	0	0	0	2	31	93.5%	93.5%
FTEC-134	2017/SP	On Campus	6	18	5	0	0	0	0	2	31	93.5%	93.5%
FTEC-135	2017/SP	On Campus	3	22	4	0	0	0	0	2	31	93.5%	93.5%
FTEC-136	2017/SP	On Campus	6	19	4	0	0	0	0	2	31	93.5%	93.5%
FTEC-137	2017/SP	On Campus	9	15	5	0	0	0	0	2	31	93.5%	93.5%
FTEC-138	2017/SP	On Campus	0	0	0	0	0	29	0	0	29	100.0%	100.0%
FTEC-139	2017/SP	On Campus	0	0	0	0	0	24	3	0	27	88.9%	100.0%
FTEC-144	2017/SP	On Campus	33	16	41	1	11	0	0	26	128	70.3%	79.7%
FTEC-15	2017/SP	On Campus	16	14	0	0	1	0	0	0	31	96.8%	100.0%
FTEC-150	2017/SP	On Campus	0	0	0	0	0	103	1	0	104	99.0%	100.0%
FTEC-2	2017/SP	On Campus	21	20	1	0	0	0	0	0	42	100.0%	100.0%
FTEC-20	2017/SP	On Campus	2	11	4	1	3	0	0	7	28	60.7%	75.0%
FTEC-3	2017/SP	On Campus	6	7	5	0	1	0	0	1	20	90.0%	95.0%
FTEC-5	2017/SP	On Campus	1	11	4	0	4	0	0	8	28	57.1%	71.4%
FTEC-6	2017/SP	On Campus	24	21	7	2	10	0	0	6	70	74.3%	91.4%
FTEC-1	2017/SU	On Campus	11	8	1	1	0	0	0	1	22	90.9%	95.5%
FTEC-130	2017/SU	On Campus	4	12	12	1	2	0	0	0	31	90.3%	100.0%
FTEC-131	2017/SU	On Campus	6	14	8	0	0	0	0	0	28	100.0%	100.0%
FTEC-132	2017/SU	On Campus	9	12	7	0	0	0	0	0	28	100.0%	100.0%
FTEC-133	2017/SU	On Campus	5	15	8	0	0	0	0	0	28	100.0%	100.0%
FTEC-134	2017/SU	On Campus	3	15	10	0	0	0	0	0	28	100.0%	100.0%
FTEC-135	2017/SU	On Campus	6	16	6	0	0	0	0	0	28	100.0%	100.0%
FTEC-136	2017/SU	On Campus	10	14	4	0	0	0	0	0	28	100.0%	100.0%
FTEC-137	2017/SU	On Campus	2	12	14	0	0	0	0	0	28	100.0%	100.0%
FTEC-138	2017/SU	On Campus	0	0	0	0	0	28	0	0	28	100.0%	100.0%
FTEC-139	2017/SU	On Campus	0	0	0	0	0	28	1	0	29	96.6%	100.0%
FTEC-144	2017/SU	On Campus	35	18	13	0	5	0	0	7	78	84.6%	91.0%
FTEC-138	2017/WI	On Campus	0	0	0	0	0	27	0	0	27	100.0%	100.0%
FTEC-139	2017/WI	On Campus	0	0	0	0	0	17	1	0	18	94.4%	100.0%
FTEC-144	2017/WI	On Campus	19	6	0	0	0	0	0	4	29	86.2%	86.2%
FTEC-6	2017/WI	Online	23	4	2	0	3	0	0	0	32	90.6%	100.0%

Course	Term	Instructional Method	A	B	C	D	F	Pass	No Pass	W	Total	Success Rate	Course Completion Rate
FTEC-1	2016/SP	On Campus	13	20	21	5	6	0	0	8	73	74.0%	89.0%
FTEC-1	2016/SP	Online	3	3	2	2	1	0	0	9	20	40.0%	55.0%
FTEC-10	2016/SP	On Campus	4	14	8	0	0	0	0	4	30	86.7%	86.7%
FTEC-11	2016/SP	On Campus	7	9	3	0	1	0	0	3	23	82.6%	87.0%
FTEC-130	2016/SP	On Campus	4	16	5	0	1	0	0	0	26	96.2%	100.0%
FTEC-131	2016/SP	On Campus	14	11	0	0	0	0	0	0	25	100.0%	100.0%
FTEC-132	2016/SP	On Campus	9	10	5	0	1	0	0	0	25	96.0%	100.0%
FTEC-133	2016/SP	On Campus	10	13	1	0	0	0	0	1	25	96.0%	96.0%
FTEC-134	2016/SP	On Campus	1	12	11	0	0	0	0	1	25	96.0%	96.0%
FTEC-135	2016/SP	On Campus	1	17	5	0	0	0	0	2	25	92.0%	92.0%
FTEC-136	2016/SP	On Campus	1	15	7	0	0	0	0	2	25	92.0%	92.0%
FTEC-137	2016/SP	On Campus	8	13	2	0	0	0	0	2	25	92.0%	92.0%
FTEC-138	2016/SP	On Campus	0	0	0	0	0	47	0	0	47	100.0%	100.0%
FTEC-139	2016/SP	On Campus	0	0	0	0	0	24	0	0	24	100.0%	100.0%
FTEC-144	2016/SP	On Campus	25	28	28	34	5	0	0	46	166	48.8%	72.3%
FTEC-15	2016/SP	On Campus	17	7	1	0	0	0	0	0	25	100.0%	100.0%
FTEC-2	2016/SP	On Campus	13	21	2	0	2	0	0	3	41	87.8%	92.7%
FTEC-20	2016/SP	On Campus	0	13	10	4	2	0	0	4	33	69.7%	87.9%
FTEC-3	2016/SP	On Campus	13	14	5	0	1	0	0	3	36	88.9%	91.7%
FTEC-5	2016/SP	On Campus	1	12	7	0	4	0	0	15	39	51.3%	61.5%
FTEC-6	2016/SP	On Campus	11	14	18	4	6	0	0	14	67	64.2%	79.1%
FTEC-1	2016/SU	Online	12	2	2	0	1	0	0	5	22	72.7%	77.3%
FTEC-130	2016/SU	On Campus	5	13	1	0	1	0	0	0	20	95.0%	100.0%
FTEC-131	2016/SU	On Campus	4	12	3	0	0	0	0	1	20	95.0%	95.0%
FTEC-132	2016/SU	On Campus	5	10	4	0	0	0	0	1	20	95.0%	95.0%
FTEC-133	2016/SU	On Campus	4	13	2	0	0	0	0	1	20	95.0%	95.0%
FTEC-134	2016/SU	On Campus	3	12	4	0	0	0	0	1	20	95.0%	95.0%
FTEC-135	2016/SU	On Campus	7	11	1	0	0	0	0	1	20	95.0%	95.0%
FTEC-136	2016/SU	On Campus	6	9	4	0	0	0	0	1	20	95.0%	95.0%
FTEC-137	2016/SU	On Campus	4	13	2	0	0	0	0	1	20	95.0%	95.0%
FTEC-138	2016/SU	On Campus	0	0	0	0	0	19	0	0	19	100.0%	100.0%
FTEC-139	2016/SU	On Campus	0	0	0	0	0	23	0	0	23	100.0%	100.0%
FTEC-144	2016/SU	On Campus	34	14	6	2	3	0	0	5	64	84.4%	92.2%
FTEC-1	2017/FA	On Campus	52	33	6	1	6	0	0	7	105	86.7%	93.3%
FTEC-1	2017/FA	Online	15	9	1	3	4	0	0	2	34	73.5%	94.1%
FTEC-10	2017/FA	On Campus	21	5	5	2	1	0	0	2	36	86.1%	94.4%
FTEC-130	2017/FA	On Campus	6	21	2	0	0	0	0	1	30	96.7%	96.7%
FTEC-131	2017/FA	On Campus	22	7	0	0	0	0	0	1	30	96.7%	96.7%
FTEC-132	2017/FA	On Campus	18	7	3	1	0	0	0	1	30	93.3%	96.7%
FTEC-133	2017/FA	On Campus	9	16	3	0	0	0	0	2	30	93.3%	93.3%
FTEC-134	2017/FA	On Campus	1	19	8	0	0	0	0	2	30	93.3%	93.3%
FTEC-135	2017/FA	On Campus	1	19	8	0	0	0	0	2	30	93.3%	93.3%
FTEC-136	2017/FA	On Campus	6	18	4	0	0	0	0	2	30	93.3%	93.3%
FTEC-137	2017/FA	On Campus	5	16	7	0	0	0	0	2	30	93.3%	93.3%
FTEC-138	2017/FA	On Campus	0	0	0	0	0	28	0	0	28	100.0%	100.0%
FTEC-139	2017/FA	On Campus	0	0	0	0	0	27	1	0	28	96.4%	100.0%
FTEC-144	2017/FA	On Campus	46	33	32	3	5	0	0	31	150	74.0%	79.3%
FTEC-15	2017/FA	On Campus	25	3	0	0	0	0	0	2	30	93.3%	93.3%
FTEC-150	2017/FA	On Campus	0	0	0	0	0	96	0	0	96	100.0%	100.0%
FTEC-19	2017/FA	On Campus	8	4	0	1	0	0	0	0	13	92.3%	100.0%
FTEC-20	2017/FA	On Campus	2	7	9	3	1	0	0	6	28	64.3%	78.6%
FTEC-3	2017/FA	On Campus	16	13	4	0	0	0	0	1	34	97.1%	97.1%
FTEC-4	2017/FA	On Campus	0	6	0	0	5	0	0	5	16	37.5%	68.8%
FTEC-5	2017/FA	On Campus	2	9	11	2	3	0	0	3	30	73.3%	90.0%
FTEC-6	2017/FA	Online	36	12	6	2	12	0	0	15	83	65.1%	81.9%
FTEC-9	2017/FA	On Campus	5	7	2	1	0	0	0	2	17	82.4%	88.2%

Course	Term	Instructional Method	A	B	C	D	F	Pass	No Pass	W	Total	Success Rate	Course Completion Rate
FTEC-1	2015/SP	On Campus	16	19	23	6	10	0	0	16	90	64.4%	82.2%
FTEC-1	2015/SP	Online	11	2	4	0	4	0	0	17	38	44.7%	55.3%
FTEC-10	2015/SP	On Campus	6	7	7	1	1	0	0	4	26	76.9%	84.6%
FTEC-11	2015/SP	On Campus	7	11	4	4	1	0	0	3	30	73.3%	90.0%
FTEC-128	2015/SP	On Campus	31	8	0	0	3	0	0	3	45	86.7%	93.3%
FTEC-130	2015/SP	On Campus	8	14	2	0	1	0	0	0	25	96.0%	100.0%
FTEC-131	2015/SP	On Campus	15	9	0	0	0	0	0	1	25	96.0%	96.0%
FTEC-132	2015/SP	On Campus	10	7	7	0	0	0	0	1	25	96.0%	96.0%
FTEC-133	2015/SP	On Campus	6	10	8	0	0	0	0	1	25	96.0%	96.0%
FTEC-134	2015/SP	On Campus	2	11	10	0	1	0	0	1	25	92.0%	96.0%
FTEC-135	2015/SP	On Campus	1	14	8	0	0	0	0	2	25	92.0%	92.0%
FTEC-136	2015/SP	On Campus	5	14	4	0	0	0	0	2	25	92.0%	92.0%
FTEC-137	2015/SP	On Campus	1	12	10	0	0	0	0	2	25	92.0%	92.0%
FTEC-138	2015/SP	On Campus	0	0	0	0	0	46	3	0	49	93.9%	100.0%
FTEC-139	2015/SP	On Campus	0	0	0	0	0	23	3	0	26	88.5%	100.0%
FTEC-144	2015/SP	On Campus	34	30	50	4	14	0	0	38	170	67.1%	77.6%
FTEC-15	2015/SP	On Campus	40	3	1	0	0	0	0	0	44	100.0%	100.0%
FTEC-2	2015/SP	On Campus	26	13	1	0	1	0	0	5	46	87.0%	89.1%
FTEC-20	2015/SP	On Campus	1	12	9	1	3	0	0	9	35	62.9%	74.3%
FTEC-3	2015/SP	On Campus	20	14	6	0	0	0	0	0	40	100.0%	100.0%
FTEC-5	2015/SP	On Campus	4	10	3	0	5	0	0	10	32	53.1%	68.8%
FTEC-6	2015/SP	On Campus	0	3	20	6	4	0	0	7	40	57.5%	82.5%
FTEC-1	2015/SU	On Campus	14	9	0	0	0	0	0	3	26	88.5%	88.5%
FTEC-128	2015/SU	On Campus	30	9	2	0	2	0	0	2	45	91.1%	95.6%
FTEC-130	2015/SU	On Campus	3	16	1	3	2	0	0	0	25	80.0%	100.0%
FTEC-131	2015/SU	On Campus	1	14	5	0	5	0	0	1	26	76.9%	96.2%
FTEC-132	2015/SU	On Campus	2	17	0	0	6	0	0	1	26	73.1%	96.2%
FTEC-133	2015/SU	On Campus	0	18	1	0	6	0	0	1	26	73.1%	96.2%
FTEC-134	2015/SU	On Campus	1	15	3	0	6	0	0	1	26	73.1%	96.2%
FTEC-135	2015/SU	On Campus	4	15	0	0	6	0	0	1	26	73.1%	96.2%
FTEC-136	2015/SU	On Campus	6	11	2	0	6	0	0	1	26	73.1%	96.2%
FTEC-137	2015/SU	On Campus	2	12	5	0	6	0	0	1	26	73.1%	96.2%
FTEC-138	2015/SU	On Campus	0	0	0	0	0	19	0	0	19	100.0%	100.0%
FTEC-139	2015/SU	On Campus	0	0	0	0	0	22	1	0	23	95.7%	100.0%
FTEC-144	2015/SU	On Campus	12	18	0	0	2	0	0	5	37	81.1%	86.5%
FTEC-1	2016/FA	On Campus	25	24	20	3	7	0	0	9	88	78.4%	89.8%
FTEC-1	2016/FA	Online	12	1	1	2	7	0	0	10	33	42.4%	69.7%
FTEC-10	2016/FA	On Campus	9	13	7	0	0	0	0	4	33	87.9%	87.9%
FTEC-130	2016/FA	On Campus	12	24	9	0	5	0	0	0	50	90.0%	100.0%
FTEC-131	2016/FA	On Campus	22	21	2	0	0	0	0	5	50	90.0%	90.0%
FTEC-132	2016/FA	On Campus	26	11	8	0	0	0	0	5	50	90.0%	90.0%
FTEC-133	2016/FA	On Campus	15	25	5	0	0	0	0	5	50	90.0%	90.0%
FTEC-134	2016/FA	On Campus	14	24	7	0	0	0	0	5	50	90.0%	90.0%
FTEC-135	2016/FA	On Campus	14	22	9	0	0	0	0	5	50	90.0%	90.0%
FTEC-136	2016/FA	On Campus	15	28	2	0	0	0	0	5	50	90.0%	90.0%
FTEC-137	2016/FA	On Campus	19	18	8	0	0	0	0	5	50	90.0%	90.0%
FTEC-138	2016/FA	On Campus	0	0	0	0	0	18	0	0	18	100.0%	100.0%
FTEC-139	2016/FA	On Campus	0	0	0	0	0	18	0	0	18	100.0%	100.0%
FTEC-144	2016/FA	On Campus	22	34	53	11	12	0	0	25	157	69.4%	84.1%
FTEC-15	2016/FA	On Campus	0	22	3	0	2	0	0	0	27	92.6%	100.0%
FTEC-19	2016/FA	On Campus	12	4	0	0	0	0	0	0	16	100.0%	100.0%
FTEC-20	2016/FA	On Campus	1	12	6	1	4	0	0	9	33	57.6%	72.7%
FTEC-3	2016/FA	On Campus	22	11	1	1	0	0	0	1	36	94.4%	97.2%
FTEC-4	2016/FA	On Campus	0	8	4	3	2	0	0	5	22	54.5%	77.3%
FTEC-5	2016/FA	On Campus	4	15	5	1	2	0	0	7	34	70.6%	79.4%
FTEC-6	2016/FA	On Campus	28	10	2	0	2	0	0	4	46	87.0%	91.3%
FTEC-9	2016/FA	On Campus	11	14	3	0	0	0	0	2	30	93.3%	93.3%

Course	Term	Instructional Method	A	B	C	D	F	Pass	No Pass	W	Total	Success Rate	Course Completion Rate
FTEC-1	2014/FA	On Campus	28	26	23	4	19	0	0	26	126	61.1%	79.4%
FTEC-10	2014/FA	On Campus	11	14	9	1	0	0	0	3	38	89.5%	92.1%
FTEC-128	2014/FA	On Campus	43	14	0	0	0	0	0	8	65	87.7%	87.7%
FTEC-130	2014/FA	On Campus	8	31	13	0	0	0	0	0	52	100.0%	100.0%
FTEC-131	2014/FA	On Campus	16	25	10	0	1	0	0	1	53	96.2%	98.1%
FTEC-132	2014/FA	On Campus	10	11	5	0	0	0	0	1	27	96.3%	96.3%
FTEC-133	2014/FA	On Campus	17	23	9	0	1	0	0	3	53	92.5%	94.3%
FTEC-134	2014/FA	On Campus	3	28	15	0	3	0	0	4	53	86.8%	92.5%
FTEC-135	2014/FA	On Campus	10	24	11	0	4	0	0	3	52	86.5%	94.2%
FTEC-136	2014/FA	On Campus	11	27	7	0	1	0	0	3	49	91.8%	93.9%
FTEC-137	2014/FA	On Campus	14	21	10	0	1	0	0	3	49	91.8%	93.9%
FTEC-138	2014/FA	On Campus	0	0	0	0	0	21	2	0	23	91.3%	100.0%
FTEC-139	2014/FA	On Campus	0	0	0	0	0	37	2	0	39	94.9%	100.0%
FTEC-144	2014/FA	On Campus	16	51	34	2	14	0	0	52	169	59.8%	69.2%
FTEC-15	2014/FA	On Campus	29	11	0	0	1	0	0	6	47	85.1%	87.2%
FTEC-19	2014/FA	On Campus	12	9	2	0	0	0	0	5	28	82.1%	82.1%
FTEC-20	2014/FA	On Campus	4	13	9	2	3	0	0	5	36	72.2%	86.1%
FTEC-3	2014/FA	On Campus	12	15	7	0	0	0	0	3	37	91.9%	91.9%
FTEC-4	2014/FA	On Campus	1	6	11	0	2	0	0	14	34	52.9%	58.8%
FTEC-5	2014/FA	On Campus	0	18	3	1	3	0	0	11	36	58.3%	69.4%
FTEC-9	2014/FA	On Campus	16	12	4	1	0	0	0	3	36	88.9%	91.7%
FTEC-1	2014/SU	On Campus	16	11	2	1	0	0	0	4	34	85.3%	88.2%
FTEC-128	2014/SU	On Campus	34	12	1	0	1	0	0	7	55	85.5%	87.3%
FTEC-130	2014/SU	On Campus	3	10	8	0	3	0	0	0	24	87.5%	100.0%
FTEC-131	2014/SU	On Campus	0	6	15	0	0	0	0	3	24	87.5%	87.5%
FTEC-132	2014/SU	On Campus	8	11	2	0	0	0	0	3	24	87.5%	87.5%
FTEC-133	2014/SU	On Campus	7	10	4	0	0	0	0	3	24	87.5%	87.5%
FTEC-134	2014/SU	On Campus	3	13	4	0	1	0	0	3	24	83.3%	87.5%
FTEC-135	2014/SU	On Campus	1	15	4	0	0	0	0	3	23	87.0%	87.0%
FTEC-136	2014/SU	On Campus	0	16	5	0	0	0	0	3	24	87.5%	87.5%
FTEC-137	2014/SU	On Campus	2	10	8	0	0	0	0	4	24	83.3%	83.3%
FTEC-138	2014/SU	On Campus	0	0	0	0	0	19	1	1	21	90.5%	95.2%
FTEC-139	2014/SU	On Campus	0	0	0	0	0	21	1	0	22	95.5%	100.0%
FTEC-144	2014/SU	On Campus	12	8	12	0	0	0	0	8	40	80.0%	80.0%
FTEC-1	2015/FA	On Campus	28	29	22	6	17	0	0	15	117	67.5%	87.2%
FTEC-1	2015/FA	Online	9	4	3	1	3	0	0	8	28	57.1%	71.4%
FTEC-10	2015/FA	On Campus	8	17	10	1	3	0	0	1	40	87.5%	97.5%
FTEC-128	2015/FA	On Campus	30	4	1	0	2	0	0	2	39	89.7%	94.9%
FTEC-130	2015/FA	On Campus	9	32	8	2	1	0	0	0	52	94.2%	100.0%
FTEC-131	2015/FA	On Campus	20	20	9	0	0	0	0	3	52	94.2%	94.2%
FTEC-132	2015/FA	On Campus	20	20	7	0	2	0	0	3	52	90.4%	94.2%
FTEC-133	2015/FA	On Campus	8	29	8	1	1	0	0	5	52	86.5%	90.4%
FTEC-134	2015/FA	On Campus	4	28	11	1	2	0	0	6	52	82.7%	88.5%
FTEC-135	2015/FA	On Campus	8	28	7	0	1	0	0	8	52	82.7%	84.[illegible] 88.5
FTEC-136	2015/FA	On Campus	12	29	2	0	1	0	0	8	52	82.7%	84.6%
FTEC-137	2015/FA	On Campus	19	21	3	0	1	0	0	8	52	82.7%	84.6%
FTEC-138	2015/FA	On Campus	0	0	0	0	0	18	1	0	19	94.7%	100.0%
FTEC-139	2015/FA	On Campus	0	0	0	0	0	17	2	0	19	89.5%	100.0%
FTEC-144	2015/FA	On Campus	30	46	29	2	19	0	0	36	162	64.8%	77.8%
FTEC-15	2015/FA	On Campus	29	7	0	0	0	0	0	4	40	90.0%	90.0%
FTEC-19	2015/FA	On Campus	7	11	1	0	0	0	0	4	23	82.6%	82.6%
FTEC-20	2015/FA	On Campus	2	13	11	1	6	0	0	3	36	72.2%	91.7%
FTEC-3	2015/FA	On Campus	14	12	1	0	1	0	0	1	29	93.1%	96.6%
FTEC-4	2015/FA	On Campus	2	8	2	1	5	0	0	10	28	42.9%	64.3%
FTEC-5	2015/FA	On Campus	5	12	4	1	1	0	0	11	34	61.8%	67.6%
FTEC-6	2015/FA	On Campus	2	13	1	0	1	0	0	0	17	94.1%	100.0%
FTEC-9	2015/FA	On Campus	10	17	7	0	0	0	0	2	36	94.4%	94.4%

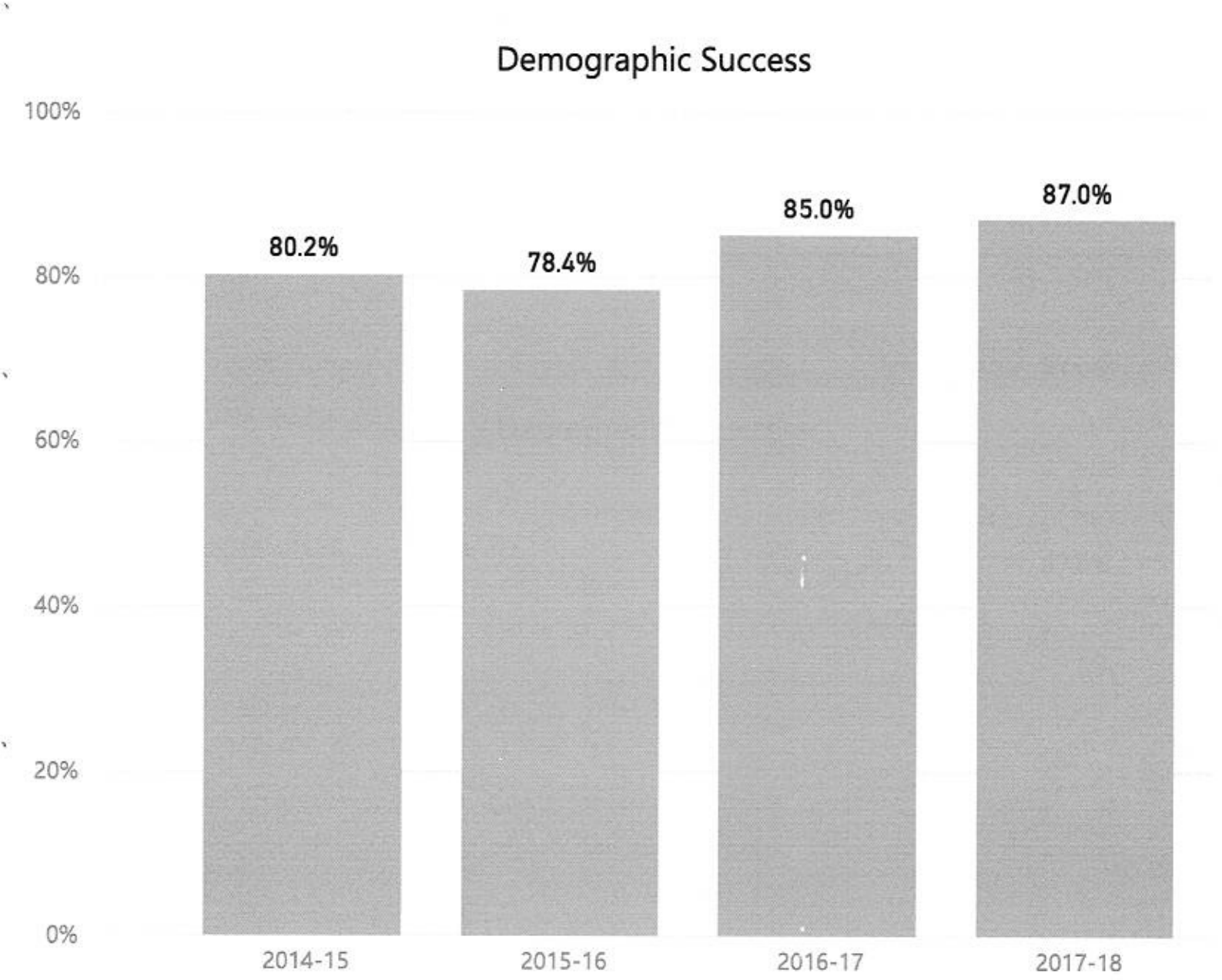
Programs for Program Review

Fire and Emergency Technology

Terms

Fall | Summer

Spring | Winter


Demographic Success
100%
80%
60%
40%
20%
0%
80.2%
78.4%
85.0%
87.0%
2014-15
2015-16
2016-17
2017-18

ers

Gender

- [x] Female
- [ ] Male
- [ ] Unknown or Decline

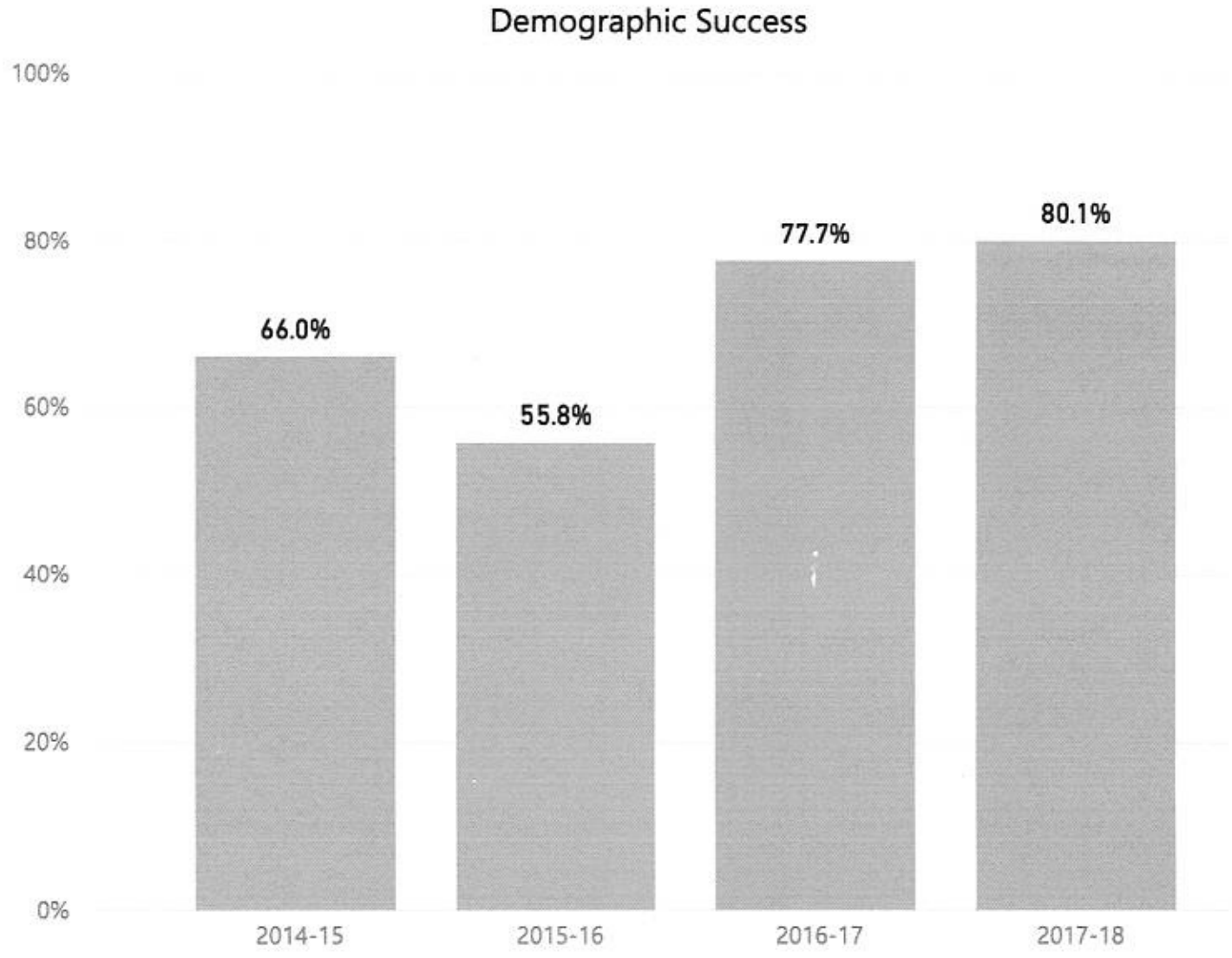
Age Group

- [ ] 17 to 19
- [ ] 20 to 24
- [ ] 25 to 29
- [ ] 30 to 49
- [ ] 50+
- [ ] Special Admit

Ethnicity

- [ ] African American
- [ ] American Indian/Alaskan
- [ ] Asian
- [ ] Hispanic
- [ ] Pacific Islander
- [ ] Student Visa
- [ ] Two or More Races
- [ ] Unknown or Decline
- [ ] White

Program Success rates are shown for the demographic groups and terms selected.



ers

Gender

- ☐ Female
- ■ Male
- ☐ Unknown or Decline

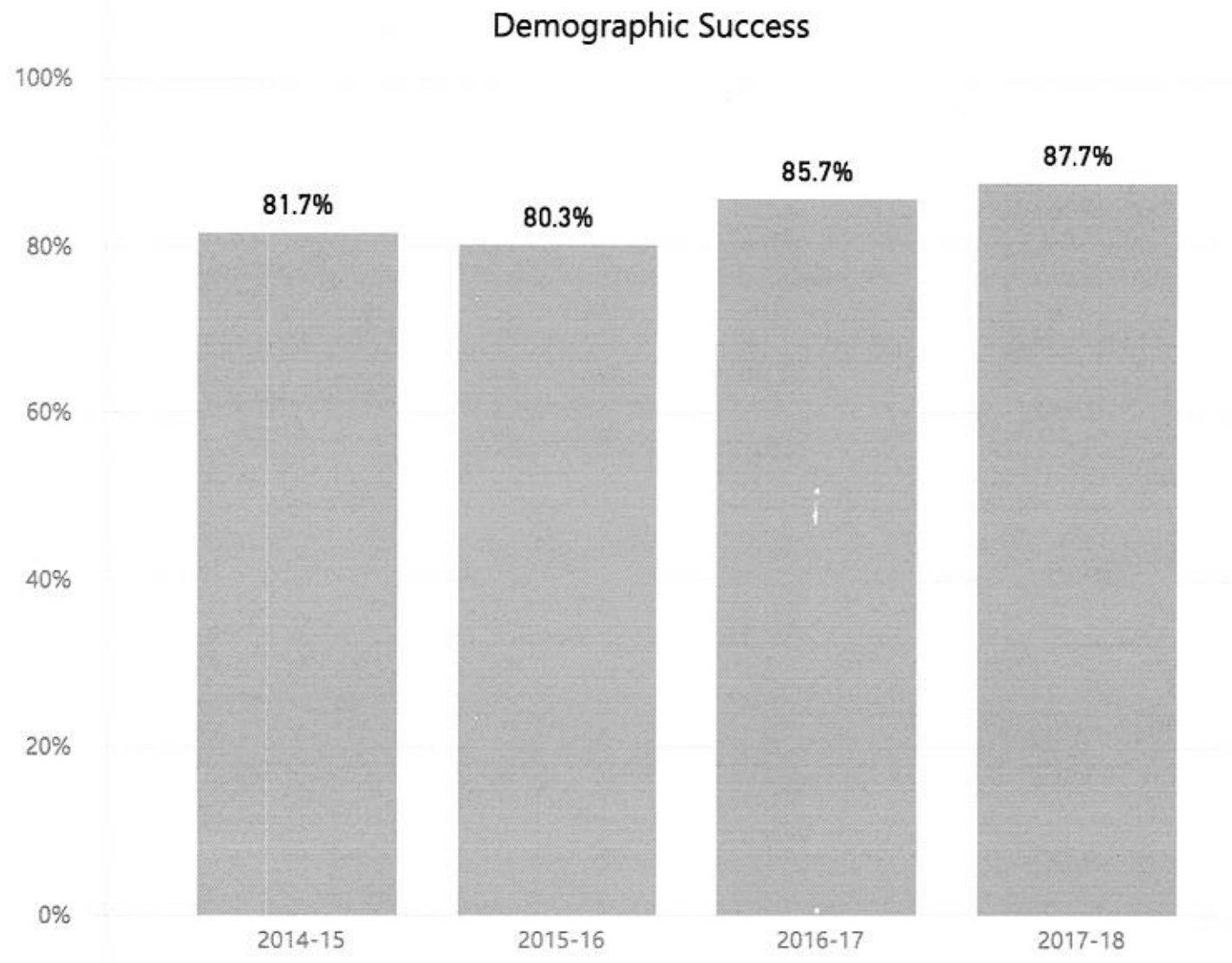
Age Group

- ☐ 17 to 19
- ☐ 20 to 24
- ☐ 25 to 29
- ☐ 30 to 49
- ☐ 50+
- ☐ Special Admit

Ethnicity

- ☐ African American
- ☐ American Indian/Alaskan
- ☐ Asian
- ☐ Hispanic
- ☐ Pacific Islander
- ☐ Student Visa
- ☐ Two or More Races
- ☐ Unknown or Decline
- ☐ White

Program Success rates are shown for the demographic groups and terms selected.



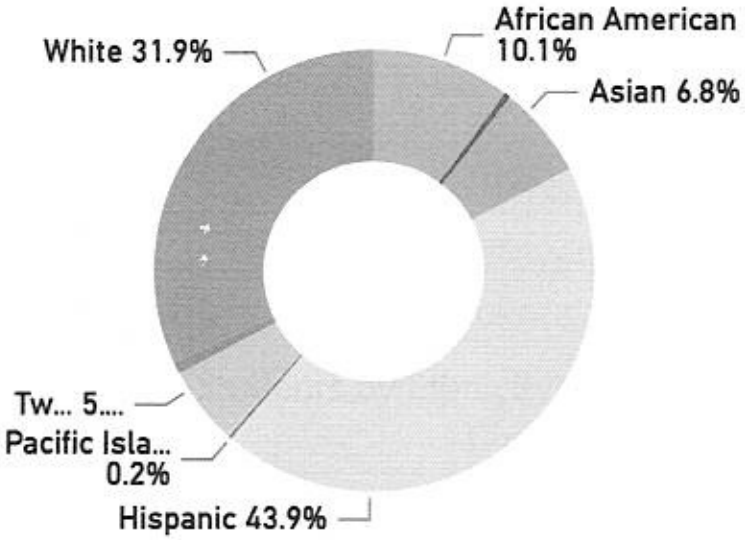
Appendix G

1,522

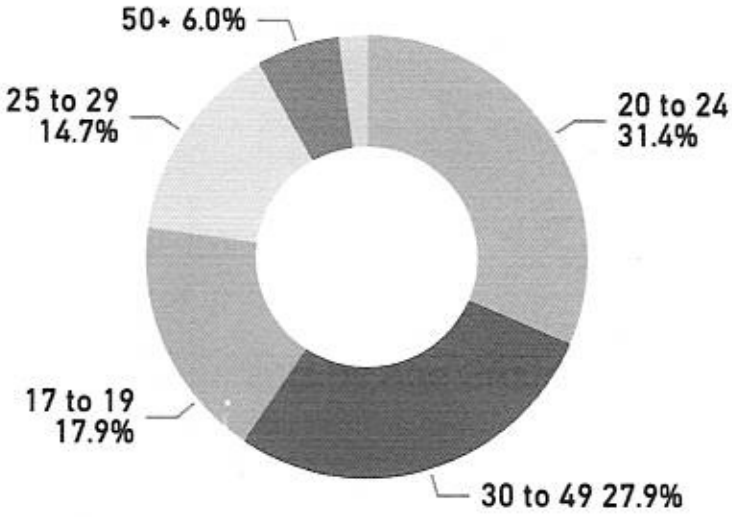
Students

Program Demographics displayed for the selected program/term combination in the most recent completed academic year (2017-18).

Students by Ethnicity



Students by Age Group



Percent Female

Percent Enrolled Full-Time

FIRE AND EMERGENCY TECHNOLOGY
CURRICULUM – 2014–2020

COURSE	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Fire and Emergency Technology 1	CTE 2 Year		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 2		Content Review		CTE 2 Year		CTE 2 Year
Fire and Emergency Technology 3		CTE 2 Year		CTE 2 Year		CTE 2 Year
Fire and Emergency Technology 4	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 5	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 6	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 9		Content Review		CTE 2 Year		CTE 2 Year
Fire and Emergency Technology 10		Content Review		CTE 2 Year		CTE 2 Year
Fire and Emergency Technology 11		Content Review		CTE 2 Year		CTE 2 Year
Fire and Emergency Technology 15		Content Review Lecture Hours decrease Lab Hours increase Increase to 15 units Prerequisites		CTE 2 Year	CTE 2 Year Prerequisite: Addition of FTECH 3 and FTECH 5	
Fire and Emergency Technology 16				NEW		In process of INACTIVATION
Fire and Emergency Technology 19		Content Review		CTE 2 Year		CTE 2 Year
Fire and Emergency Technology 20	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 50		INACTIVATED				
Fire and Emergency Technology 60A	INACTIVATED					
Fire and Emergency Technology 60B	INACTIVATED					

COURSE	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Fire and Emergency Technology 60C	INACTIVATED					
Fire and Emergency Technology 60D	INACTIVATED					
Fire and Emergency Technology 60F	INACTIVATED					
Fire and Emergency Technology 60G	INACTIVATED					
Fire and Emergency Technology 71				NEW		CTE 2 Year
Fire and Emergency Technology 72				NEW		CTE 2 Year
Fire and Emergency Technology 73				NEW		CTE 2 Year
Fire and Emergency Technology 74				NEW		CTE 2 Year
Fire and Emergency Technology 75				NEW		CTE 2 Year
Fire and Emergency Technology 76				NEW		CTE 2 Year
Fire and Emergency Technology 77				NEW		CTE 2 Year
Fire and Emergency Technology 78				NEW		CTE 2 Year
Fire and Emergency Technology 80A			REACTIVATION		CTE 2 Year	
Fire and Emergency Technology 80B			REACTIVATION		CTE 2 Year	
Fire and Emergency Technology 95		To FTECH 95				
Fire and Emergency Technology 99	to FTECH 99					
Fire and Emergency Technology 100			REACTIVATE	INACTIVATE		
Fire and Emergency Technology 110B			REACTIVATE		CTE 2 Year	

COURSE	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Fire and Emergency Technology 110C			REACTIVATE		CTE 2 Year	
Fire and Emergency Technology 113A			REACTIVATE		CTE 2 Year	
Fire and Emergency Technology 113B			REACTIVATE		CTE 2 Year	
Fire and Emergency Technology 120				NEW		CTE 2 Year
Fire and Emergency Technology 128		CTE 2 Year	INACTIVATED			
Fire and Emergency Technology 130	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 131	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 132	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 133	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 134	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 135	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 136	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 137	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 138	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 139	Content Review		CTE 2 Year		CTE 2 Year	
Fire and Emergency Technology 142		INACTIVATE				In process of REACTIVATION
Fire and Emergency Technology 144		Content Review		CTE 2 Year	CTE 2 Year UNITS From: 6 units TO: 6.5 units	
Fire and Emergency Technology 150		CTE 2 Year		CTE 2 Year		CTE 2 Year

ASSOCIATE IN SCIENCE DEGREES - CERTIFICATES OF ACHIEVEMENT - CERTIFICATES OF ACCOMPLISHMENT						
ASSOCIATE IN SCIENCE DEGREES / CERTIFICATES	**2014-2015**	**2015-2016**	**2016-2017**	**2017-2018**	**2018-2019**	**2019-2020**
Associate in Science Degree *Fire and Emergency Technology Option*	Add FTECH 3 Remove FTECH 7, 8, 14 FTECH 140 to 5 units	FTECH 140/141 to FTECH 144				Addition of (.5 unit increase) FTECH 144 From: 27 units TO: 27.5 units
Associate in Science Degree *Paramedical Technician Option*						
Certificate of Achievement *Fire and Emergency Technology*	Add FTECH 3 Remove FTECH 7, 8, 14 FTECH 140 to 5 units	FTECH 140/141 to FTECH 144				Addition of (.5 unit increase) FTECH 144 From: 27 units TO: 27.5 units
Certificate of Achievement *Fire Academy*	Add to 3 units From: FTECH 3 Remove FTECH 7, 8, 14 FTECH 140 to 5 units	FTECH 140/141 to FTECH 144				Addition of FTECH 3 and FTECH 5 and FTECH 144 (.5 unit increase) From: 27 units TO: 33.5 units
Certificate of Achievement *Paramedical Technician*						
Certificate of Accomplishment *Fire Explorer*					NEW	

[redacted]

[redacted]

[redacted]

FTEC 4 - Fire Company Organization and Management

3 units
3 hours lecture
Recommended Preparation: FTEC 1 and eligibility for ENGL 1A
Credit, degree applicable
Transfer CSU

This course is designed to review fire department organization and offer instruction in the organization, management and supervision of fire companies. Areas of discussion include the relationship of the company officer to the organizational structure as well as responsibilities related to personnel supervision, evaluation, discipline and training, communication, fire apparatus and equipment, maintenance, fire prevention, incident response and command, strategy, tactics, records and reports.

FTEC 5 - Fire Behavior and Combustion

3 units
3 hours lecture
Recommended Preparation: FTEC 1 and eligibility for ENGL 1A
Credit, degree applicable
Transfer CSU

This course examines the theory and fundamentals of how and why fires start, spread, and are controlled, as well as an in-depth study of fire chemistry and physics, fire characteristics of materials, extinguishing agents and fire control techniques.

FTEC 6 - Building Construction for Fire Protection

3 units
3 hours lecture
Recommended Preparation: FTEC 1 and eligibility for ENGL 1A
Credit, degree applicable
Transfer CSU

This course is the study of the components of building construction that relate to fire safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, pre-planning fire operations, and operating at fires. The development and evolution of building and fire codes will be studied in relationship to past fires in residential, commercial, and industrial occupancies.

FTEC 9 - Fire Apparatus and Equipment

3 units
3 hours lecture
Recommended Preparation: FTEC 1 and ENGL A
Credit, degree applicable
Transfer CSU

This course is a study of fire apparatus design and use, including mobile and fixed apparatus. It includes a review of construction specifications and performance capabilities as well as effective deployment, utilization, and performance of equipment under emergency conditions.

FTEC 10 - Hazardous Materials

3 units
3 hours lecture
Recommended Preparation: FTEC 1 and ENGL 1A
Credit, degree applicable
Transfer CSU

This course is a study of firefighting practices related to hazardous chemicals and their physical properties, uses in industry, and characteristics when involved in spills and fires. It includes basic information regarding health effects and treatment as well as fire department protocols and responsibilities.

FTEC 11 - Arson Detection and Control

3 units
3 hours lecture
Recommended Preparation: FTEC 1 and ENGL A
Credit, degree applicable
Transfer CSU

This course is a study of prevention, detection, and control of arson fires. It includes arson motives, fire investigation, and lawful search, identification, collection, seizure, and preservation of evidence.

FTEC 15 - Fire Academy

15 units
9 hours lecture, 18.5 hours lab
Prerequisite:

1. Fire and Emergency Technology 1 with a minimum grade of C or equivalent
2. Fire and Emergency Technology 3 with a minimum grade of C or equivalent
3. Fire and Emergency Technology 5 with a minimum grade of C or equivalent
4. Fire and Emergency Technology 6 with a minimum grade of C or equivalent
5. Possession of a National Registry Card or possession of a valid Emergency Medical Technician (EMT) license as required by the California State Fire Marshal's Office
6. Pass a Fire Fighter Physical Agility Test (FPAT) or Candidate Physical Agility Test (CPAT) within the last 6 months as required by the California State Fire Marshal's Office
7. Pass a physical examination according to the National Fire Protection Association (NFPA) Standard #1582
8. Pass the El Camino College Fire Physical Qualification Test
9. Possess a valid California driver's license

Credit, degree applicable

This course is designed for students who wish to prepare for entry-level positions as a firefighter and work toward becoming certified as a Fire Fighter 1, as specified by the California State Fire Marshal's Office. Students participate in a 495-hour course of instruction emphasizing basic firefighting skills such as methods of extinguishing fires, principles of ventilation, techniques of physical rescue, building construction, fire apparatus, fire equipment maintenance, and the knowledge of fire behavior.

Note: Students must apply through the Industry and Technology Division Office. Students must pay non-refundable fees for state certifications and state licensing.

FTEC 16 - Fire Fighter 1 Capstone Testing

1.5 units
4.5 hours lab
Recommended Preparation: FTEC 15 with a minimum grade of C
Credit, not degree applicable

This course encompasses the California State Fire Marshal "Capstone Testing" program. Students who have graduated from a California State Fire Marshal certified fire academy are required to pass this course, in order to receive certification as a Fire Fighter 1. Topics covered include self-contained breathing apparatus, ladders, hose, tools and equipment, wildland fire fighting, hazardous materials and general firefighting knowledge. A certificate from the California State Fire Marshal will be issued to students who successfully pass this course according to current State Fire Marshal standards.

Note: Pass/no pass only

FTEC 19 - Fire Service Entrance Preparation

3 units
3 hours lecture
Recommended Preparation: FTEC 1 and ENGL A
Credit, degree applicable

This course will explore all aspects of commonly used hiring procedures in the field of fire service. Fire service diagnostic tests will be used to identify any weakness in fire service entry-level skills. Students will research hiring practices, take practice written examinations, participate in mock oral board examinations, and receive instruction which will enhance their fire technology career opportunities.

FTEC 20 - Fire Protection Equipment and Systems

3 units
3 hours lecture
Recommended Preparation: eligibility for ENGL 1A
Credit, degree applicable
Transfer CSU

This course addresses the features of design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers.

FTEC 71 - Vehicle Extrication 1B

1.5 units
1.5 hours lecture
Prerequisite: Successful completion of a California State Fire Marshall certified Fire Academy. Proof of passing the Emergency Medical Technician (EMT) National Registry Examination
Credit, not degree applicable

This course parallels the Hazardous Materials Command Principles for Company Officers course offered by the California Fire Service Training and Education System (CFSTES). The topics include the Incident Command System (ICS), multi-casualty incidents, hazardous materials incidents, wildland fire incidents, environmental concerns and legal issues. The course applies to Fire Officer certification requirements established by the California State Board of Fire Services.

FTEC 72 - Trench Rescue Technician

1.5 units
1.5 hours lecture
Prerequisite: Successful completion of a California State Fire Marshall certified Fire Academy. Proof of passing the Emergency Medical Technician (EMT) National Registry Examination
Credit, not degree applicable

This course parallels Instructional Techniques Part 1 offered by the California Fire Service Training and Education System (CFSTES). It is designed to provide instruction in fire service training methods with emphasis on using occupational analysis, identifying training needs, and training others to perform manipulative skills. The course applies to Fire Officer, Fire Instructor I and Public Education Officer II certification requirements established by the California State Board of Fire Services.

FTEC 73 - Human Resource Management for Company Officers (Company Officer 2A)

2 units
2 hours lecture
Recommended Preparation: FTEC 1 and ENGL A
Credit, degree applicable

This course provides information on the use of human resources to accomplish assignments, evaluating member performance, and integrating health and safety plans, policies, and procedures into daily activities as well as the emergency scene

FTEC 74 - General Administrative Functions for Company Officers (Company Officer 2B)

1 units
1 hours lecture
Recommended Preparation: FTEC 1
Credit, degree applicable
Transfer CSU

This course provides information on general administrative functions and the implementation of department policies and procedures and addresses conveying the fire department's role, image, and mission to the public.

FTEC 75 - Fire Inspections and Investigation for Company Officers (Company Officer 2C)

2 units
2 hours lecture
Recommended Preparation: FTEC 1
Credit, degree applicable
Transfer CSU

This course addresses conducting inspections, identifying hazards and addressing violations, performing a fire investigation to determine preliminary cause, and securing the incident scene and preserving evidence.

FTEC 76 - All-Risk Command Operations for Company Officers (Company Officer 2D)

2 units
2 hours lecture
Recommended Preparation: FTEC 1 and ENGL A
Credit, degree applicable
Transfer CSU

This course provides information on conducting incident size-up, developing and implementing an initial plan of action involving single and multiunit operations for various types of emergency incidents to mitigate the situation following agency safety procedures, conducting pre-incident planning, and developing and conducting a post-incident analysis.

FTEC 77 - Wildland Operations for Company Officers (Company Officer 2E)

2 units
2 hours lecture
Recommended Preparation: FTEC 1
Credit, degree applicable
Transfer CSU

This course provides information on evaluating and reporting incident conditions, analyzing needs, developing and implementing a plan of action to deploy incident resources, completing all operations to suppress a wildland fire, establishing an incident command post, creating an incident action plan, and completing incident records and reports.

FTEC 78 - Instructional Methodology (Instructor I)

2 units
2 hours lecture
Recommended Preparation: FTEC 1 and ENGL A
Credit, degree applicable
Transfer CSU

This course provides the skills and knowledge needed for the entry level professional instructor to perform his or her duties safely, effectively, and competently. The curriculum is based on the most current edition of National Fire Protection Association (NFPA) 1041 Standards for Fire Service Instructor Professional Qualifications. At the end of this course, candidates for Instructor I certification will be able to teach and deliver instruction from a prepared lesson plan utilizing instructional aids and evaluation instruments. The Instructor I will also be able to adapt a lesson plan and complete the reporting requirements to the local jurisdiction.

FTEC 80A - Training Instructor 1A

2 units
2 hours lecture
Recommended Preparation: FTEC 1
Credit, degree applicable
Transfer CSU

This course parallels Instructional Techniques Part 1 offered by the California Fire Service Training and Education System (CFSTES). It is designed to provide instruction in fire service training methods with emphasis on using occupational analysis, identifying training needs, and training others to perform manipulative skills. The course applies to Fire Officer, Fire Instructor I and Public Education Officer II certification requirements established by the California State Board of Fire Services.

FTEC 80B - Training Instructor 1B

2 units
2 hours lecture
Recommended Preparation: FTEC 80A
Credit, degree applicable
Transfer CSU

This course parallels Instructional Techniques Part 2 offered by the California Fire Service Training and Education System (CFSTES). The topics covered include preparing course outlines, establishing levels of instruction, constructing behavioral objectives and lesson plans, instructional aid development, and the fundamentals of testing and evaluation. The course applies to Fire Officer, Fire Instructor I and Public Education Officer II certification requirements established by the California State Board of Fire Services.

FTEC 95 - Cooperative Work Experience Education

2-4 units
hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU*

Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Fire and Emergency Technology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.

Note: *Transfer limitations apply. The total units earned for Cooperative Work Experience Education may not exceed 16 units.
(formerly Fire and Emergency Technology 95abcd)

FTEC 99 - Independent Study

1-3 units
hours to be arranged
Enrollment Limitation: two courses in Fire and Emergency Technology with a minimum grade of B in each and acknowledgment by instructor with whom the student will work
Credit, degree applicable
Transfer CSU*

This course provides special advanced studies in a subject field of Fire and Emergency Technology not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Fire and Emergency Technology projects (54 hours per unit).

Note: *Transfer limitations apply. For eligibility requirements, go to www.elcamino.edu/admissions/credit.asp
(formerly Fire and Emergency Technology 99abc)

FTEC 110B - Fire Inspector 1B

1.5 units
1.5 hour lecture
Recommended Preparation: FTEC 1
Credit, degree applicable
CSU Transfer

This course provides students with a basic knowledge of fire and life safety aspects related to the roles and responsibilities of a Fire Inspector 1, including building construction, occupancy classifications, occupant load, means of egress, hazardous conditions, fire growth potential, fire flow, and emergency planning and preparedness measures. The student who completes this course will be awarded a Certificate from the Office of the California State Fire Marshal.

FTEC 110C - Fire Inspector 1C

2 units
2 hours lecture
Recommended Preparation: FTEC 1
Credit, degree applicable
CSU Transfer

This course provides students with a basic knowledge of field inspection roles and responsibilities of a Fire Inspector 1 including basic plan review, emergency access for an existing system, hazardous materials, and the operational readiness of fixed fire suppression systems, existing fire detection and alarm systems, and portable fire extinguishers. The student who completes this course will be awarded a certificate from the Office of the California State Fire Marshal.

FTEC 113A - Fire Apparatus Driver/Operator-Pumping Apparatus (Driving)

1 unit
1 hour lecture
Prerequisite: Hold a valid Class C driver's license (minimum). State Fire Marshal requirement.
Recommended Preparation: FTEC 1
Credit, degree applicable
CSU Transfer

This course provides information on fire apparatus preventive maintenance and driver/operating. Topics include routine tests, inspections, servicing functions, operate, back, maneuver, and turn a fire apparatus in a variety of conditions and operate all fixed systems and equipment on a fire apparatus. This course is based on the 2014 edition of National Fire Protection Association 1002 "Standards for Fire Apparatus Driver/Operator Professional Qualifications." This course fulfills the requirements for a Class C Firefighter Endorsement.

Note: Pass/no pass only

FTEC 113B - Fire Apparatus Driver/Operator-Pumping Apparatus (Pumping)

1 unit
1 hour lecture
Prerequisite:

- Fire Apparatus Driver/Operator 1A (2008 or 2015 version)
- Successfully completed Office of the State Fire Marshal Fire Fighter 1
- Hold a valid Class C Firefighter Endorsed driver's license

Note: These are State Fire Marshal requirements
Recommended Preparation: FTEC 1
Credit, degree applicable

This course provides information on pumping apparatus preventive maintenance and operations. Topics include routine tests, inspections, and servicing functions producing hand, master, and foam fire streams, relay pump operations and supplying water to fire sprinkler and standpipe systems. This course is based on the 2014 edition of National Fire Protection Association 1002 "Standards for Fire Apparatus Driver/Operator Professional Qualifications"

Note: Students must apply through the Industry and Technology Division Office. Pass/no pass only.

FTEC 120 - Emergency Medical Foundations

3 units
3 hours lecture
Credit, not degree applicable

The Emergency Medical Foundations course prepares students for prehospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Areas of study include an introduction to emergency medical services systems, roles and responsibilities of prehospital care workers, safety principles, anatomy and physiology, medical emergencies, trauma, and emergency scene management.

Note: This course is recommended for any students interested in emergency medicine which includes, but not limited to: EMT's, paramedics, nurses, and doctors. The principles covered throughout the course are universal to the foundation of emergency medicine.

FTEC 130 - Basic Prehospital Care Principles

2 units
3 hours lecture to be arranged (13 week course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course provides an introduction to medical terminology, along with a review of surface anatomy and physiology. The course presents an overview of the human nervous system, cardiovascular system, and respiratory system. Aseptic techniques will be described and demonstrated

FTEC 131 - Field Assessing and Reporting

1.5 units
2 hours lecture, 1 hour lab to be arranged (13 week course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course covers assessment techniques used in a nonhospital/non-clinical setting. The necessity of obtaining complete and accurate vital signs is stressed. Trauma assessment is discussed and demonstrated.

FTEC 132 - Prehospital Care Pharmacology

1.5 units
2 hours lecture, 1 hour lab to be arranged (13 week course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course provides an introduction to the study of drugs and their ongoing nature and effect on living tissue. A study of the various drugs that are available to the prehospital care technician is presented along with medication administration techniques. An introduction to intravenous (IV) therapy and drug therapy is covered.

FTEC 133 - Basic and Advanced Life Support

6.5 units
9 hours lecture to be arranged (13 week course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course provides students with a review of cardiopulmonary resuscitation (CPR) techniques and sophisticated forms of airway management. The course presents an introduction and interpretation of electrocardiogram (EKG) rhythms with the use of an oscilloscope. Drugs used in cardiac arrest situations are discussed. Simulation exercises are conducted throughout the course.

FTEC 134 - Medical Emergencies

4 units
6 hours lecture, 1 hour lab to be arranged (13 week course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course covers a variety of medical emergencies that a paramedic is most likely to encounter. Topics presented include, but are not limited to communicable diseases, chest pain, drug abuse/poisonings, diabetes, neurological complications, and respiratory distress.

FTEC 135 - Traumatic Emergencies

2 units
3 hours lecture to be arranged (13 week course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course covers the causes and treatment of bodily injuries due to trauma. Topics include maxillofacial and soft tissue injuries, burns, head, spinal, chest and abdominal wounds, emergency childbirth and multicasualty incidents.

FTEC 136 - Special Patient Emergencies

2 units
3 hours lecture to be arranged (13 week course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course focuses on emergencies, which involve unresponsive patients, from pediatric to geriatric, patients, and methods for resuscitating these victims. Discussions include obstetrical and behavioral problems as well as circumstances surrounding paramedic critical incident stress.

FTEC 137 - Emergency Medical Services (EMS)/Legal Aspects/Documentation

2 units
3 hours lecture, 1 hour lab to be arranged (13 week course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course covers the laws and legal authority which govern the scope of practice for the paramedic. Also discussed are documentation techniques, paramedic report writing, and skills competency testing.

FTEC 138 - Paramedic Clinical Internship

3 units
40 hours lab per week to be arranged (4 week course)
Prerequisite: FTEC 130, FTEC 131, FTEC 132, FTEC 133, FTEC 134, FTEC 135, FTEC 136, and FTEC 137 with a minimum grade of C in each prerequisite course
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course provides the student with an opportunity to apply knowledge and skills learned in the preceding courses to patient care. The emphasis of the course is to increase the student's assessment and diagnostic skills in a clinical setting.

Note: Pass/no pass only.

FTEC 139 - Paramedic Field Internship

8.5 units
60 hours lab per week to be arranged (8 week course)
Prerequisite: FTEC 138 with a minimum grade of C
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course provides an in-depth opportunity for the student to apply the skills and techniques that are necessary for a paramedic. The student will complete a field internship in a designated mobile intensive care unit under the supervision and evaluation of a certified paramedic or mobile intensive care nurse.

Note: Pass/no pass only.

FTEC 144 - Emergency Medical Technician

6.5 units
5.5 hours lecture, 3 hours lab
Prerequisite: Possession of a current Basic Life Support (BLS) for Healthcare Providers (HCP) certification or BLS for Prehospital Providers (PHP) certification. Must be issued by the American Heart Association or American Red Cross and not expire less than six months from the start date of class.
Recommended Preparation: FTEC 120
Credit, degree applicable
Transfer CSU

Emergency Medical Technicians are professional medical responders that work to help and transport ill and injured patients in various emergency field and clinical settings. Principles that are covered throughout this course include, but are not limited to: leadership, followership, communication, safety, situational awareness, decision making, patient assessment and professionalism. EMT students will be trained to recognize and treat medical illnesses and traumatic injuries through facilitated discussion, skills lab, simulations, scenarios, role-play, tactical decision games and field experience.

Note: Students successfully completing this course with a minimum grade of B will be eligible to take the National Registry of Emergency Medical Technicians (NREMT) written exam.
Students are required to pay for a background check and additional material fees. Proof of immunizations is required to complete hospital and ambulance field work and must include: Measles-Mumps-Rubella (MMR), Tetanus-Diptheria-Pertussis (Tdap), Varicella, and Tuberculosis results.
This course is repeatable.

FTEC 150 - Fire Specialized Training

2 units
1 hour lecture per week to be arranged, 4 hours lab per week to be arranged
Prerequisite:

1. Successful completion of a California State Fire Marshal certified fire academy.
2. Proof of passing the Emergency Medical Technician (EMT) National Registry Examination.
3. Furnish proof of a current negative Tuberculosis (TB) test. Test must be taken within 12 months and valid during class period.
4. Completion of background investigation. Background investigation to be completed prior to attending the first class session. See the Division Office of Industry and Technology for details.

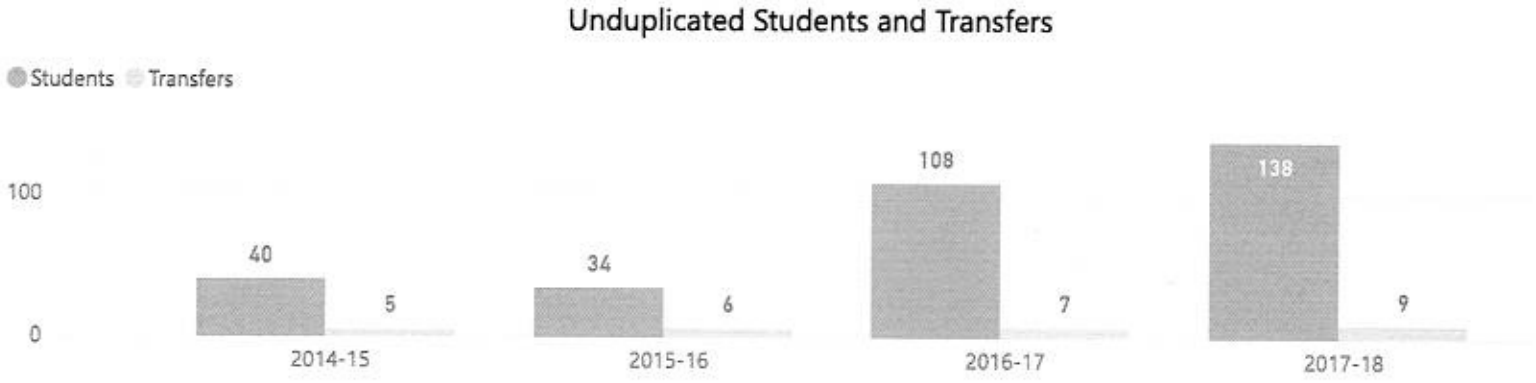
Credit, degree applicable
Transfer CSU

This course will acquaint the student with current changes in contemporary firefighting techniques. Major topics include fire service appliances, fire chemistry, automatic fire extinguishers and agents. Additional topics include fire prevention and enforcement, arson investigation, public safety, hazardous materials control and enforcement, communication, and emergency medical techniques.

Note: Pass/no pass only. This course is repeatable.

Appendix J

Acad Yr / Title	2014-15 Awards	2014-15 Average Units Earned	2014-15 GPA	2015-16 Awards	2015-16 Average Units Earned	2015-16 GPA	2016-17 Awards	2016-17 Average Units Earned	2016-17 GPA	2017-18 Awards	2017-18 Average Units Earned	2017-18 GPA
Fire & Emergency Technology												
AA/AS	33	90	2.93	23	80	2.95	32	75	3.02	28	81	3.01
CERT	10	83	2.95	6	70	3.12	14	68	3.02	16	88	3.14
Fire Academy												
CERT	1	60	3.43	3	59	3.15	4	63	3.15	19	55	3.22
Paramedical Technician												
AA/AS	3	62	3.01	4	49	3.16	6	58	2.85	3	47	3.44
CERT	1	48	2.92	2	61	2.37	68	36	2.95	87	38	3.01



Assessment: Assessment Unit Four Column

Fire and Emergency Technology Program

El Camino: PLOs (IND) - Fire and Emergency Technology

PLOs	*Assessment Method Description*	*Results*	*Actions*
PLO #1 Minimum Qualifications - Identify minimum qualifications and the needed entry skills for the fire fighter position. **PLO Status:** Active **PLO Assessment Cycle:** 2013-14 (Fall 2013), 2015-16 (Spring 2016), 2019-20 (Spring 2020) **Input Date:** 07/01/2013	**Exam/Test/Quiz -** Objective multiple choice questions **Standard and Rubric:** It is expected that 75% of students will score 75% or above on this PLO	**Semester of Current Assessment:** 2015-16 (Spring 2016) **Standard Met:** Standard Met There were a total of 360 students assessed from Fall 2014 - Summer 2016. Of the 360 students, 291 students scored above a 75% on PLO#1. In totality 291 of 360 students is 81% of the students who scored above the 75% goal. (10/06/2016) **Faculty Assessment Leader:** Ryan Carey **Faculty Contributing to Assessment:** Lee MacPherson	**Action:** Provide more opportunities for equitable learning through tutoring, group study and support. (10/06/2016) **Action Category:** Program/College Support
		Semester of Current Assessment: 2013-14 (Fall 2013) **Standard Met:** Standard Met 204 students were assessed on PLO#1 with 79% scoring above 75%. Of the 5 embedded questions the questions concerning 'entry skills' showed a lower percentage of correct answers. More emphasis during instruction needs to be placed on this topic. The overall score of 79% was actually lower than expected. Although the standard was met more direct instructional time on PLO #1 needs to be incorporated into the future lesson plans. (02/24/2014) **Faculty Assessment Leader:** Lee Macpherson **Faculty Contributing to Assessment:** William Melendez, Rey Rojo **Courses Associated with PLO Assessment:** FTEC 1, sections 7570-7572-7574-7576, FTEC 15, section 7587, 7589	
	Exam/Test/Quiz - Objective multiple choice questions testing entry-level skills. **Standard and Rubric:** It is expected	**Semester of Current Assessment:** 2015-16 (Spring 2016) **Standard Met:** Standard Met There were a total of 360 students assessed from Fall 2014 - Summer 2016. Of the 360 students, 291 students scored	**Action:** Provide more opportunities for equitable learning through tutoring, group study and support. (10/06/2017)

PLOs	Assessment Method Description	Results	Actions
	that 75% of students will score 75% or above on this PLO.	above a 75% on PLO#1. In totality 291 of 360 students is 81% of the students who scored above the 75% goal. (10/04/2016) **Faculty Assessment Leader:** Ryan Carey **Faculty Contributing to Assessment:** Lee MacPherson	**Action Category:** Program/College Support
PLO #2 Analyzing, Appraising and Evaluation Fire Incidents - Demonstrate the ability to analyze, appraise, evaluate fire incidents; Explain size-up, the incident command system, the 10 standard fire orders, the 18 situations that shout watch out and identify the common factors associated with injuries and deaths in the line of duty. **PLO Status:** Active **PLO Assessment Cycle:** 2016-17 (Spring 2017), 2020-21 (Spring 2021) **Input Date:** 07/01/2013	**Exam/Test/Quiz -** Objective multiple choice questions. **Standard and Rubric:** It is expected that 75% of students will score 75% or above on this PLO.	**Semester of Current Assessment:** 2016-17 (Spring 2017) **Standard Met:** Standard Met 357 students were assessed on PLO#2 with 89%. This increase is continuing in the right direction and in the future the expectation may need to be raised to 75% of students scoring 80% or above. Although teaching methodology and assessment has been improving there is still a significant need for updated equipment and learning materials at the Fire Academy and within the FTEC program. (09/14/2017) **Faculty Assessment Leader:** Ryan Carey **Courses Associated with PLO Assessment:** FTEC 2, FTEC 3, FTEC 4, FTEC 5, FTEC 6, FTEC 9, FTEC 15, FTEC 20	**Action:** Although PLO assessment data is still increasing/ improving, there is a need to replace large amounts of aging/ outdated equipment and facility upgrades to support modern classroom needs including high speed internet at the Fire Academy. (09/14/2018) **Action Category:** Program/College Support
PLO #3 Knowledge of Laws and Regulations - Upon completion of the Fire and Emergency Technology program, the student will show knowledge of federal and state laws, regulations and codes pertaining to safety and efficiency in all risk emergencies and scenarios pertaining to fire, safety, and or medical services. **PLO Status:** Active **PLO Assessment Cycle:** 2017-18 (Spring 2018), 2021-22 (Spring 2022) **Input Date:** 10/04/2013	**Exam/Test/Quiz -** Objective multiple choice questions. **Standard and Rubric:** It is expected that 75% of students will score 75% or above on this PLO.	**Semester of Current Assessment:** 2017-18 (Spring 2018) **Standard Met:** Standard Met There were a total of 673 students assessed from Summer 2017 - Spring 2018. Of the 673 students, 536 scored above a 75% on PLO#3. In totality 536 of 673 is 79% of the students who scored above the 75% goal. (09/12/2018) **Faculty Assessment Leader:** Ryan Carey **Courses Associated with PLO Assessment:** FTEC 15, FTEC 20, FTEC 137, FTEC 144	**Action:** There is a need to replace large amounts of aging/ outdated equipment and facility upgrades to support modern classroom needs including high speed internet at the Fire Academy. (09/12/2019) (09/12/2019) **Action Category:** Program/College Support

Assessment: Course Four Column

Fire and Emergency Technology Program

El Camino: Course SLOs (IND) - Fire and Emergency Technology

ECC: FTEC 1:Fire Protect Organization

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Career Opportunities - The Student will be able to identify a minimum of three fire protection career opportunities and the skills and training needed. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2016-17 (Fall 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a multiple choice test in which 5 imbedded questions concerned career opportunities. **Standard and Target for Success:** Students will be graded on a standard grade scale of 70%= C, 80%=B, 90%=A. 70% of the students will achieve a passing score of C or above.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met 83% of the students passed with a 70% or better on the imbedded questions. (12/16/2016) **Faculty Assessment Leader:** Lee MacPherson	**Action:** During lecture a emphasis will be applied to the imbedded questions. (12/16/2017) **Action Category:** Teaching Strategies
SLO #2 Technical Training - The student will be able to identify 5 types of technical training available for those wishing to be firefighters. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Multiple Choice Final Exam **Standard and Target for Success:** It is expected that 70% of students will score 70% or better on this SLO.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Met In total there were 36 student that completed the multiple choice final exam from FTEC 1, course section 7572. Overall, 31 of the 36 students successfully completed the exam with at least a 70% score or better. (02/27/2018) **% of Success for this SLO:** 86 **Faculty Assessment Leader:** Adam Iqueda **Faculty Contributing to Assessment:** Ryan Carey	**Action:** Provide industry pathways for technical training and emphasis courses that are offered at El Camino College. This will support students' success by offering a continuity of their education to enable career technical training for job placement. (02/27/2018) **Action Category:** Teaching Strategies
SLO #3 Organizational & Administrative Structures - The student will be able to identify 2	**Exam/Test/Quiz -** Students were given a multiple choice test in which 5 imbedded questions concerning	**Semester and Year Assessment Conducted:** 2018-19 (Fall 2018) **Standard Met? :** Standard Met	**Action:** Improve presentations by enhancing multiple learning domains to help reinforce lessons.

Course SLOs	Assessment Method Description	Results	Actions
different types of fire department organizational and administrative structures. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2018-19 (Fall 2018) **Input Date:** 11/29/2013	organizational and administrative structures. **Standard and Target for Success:** Students will be graded on a standard grade scale of 70% = C, 80% = B, 90% = A. 70 % of the students will achieve a passing score of C or above.	72% of the students in the classes received a passing grade of C (70%) or higher. These topics are covered in the textbook, power-point presentations and reinforced throughout the semester. (03/05/2019) **% of Success for this SLO:** 72 **Faculty Assessment Leader:** Ryan Carey	Hands-on equipment, pictures and in-class group activities will be used. (03/05/2019) **Action Category:** Teaching Strategies

ECC: FTEC 10:Hazardous Materials

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 First Responder - After the course of instruction the student will be able to describe the role of the First Responder. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Spring 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Embedded within the final exam are five common questions that measure the students mastery of the SLO (Active) **Standard and Target for Success:** 75% of students will score 80% or better on the 5 common embedded questions on the final exam. 1 section of 27 students Spring 2016 **Additional Information:** Much emphasis was spent in lecture on this SLO resulting in such a high success rate.	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met 92% of the students correctly answered the embedded questions. This indicates that the current instructional emphasis on the SLO is meeting the students needs for success (04/28/2016) **Faculty Assessment Leader:** Lee Macpherson	**Action:** A practice exam will developed to try to increase student success. (04/28/2017) **Action Category:** Teaching Strategies
	Exam/Test/Quiz - Embedded within the final exam are five common questions that measure the students mastery of the SLO	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met 92% of the students correctly answered the embedded questions. This indicates that the current instructional emphasis on the SLO is meeting the students needs for success. (04/25/2016) **Faculty Assessment Leader:** Lee Macpherson	**Action:** A practice exam will developed to try to increase student success. (04/28/2017) **Action Category:** Teaching Strategies
SLO #2 Five Flammable Liquids - The student will be able to identify five flammable liquids. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Spring 2014), 2016-17 (Spring 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Embedded within the final exam are five common questions that measure the students mastery of the SLO **Standard and Target for Success:** It is expected that 75% of students will score 80% or above on this SLO	**Semester and Year Assessment Conducted:** 2016-17 (Spring 2017) **Standard Met? :** Standard Met 92% of the students scored 80% or better. (05/04/2017) **Faculty Assessment Leader:** macpherson	**Action:** More emphasis on visual aids to help with the embedded questions. (05/04/2018) **Action Category:** Teaching Strategies
SLO #3 Spill Containment - The student will be able to identify three basic methods of spill containment. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Spring 2014), 2017-18 (Spring 2018)	**Exam/Test/Quiz -** 75% of students will score 80% or better on 5 common embedded questions on the final exam. **Standard and Target for Success:** 84% scored 80% or better on the 5 common embedded questions on	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met Assessment success percentage rose over previous assessment period. I believe the changes to my action plan listed below will assist with future improvements. (06/07/2017)	**Action:** Future assessments will include an in class activity and demonstration to assist with reinforcing of the material. (09/10/2019) **Action Category:** Teaching Strategies

Course SLOs	Assessment Method Description	Results	Actions
Input Date: 11/29/2013	the final exam. 1 section of 34 students Spring 2014 **Additional Information:** Although this SLO had a high score it was the lowest of the 3. Possibly a field exercise might be developed to reinforce the classroom presentation.	**% of Success for this SLO:** 87 **Faculty Assessment Leader:** Tim Dennis	**Action:** During the next SLO period I wish to amend each of the SLO's in an attempt to update and make more focused each of the SLO focus areas. These updated SLO's will be more aligned with the latest course material. (09/10/2019) **Action Category:** SLO/PLO Assessment Process

ECC: FTEC 11:Arson Detection/Control

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Investigating a Fire - The student will be able to identify legal search methods and procedures to follow when investigating a fire. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Spring 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple choice test to identify the legal search methods and procedures when investigating a fire. **Standard and Target for Success:** Based on the rubric, it is expected that 90% of students will score 75% or above.	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met 22 of 24 students received 75% or better. The remaining two students received 60% or better (D). (09/29/2016) **Faculty Assessment Leader:** Earl Warren **Faculty Contributing to Assessment:** Bruce Tran	**Action:** Shall have the students record information to create a checklist of the legal search methods and procedures to follow when investigating a fire. (09/29/2017) **Action Category:** Teaching Strategies
SLO #2 Evidence Collection & Preservation - The student will be able to identify the collection and preservation of evidence. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2016-17 (Spring 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** A lecture is given and a ten (10) question quiz is provided. **Standard and Target for Success:** It is expected that 75% of the students will get a score of 7 or better on the provided quiz .	**Semester and Year Assessment Conducted:** 2016-17 (Spring 2017) **Standard Met? :** Standard Not Met With a class of sixteen (16), 44% received an A; no B; 25% received a C; 19% received a D; and 12% received an F. (09/01/2017) **Faculty Assessment Leader:** William Warren	**Action:** This is a harder class. Need to provide more hands-on instruction concerning the collection and preservation of evidence. (09/01/2018) **Action Category:** Teaching Strategies
SLO #3 Motives of Arson - The student will be able to identify the various motives of arson-related fires. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Spring 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Multiple choice exam. **Standard and Target for Success:** It is expected that 75% fo students will score 75% or above on this SLO.	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met There were a total of 18 students assessed from Summer 2017 - Spring 2018. Of the 18 students, 16 scored above a 75% on SLO#3. In totality 16 of 18 is 89% of the students who scored above the 75% goal. (09/13/2018) **% of Success for this SLO:** 89 **Faculty Assessment Leader:** Ryan Carey	**Action:** Continue using current events and direct application correlations to the subject matter content. Encourage students to work in teams and form study groups based on best practices. (09/13/2019) **Action Category:** Teaching Strategies

ECC: FTEC 128:Paramedic Preparation Course (INACTIVE)

No data found for the selected criteria.

ECC: FTEC 130:Basc Prehosptl Care Princ

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Upper and Lower Airway - Students will be able to compare and contrast the major components and functions of the upper and lower airway. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Spring 2014), 2015-16 (Spring 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple choice test on the major components of both the upper and lower airway in the human body. This is one of 10 courses taken concurrently by the same group of students. **Standard and Target for Success:** Students will be graded on a grade scale of 75% = 'C', 84% = 'B', and 92% ='A'. At least 70% of the students will achieve a passing score of 75% or better.	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met Class starts with 25 students. Average attrition rate is 20 %. Approximately 80% of the enrolled students pass with a 75% or higher. (05/05/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** Course is team-taught. Continue to monitor inter-rater reliability between instructors to ensure consistent delivery of material (05/05/2017) **Action Category:** Teaching Strategies
SLO #2 Physiology - Students will be able to identify cellular components and relate them to fluid and electrolyte replacement. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2016-17 (Spring 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Each student completed a 100 question exam on Physiology. **Standard and Target for Success:** 80% of the students will score 75% or better on the exam.	**Semester and Year Assessment Conducted:** 2016-17 (Spring 2017) **Standard Met? :** Standard Met 31 students took the exam. 80% passed with 75% or better. (06/01/2017) **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to review the team taught course curriculum and teaching strategies through collaboration (03/01/2018) **Action Category:** Teaching Strategies **Follow-Up:** The team taught class instructors to continue to collaborate on teaching strategies (06/07/2018)
SLO #3 Nervous System - Students will be able to identify structures in the nervous system. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Spring 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Each student completed a 100 question exam on the nervous system. **Standard and Target for Success:** Standard and Target for Success: 80% of the students will score 75% or better on the exam.	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met 32 students took the exam. 30 passed with 75% or better. The two students who did not pass was very weak in basic anatomy and physiology. (06/07/2018) **% of Success for this SLO:** 90 **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to review the team-taught course curriculum and teaching strategies through collaboration (10/04/2018) **Action Category:** Teaching Strategies

ECC: FTEC 131:Field Assessing/Reporting

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Primary Patient Survey - Given a simulated medical emergency patient, the student will be able to successfully evaluate the components in a primary patient survey. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Spring 2014), 2016-17 (Fall 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a multiple-choice test on the components of a primary survey. **Standard and Target for Success:** Students will be graded on a standard grade scale of 75% = 'C', 84% = 'B' and 92% = 'A'. At least 70% of the students achieved a passing score of 'C' or above.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met Class starts with 25 students. Average attrition rate is 20 %. Approximately 80% of the enrolled students pass with a 75% or higher. [more] Collapse Action Action Category Teaching Strategies (12/01/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** The course is team-taught. Continue to monitor inter-rater reliability between instructors to ensure consistent delivery of material (05/05/2017) (09/25/2017) **Action Category:** Teaching Strategies **Follow-Up:** Collaboration is an ongoing process as the faculty meets once a week. (12/12/2017)
SLO #2 Secondary Patient Survey - Given a simulated medical emergency patient, the student will be able to successfully evaluate the components in a secondary patient survey. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a multiple-choice test on the components of a primary survey. **Standard and Target for Success:** Students will be graded on a standard grade scale of 75% = 'C', 84% = 'B' and 92% = 'A'. At least 70% of the students achieved a passing score of 'C' or above.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Met 30 students started and 28 finished. 100% (28) of the students achieved a C or better. (12/12/2017) **% of Success for this SLO:** 90 **Faculty Assessment Leader:** Kevin Huben	**Action:** The course is team-taught. Continue to monitor inter-rater reliability between instructors to ensure consistent delivery of material (09/12/2018) **Action Category:** Teaching Strategies **Follow-Up:** We continue to collaborate and successfully. (12/13/2018)
SLO #3 Assessing & Reporting - Student will be able to recognize the process in reporting patient finding to hospital staff. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2018-19 (Fall 2018) **Input Date:** 11/29/2013	**Essay/Written Assignment -** Composed a practice report on patient assessment. The report is one that would be given to hospital staff or medical authority. **Standard and Target for Success:** All students should be able to earn 75% or better on the assignment.	**Semester and Year Assessment Conducted:** 2018-19 (Fall 2018) **Standard Met? :** Standard Met 26 students completed the assignment. All students earned 75% or better. (12/13/2018) **% of Success for this SLO:** 100 **Faculty Assessment Leader:** Kevin Huben	**Action:** No resources are needed as funding comes from an outside source. Continue to collaborate with faculty teaching the course to ensure continued success. (12/13/2019) **Action Category:** Teaching Strategies

ECC: FTEC 132:Prehospital Care Pharm

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Routes for Selected Drugs - Students completing this course will be able to successfully choose the routes by which selected drugs can be administrated. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Spring 2014), 2015-16 (Spring 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple-choice test on the proper routes selected for administration of drugs. **Standard and Target for Success:** Students will be graded on a scale of 75% = 'C', 84% = 'B', and 92% = 'A'. At least 70% of the students will achieve a passing score of 75% or better.	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met Class starts with 25 students. Average attrition rate is 20%. Approximately 80% of enrolled students pass with a score of 75% or higher. (05/05/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** Course is team-taught. Continue to monitor curriculum delivery insuring inter-rater reliability for consistent delivery of material. (05/05/2017) **Action Category:** Teaching Strategies
SLO #2 Pharmacology - Students at the end of this course will be able to identify pertinent drug therapy and the actions, interactions and adverse effects of drugs. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2016-17 (Spring 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Each student completed a 100 question exam on Pharmacology. **Standard and Target for Success:** 80% of the students will score 75% or better on the exam	**Semester and Year Assessment Conducted:** 2016-17 (Spring 2017) **Standard Met? :** Standard Met 31 students took the exam. 80% passed with 75% or better. (06/01/2017) **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to review the team taught course curriculum and teaching strategies through collaboration (03/01/2018) **Action Category:** Teaching Strategies
SLO #3 IV Therapy - Students will be able to locate proper IV sites and perform IV techniques in a skills demonstration. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Spring 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Each student completed a 100 question exam on IV therapy. **Standard and Target for Success:** Standard and Target for Success: 80% of the students will score 75% or better on the exam	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met 30 students took the exam and 100% of the students passed the exam. (06/07/2018) **% of Success for this SLO:** 100 **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to collaborate as a team to ensure student success. (10/04/2018) **Action Category:** Teaching Strategies

ECC: FTEC 133:Basic/Adv Life Support

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Obstructed Airways - 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 **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Spring 2014), 2016-17 (Fall 2016), 2019-20 (Fall 2019) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple-choice test on evaluating the reasons for an obstructed airway and the proper actions to clear the obstruction. **Standard and Target for Success:** Students will be graded on a scale of 75% ='C', 84% = 'B', and 92% = 'A'. At least 75% of the students will achieve a passing score of 75% or better.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met Class starts with 25 students. Average attrition rate is 20 %. Approximately 80% of the enrolled students pass with a 75% or higher. (12/01/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** Review delivery of subject matter as it relates to lecture, case studies, use of audio-visual material and other methods to supplement delivery. Adjust material accordingly as needed. (09/25/2017) **Action Category:** Teaching Strategies **Follow-Up:** Faculty reviewed materials and everything is in alignment. (12/12/2017)
SLO #2 ECG - Students will be able to identify and label cardiac dysrhythmias as they relate to the location of the irritability within the myocardium. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple-choice test on evaluating the reasons for an obstructed airway and the proper actions to clear the obstruction **Standard and Target for Success:** Students will be graded on a scale of 75% ='C', 84% = 'B', and 92% = 'A'. At least 75% of the students will achieve a passing score of 75% or better.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Met 30 students started the course, 28 completed. All received a C or better. (12/12/2017) **% of Success for this SLO:** 90 **Faculty Assessment Leader:** Kevin Huben	**Action:** Review delivery of subject matter as it relates to lecture, case studies, use of audio-visual material and other methods to supplement delivery. Adjust material accordingly as needed. (09/12/2018) **Action Category:** Teaching Strategies **Follow-Up:** New edition of the textbook was adopted. (12/13/2018)
SLO #3 BLS - Students will complete an AHA course in BLS for Healthcare Providers learning the latest methods for administering CPR. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2018-19 (Fall 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple-choice test on evaluating the reasons for an obstructed airway and the proper actions to clear the obstruction **Standard and Target for Success:** 100% of the students should be able to pass at 75%.	**Semester and Year Assessment Conducted:** 2018-19 (Fall 2018) **Standard Met? :** Standard Met 26 students took the exam, and 100% of the students passed with 75% or better. (12/13/2018) **% of Success for this SLO:** 100 **Faculty Assessment Leader:** Kevin Huben	**Action:** Class adopted a new textbook, and need to implement changes with collaboration with instructors. (12/13/2019) **Action Category:** Teaching Strategies

ECC: FTEC 134:Medical Emergencies

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Altered Consciousness - Students completing this course will be able to successfully choose the appropriate field treatment for a patient with an altered level of consciousness. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Spring 2014), 2015-16 (Spring 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple-choice test on choosing the appropriate field treatments for a patient with an altered level of consciousness. **Standard and Target for Success:** Students will be grade on a scale of 75% = 'C', 84% = 'B', and 92% = 'A'. At least 70% of the students will achieve passing score of 75% or better.	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met Class starts with 25 students. Average attrition rate is 20%. Approximately 80% of enrolled students pass with a 75% or higher. (05/05/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** Course is team taught. Continue to insure inter-rater reliability for consistent curriculum delivery. (05/05/2017) **Action Category:** Teaching Strategies
SLO #2 Endocrine - Students will be able to identify endocrine emergencies and formulate a plan of care for the patient experiencing an endocrine emergency. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2016-17 (Spring 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Each student will take a 100 question written an exam on the endocrine system. **Standard and Target for Success:** 80% of the students will score 75% or better on the exam	**Semester and Year Assessment Conducted:** 2016-17 (Spring 2017) **Standard Met? :** Standard Met 31 students took the exam. 80% passed with 75% or better. (06/01/2017) **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to review the team taught course curriculum and teaching strategies through collaboration (03/01/2018) **Action Category:** Teaching Strategies
SLO #3 Cardiovascular Emergencies - Students will be able to identify cardiovascular emergencies and formulate a plan of car for the patient experiencing a cardiovascular emergency. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Spring 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Each student will take a 100 question written an exam on the cardiovascular emergencies. **Standard and Target for Success:** 75% of the students will achieve 80% or better on the exam.	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met 30 students took the exam. 26 passed the exam. The exam requires additional studying and a background knowledge. the 4 who did not pass were unprepared for the rigor. (06/07/2018) **% of Success for this SLO:** 80 **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to collaborate with all team members who teach the course. (10/04/2018) **Action Category:** Teaching Strategies

ECC: FTEC 135:Traumatic Emergencies

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Impaled Objects - Students successfully completing this course will be able to select the appropriate field treatment for an impaled object. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Spring 2014), 2016-17 (Fall 2016), 2019-20 (Fall 2019) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple-choice test on selecting the appropriate field treatment methods for patients with impaled objects. **Standard and Target for Success:** Students will be graded on a scale of 75% = 'C', 84% = 'B', and 92% = 'A'. At least 70% of the students will achieve a passing score of 75% or better.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met Class starts with 25 students. Average attrition rate is 20 %. Approximately 80% of the enrolled students pass with a 75% or higher. [more] Collapse (12/01/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** The course is team-taught. Continue to monitor inter-rater reliability between instructors to ensure consistent delivery of material (05/05/2017) (09/25/2017) **Action Category:** Teaching Strategies
SLO #2 Chest Trauma - Students will be able to recognize traumatic injuries to the chest and formulate appropriate treatment plans. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple-choice test on selecting the appropriate field treatment methods for patients with impaled objects. **Standard and Target for Success:** Students will be graded on a scale of 75% = 'C', 84% = 'B', and 92% = 'A'. At least 70% of the students will achieve a passing score of 75% or better.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Met 30 students started, 28 completed the course. All students received a C or better (12/12/2017) **% of Success for this SLO:** 90 **Faculty Assessment Leader:** Kevin Huben	**Action:** The course is team-taught. Continue to monitor inter-rater reliability between instructors to ensure consistent delivery of material (09/12/2018) **Action Category:** Teaching Strategies **Follow-Up:** Continued collaboration ensures that all instructors are consistent with teaching methods etc. (12/13/2018)
SLO #3 Head & Spinal Trauma - Students will be able to identify the signs and symptoms of traumatic head injuries and formulate appropriate treatment plans. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2018-19 (Fall 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** A written test consisting of identifying signs and symptoms of traumatic head injuries. **Standard and Target for Success:** 100% of students will score 75% or better on the exam.	**Semester and Year Assessment Conducted:** 2018-19 (Fall 2018) **Standard Met? :** Standard Met 26 students took the exam. All 26 (100%) of the students scored 75% or better on the exam. (12/13/2018) **% of Success for this SLO:** 100 **Faculty Assessment Leader:** Kevin Huben	**Action:** Implemented a new text and collaboration between instructors needs to be assured so teaching is consistent. (12/13/2019) **Action Category:** Teaching Strategies

ECC: FTEC 136:Special Patient Emergnces

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Stages of Labor - Students completing this course will be able to successfully differentiate among the three stages of labor. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Spring 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Exam/Test/Quiz Students will be given a multiple-choice test on choosing the appropriate field treatments for a patient with an altered level of consciousness. (Active) **Standard and Target for Success:** Standard and Target for Success: Students will be grade on a scale of 75% = 'C', 84% = 'B', and 92% = 'A'. At least 70% of the students will achieve passing score of 75% or better.	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met Class starts with 25 students. Average attrition rate is 20%. 80% of the students pass with 75% or higher. (05/05/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** Course is team taught. Continue to insure inter-rater reliability for curriculum delivery. (05/05/2017) **Action Category:** Teaching Strategies
SLO #2 Pediatrics - Students at the end of this course will be able to recognize pediatric patients and identify common illnesses and injury as they relate to developmental benchmarks. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2016-17 (Spring 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Each student will take a 100 question written an exam on the pediatrics **Standard and Target for Success:** 80% of the students will score 75% or better on the exam	**Semester and Year Assessment Conducted:** 2016-17 (Spring 2017) **Standard Met? :** Standard Met 28 students took the exam. 80% passed with 75% or better. (06/01/2017) **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to review the team taught course curriculum and teaching strategies through collaboration (03/01/2018) **Action Category:** Teaching Strategies **Follow-Up:** The continued collaboration is effective and we need to continue. (10/04/2018)
SLO #3 Elderly - Student will be able to recognize differences in caring for the elderly as it relates to the pathophysiology of aging and common ailments of the elderly. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Spring 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Each student will take a 100 question written an exam on the pediatrics. **Standard and Target for Success:** 80% of the students will score 75% or better on the exam	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met 24 students took the exam and all passed. The collaboration between instructors is effective. (06/07/2018) **% of Success for this SLO:** 100 **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue the collaboration as the student outcomes have been above the target and what we are doing is effective. (10/04/2018) **Action Category:** Teaching Strategies

ECC: FTEC 137:Ems/Legal Aspects/Documnt

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Paramedic Field Reports - 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. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2016-17 (Fall 2016), 2019-20 (Fall 2019) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a multiple-choice test on the components of a primary survey. (Active) **Standard and Target for Success:** Standard and Target for Success: Students will be graded on a standard grade scale of 75% = 'C', 84% = 'B' and 92% = 'A'. At least 70% of the students achieved a passing score of 'C' or above.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met Class starts with 25 students. Average attrition rate is 20 %. Approximately 80% of the enrolled students pass with a 75% or higher. (12/01/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** The course is team-taught. Continue to monitor inter-rater reliability between instructors to ensure consistent delivery of material (09/25/2017) **Action Category:** Teaching Strategies
SLO #2 Policies - Students completing this course will be able to identify and define pre-hospital policies and be prepared to take the county's accreditation exam. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a multiple-choice test on the components of a primary survey. **Standard and Target for Success:** Standard and Target for Success: Students will be graded on a standard grade scale of 75% = 'C', 84% = 'B' and 92% = 'A'. At least 70% of the students achieved a passing score of 'C' or above.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Met 30 students started and 28 finished the course. All 28 received a C or better. (12/12/2017) **% of Success for this SLO:** 90 **Faculty Assessment Leader:** Kevin Huben	**Action:** The course is team-taught. Continue to monitor inter-rater reliability between instructors to ensure consistent delivery of material ((09/12/2018) **Action Category:** Teaching Strategies **Follow-Up:** Collaboration between instructors assures consistent teaching for improved student success. (12/13/2018)
SLO #3 Introduction to Clinical - The students will be able to prepare for clinical internship by accomplishing hospital-specific modules in regards to HIPAA and Patient Safety Goals. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2018-19 (Fall 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** A written exam that included hospital-specific HIPAA and Patient Saftey Goals **Standard and Target for Success:** 100% of the students will score 75% or better on the exam	**Semester and Year Assessment Conducted:** 2018-19 (Fall 2018) **Standard Met? :** Standard Met 26 students took the exam, 100% of the students passed the exam with 75% or better. (12/13/2018) **% of Success for this SLO:** 100 **Faculty Assessment Leader:** Kevin Huben	**Action:** Adopted a new textbook. All instructors should collaborate and be sure teaching is consistent. (12/13/2019) **Action Category:** Teaching Strategies

ECC: FTEC 138:Paramedic Clinical Intern

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Proper Lung Auscultation - 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. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Spring 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Exam/Test/Quiz Students will be given a multiple-choice test on choosing the appropriate field treatments for a patient with an altered level of consciousness. (Active) **Standard and Target for Success:** Standard and Target for Success: Students will be grade on a scale of 75% = 'C', 84% = 'B', and 92% = 'A'. At least 70% of the students will achieve passing score of 75% or better	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met Class starts with 25 students. Average attrition rate is 20%. 80 % of the students pass with a 75% or higher. (05/05/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** course is team-taught. Continue to insure inter-rater reliability for consistent curriculum delivery. (05/05/2017) **Action Category:** Teaching Strategies
SLO #2 IV Insertion - Under the direct observation of a licensed healthcare provider, the student will demonstrate competency in IV insertion. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2016-17 (Spring 2017) **Input Date:** 11/29/2013	**Field Work/Internship -** Students will be given a multiple-choice test on choosing the appropriate field treatments for a patient needing an IV insertion **Standard and Target for Success:** 80% of the students will successful completion on the first attempt	**Semester and Year Assessment Conducted:** 2016-17 (Spring 2017) **Standard Met? :** Standard Met 28 students took the exam. 80% passed with 75% or better. (06/01/2017) **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to review the team taught course curriculum and teaching strategies through collaboration (03/01/2018) **Action Category:** Teaching Strategies
SLO #3 Mediation Administration - Under the direct observation of a licensed healthcare provider, the student will demonstrate competency in mediation administration. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Spring 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple-choice test on choosing the appropriate field treatments for a patient needing an IV insertion/medication administration **Standard and Target for Success:** 80% of the students will successful completion on the first attempt	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met 24 students took the exam and all passed with 80% or better. (06/07/2018) **% of Success for this SLO:** 100 **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue collaboration and review of material between instructors. (10/04/2018) **Action Category:** Teaching Strategies

ECC: FTEC 139:Paramedic Field Intern

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Collecting and Transmitting Medical Data - 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. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2016-17 (Fall 2016), 2019-20 (Fall 2019) **Input Date:** 11/29/2013	**Presentation/Skill Demonstration -** Student will be graded by 2 field preceptors on a scale of 1 thru 3. Only those students achieving a 3 will successfully pass. Criteria is based in the LACo EMS Agency skills exam criteria. **Standard and Target for Success:** All students must achieve a rating of '3' on this skill to successfully pass this portion.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met Class starts with 25 students. Average attrition rate is 20 %. Approximately 80% of the enrolled students pass with a 75% or higher. (12/01/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** The course is team-taught. Continue to monitor inter-rater reliability between instructors to ensure consistent delivery of material (09/25/2017) **Action Category:** Teaching Strategies
SLO #2 Leadership - Students, under the direct observation of a licensed paramedic, will demonstrate safe, competent patient care administered in the pre-hospital setting. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Field Work/Internship -** Students will perform patient assessments while being observed/supervised by 2 licensed preceptor paramedics. Per LACo EMS Patient Care Guidelines, students must achieve a rating of '3' from each of their preceptors. Ratings range from 1 to 3. **Standard and Target for Success:** All students must achieve a rating of '3' by each of their preceptors in order to successfully complete this portion of their training.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Met 26 students started the course. 22 completed and all received a 3 or better. (12/12/2017) **% of Success for this SLO:** 80 **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to monitor and collaborate with faculty since it is team taught. (09/12/2018) **Action Category:** Teaching Strategies **Follow-Up:** Collaboration between instructors continues to assure students success. (12/13/2018)
SLO #3 Documentation - The student will demonstrate competency in documenting the patient care record. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2018-19 (Fall 2018) **Input Date:** 11/29/2013	**Performance -** Students must thoroughly document patient assessment, treatment and transport. Students must follow LACo EMS Agency Patient Documentation Guidelines. Licensed prepceptors will grade on a scale of 1 to 3, with a rating of '3' needed to successfully pass this portion of the training. **Standard and Target for Success:** All	**Semester and Year Assessment Conducted:** 2018-19 (Fall 2018) **Standard Met? :** Standard Not Met 29 students took the exam. 24 passed with 75% or better. 5 students failed the course. (12/13/2018) **% of Success for this SLO:** 80 **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to emphasize book knowledge in a field application setting. Improve leadership and scene management skills. (12/13/2019) **Action Category:** Teaching Strategies

Course SLOs	Assessment Method Description	Results	Actions
	students must achieve a rating of '3' in order to successfully pass.		

ECC: FTEC 142abcd:Basic EMT Recertification (INACTIVE)

No data found for the selected criteria.

ECC: FTEC 144:Emergency Medical Technician

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Skeletal System - Students will be able to identify the 32 major bones of the skeletal system. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Fall 2013), 2016-17 (Fall 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Multiple choice trauma exam **Standard and Target for Success:** It is expected that 65% of students will score 70% or above on this SLO.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met In total there were 61 students who completed the multiple choice trauma exam. Overall 42 of the 61 students successfully completed the exam with at least a 70% score or better. The comprehensive trauma exam covers all the 32 major bones of the skeletal system, including anatomical positions, injuries related to, and proper steps to take in treating fractured and broken bones. This exam is given as the fourth of six module exams throughout the course and is assessed when the class is approximately 3/4 complete. (02/27/2017) **Faculty Assessment Leader:** Ryan Carey	**Action:** Through more frequent formative assessments during the course, identify misunderstandings and differentiate between students to better support their learning process. (03/01/2017) **Action Category:** Teaching Strategies
SLO #2 Cardiovascular System - Students will be able to identify the 19 major components of the cardiovascular system. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Fall 2013), 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Multiple choice cardiovascular exam **Standard and Target for Success:** It is expected that 65% of students will score 70% or above on this SLO.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Met In total there were 128 students who completed the multiple choice cardiovascular exams from FTEC-144 course sections: 7600, 7602, 7604, 7606 and 7608. Overall 104 of the 128 students successfully completed the exam with at least a 70% score or better. The comprehensive cardiovascular exam covers all the 19 major components of the cardiovascular system. (02/25/2018) **% of Success for this SLO:** 81 **Faculty Assessment Leader:** Ryan Carey	**Action:** Through more frequent formative assessments during the course, identify misunderstandings and differentiate between students to better support their learning process. (02/25/2018) **Action Category:** Teaching Strategies
SLO #3 Respiratory System - Students will be able to identify the 17 major components of the respiratory system. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Fall 2013), 2018-19 (Fall 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Multiple choice respiratory exam **Standard and Target for Success:** It is expected that 65% of students will score 70% or above on this SLO.	**Semester and Year Assessment Conducted:** 2018-19 (Fall 2018) **Standard Met? :** Standard Met Of the 181 students assessed for this student learning objective, 118 successfully passed their Respiratory System module test with a 70% and above during the Fall 2018 semester. In total that's 65% of the students hitting the stated SLO standard and target for success on the mark. This is the first module test provided to be assessed by	**Action:** Airway and respiratory system lessons need to incorporate more hands-on training with auscultation manikins and audio recordings of all human lung sounds and correlations to illnesses and injuries. Due to the order the tests

Course SLOs	Assessment Method Description	Results	Actions
		students early on in the course and is the first time the students are exposed to any of the EMT module tests. (02/28/2019) **% of Success for this SLO:** 65 **Faculty Assessment Leader:** Ryan Carey	are delivered, the Airway Module is foundational to the rest of the class and therefore needs to be presented first. In order to increase student success in this area, providing learning through multiple domains early on will help provide further examples and training to reflect on when testing. (02/28/2019) **Action Category:** Teaching Strategies

ECC: FTEC 15:Fire Academy

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Fire Department Organization and Culture - Students will define fire department organization and culture, and the expectations of entry-level fire department personnel. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2016-17 (Fall 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Student will take a 25 multiple test question as well as complete a 2 page report of their fire station visit. There will also be an implementation of a written exam and manipulative skills exam. **Standard and Target for Success:** 90% of the students will pass this exam and turn in acceptable reports.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met 27 students testes and 100% achieved a 92% score or higher on the testing/exam portion. (03/03/2017) **Faculty Assessment Leader:** William Melendez	**Action:** Next time I will work to be able to meet with students scoring below 92% to ascertain what can be done to more effectively help them understand the material. (03/03/2018) **Action Category:** Teaching Strategies
SLO #2 Characteristics of Fire Behavior - Students will recognize the characteristics of fire behavior and relate how the external influences of weather and chemicals affect it. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will take a 50 multiple choice question and skills evaluation during fire behavior class. **Standard and Target for Success:** 80 % of the students will be able to score 90% or above execute these skills accurately.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Met This semester, 28 students were able to score up to 92%. (03/02/2018) **Faculty Assessment Leader:** WILLIAM MELENDEZ	**Action:** To improve student success, using more visual aids and doing more skills demonstrations would be helpful. (03/02/2019) **Action Category:** Teaching Strategies
SLO #3 Fire Behavior and Building Construction - Students will be able to relate the building construction type to its anticipated fire behavior in emergency situations. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2018-19 (Fall 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will take a 25 question quiz, requiring a score of 80% or better. Students will visit various buildings to see different building construction. Students will participate in live fire training to see the different stages of fire and fire behavior as it relates to building construction. **Standard and Target for Success:** 90% of the students will successfully pass this quiz. **Additional Information:** Lectures, power point presentation, visual inspection of various buildings, and live fire training will all assist in the success of student performance and understanding of the subject.	**Semester and Year Assessment Conducted:** 2018-19 (Fall 2018) **Standard Met? :** Standard Met 100% of the students achieved a score of 80% or better on the 25 question quiz for Fire Behavior and Building Construction. The California State Fire Marshal's (OSFM) office requires scores of 80% or better to achieve the Firefighter I certification. Because of the strict requirements set forth by OSFM, students are motivated to achieve higher scores. Those students that cannot successfully score 80% or better, drop the class. (02/26/2019) **% of Success for this SLO:** 27 **Faculty Assessment Leader:** Jeffrey Baumunk **Faculty Contributing to Assessment:** Jeffrey Baumunk	**Action:** Instructors will continue to improve the teaching methods as well as work to provide more live scenarios to have a better understanding of Fire Behavior and Building Construction. (02/26/2019) **Action Category:** Teaching Strategies

Course SLOs	Assessment Method Description	Results	Actions

ECC: FTEC 150:Firefighter In-Service Training

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #3 Ladders - The student will select the appropriate size ladder to reach the roof of a single family residence. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Spring 2018) **Input Date:** 11/29/2013 **Comments::** Course being removed/Not offered per Amanda Webb e-mail dated 9.20.2016.	**Presentation/Skill Demonstration -** It is expected that 80% of students will score 80% or above on this SLO.	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met There were a total of 274 in-service firefighters (students) assessed from Summer 2017 - Spring 2018. Of the 274 students, 274 successfully passed their ladder skill demonstration. In totality 274 of 274 is 100% of the students who scored above the 80% goal. (09/13/2018) **% of Success for this SLO:** 100 **Faculty Assessment Leader:** Ryan Carey **Faculty Contributing to Assessment:** Jon Henderson	**Action:** Continue using current events and direct application correlations to the subject matter content. Encourage students to wok in teams and form study groups based on best practices. (09/13/2019) **Action Category:** Teaching Strategies

ECC: FTEC 19:Fire Servce Entrance Prep

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Entrance Exams Types - The student will be able to identify a minimum of three types of entrance exams. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2016-17 (Fall 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given 5 embedded questions concerning written exams and oral exams. **Standard and Target for Success:** 80% will score 75% or better on the 5 embedded questions on the entrance exam.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met Of the 16 students, 100% received 80% or better. (03/03/2017) **Faculty Assessment Leader:** Earl Warren	**Action:** Although the data shows strong results, there is room for improvement. More classroom discussion maybe needed after viewing the videos. (03/03/2018) **Action Category:** Teaching Strategies
SLO #2 Written Exam Proficiency - The student will be able to demonstrate proficiency in completing examples of standardized fire service, entry-level written examinations. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a multiple choice test in which 5 imbedded questions concerning standardized fire service, entry-level written examinations. **Standard and Target for Success:** It is expected that 75% of the student will receive a grade of 70% - C or better on this SLO.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Met 92% of the class received a grade of 80% - B or better. (02/22/2018) **Faculty Assessment Leader:** Earl Warren	**Action:** Further practice with sample examinations, and continue monitoring test scores for students success and outcomes. (02/22/2019) **Action Category:** Teaching Strategies

ECC: FTEC 2:Fire Prevention Technolgy

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Historical Fire Problems - The Student will be able to define the historical fire problem and progress of fire prevention in the United States. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Spring 2016) **Input Date:** 12/02/2013	**Exam/Test/Quiz -** Students will be given a multiple choice test to identify the historical fire problem and progress of fire prevention in the United States **Standard and Target for Success:** Based on the rubric, 90% of the students will score 75% or better	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met 39 of 40 students successfully passed with 75% or above. (09/29/2016) **Faculty Assessment Leader:** Earl Warren **Faculty Contributing to Assessment:** Merriel Winfree; Bruce Tran	**Action:** To provide more "hands-on" training by students inspecting a business and recording fire prevention equipment. (09/29/2017) **Action Category:** Teaching Strategies
SLO #2 Responsibility & Authority - The student will be able to identify the responsibility and authority for fire prevention programs **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2016-17 (Spring 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** A lecture is given and a ten (10) question quiz is provided. **Standard and Target for Success:** It is expected that 75% of the students will obtain 7 or better on the provided quiz.	**Semester and Year Assessment Conducted:** 2016-17 (Spring 2017) **Standard Met? :** Standard Met With a class of 42, 21 received an A; 20 received a B, and 1 received a C. (09/01/2017) **Faculty Assessment Leader:** William Warren	**Action:** This was a larger class and met expectations, but can provide more visual instruction. (09/01/2018) **Action Category:** Teaching Strategies
SLO #3 Fire Code Definitions - The student will be able to identify definitions of the fire code and how they are applied in the fire prevention inspections. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Spring 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Multiple choice exam. **Standard and Target for Success:** It is expected that 75% of students will score 75% or above on the SLO.	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met There were a total of 42 students assessed from Summer 2017 - Spring 2018. Of the 42 students, 37 scored above a 75%. In totality 37 of 42 is 88% of the students who scored above the 75% goal. (09/13/2018) **% of Success for this SLO:** 88 **Faculty Assessment Leader:** Ryan Carey	**Action:** Continue using current events and direct application correlations to the subject matter content. Encourage students to work in teams and form study groups based on best practices. (09/13/2019) **Action Category:** Teaching Strategies

ECC: FTEC 20:Fire Protection Equipment/Systems

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Sprinkler Systems - The student will be able to identify a minimum of four types of sprinkler systems. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Spring 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a 100 question multiple choice written exam that was comprehensive. **Standard and Target for Success:** 75 % of the students passed the course with a letter grade of 'C' or better.	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met Course started with 35 students. Course had a 30% attrition rate. The remaining students passed with a 70% or better. (05/12/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** Review alignment of textbook material to lecture and exams. Confer with other instructors in discipline to ensure accuracy. (05/12/2017) **Action Category:** Teaching Strategies
SLO #2 Fire Extinguishers - The student will be able to identify different types of fire extinguishers and their components. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2016-17 (Spring 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** 100 question written exam will be given to students **Standard and Target for Success:** 80% of the students will score 70% or better	**Semester and Year Assessment Conducted:** 2016-17 (Spring 2017) **Standard Met? :** Standard Met 28 students took the exam, 24 passed with 70% or better (06/01/2017) **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to review curriculum to assure it is current and aligns with exams. (03/01/2018) **Action Category:** Teaching Strategies
SLO #3 Fire Detection & Alarm Systems - The student will be able to identify different types of fire detection and alarm systems. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Spring 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** 100 point exam will be taken at the end of the semester. **Standard and Target for Success:** 70% of the students will score 70% or above.	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met 29 students took the exam. 28 scored 70% or above. The material was to difficult for a student who had special needs. (06/07/2018) **% of Success for this SLO:** 95 **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to review curriculum to ensure alignment with written exams. (10/04/2018) **Action Category:** Teaching Strategies

ECC: FTEC 3:Fundamentals of Personal Fire Safety and Survival

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Line of Duty Deaths - Identify the major causes of Firefighter's Line of Duty Deaths and injuries in the United States. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2016-17 (Fall 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple choice test in which 5 imbedded questions concerned line of death/injuries.S **Standard and Target for Success:** Students will be graded on a standard grade scale of 70%=C, 80%=B, 90%=A. 75% of the students will achieve a passing score of C or above.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met 94% scored 80% or better on the 5 common embedded questions of the final exam. These topics are covered in the textbook, power point presentation and consistently reinforced throughout the semester. Continued reinforcement of subject contributed to student retaining knowledge base. (03/03/2017) **Faculty Assessment Leader:** Earl Warren	**Action:** Additional visual or training materials may translate into a better result. (03/03/2018) **Action Category:** Teaching Strategies
SLO #2 Fire Equipment Safety - The student will be able to describe safety and the steps necessary to safely operate various fire related equipment. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** The student will be able to describe safety and the steps necessary to describe various fire related equipment. Students will be graded on a standard grade scale of 70% = C, 80% = B, 90% = A. **Standard and Target for Success:** It is expected that 75% of the students will receive a grade of C or better.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Met This particular semester 29 students out of 33 students receive a 80% = B or better. (02/22/2018) **Faculty Assessment Leader:** Earl Warren	**Action:** Emphasize the need for students to take safety seriously and provide real-life examples of neglecting to do so. Continue to monitor test scores for student success and outcomes. (02/22/2019) **Action Category:** Teaching Strategies
SLO #3 Fire Equipment Operation - The student will be able to demonstrate the safe operation of various fire related equipment. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2018-19 (Fall 2018) **Input Date:** 11/29/2013	**Performance -** Based on the overall outcome of the student performance in the class in receiving any grade better than a "C". **Standard and Target for Success:** It is expected that 70% of students will score 70% or better on this SLO.	**Semester and Year Assessment Conducted:** 2018-19 (Fall 2018) **Standard Met? :** Standard Met 87% of the students in the class received 70% or higher. These topics are covered in the textbook, power-point presentations and reinforced throughout the semester. (03/05/2019) **% of Success for this SLO:** 87 **Faculty Assessment Leader:** Ryan Carey	**Action:** Improve presentations by enhancing multiple learning domains to help reinforce lessons. Hands-on equipment, pictures and in-class group activities will be used. (03/05/2019) **Action Category:** Teaching Strategies

ECC: FTEC 4:Fire Company Organization and Management

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Types of Leadership - The student will be able to identify three styles of leadership. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2013-14 (Fall 2013), 2014-15 (Fall 2014), 2016-17 (Fall 2016), 2019-20 (Fall 2019) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a multiple choice test on the three styles of leadership. **Standard and Target for Success:** Students will be graded on a standard grade scale of 70% = C, 80% = B, 90% = A. 70 % of the students achieved a passing score of C or above. **Additional Information:** I was pleased with the overall outcome of the scores.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met 70% of the students in the class received a passing grade of 'C' or higher. These topics are covered in the textbook, powerpoint presentation and consistently reinforced throughout the semester. Continued reinforcement of subject contributed to student retaining knowledge base. (12/01/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to monitor test scores for student success and outcomes. (12/01/2016) **Action Category:** Teaching Strategies
SLO #2 Budgeting Systems - The student will be able to identify 4 basic types of budgeting systems used in modern fire departments. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a multiple choice exam on the 4 basic types of budgeting systems used in a modern fire department. **Standard and Target for Success:** Students were graded on a standard grade scale of 70% = C, 80% = B, and 90% = A. 70% of the students achieved a passing score of 'C' or better.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Not Met 15 students started and 6 finished. All 6 passed with a B or better. The attrition was attributed to 2 factors. One-assignment of a term paper that required an interview with a fire service manager, Two - six of the students obtained jobs as EMTs and had to drop the course. (12/12/2017) **% of Success for this SLO:** 40 **Faculty Assessment Leader:** Kevin Huben	**Action:** Review the available textbooks to look for a new textbook that better aligns with course materials. (09/12/2018) **Action Category:** Teaching Strategies
SLO #3 Local Government Structure - The student will be able to identify 3 different ways that local governments are structured. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2018-19 (Fall 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a multiple-choice test on the three different ways that local governments are structured. **Standard and Target for Success:** Students were graded on a standard grade scale of 70% = C, 80% = B, and 90% =A. 70% of the students achieved a passing score of 'C' or above.	**Semester and Year Assessment Conducted:** 2018-19 (Fall 2018) **Standard Met? :** Standard Met 9 students took the exam. 9 students passed (100%). (12/13/2018) **% of Success for this SLO:** 100 **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to emphasize material in the new textbook. Stress the importance of time management and necessary study time. (12/13/2019) **Action Category:** Teaching Strategies

ECC: FTEC 5:Fire Behavior/Combustion

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Fire Behavior and Chemistry - After the course of instruction the student will be able to recognize the terms and concepts related to fire behavior and chemistry. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2015-16 (Spring 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a multiple-choice test on terms and concepts related to fire behavior and chemistry. **Standard and Target for Success:** Students were graded on a standard grading scale of 70% = 'C', 80% = 'B'. and 90% = 'A'. The goal is for at least 70% of the students in the class obtain a passing score of 70% or above.	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met Course started with 35 students. Course had approximately a 25% attrition rate. The remaining students completed the course with a 70% or better. (05/12/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** Review alignment of textbook with exams to ensure accuracy. Confer with department faculty to concur with alignment. (05/12/2017) **Action Category:** Teaching Strategies
SLO #2 Physical States of Matter - The Student will be able to identify the 3 physical states of matter and their physical properties. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2016-17 (Spring 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple-choice test on the 3 physical states of matter and their physical properties. **Standard and Target for Success:** Students will be graded on a standard grade scale of 70% = 'C', 80% = 'B', and 90% = 'A'. At least 70% of the students should achieve a passing score of 'C' or above.	**Semester and Year Assessment Conducted:** 2016-17 (Spring 2017) **Standard Met? :** Standard Met 29 students took the exam and 23 scored 70% or better. (06/01/2017) **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to review curriculum to ensure it aligns with exam (03/01/2018) **Action Category:** Teaching Strategies **Follow-Up:** The curriculum and SLO/PLOs are all in alignment and no changes are necessary at this time. (06/07/2018)
SLO #3 ICS System - The student will be able to identify the five basic sections of the ICS system. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2017-18 (Spring 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a multiple-choice test on the five basic sections of the Incident Command System. **Standard and Target for Success:** Students were graded on a standard grade scale of 70% = 'C', 80% = 'B' and 90% = 'A'. 70% of the students need to achieve a passing score of 70% or higher.	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met 25 took the exam. 20 passed with 70% or better. The students who did not pass stopped attending due to getting a job. (06/07/2018) **% of Success for this SLO:** 80 **Faculty Assessment Leader:** Kevin Huben	**Action:** , (10/04/2018) **Action Category:** Teaching Strategies **Action:** Curriculum, learning outcomes, and assignments continue to be reviewed and are in alignment. No changes necessary at this time. (10/04/2018) **Action Category:** Teaching Strategies

ECC: FTEC 6:Building Construction for Fire Protection

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Types of Building Construction - The student will be able to identify the 5 types of building construction. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Spring 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Written exam given with a standard grading scale of 70% = 'C', 80% = 'B' and 90% = 'A'. **Standard and Target for Success:** 75% of the enrolled students will successfully complete the course with a 70% or better.	**Semester and Year Assessment Conducted:** 2015-16 (Spring 2016) **Standard Met? :** Standard Met 70% of the students successfully completed the course with a grade of 70% or better. (05/12/2016) **Faculty Assessment Leader:** Kevin Huben	**Action:** Review alignment of exams with textbook. Confer with other faculty to ensure alignment. (05/12/2017) **Action Category:** Teaching Strategies
SLO #2 Pre-1933 Building Construction Indicators - The student will be able to identify the indicators of pre-1933 building construction. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2016-17 (Spring 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** 100 question multiple choice exam will be given to all students **Standard and Target for Success:** 70% of the students will score 70% or better.	**Semester and Year Assessment Conducted:** 2016-17 (Spring 2017) **Standard Met? :** Standard Met 30 students took the exam. 22 passed with 70% or better. (06/01/2017) **Faculty Assessment Leader:** Kevin Huben	**Action:** Continue to review curriculum to ensure alignment with written exams. (03/01/2018) **Action Category:** Teaching Strategies **Follow-Up:** Curriculum. SLO/PLOs are in alignment with the exams. (06/07/2018)
SLO #3 Under-Construction Hazards - The student will be able to identify the hazards encountered in buildings that are under construction. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Spring 2018) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** 100 question multiple choice exam will be given to all students **Standard and Target for Success:** 70% of the students will score 70% or above on a final exam.	**Semester and Year Assessment Conducted:** 2017-18 (Spring 2018) **Standard Met? :** Standard Met 29 students took the exam. 24 scored 70% or above. Of the students that did not pass, some gained employment, some did not complete the project which affected the outcome of the exam. (06/07/2018) **% of Success for this SLO:** 80 **Faculty Assessment Leader:** Kevin Huben	**Action:** m (06/07/2018) **Action Category:** Teaching Strategies **Action:** Continue to review curriculum to ensure alignment with written exams. (10/04/2018) **Action Category:** Teaching Strategies

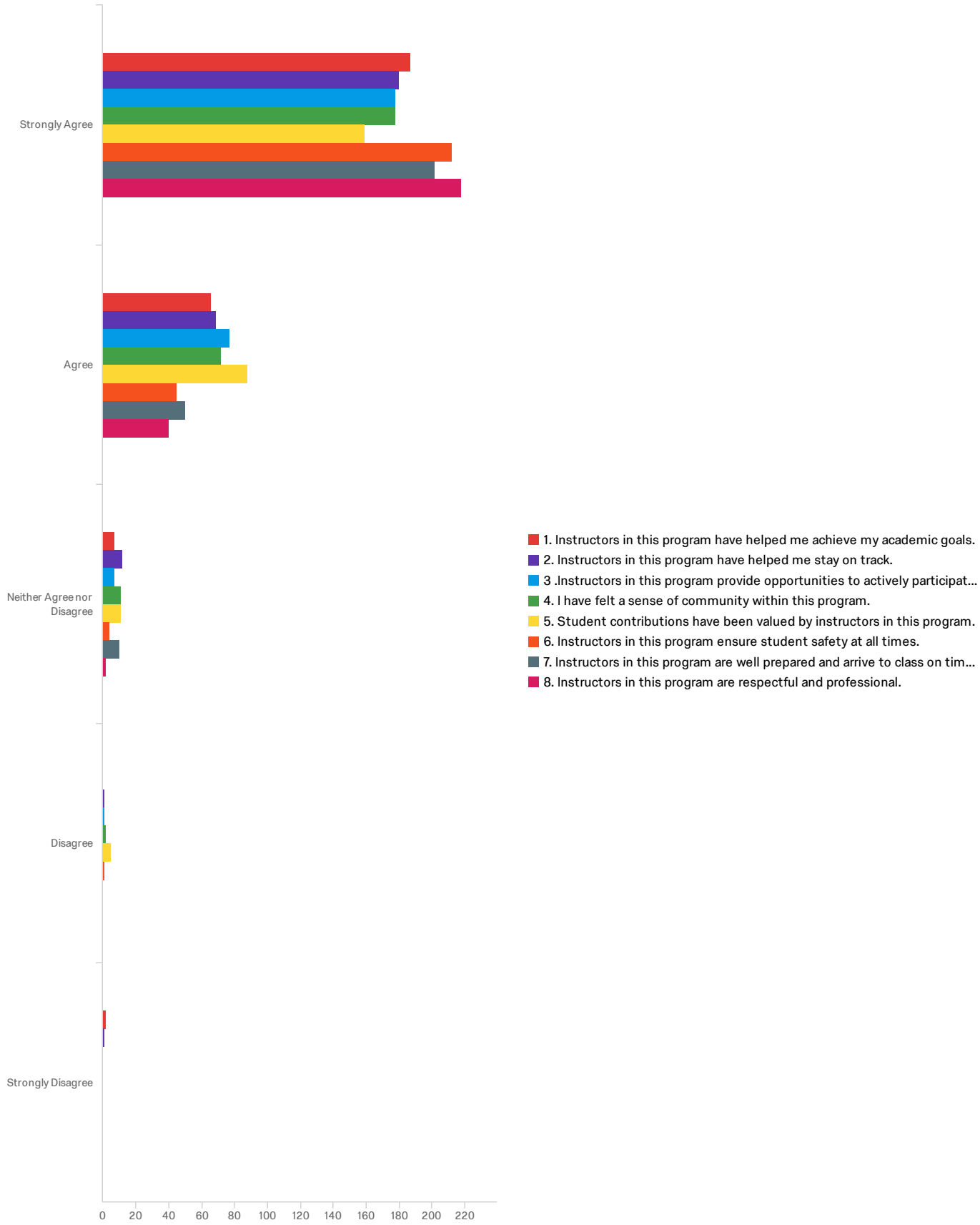
ECC: FTEC 9:Fire Apparatus and Equipment

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Types of Aerial Apparatus - The student will be able to identify and describe various types of fire apparatus in terms of their operational characteristics. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Fall 2014), 2016-17 (Fall 2016) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Embedded within the final exam are five common questions that measure the students mastery of the SLO. **Standard and Target for Success:** 75% of students will score 80% or better on 5 common embedded questions on the final exam.	**Semester and Year Assessment Conducted:** 2016-17 (Fall 2016) **Standard Met? :** Standard Met Of the 28 students, 89% of the student scored 80% or better. 100% of the students score a 70% or better. (03/03/2017) **Faculty Assessment Leader:** Earl Warren	**Action:** Emphasis on visual and training materials for more manipulative or hands on instructions. (03/03/2018) **Action Category:** Teaching Strategies
SLO #2 Tools & Equipment - The student will be able to identify and describe the tools and equipment carried on fire apparatus. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2012-13 (Fall 2012), 2017-18 (Fall 2017) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students will be given a multiple choice test in which 5 embedded questions concerning tools and equipment carried on fire apparatus. **Standard and Target for Success:** It is expected that 75% of these students will receive a 70%- C or better.	**Semester and Year Assessment Conducted:** 2017-18 (Fall 2017) **Standard Met? :** Standard Met 80% of the students that enrolled in the Fall received a grade of 80%- B or better. (02/22/2018) **Faculty Assessment Leader:** Earl Warren	**Action:** Give students more time physically handling actual equipment to reinforce learning. Continue monitoring test scores for student success and outcome. (02/22/2019) **Action Category:** Teaching Strategies

Default Report

FTEC Student Satisfaction Survey
November 4, 2019 9:59 AM MST

Q1 - For each question, please indicate your level of agreement:

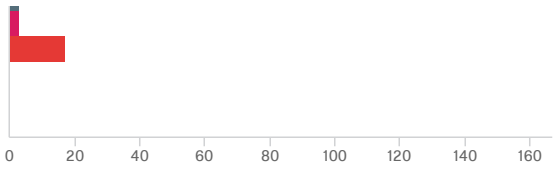


#	Field	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total

#	Field	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly Disagree		Total
1	1. Instructors in this program have helped me achieve my academic goals.	71.37%	187	25.19%	66	2.67%	7	0.00%	0	0.76%	2	262
2	2. Instructors in this program have helped me stay on track.	68.44%	180	26.24%	69	4.56%	12	0.38%	1	0.38%	1	263
3	3 .Instructors in this program provide opportunities to actively participate in my classes.	67.68%	178	29.28%	77	2.66%	7	0.38%	1	0.00%	0	263
4	4. I have felt a sense of community within this program.	67.68%	178	27.38%	72	4.18%	11	0.76%	2	0.00%	0	263
5	5. Student contributions have been valued by instructors in this program.	60.46%	159	33.46%	88	4.18%	11	1.90%	5	0.00%	0	263
6	6. Instructors in this program ensure student safety at all times.	80.92%	212	17.18%	45	1.53%	4	0.38%	1	0.00%	0	262
7	7. Instructors in this program are well prepared and arrive to class on time.	77.10%	202	19.08%	50	3.82%	10	0.00%	0	0.00%	0	262
8	8. Instructors in this program are respectful and professional.	83.85%	218	15.38%	40	0.77%	2	0.00%	0	0.00%	0	260

Showing rows 1 - 8 of 8

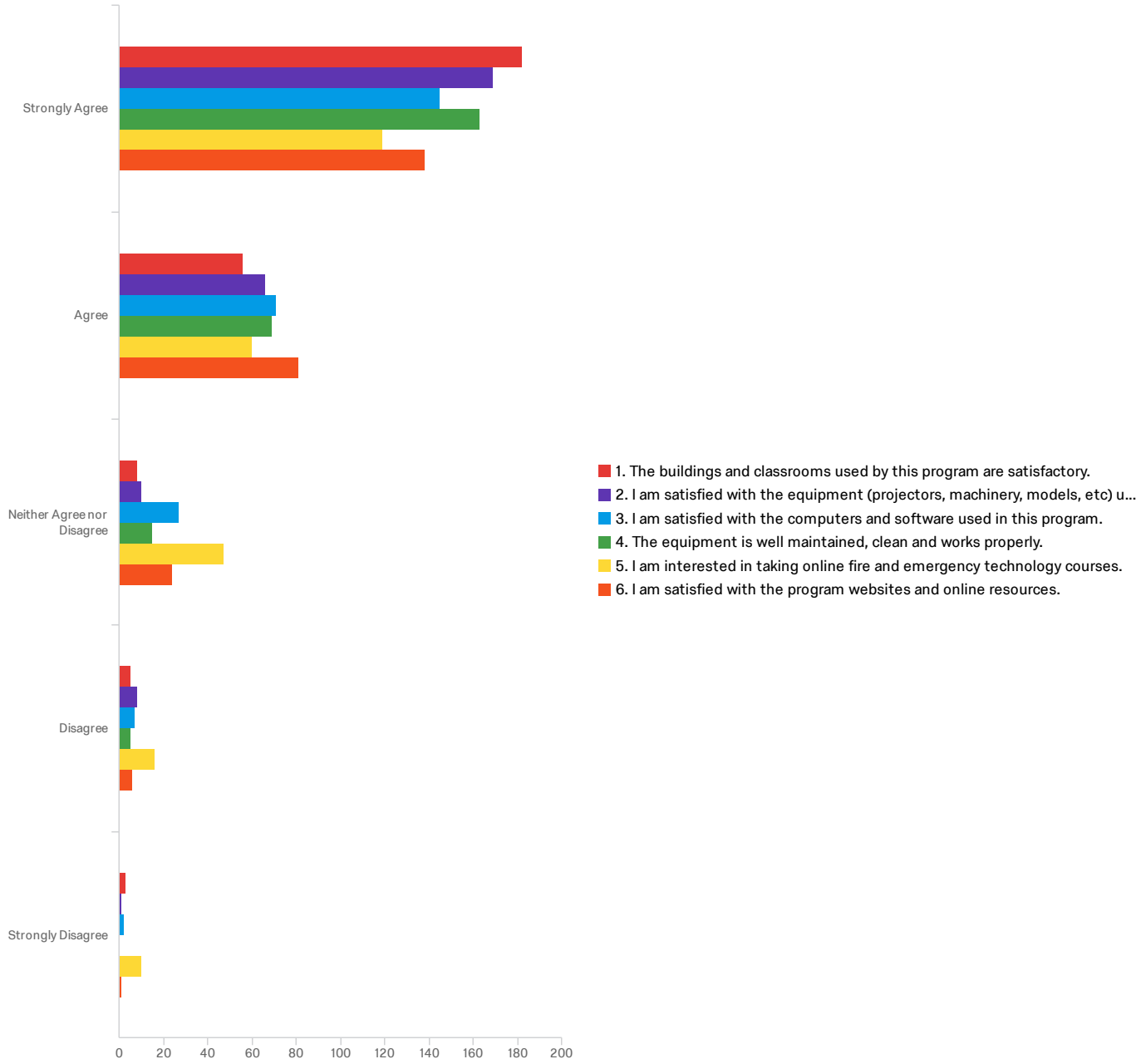
Q7 - For each question, please indicate your level of agreement:



#	Field	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
1	1. There is an appropriate range of courses offered in this program.	56.18% 141	35.86% 90	4.38% 11	3.59% 9	0.00% 0	251
2	2. Courses were scheduled on days and times that were convenient to me.	52.40% 131	32.80% 82	8.80% 22	4.40% 11	1.60% 4	250
3	3. I've been able to register for the classes I need within this program.	52.99% 133	36.25% 91	5.58% 14	4.38% 11	0.80% 2	251
4	4. The courses in this program have helped me meet my academic goals.	61.04% 152	35.34% 88	3.21% 8	0.00% 0	0.40% 1	249
5	5. There is a variety of extracurricular activities related to this program on campus.	42.63% 107	30.28% 76	20.72% 52	4.38% 11	1.99% 5	251
6	6. The library has the resources to help me succeed in this program.	33.20% 83	29.60% 74	29.20% 73	6.40% 16	1.60% 4	250
7	7. I am interested in Wildland Firefighting courses and certificates.	54.98% 138	30.68% 77	9.56% 24	3.59% 9	1.20% 3	251
8	8. I am interested in Emergency Management courses and certificates.	57.83% 144	31.73% 79	7.23% 18	2.01% 5	1.20% 3	249
9	9. I am interested in Administration of Justice courses and certificates.	26.21% 65	19.35% 48	35.48% 88	12.10% 30	6.85% 17	248

Showing rows 1 - 9 of 9

Q6 - For each question, please indicate your level of agreement:

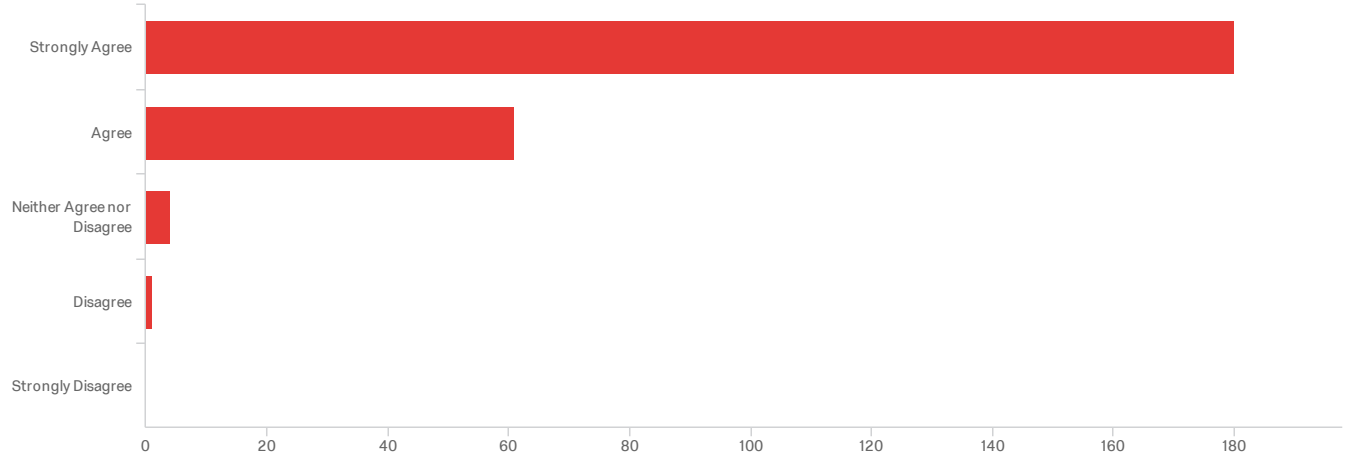


#	Field	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
1	1. The buildings and classrooms used by this program are satisfactory.	71.65% 182	22.05% 56	3.15% 8	1.97% 5	1.18% 3	254
2	2. I am satisfied with the equipment (projectors, machinery, models, etc) used in this program.	66.54% 169	25.98% 66	3.94% 10	3.15% 8	0.39% 1	254
3	3. I am satisfied with the computers and software used in this program.	57.54% 145	28.17% 71	10.71% 27	2.78% 7	0.79% 2	252

#	Field	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
4	4. The equipment is well maintained, clean and works properly.	64.68% 163	27.38% 69	5.95% 15	1.98% 5	0.00% 0	252
5	5. I am interested in taking online fire and emergency technology courses.	47.22% 119	23.81% 60	18.65% 47	6.35% 16	3.97% 10	252
6	6. I am satisfied with the program websites and online resources.	55.20% 138	32.40% 81	9.60% 24	2.40% 6	0.40% 1	250

Showing rows 1 - 6 of 6

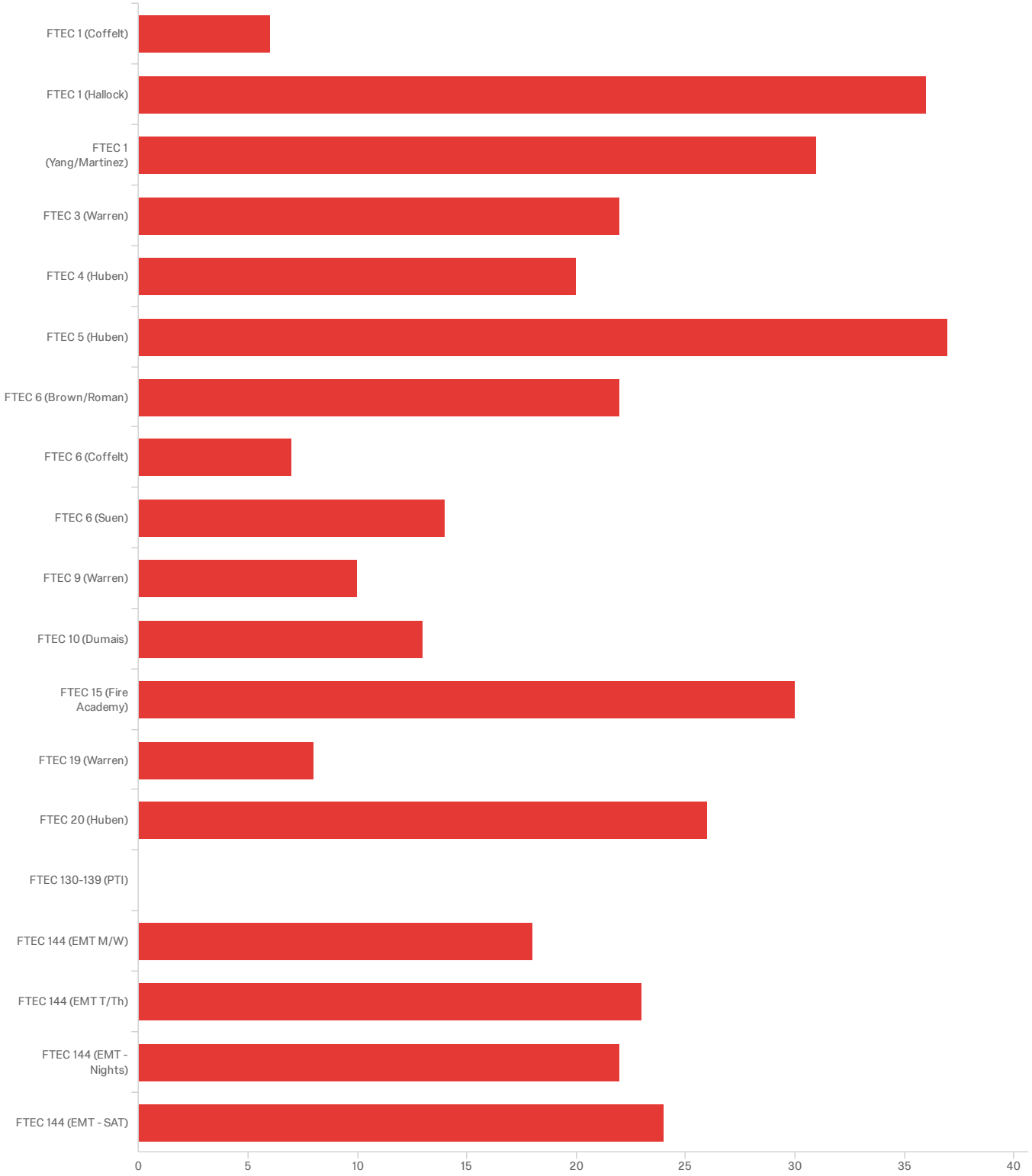
Q8 - For each question, please indicate your level of agreement:



#	Field	Choice Count	
1	Strongly Agree	73.17%	180
2	Agree	24.80%	61
3	Neither Agree nor Disagree	1.63%	4
4	Disagree	0.41%	1
5	Strongly Disagree	0.00%	0
			246

Showing rows 1 - 6 of 6

Q11 - Which FTEC course are you currently enrolled in?



#	Field	Choice Count
1	FTEC 1 (Coffelt)	1.63% 6

#	Field	Choice Count	
2	FTEC 1 (Hallock)	9.76%	36
3	FTEC 1 (Yang/Martinez)	8.40%	31
4	FTEC 3 (Warren)	5.96%	22
5	FTEC 4 (Huben)	5.42%	20
6	FTEC 5 (Huben)	10.03%	37
7	FTEC 6 (Brown/Roman)	5.96%	22
8	FTEC 6 (Coffelt)	1.90%	7
9	FTEC 6 (Suen)	3.79%	14
10	FTEC 9 (Warren)	2.71%	10
11	FTEC 10 (Dumais)	3.52%	13
12	FTEC 15 (Fire Academy)	8.13%	30
13	FTEC 19 (Warren)	2.17%	8
14	FTEC 20 (Huben)	7.05%	26
15	FTEC 130-139 (PTI)	0.00%	0
16	FTEC 144 (EMT M/W)	4.88%	18
17	FTEC 144 (EMT T/Th)	6.23%	23
18	FTEC 144 (EMT - Nights)	5.96%	22
19	FTEC 144 (EMT - SAT)	6.50%	24
			369

Showing rows 1 - 20 of 20

End of Report

Assessment: Program Review & Planning

Fire and Emergency Technology

El Camino: PRP (AA) - IND Program: Fire & Emergency Technology

Recommendation: FTECH (I&T) 2018-2019 Public Safety Training Center FACILITIES Req 1

Build a new joint services Public Safety Training Center for El Camino College. This is a recommendation that is continued from the last two years and is supported by the college, the advisory members, and the area public service groups and organizations.

Recommendation Status: Not Started
Implementation Timeline: 2018-19
Input/Last Revised Date: 10/25/2017
Origin of Recommendation: Program Review
Expense Category: Facilities
Program Rank: 01
Rationale & Expected Outcome: The aging fire academy requires a lot of improvements to be sufficient in its stand alone function. Building a Joint Services Public Safety Training Center will provide expansion and growth opportunities of up to 300%
Anticipated Cost: 10000000
Primary SI Supporting Recommendation: B - Student Success & Support
Any Impact On Other Programs, Areas, or Units?: Yes
List impacted areas and describe potential impact: The Joint Services Public Safety Training Center would act as a hub to facilitate advanced fire science courses, hazardous materials courses, EMT, paramedic, administration of justice and homeland security and possibly other future collaborative opportunities with outside industry partners.
Funding Status: Proposed
Funding Type: One-Time Funds Needed (Augmentation)

Recommendation: FTECH 2018-2019 Program Review Recommendation STAFFING Req 1

Hire one full-time clerical support staff for the Fire and Emergency Technology, EMT and Paramedic programs.

Recommendation Status: Not Started
Implementation Timeline: 2018-19
Input/Last Revised Date: 10/25/2017
Origin of Recommendation: Program Review
Expense Category: Staffing
Program Rank: 01
Rationale & Expected Outcome: In order to achieve higher student success through program support, the clerical support staff member will maintain records as necessary, provide documentation and files for the training programs, comply with changes in regulatory requirements, and facilitate required reporting for facility maintenance and repair orders. Previously requested in 2016-2017 and 2017-2018.
Anticipated Cost: 56000
Primary SI Supporting Recommendation: B - Student Success & Support
Any Impact On Other Programs, Areas, or Units?: Yes

El Camino: PRP (AA) - IND Program: Fire & Emergency Technology

List impacted areas and describe potential impact: The support staff for FTEC could combine efforts with other support staff within the division as necessary depending on workload.
Funding Status: Proposed
Funding Type: Ongoing or Permanent Funds Needed (Enhancement)

Recommendation: FTEC Fire Academy 2019-2020 Shipping Containers Facilities Req. 1

It is recommended that shipping containers be purchased for safe storage of equipment and protection of students.

$7,000

Recommendation Status: Not Started
Implementation Timeline: 2019-20
Input/Last Revised Date: 10/26/2018
Origin of Recommendation: Emerging Need
Expense Category: Facilities
Program Rank: 01
Rationale & Expected Outcome: Shipping containers are needed for safe and secure storage of equipment. Current students take their Personal Protective Equipment (PPE) gear home each night. Due to firefighting activities, PPE frequently have contaminants that can cause Cancer and other serious medical issues. To assist in the prevention of this, we would like to have a container act as a PPE storage locker for the students to store their equipment to alleviate the daily transportation of equipment. The 2nd container will help with the ongoing issue of clutter in our limited space apparatus bay.
Anticipated Cost: 7000
Primary SI Supporting Recommendation: B - Student Success & Support
Any Impact On Other Programs, Areas, or Units?: No
Code Requirement or External Mandate Explanation: FPS standards state that PPE should not be stored in living and work areas. The students should be placing their equipment in a secure containment unit.
Health and Safety Issue Explanation: This will greatly reduce the risk of students exposure to PPE contaminants and the risk of developing cancer or other medical issues as a result.
Funding Status: Not Funded
Funding Type: One-Time Funds Needed (Augmentation)

Recommendation: FTEC (I&T) 2019-2020 Fire Academy Recommendation 1

Purchase fire tools to support the fire academy psycho-motor objectives.

$10,000

Recommendation Status: Not Started
Implementation Timeline: 2019-20
Input/Last Revised Date: 02/22/2019
Origin of Recommendation: Emerging Need
Expense Category: Instructional Equipment
Unit Rank: 01
Program Rank: 01
Rationale & Expected Outcome: Fire tools break down over time and become hazardous, at which point they are flagged and then removed from service/training and need to be replaced to have enough for all the students to participate in tool manipulation with more hours of use with an equal ratio of tools to students. The expected outcome is to provide more hands on tool manipulation so that fire academy students maintain a high level of safety and student learning objectives for years to come.

Tools needed includes:

(x3) RIC Bags
x2) 24' Ladders
(x2) 35' Ladders
(x3) Pulaskis
(x3) McCleods
(x3) Fire Rakes
(x6) 6' Pike Poles
(x3) Salvage Covers
(x4) Rubbish Hooks
(x8) Axe Scabbards
(x6) Flat Head Axes
(x6) Pick Head Axes
(x2) CO2 Fire Extinguishers
Anticipated Cost: 10650
Primary SI Supporting Recommendation: A - Student Learning
Any Impact On Other Programs, Areas, or Units?: No
Funding Status: Proposed
Funding Type: One-Time Funds Needed (Augmentation)
Annual Evaluation Date: 02/22/2019
Annual Evaluation: Proposed, waiting for funding.

Recommendation: FTEC (I&T) 2019-2020 Fire Academy Recommendation 2

Purchase fire engine hose and appliances to support the fire academy psycho-motor objectives.

$7,000

Recommendation Status: Not Started
Implementation Timeline: 2019-20
Input/Last Revised Date: 02/22/2019
Origin of Recommendation: Emerging Need
Expense Category: Instructional Equipment
Unit Rank: 02
Program Rank: 02
Rationale & Expected Outcome: Fire hose and appliances leak and break down over time and have to be flagged and then removed from training for safety concerns. The hose and appliances need to be purchased in order to meet the objectives relying on engine operations using hose lays and appliances.

Equipment needed includes:
(x3) Gated Wyes
(x12) 1" x 100' Fire Hose
(x4) 1 3/4" Task Force Tips
(x6) Adjustable Hydrant Wrenches
(x3) 1 1/2" National Standard to 1" National Pipe reducers
(x3) 1 1/2" National Standard to 1" National Standard reducers
Anticipated Cost: 7000
Primary SI Supporting Recommendation: A - Student Learning
Any Impact On Other Programs, Areas, or Units?: No
Funding Status: Proposed
Funding Type: One-Time Funds Needed (Augmentation)
Annual Evaluation Date: 02/22/2019
Annual Evaluation: Proposed, waiting for funding.

El Camino: PRP (AA) - IND Program: Fire & Emergency Technology

Recommendation: FTEC (I&T) 2019-2020 Fire Academy Recommendation 3

Provide required safety maintenance on fire academy props to continue supporting student learning outcomes.

$7,000

Recommendation Status: Not Started
Implementation Timeline: 2019-20
Input/Last Revised Date: 02/22/2019
Origin of Recommendation: Emerging Need
Expense Category: Facilities
Unit Rank: 03
Program Rank: 03
Rationale & Expected Outcome: Fire props must be properly maintained to ensure safe environments for fire academy students in training.
Anticipated Cost: 7000
Primary SI Supporting Recommendation: F - Modernization
Any Impact On Other Programs, Areas, or Units?: No
Funding Status: Proposed
Funding Type: One-Time Funds Needed (Augmentation)
Annual Evaluation Date: 02/22/2019
Annual Evaluation: Proposed, waiting for funding.

Recommendation: FTEC (I&T) 2019-2020 Fire Academy Recommendation 4

Hire a Fire Engine Mechanic to provide up to 100 hours of service on the Fire Academy apparatus fleet.

$10,000 (annually)

Recommendation Status: Not Started
Implementation Timeline: 2019-20
Input/Last Revised Date: 02/22/2019
Origin of Recommendation: Emerging Need
Expense Category: Staffing
Unit Rank: 05
Program Rank: 05
Rationale & Expected Outcome: Fire apparatus requires regular maintenance in order to meet performance and safety standards. This allows the fire apparatus to be used during pumping and other fire ground/training activities that are required in order for the ECC Fire Academy to maintain its status as a state fire academy with the California State Fire Marshals office.
Anticipated Cost: 10000
Primary SI Supporting Recommendation: F - Modernization
Any Impact On Other Programs, Areas, or Units?: No
Funding Status: Proposed
Funding Type: Ongoing or Permanent Funds Needed (Enhancement)
Annual Evaluation Date: 02/22/2019
Annual Evaluation: Proposed, waiting for funding.

Recommendation: FTEC (I&T) 2019-2020 Emergency Medical

El Camino: PRP (AA) - IND Program: Fire & Emergency Technology

Technician Recommnedation 1

Purchase 40 Chromebooks (or equivalent) with charging/security carts for mandatory EMT computer-based testing.

$60,000 (one-time cost)

Recommendation Status: Not Started
Implementation Timeline: 2019-20
Input/Last Revised Date: 02/22/2019
Origin of Recommendation: Emerging Need
Expense Category: Software/Hardware
Unit Rank: 01
Program Rank: 01
Rationale & Expected Outcome: Due to mandatory national EMT testing standards, all EMT students are required to pass a computer-based adaptive test in order to obtain a license. Throughout the ECC EMT program students are required to take at least 7 in class computer-based tests (more if they need to retest, up to 14). By acquiring at least 40 laptop computers (Chromebooks or equivalent) with at least 2 charging/security carts, the EMT program students will have more time to study and review before and after each test and it will provide the flexibility to primary EMT instructors to more effectively and efficiently use the time in each class.
Anticipated Cost: 60000
Primary SI Supporting Recommendation: B - Student Success & Support
Any Impact On Other Programs, Areas, or Units?: No
Technology Need Explanation: Classroom laptop use for each student to complete online computer-based testing 7-14 times each class (up to 15 per year).
Funding Status: Proposed
Funding Type: One-Time Funds Needed (Augmentation)
Annual Evaluation Date: 02/22/2019
Annual Evaluation: Proposed, waiting for funding.

Emergency Medical Technicians and Paramedics
2019 Wages

Geography	Median Hourly	Median Annually
California	$15.68	$32,608
$15		
$30,288		
Anaheim-Santa Ana-Irvine Area	$12.51	$26,033
East Bay Area	$17.33	$36,034
Eastern Sierra Region	$15.58	$32,405
Fresno County	$15.80	$32,852
Imperial County	$22.46	$46,740
Inland Empire Area	$15.66	$32,567
Kern County	$16.42	$34,144
Los Angeles County	$14.88	$30,958
Madera County	$17.16	$35,701
Monterey County	$29.12	$60,566
Mother Lode Region	$19.28	$40,106
North Coast Region	$14.23	$29,617
Sacramento Metro Area	$26.99	$56,151
San Benito and Santa Clara Counties	$14.59	$30,339
San Diego County	$14.20	$29,546
San Francisco Bay Area	$27.48	$57,153
San Joaquin County	$14.76	$30,705
San Luis Obispo County	$16.92	$35,182
Santa Maria-Santa Barbara Area	$14.64	$30,461
Shasta County	$26.85	$55,846
Solano County	$20.19	$41,989
Sonoma County	$15.10	$31,407
Stanislaus County	$15.29	$31,814
Sutter and Yuba Counties	$21.36	$44,420
Tulare County	$14.14	$29,424
Ventura County	$16.23	$33,758

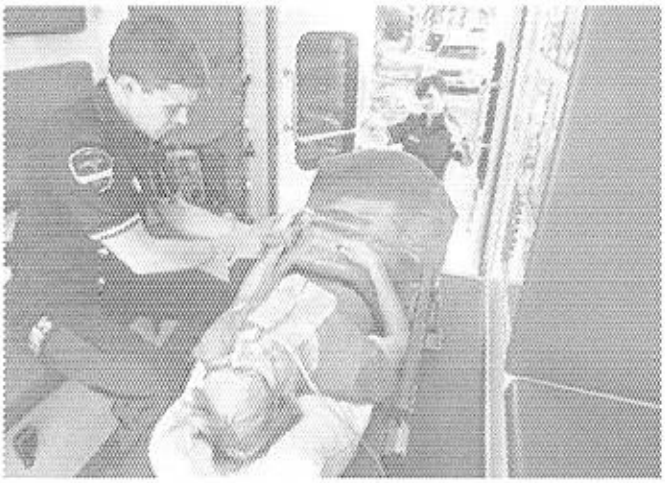
Fire Fighters
2019 Wages

Geography	Median Hourly	Median Annually
California	$37.07	$77,097
$45		
$94,570		
Anaheim-Santa Ana-Irvine Area	$42.96	$89,352
Butte County	$28.57	$59,417
East Bay Area	$47.94	$99,718
Eastern Sierra Region	$23.94	$49,809
Fresno County	$31.52	$65,548
Imperial County	$17.71	$36,846
Inland Empire Area	$31.30	$65,115
Kings County	$24.10	$50,129
Los Angeles County	$45.96	$95,587
Mother Lode Region	$24.18	$50,294
Napa County	$30.65	$63,762
North Coast Region	$27.46	$57,126
Sacramento Metro Area	$32.67	$67,942
San Benito and Santa Clara Counties	$55.53	$115,491
San Diego County	$33.40	$69,460
San Francisco Bay Area	$50.27	$104,560
San Joaquin County	$28.41	$59,097
San Luis Obispo County	$27.15	$56,476
San Rafael Area	$39.54	$82,249
Santa Cruz County	$28.56	$59,407
Santa Maria-Santa Barbara Area	$36.61	$76,137
Shasta County	$26.23	$54,546
Solano County	$48.13	$100,102
Sonoma County	$28.67	$59,644
Stanislaus County	$36.57	$76,065
Sutter and Yuba Counties	$22.95	$47,734
Tulare County	$32.15	$66,859
Ventura County	$43.01	$89,451

U.S. Bureau of Labor Statistics

EMTs and Paramedics

Summary



EMTs and paramedics transport patients to medical facilities.

Quick Facts: EMTs and Paramedics	
2018 Median Pay	$34,320 per year $16.50 per hour
Typical Entry-Level Education	Postsecondary nondegree award
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2018	262,100
Job Outlook, 2018-28	7% (Faster than average)
Employment Change, 2018-28	18,700

What EMTs and Paramedics Do

Emergency medical technicians (EMTs) and paramedics respond to emergency calls, performing medical services and transporting patients to medical facilities.

Work Environment

Most EMTs and paramedics work full time. Their work can be physically strenuous and stressful, sometimes involving life-or-death situations.

How to Become an EMT or Paramedic

Emergency medical technicians (EMTs) and paramedics typically complete a postsecondary educational program. All states require EMTs and paramedics to be licensed; requirements vary by state.

Pay

The median annual wage for EMTs and paramedics was $34,320 in May 2018.

Job Outlook

Employment of emergency medical technicians (EMTs) and paramedics is projected to grow 7 percent from 2018 to 2028, faster than the average for all occupations. Emergencies, such as car crashes, natural disasters, and acts of violence, will continue to require the skills of EMTs and paramedics.

State & Area Data

Explore resources for employment and wages by state and area for EMTs and paramedics.

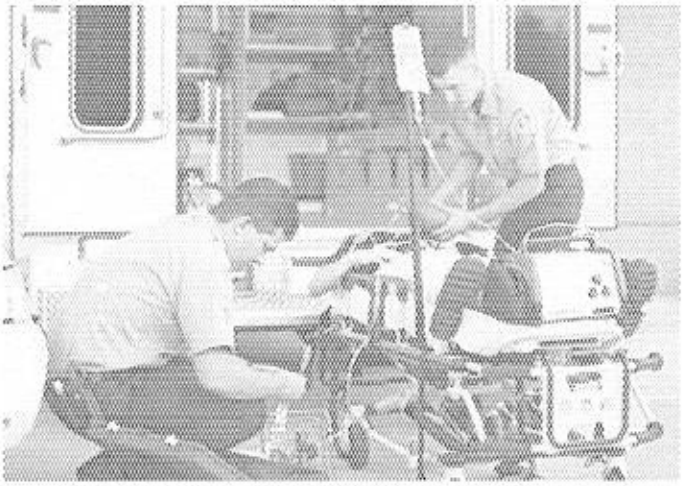
Similar Occupations

Compare the job duties, education, job growth, and pay of EMTs and paramedics with similar occupations.

More Information, Including Links to O*NET

Learn more about EMTs and paramedics by visiting additional resources, including O*NET, a source on key characteristics of workers and occupations.

What EMTs and Paramedics Do



EMTs and paramedics assess a patient's condition and administer emergency medical care.

Emergency medical technicians (EMTs) and paramedics care for the sick or injured in emergency medical settings. People's lives often depend on the quick reaction and competent care provided by these workers. EMTs and paramedics respond to emergency calls, performing medical services and transporting patients to medical facilities.

A 911 operator sends EMTs and paramedics to the scene of an emergency, where they often work with police and firefighters.

Duties

EMTs and paramedics typically do the following:

- Respond to 911 calls for emergency medical assistance, such as cardiopulmonary resuscitation (CPR) or bandaging a wound
- Assess a patient's condition and determine a course of treatment
- Provide first-aid treatment or life support care to sick or injured patients
- Transport patients safely in an ambulance
- Transfer patients to the emergency department of a hospital or other healthcare facility
- Report their observations and treatment to physicians, nurses, or other healthcare facility staff

- Document medical care given to patients
- Inventory, replace, and clean supplies and equipment after use

When transporting a patient in an ambulance, one EMT or paramedic may drive the ambulance while another monitors the patient's vital signs and gives additional care. Some paramedics work as part of a helicopter's or an airplane's flight crew to transport critically ill or injured patients to a hospital.

EMTs and paramedics also transport patients from one medical facility to another. Some patients may need to be transferred to a hospital that specializes in treating their particular injury or illness or to a facility that provides long-term care, such as a nursing home.

If a patient has a contagious disease, EMTs and paramedics decontaminate the interior of the ambulance and may need to report the case to the proper authorities.

The specific responsibilities of EMTs and paramedics depend on their level of certification and the state they work in. The National Registry of Emergency Medical Technicians (NREMT) provides national certification of EMTs and paramedics at four levels: EMR, EMT, Advanced EMT, and Paramedic. Some states, however, have their own certification programs and use similar titles.

Emergency Medical Responders, or EMRs, are trained to provide basic medical care with minimal equipment. These workers may provide immediate lifesaving interventions while waiting for other emergency medical services (EMS) resources to arrive. Jobs in this category may also go by a variety of titles including Emergency Care Attendants, Certified First Responders, or similar.

An *EMT*, also known as an *EMT-Basic*, cares for patients at the scene of an incident and while taking patients by ambulance to a hospital. An EMT has the skills to assess a patient's condition and to manage respiratory, cardiac, and trauma emergencies.

An ***Advanced EMT***, also known as an *EMT-Intermediate*, has completed the requirements for the EMT level, as well as instruction in more advanced medical procedures, such as administering intravenous fluids and some medications.

Paramedics provide more extensive prehospital care than do EMTs. In addition to doing the tasks of EMTs, paramedics can give medications orally and intravenously, interpret electrocardiograms (EKGs)—which monitor heart function—and use other monitors and complex equipment.

The specific tasks or procedures EMTs and paramedics are allowed to perform vary by state.

Work Environment

EMTs and paramedics care for sick or injured patients in a prehospital setting.

EMTs and paramedics held about 262,100 jobs in 2018. The largest employers of EMTs and paramedics were as follows:

Ambulance services	47%
Local government, excluding education and hospitals	27
Hospitals; state, local, and private	19

The above percentages exclude volunteer EMTs and paramedics who do not receive pay.

EMTs and paramedics work both indoors and outdoors, in all types of weather. Their work is physically strenuous and can be stressful, sometimes involving life-or-death situations.

Volunteer EMTs and paramedics share many of the same duties as paid EMTs and paramedics. They volunteer for fire departments, providers of emergency medical services, or hospitals. They may respond to only a few calls per month.

Injuries and Illnesses

EMTs and paramedics have one of the highest rates of injuries and illnesses of all occupations. They are required to do considerable kneeling, bending, and lifting while caring for and moving patients. They may be exposed to contagious diseases and viruses, such as hepatitis B and HIV. Sometimes they can be injured by combative patients. These risks can be reduced by following proper safety procedures, such as waiting for police to clear an area in violent situations or wearing gloves while working with a patient.

Work Schedules

Most paid EMTs and paramedics work full time. Some work more than 40 hours per week. Because EMTs and paramedics must be available to work in emergencies, they may work overnight and on weekends. Some EMTs and paramedics work shifts in 12- or 24-hour increments. Volunteer EMTs and paramedics have variable work schedules. For example, they may work only a few days per week.

How to Become an EMT or Paramedic

EMTs and paramedics need to be physically fit as their job requires bending, lifting, and kneeling.

Emergency medical technicians (EMTs) and paramedics typically complete a postsecondary educational program. All states require EMTs and paramedics to be licensed; requirements vary by state.

Education

Both a high school diploma or equivalent and cardiopulmonary resuscitation (CPR) certification typically are required for entry into postsecondary educational programs in emergency medical technology. Most of these programs are nondegree award programs that can be completed in less than 1 year; others last up to 2 years. Paramedics, however, may need an associate's degree. Programs in emergency medical technology are offered by technical institutes, community colleges, universities, and facilities that specialize in emergency care training. Some states have EMR positions that do not require national certification. These positions typically require state certification.

The Commission on Accreditation of Allied Health Education Programs offers a list of accredited programs for EMTs and paramedics, by state.

Programs at the EMT level include instruction in assessing patients' conditions, dealing with trauma and cardiac emergencies, clearing obstructed airways, using field equipment, and handling emergencies. Formal courses include about 150 hours of specialized instruction, and some instruction may take place in a hospital or ambulance setting.

Programs at the Advanced EMT level typically require about 400 hours of instruction. At this level, candidates learn EMT-level skills as well as more advanced ones, such as using complex airway devices, intravenous fluids, and some medications.

Paramedics have the most advanced level of education. To enter specific paramedical training programs, they must already be EMT certified. Community colleges and universities may offer these programs, which require about 1,200 hours of instruction and may lead to an associate's or bachelor's degree. Paramedics' broader scope of practice may include stitching wounds or administering intravenous medications.

High school students interested in becoming EMTs or paramedics should take courses in anatomy and physiology and consider becoming certified in CPR.

Licenses, Certifications, and Registrations

The National Registry of Emergency Medical Technicians (NREMT) certifies EMTs and paramedics at the national level. All levels of NREMT certification require completing a certified education program and passing the national exam. The national exam has both written and practical parts. Some states have first-level state certifications that do not require national certification.

All states require EMTs and paramedics to be licensed; requirements vary by state. In most states, an individual who has NREMT certification qualifies for licensure; in others, passing an equivalent state exam is required. Usually, an applicant must be over the age of 18. Many states require background checks and may not give a license to an applicant

who has a criminal history.

Although some emergency medical services hire separate drivers, most EMTs and paramedics take a course requiring about 8 hours of instruction before they can drive an ambulance.

Important Qualities

Compassion. EMTs and paramedics must be able to provide emotional support to patients in an emergency, especially patients who are in life-threatening situations or extreme mental distress.

Interpersonal skills. EMTs and paramedics usually work on teams and must be able to coordinate their activities closely with others in stressful situations.

Listening skills. EMTs and paramedics need to listen to patients to determine the extent of their injuries or illnesses.

Physical strength. EMTs and paramedics need to be physically fit. Their job requires a lot of bending, lifting, and kneeling.

Problem-solving skills. EMTs and paramedics must evaluate patients' symptoms and administer appropriate treatments.

Speaking skills. EMTs and paramedics need to clearly explain procedures to patients, give orders, and relay information to others.

Advancement

EMTs and paramedics may advance into other related healthcare occupations, such as physician assistants and medical assistants, as well as administrative positions in various healthcare settings, such as ambulatory care companies or hospitals.

Pay

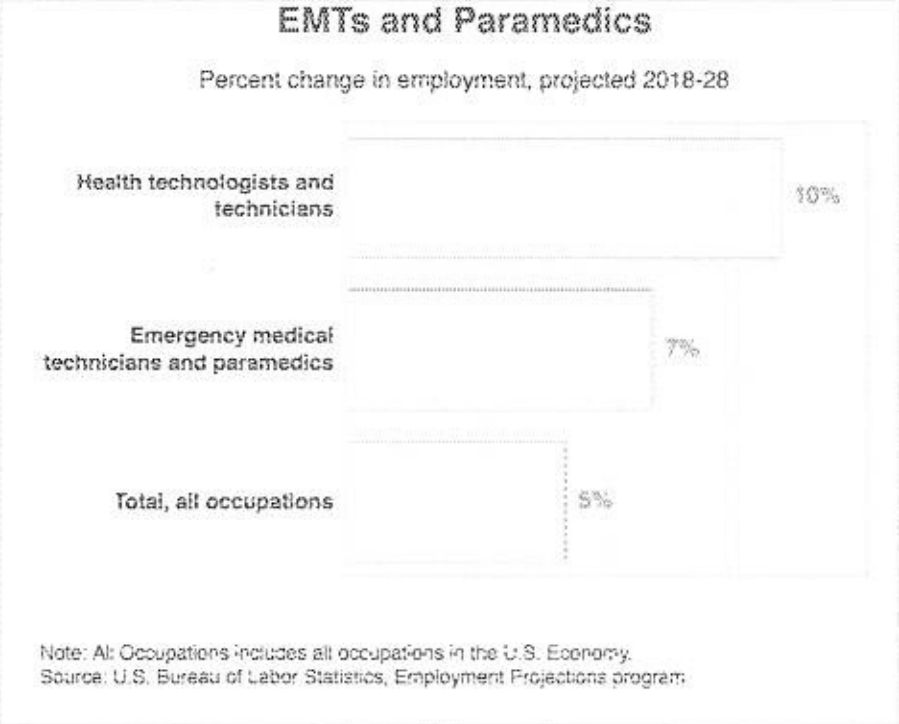
The median annual wage for EMTs and paramedics was $34,320 in May 2018. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than $22,760, and the highest 10 percent earned more than $58,640.

In May 2018, the median annual wages for EMTs and paramedics in the top industries in which they worked were as follows:

Hospitals; state, local, and private	$36,650
Local government, excluding education and hospitals	36,450
Ambulance services	31,590

Most paid EMTs and paramedics work full time. Some work more than 40 hours per week. Because EMTs and paramedics must be available to work in emergencies, they may work overnight and on weekends. Some EMTs and paramedics work shifts in 12- or 24-hour increments. Volunteer EMTs and paramedics have variable work schedules. For example, they may work only a few days per week.

Job Outlook



Employment of emergency medical technicians (EMTs) and paramedics is projected to grow 7 percent from 2018 to 2028, faster than the average for all occupations. Emergencies, such as car crashes, natural disasters, and acts of violence, will continue to require the skills of EMTs and paramedics. The need for volunteer EMTs and paramedics in rural areas and smaller metropolitan areas will also continue.

Growth in the middle-aged and older population will lead to an increase in age-related health emergencies, such as heart attacks and strokes. This increase, in turn, will create greater demand for EMT and paramedic services. An increase in the number of specialized medical facilities will require more EMTs and paramedics to transfer patients with specific conditions to these facilities for treatment.

Job Prospects

Job opportunities should be good because the growing population will require more emergency services generally. There will also be a need to replace workers who leave the occupation due to the high stress nature of the job or to seek job opportunities in other healthcare occupations.

Employment projections data for EMTs and paramedics, 2018-28

Occupational Title	SOC	Employment,	Projected	Change, 2018-28	Employment by

	Code	2018	Employment, 2028	Percent	Numeric	Industry
Emergency medical technicians and paramedics	29-2041	262,100	280,800	7	18,700	Get data

SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program

State & Area Data

Occupational Employment Statistics (OES)

The Occupational Employment Statistics (OES) program produces employment and wage estimates annually for over 800 occupations. These estimates are available for the nation as a whole, for individual states, and for metropolitan and nonmetropolitan areas. The link(s) below go to OES data maps for employment and wages by state and area.

- Emergency medical technicians and paramedics

Projections Central

Occupational employment projections are developed for all states by Labor Market Information (LMI) or individual state Employment Projections offices. All state projections data are available at www.projectionscentral.com . Information on this site allows projected employment growth for an occupation to be compared among states or to be compared within one state. In addition, states may produce projections for areas; there are links to each state's websites where these data may be retrieved.

CareerOneStop

CareerOneStop includes hundreds of occupational profiles with data available by state and metro area. There are links in the left-hand side menu to compare occupational employment by state and occupational wages by local area or metro area. There is also a salary info tool to search for wages by zip code.

Similar Occupations

This table shows a list of occupations with job duties that are similar to those of EMTs and paramedics.

	OCCUPATION	JOB DUTIES	ENTRY-LEVEL EDUCATION	2018 MEDIAN PAY
	Emergency Management Directors	Emergency management directors prepare plans and procedures for responding to natural disasters or other emergencies. They also help lead the response during and after emergencies.	Bachelor's degree	$74,420
	Firefighters	Firefighters control and put out fires and respond to emergencies where life, property, or the environment is at risk.	Postsecondary nondegree award	$49,620

	OCCUPATION	JOB DUTIES	ENTRY-LEVEL EDUCATION	2018 MEDIAN PAY
	Medical Assistants	Medical assistants complete administrative and clinical tasks in hospitals, offices of physicians, and other healthcare facilities.	Postsecondary nondegree award	$33,610
	Police and Detectives	Police officers protect lives and property. Detectives and criminal investigators gather facts and collect evidence of possible crimes.	See How to Become One	$63,380
	Physician Assistants	Physician assistants practice medicine on teams with physicians, surgeons, and other healthcare workers.	Master's degree	$108,610
	Registered Nurses	Registered nurses (RNs) provide and coordinate patient care, educate patients and the public about various health conditions.	Bachelor's degree	$71,730

Contacts for More Information

For more information about emergency medical technicians and paramedics, visit

National Association of Emergency Medical Technicians

National Association of State EMS Officials

National Highway Traffic Safety Administration, Office of Emergency Medical Services

National Registry of Emergency Medical Technicians

For information about educational programs, visit

Commission on Accreditation of Allied Health Education Programs

O*NET

Emergency Medical Technicians and Paramedics

Suggested citation:

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, EMTs and Paramedics, on the Internet at https://www.bls.gov/ooh/healthcare/emts-and-paramedics.htm (visited *November 05, 2019*).

Last Modified Date: Wednesday, September 4, 2019

U.S. Bureau of Labor Statistics

Firefighters

Summary

Firefighters control fires and respond to other emergencies.

Quick Facts: Firefighters	
2018 Median Pay	$49,620 per year $23.85 per hour
Typical Entry-Level Education	Postsecondary nondegree award
Work Experience in a Related Occupation	None
On-the-job Training	Long-term on-the-job training
Number of Jobs, 2018	332,400
Job Outlook, 2018-28	5% (As fast as average)
Employment Change, 2018-28	17,600

What Firefighters Do

Firefighters control and put out fires and respond to emergencies where life, property, or the environment is at risk.

Work Environment

When on the scenes of fires and other emergencies, the work can be very dangerous. When not on the scene of an emergency, firefighters remain on call at fire stations, where they sleep, eat, and perform other duties during shifts that often last 24 hours. Many work more than 40 hours per week.

How to Become a Firefighter

Firefighters typically need a high school diploma and training in emergency medical services. Most firefighters receive training at a fire academy, must pass written and physical tests, complete a series of interviews, and hold an emergency medical technician (EMT) certification.

Pay

The median annual wage for firefighters was $49,620 in May 2018.

Job Outlook

Employment of firefighters is projected to grow 5 percent from 2018 to 2028, about as fast as the average for all occupations. Physically fit applicants with paramedic training will have the best job prospects.

State & Area Data

Explore resources for employment and wages by state and area for firefighters.

Similar Occupations

Compare the job duties, education, job growth, and pay of firefighters with similar occupations.

More Information, Including Links to O*NET

Learn more about firefighters by visiting additional resources, including O*NET, a source on key characteristics of workers and occupations.

What Firefighters Do

Many firefighters are responsible for providing medical attention.

Firefighters control and put out fires and respond to emergencies where life, property, or the environment is at risk.

Duties

Firefighters typically do the following:

- Drive firetrucks and other emergency vehicles
- Put out fires using water hoses, fire extinguishers, and water pumps
- Find and rescue victims in burning buildings or in other emergency situations
- Treat sick or injured people
- Prepare written reports on emergency incidents
- Clean and maintain equipment
- Conduct drills and physical fitness training

When responding to an emergency, firefighters are responsible for connecting hoses to hydrants, operating the pumps that power the hoses, climbing ladders, and using other tools to break through debris. Firefighters also enter burning buildings to extinguish fires and rescue individuals. Many firefighters are responsible for providing medical attention. Two out of three calls to firefighters are for medical emergencies, not fires, according to the National Fire Protection

Association .

When firefighters are not responding to an emergency, they are on call at a fire station. During this time, they regularly inspect equipment and perform practice drills. They also eat and sleep and remain on call, as their shifts usually last 24 hours. Some firefighters may provide public education about fire safety, such as presenting about fire safety at a school.

Some firefighters also work in hazardous materials units and are specially trained to control and clean up hazardous materials, such as oil spills and chemical accidents. They work with hazardous materials removal workers in these cases.

Wildland firefighters are specially trained firefighters. They use heavy equipment and water hoses to control forest fires. Wildland firefighters also frequently create fire lines—a swath of cut-down trees and dug-up grass in the path of a fire—to deprive a fire of fuel. They also use prescribed fires to burn potential fire fuel under controlled conditions. Some wildland firefighters, known as *smoke jumpers*, parachute from airplanes to reach otherwise inaccessible areas.

Work Environment

Firefighters respond to emergencies such as car accidents.

Firefighters held about 332,400 jobs in 2018. The largest employers of firefighters were as follows:

Local government, excluding education and hospitals	89%
Administrative and support services	4
State government, excluding education and hospitals	3
Federal government, excluding postal service	2

These employment numbers exclude volunteer firefighters.

Volunteer firefighters share the same duties as paid firefighters and account for the majority of firefighters in many areas. According to the National Fire Protection Association , about two thirds of firefighters were volunteer firefighters in 2015.

When responding to an emergency, these workers often wear protective gear, which can be very heavy and hot. When not on the scene of an emergency, firefighters work at fire stations, where they sleep, eat, work on equipment, and remain on call. Whenever an alarm sounds, firefighters respond, regardless of the weather or time of day.

Injuries and Illnesses

Firefighters have one of the highest rates of injuries and illnesses of all occupations. They often encounter dangerous situations, including collapsing floors and walls, traffic accidents, and overexposure to flames and smoke. As a result, workers must wear protective gear to help lower these risks.

Work Schedules

Firefighters typically work long periods and varied hours. Overtime is common. Most firefighters work 24-hour shifts on duty and are off the following 48 or 72 hours. Some firefighters may work 10/14 shifts, which means 10 hours working and 14 hours off.

When combating forest and wildland fires, firefighters may work for extended periods. For example, wildland firefighters may have to stay for days or weeks when a wildland fire breaks out.

How to Become a Firefighter

Firefighters begin their careers by attending fire academy training.

Firefighters typically need a high school diploma and training in emergency medical services. Prospective firefighters must pass written and physical tests, complete a series of interviews, go through training at a fire academy, and hold an emergency medical technician (EMT) certification.

Applicants for firefighter jobs typically must be at least 18 years old and have a valid driver's license. They must also pass a medical exam and drug screening to be hired. After being hired, firefighters may be subject to random drug tests and will also need to complete routine physical fitness assessments.

Education

The entry-level education needed to become a firefighter is a high school diploma or equivalent. However, some classwork beyond high school, such as instruction in assessing patients' conditions, dealing with trauma, and clearing obstructed airways, is usually needed to obtain the emergency medical technician (EMT) certification. EMT requirements vary by city and state.

Training

Entry-level firefighters receive a few months of training at fire academies run by the fire department or by the state. Through classroom instruction and practical training, recruits study firefighting and fire-prevention techniques, local building codes, and emergency medical procedures. They also learn how to fight fires with standard equipment, including axes, chain saws, fire extinguishers, and ladders. After attending a fire academy, firefighters must usually complete a probationary period.

Those wishing to become wildland firefighters may attend apprenticeship programs that last up to 4 years. These programs combine instruction with on-the-job-training under the supervision of experienced firefighters.

In addition to participating in training programs conducted by local or state fire departments and agencies, some firefighters attend federal training sessions sponsored by the National Fire Academy . These training sessions cover topics including anti-arson techniques, disaster preparedness, hazardous materials control, and public fire safety and

education.

Licenses, Certifications, and Registrations

Usually, firefighters must be certified as emergency medical technicians. In addition, some fire departments require firefighters to be certified as a paramedic. The National Registry of Emergency Medical Technicians (NREMT) certifies EMTs and paramedics. Both levels of NREMT certification require completing a training or education program and passing the national exam. The national exam has a computer-based test and a practical part. EMTs and paramedics may work with firefighters at the scenes of accidents.

Other Experience

Working as a volunteer firefighter may help in getting a job as a career firefighter.

Advancement

Firefighters can be promoted to engineer, then to lieutenant, captain, battalion chief, assistant chief, deputy chief, and, finally, chief. For promotion to positions beyond battalion chief, many fire departments now require applicants to have a bachelor's degree, preferably in fire science, public administration, or a related field. Some firefighters eventually become fire inspectors or investigators after gaining enough experience.

Important Qualities

Communication skills. Firefighters communicate conditions at an emergency scene to other firefighters and to emergency-response crews.

Compassion. Firefighters, like EMT's and paramedics, need to provide emotional support to those in emergency situations.

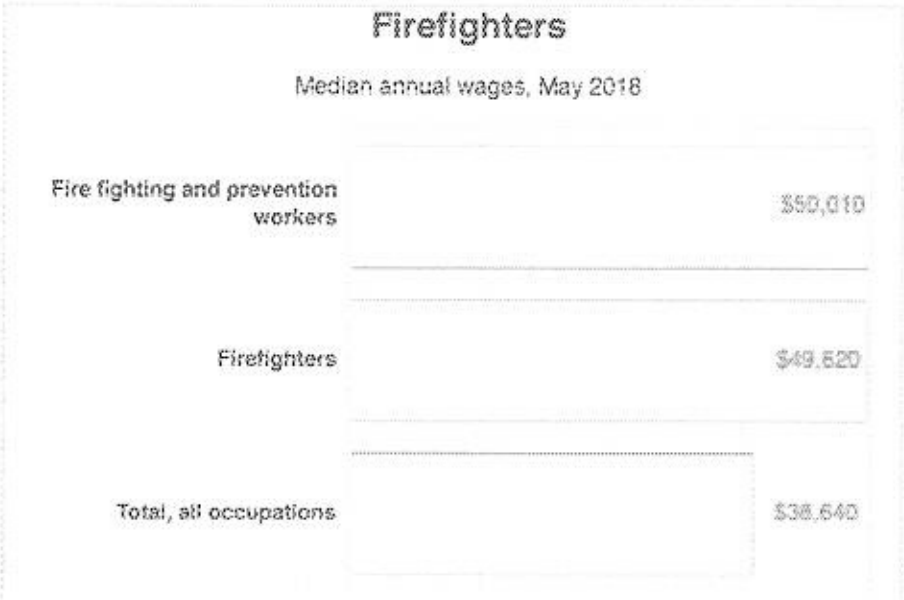
Courage. Firefighters' daily job duties involve dangerous situations, such as entering a burning building.

Decisionmaking skills. Firefighters must be able to make quick and difficult decisions in an emergency. The ability to make good decisions under pressure could potentially save someone's life.

Physical stamina. Firefighters may have to stay at disaster scenes for long periods of time to rescue and treat victims. Fighting fires requires prolonged use of strength.

Physical strength. Firefighters must be strong enough to carry heavy equipment and move debris at an emergency site. They also carry victims who are injured or cannot walk.

Pay



Note: All Occupations includes all occupations in the U.S. Economy.
Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics

The median annual wage for firefighters was $49,620 in May 2018. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than $25,170, and the highest 10 percent earned more than $88,920.

In May 2018, the median annual wages for firefighters in the top industries in which they worked were as follows:

Federal government, excluding postal service	$52,290
State government, excluding education and hospitals	50,660
Local government, excluding education and hospitals	50,310
Administrative and support services	30,260

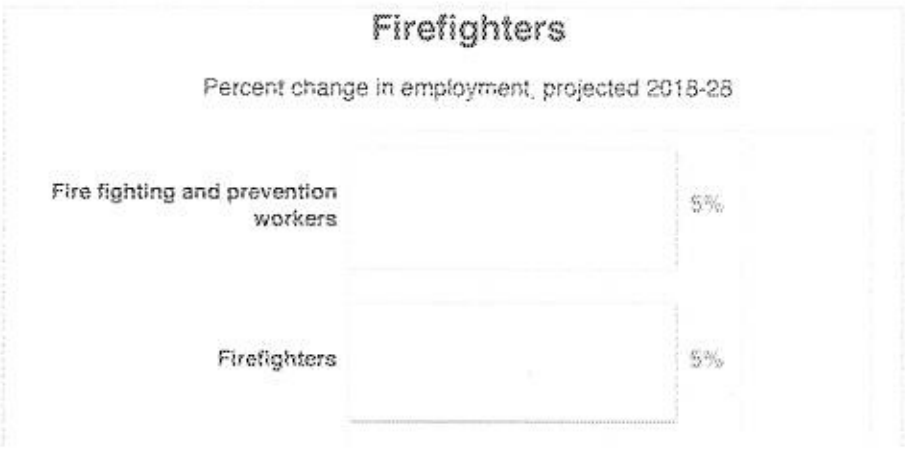
Firefighters typically work long periods and varied hours. Overtime is common. Most firefighters work 24-hour shifts on duty and are off the following 48 or 72 hours. Some firefighters may work 10/14 shifts, which means 10 hours working and 14 hours off.

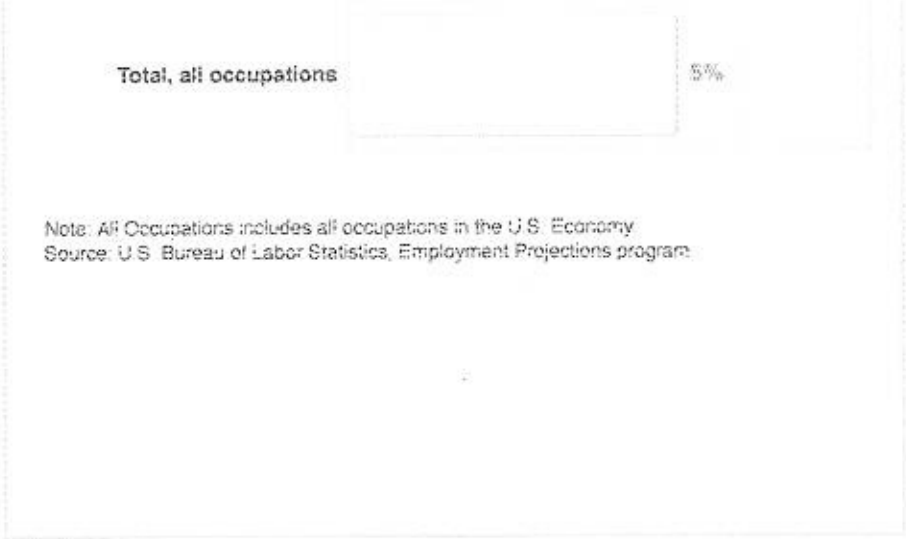
When combating forest and wildland fires, firefighters may work for extended periods. For example, wildland firefighters may have to stay for days or weeks when a wildland fire breaks out.

Union Membership

Most firefighters belong to a union. The largest organizer of firefighters is the International Association of Fire Fighters .

Job Outlook





Note: All Occupations includes all occupations in the U.S. Economy
Source: U.S. Bureau of Labor Statistics, Employment Projections program

Employment of firefighters is projected to grow 5 percent from 2018 to 2028, about as fast as the average for all occupations.

Although improved building materials and building codes have resulted in a long-term decrease in fires and fire fatalities, firefighters will still be needed to respond to fires. Fires can spread rapidly, so controlling them quickly is very important. Wildland firefighters will still be needed to combat active fires and manage the environment to reduce the impact of fires. Firefighters will also continue to respond to medical emergencies.

Job Prospects

Job prospects for firefighters will be good despite the number of volunteer firefighters that qualify for career firefighter jobs. There will be positions open from those leaving the occupation.

Physically fit applicants with some postsecondary firefighter education and paramedic training should have the best job prospects.

Employment projections data for firefighters, 2018-28

Occupational Title	SOC Code	Employment, 2018	Projected Employment, 2028	Change, 2018-28		Employment by Industry
				Percent	Numeric	
Firefighters	33-2011	332,400	350,000	5	17,600	Get data

SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program

State & Area Data

Occupational Employment Statistics (OES)

The Occupational Employment Statistics (OES) program produces employment and wage estimates annually for over 800 occupations. These estimates are available for the nation as a whole, for individual states, and for metropolitan and nonmetropolitan areas. The link(s) below go to OES data maps for employment and wages by state and area.

- Firefighters

Projections Central

Occupational employment projections are developed for all states by Labor Market Information (LMI) or individual state Employment Projections offices. All state projections data are available at www.projectionscentral.com . Information on this site allows projected employment growth for an occupation to be compared among states or to be compared within one state. In addition, states may produce projections for areas; there are links to each state's websites

where these data may be retrieved.

CareerOneStop

CareerOneStop includes hundreds of occupational profiles with data available by state and metro area. There are links in the left-hand side menu to compare occupational employment by state and occupational wages by local area or metro area. There is also a salary info tool to search for wages by zip code.

Similar Occupations

This table shows a list of occupations with job duties that are similar to those of firefighters.

	OCCUPATION	JOB DUTIES	ENTRY-LEVEL EDUCATION	2018 MEDIAN PAY
	EMTs and Paramedics	Emergency medical technicians (EMTs) and paramedics respond to emergency calls, performing medical services and transporting patients to medical facilities.	Postsecondary nondegree award	$34,320
	Fire Inspectors	Fire inspectors examine buildings in order to detect fire hazards and ensure that federal, state, and local fire codes are met.	See How to Become One	$60,200
	Forest and Conservation Workers	Forest and conservation workers measure and improve the quality of forests.	High school diploma or equivalent	$27,460
	Hazardous Materials Removal Workers	Hazardous materials removal workers identify and dispose of asbestos, lead, radioactive waste, and other hazardous materials.	High school diploma or equivalent	$42,030
	Police and Detectives	Police officers protect lives and property. Detectives and criminal investigators gather facts and collect evidence of possible crimes.	See How to Become One	$63,380

Contacts for More Information

For information about a career as a firefighter, contact your local fire department or visit

International Association of Fire Fighters

International Association of Women in Fire & Emergency Services

U.S. Fire Administration

National Fire Protection Association

For information about professional qualifications and a list of colleges and universities offering 2- or 4-year degree programs in fire science and fire prevention, visit

National Fire Academy , U.S. Fire Administration

For more information about emergency medical technicians and paramedics, visit

National Registry of Emergency Medical Technicians

O*NET

Firefighters

Forest Firefighters

Municipal Firefighters

Suggested citation:

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Firefighters, on the Internet at https://www.bls.gov/ooh/protective-service/firefighters.htm (visited *November 05, 2019*).

Last Modified Date: Wednesday, September 4, 2019

FIRE – EMERGENCY TECHNOLOGY
Standard Occupational Classification (SOC)

Emergency Medical Technicians and Paramedics (29-2041.00)

Assess injuries, administer emergency medical care, and extricate trapped individuals. Transport injured or sick persons to medical facilities.

Sample of reported job titles: Emergency Medical Technician (EMT); Emergency Medical Technician, Basic (EMT, B); Emergency Medical Technician/Driver (EMT/DRIVER); EMT Intermediate (Emergency Medical Technician, Intermediate); EMT, Paramedic (Emergency Medical Technician, Paramedic); EMT/Dispatcher (Emergency Medical Technician/Dispatcher); First Responder; Flight Paramedic; Multi Care Technician (Multi Care Tech); Paramedic

First-Line Supervisors of Fire Fighting and Prevention Workers (33-1021.00)

Directly supervise and coordinate activities of workers engaged in fire fighting and fire prevention and control.

Municipal Fire Fighting and Prevention Supervisors (33-1021.01)

Supervise fire fighters who control and extinguish municipal fires, protect life and property, and conduct rescue efforts.

Sample of reported job titles: Battalion Chief, Battalion Fire Chief, Fire Battalion Chief, Fire Captain, Fire Chief, Fire Lieutenant, Fire Marshal, Fire Suppression Captain, Lieutenant Fire Fighter, Training Officer

Forest Fire Fighting and Prevention Supervisors (33-1021.02)

Supervise fire fighters who control and suppress fires in forests or vacant public land.

Sample of reported job titles: Assistant Unit Forester, Crew Boss, District Fire Management Officer, Engine Boss, Fire Captain, Fire Management Officer, Firefighter Type One (FFT1), Forest Fire Specialist Supervisor, Section Forest Fire Warden, Squad Boss

Firefighters (33-2011.00)

Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.

Municipal Firefighters (33-2011.01)

Control and extinguish municipal fires, protect life and property and conduct rescue efforts.

Sample of reported job titles: Apparatus Operator, Fire Captain, Fire Chief, Fire Engineer, Fire Equipment Operator, Fire Fighter, Firefighter, Fireman, Safety Officer, Volunteer Firefighter

Forest Firefighters (33-2011.02)

Control and suppress fires in forests or vacant public land.

Sample of reported job titles: Fire Fighter, Fire Management Specialist, Fire Rescue Technician, Fire Technician, Firefighter, Forest Fire Suppression Specialist, Forestry Fire Technician, Hot Shot, On-Scene Supporter, Wildland Firefighter

Fire Inspectors and Investigators (33-2021.00)

Inspect buildings to detect fire hazards and enforce local ordinances and State laws, or investigate and gather facts to determine cause of fires and explosions.

Fire Inspectors (33-2021.01)

Inspect buildings and equipment to detect fire hazards and enforce state and local regulations.

Sample of reported job titles: Deputy Fire Marshal, Fire Code Inspector, Fire Inspector, Fire Marshal, Fire Official, Fire Prevention Inspector, Fire Prevention Specialist, Fire Protection Specialist, Fire Safety Inspector, Inspector

Fire Investigators (33-2021.02)

Conduct investigations to determine causes of fires and explosions.

Sample of reported job titles: Arson Division Chief, Arson Investigator, Canine Handler (K9 Handler), Fire and Explosion Investigator, Fire Investigator, Fire Lieutenant, Fire Marshal, Investigator, Lieutenant, State Fire Marshal

Forest Fire Inspectors and Prevention Specialists (33-2022.00)

Enforce fire regulations, inspect forest for fire hazards and recommend forest fire prevention or control measures. May report forest fires and weather conditions.

Sample of reported job titles: Fire Apparatus Engineer, Fire Lookout, Fire Operations Forester, Forest Fire Lookout, Forest Officer, Forest Patrolman, Forest Ranger, Forest Technician, Forester, Ranger

Select occupation/code for specific awards

Award 1: Fire and Emergency Technology Option (AS)

Award 2: Paramedic Technician Option (AS)

Award 3: Fire and Emergency Technology (CA)

Award 4: Fire Academy (CA)

Award 5: Paramedic Technician (CA)

Award 6: Fire Explorer (CA)

Taxonomy of Program (TOP)

Fire Technology (2133.00)

Principles and techniques of preventing, controlling and extinguishing fires, including firefighter operations, maintenance of fire fighting equipment, fire rescue procedures, and applicable laws and regulations.

Fire Academy (2133.50)

Studies specific to local and state training requirements for employment and post-employment advancement.

Emergency Medical Services (1250.00)

Pre-hospital, emergency medical diagnostic procedure, treatment, and comprehensive care in medical crises, including emergency vehicle operation and patient transportation procedures, including training specific to the certification standards for the EMT-1 or EMT-2 certifications.

Paramedic (1251.00)

Training specific to the certification standards for EMT-P (Paramedic).

Select TOP for specific awards

Award 1: Fire and Emergency Technology Option (AS)

Award 2: Paramedic Technician Option (AS)

Award 3: Fire and Emergency Technology (CA)

Award 4: Fire Academy (CA)

Award 5: Paramedic Technician (CA)

Award 6: Fire Explorer (CA)

Classification of Instructional Programs (CIP)

Fire Prevention and Safety Technology/Technician (43.0201)

A program focusing on the application of fire science and technology to problems of reducing fire risk, limiting loss, supervising substance removal, conducting safety inspections and investigations, and advising on matters of safety procedures and fire prevention policy. Includes instruction in fire behavior, fire simulation, structural risk assessment, materials analysis, detection and suppression systems, smoke management, supply and evacuation, public education, legal aspects of fire prevention, and related research and communications methods.

Fire Science/Fire-fighting (43.0203)

A program focusing on the theory and practice of fires and fire-fighting. Includes instruction in fire chemistry and physics, combustible materials, computer science, building construction, fire codes and related laws, fire hydraulics, fire command, fire prevention/inspection, fire protection systems, fire suppression systems, fire/arson investigation, occupational safety, equipment operation, emergency medicine and communications.

Fire Systems Technology (43.0204)

A program focusing on the principles and practice of firefighting systems, building construction and related resources as applied to fire prevention, control, and mitigation. Includes instruction in fire hydraulics and dynamics, fire protection structures and systems design, fire behavior and combustion, fire protection hydraulics and water supply, fire protection equipment and systems, building construction for fire protection, and fire apparatus.

Fire/Arson Investigation and Prevention (43.0205)

A program focusing on the theory and principles of fire combustion and behavior applied to the analysis of fires and their causes. Includes instruction in fire behavior and combustion, fire dynamics, hazardous materials chemistry, incendiary fire analysis, fire-related human behavior, forensic procedures, investigative techniques, case management and case preparation.

Emergency Care Attendant (EMT Ambulance) (51.0810)

A program that prepares individuals to assist licensed EMTs, under the supervision of a physician, to prepare and transport ill or injured patients, and to operate emergency vehicles and equipment such as life support units. Includes instruction in first aid and emergency medicine field techniques, patient stabilization and care, medical field communications, equipment operation and maintenance, emergency vehicle operation, and applicable standards and regulations.

Emergency Medical Technology/Technician (EMT Paramedic) (51.0904)

A program that prepares individuals, under the remote supervision of physicians, to recognize, assess, and manage medical emergencies in prehospital settings and to supervise Ambulance personnel. Includes instruction in basic, intermediate, and advanced EMT procedures; emergency surgical procedures; medical triage; rescue operations; crisis scene management and personnel supervision; equipment operation and maintenance; patient stabilization, monitoring, and care; drug administration; identification and preliminary diagnosis of diseases and injuries; communication and computer operations; basic anatomy, physiology, pathology, and toxicology; and professional standards and regulations.

Select CIP for specific awards

Award 1: Fire and Emergency Technology Option (AS)

Award 2: Paramedic Technician Option (AS)

Award 3: Fire and Emergency Technology (CA)

Award 4: Fire Academy (CA)

Award 5: Paramedic Technician (CA)

Award 6: Fire Explorer (CA)

NAME	TITLE	CONTROL NUMBER	TOPS CODE	CIP CODE	Recommended Change (TOP and/or SAM)	Fire Explorer (CA)	Paramedic Technician (CA)	Fire Academy (CA)	Fire and Emergency Technology (CA)	Paramedic Technician Option (AS)	Fire and Emergency Technology Option (AS)
	SAM A (Apprenticeship)										
	SAM B (Advanced Occupational)										
FTEC-9	Fire Apparatus/Equipment	CCC000168132	213300	430203							X
FTEC-80A	Training Instructor 1A	CCC000334822	213350	430203							
FTEC-80B	Training Instructor 1B	CCC000133640	213350	430203							
FTEC-110B	Fire Inspector 1B	CCC000341788	213300	430203							
FTEC-130	Basc Prehosptl Care Princ	CCC000332810	125100	510904			X				
FTEC-131	Field Assessing/Reporting	CCC000137655	125100	510904			X				
FTEC-132	Prehospital Care Pharm	CCC000287540	125100	510904			X				
FTEC-133	Basic/Adv Life Support	CCC000233255	125100	510904			X				
FTEC-134	Medical Emergencies	CCC000135649	125100	510904			X				
FTEC-135	Traumatic Emergencies	CCC000285407	125100	510904			X				
FTEC-136	Special Patient Emergences	CCC000246219	125100	510904			X				
FTEC-137	Ems/Legal Aspects/Document	CCC000150044	125100	510904			X				
FTEC-138	Paramedic Clinical Intern	CCC000299134	125100	510904			X				
FTEC-139	Paramedic Field Intern	CCC000244270	125100	510904			X				
FTEC-150	Fire Specialized Training	CCC000143475	213300	430201							

SAM C (Clearly Occupational)											
X		X				FTEC-2	Fire Prevention Technolgy	CCC000319652	213300	430203	
X		X				FTEC-3	Fundmntls Prsnl Fire Sfty/Surv	CCC000534206	213300	430203	
X						FTEC-4	Fire Co Organzation/Mngmt	CCC000306985	213300	430203	
X		X				FTEC-5	Fire Behavior/Combustion	CCC000218817	213300	430203	
X		X	X		X	FTEC-6	Bldg Constrct-Fire Protct	CCC000122046	213300	430201	
X		X				FTEC-10	Hazardous Materials	CCC000254822	213300	430203	
X						FTEC-11	Arson Detection/Control	CCC000259763	213300	430203	
			X			FTEC-15	Fire Academy	CCC000568786	213350	430203	
						FTEC-16	Fire Fighter 1 Capstone Testing	CCC000588606	213300	430203	
						FTEC-19	Fire Servce Entrance Prep	CCC000034557	213300	430203	
X		X				FTEC-20	Fire Protection Equip/Sys	CCC000231726	213300	430203	
						FTEC-71	Vehicle Extrication	CCC000585208	213300	430201	
						FTEC-72	Trench Rescue Technician	CCC000585207	213300	430201	
						FTEC-73	Human Resources Management Officer 2A	CCC000585201	213300	430203	
						FTEC-74	General Admin Functions Officer 2B	CCC000585200	213300	430203	
						FTEC-75	Fire Inspect/Investigate Officer 2C	CCC000585198	213300	430203	
						FTEC-76	All-Risk Command Officer 2D	CCC000585196	213300	430203	
						FTEC-77	Wildland Operations Officer 2E	CCC000585210	213300	430203	
						FTEC-78	Instr/Methodology-Instructor 1	CCC000585202	213300	430201	
						FTEC-99	Independent Study	CCC000334558	213300	450701	
						FTEC-113A	Fire Apparatus Driver/Operator-Pumping Apparatus (Driving)	CCC000590546	213350	430203	
						FTEC-113B	Fire Apparatus Driver/Operator-Pumping Apparatus (Pumping)	CCC000590547	213350	430203	
						FTEC-120	Emergency Medical Foundations	CCC000588605	125000	510904	
						FTEC-128	Paramedic Preparation Course	CCC000175651	125100	510904	
X		X	X		X	FTEC-144	Emergency Medical Technician	CCC000550938	125000	430203	
SAM D (Possibly Occupational)											
X		X	X		X	FTEC-1	Fire Protect Organization	CCC000195643	213300	430203	

Information for the License:

Emergency Medical Tech, Advanced EMT Cert., & Paramedic License

Licensing Agency:

Agency or Department Name: Emergency Medical Services Authority
Board or Council Name: Emergency Medical Services Personnel Division
Division Name: Paramedic Program
Telephone: (916) 323-9875
Agency Web Address: http://www.emsa.ca.gov

License Description:
(Always confirm this information with the licensing agency.)

All persons acting as emergency medical care personnel providing prehospital life support must be certified as an EMT, AEMT (Advanced EMT) or licensed as an EMT-P, depending on skill level. EMTs and AEMTs (Advanced EMTs) are certified by local EMS agencies or approved public safety agencies. EMT-Paramedics are licensed by the State of California Emergency Medical Services Authority (EMSA).

Fees: For EMT and AEMT (Advanced EMT) varies according to local emergency medical services agency (county or region of counties) or approved public safety agency.

For EMT-P:
Examination: $110 payable to National Registry of Emergency Medical Technicians (NREMT).

Initial Licensure for In-State Applicants: $250 or Out-of-State Applicants: $300.

Relicensure: $200.

Fingerprinting: $32 Dept. of Justice only or $51 Dept. of Justice & FBI.

Examination Frequency: Varies.

Exam Locations: Various locations throughout the State.

Experience Requirement: EMT must be 18 years of age and have an EMT course completion record; AEMT (Advanced EMT) must be currently certified as an EMT, with at least one year of experience; EMT-P must be currently certified as an EMT with additional experience and training.

Average Time to Process Application: Varies from county to county for EMT & AEMT (Advanced EMT); 2 – 4 weeks for EMT-P.

Renewal Period: Every 2 years.

Special License Requirements: Persons operating private ambulance services must be licensed by the California Highway Patrol; private ambulance drivers must be licensed by the Department of Motor Vehicles; all new applicants for EMT or AEMT (Advanced EMT) will have to be fingerprinted for a state and federal background check.

Authority: Health & Safety Code, Division 2.5, implementing statute.
Regulations for EMTs appear in California Code of Regulations, Title 22, Division 9.

Appendix U

Fire and Emergency Technology Program Advisory Committee

Title	FirstName	LastName	JobTitle	Company	ECC	Address1	City, ST Zip
Mr.	Ryan	Carey	Instructor	El Camino College	X	16007 Crenshaw Blvd.	Torrance, CA 90506
Mr.	Kevin	Coffelt	Instructor	El Camino College	X	16007 Crenshaw Blvd.	Torrance, CA 90506
Mr.	Jim	Crabtree	Office of Certification and Program	Emergency Medical Services Agency		10100 Pioneer Blvd., Ste. 200	Santa Fe Springs, CA 90670
Mr.	Jim	Ellingson	Instructor	El Camino College	X	16007 Crenshaw Blvd.	Torrance, CA 90506
Chief	Daryn	Drum	Fire Chief	Manhattan Beach Fire Department		400 15th St.	Manhattan Beach, CA 90266
Chief	Bill	Walker	Fire Chief	Santa Monica Fire Department		333 Olympic Drive	Santa Monica, CA 90401
Batt. Chief	Chris	Donovan	Fire Chief	El Segundo Fire Department		314 Main St.	El Segundo, CA 90245
Ms.	Jacqueline	Rifenburg	Senior EMS Program Head; Chief, Certifications & Investigations	Emergency Medical Services Agency		10100 Pioneer Blvd., Ste. 200	Santa Fe Springs, CA 90670

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Captain	Kevin	Huben	Instructor	El Camino College	X	16007 Crenshaw Blvd.	Torrance, CA 90506
Chief	Daryl	Osby	Fire Chief	Los Angeles County Fire Department		1320 N. Eastern Ave.	Los Angeles, CA 90063
Chief	Robert	Metzger	Fire Chief	Redondo Beach Fire Department		401 S. Broadway	Redondo Beach, CA 90277
Chief	Martin	Serna	Fire Chief	Torrance Fire Department		1701 Crenshaw Blvd.	Torrance, CA 90501
Chief	Greg	Barton	Fire Chief	Beverly Hills Fire Department		445 N. Rexford Drive	Beverly Hills, CA 90210
Chief	Michael	Nagy	Fire Chief	Culver City Fire Department		9770 Culver Blvd.	Culver City, CA 90232
Chief	Deen	Lee	Battalion Chief	El Segundo Fire Department		314 Main St.	El Segundo, CA 90245
Mr.	Earl	Warren	Instructor	El Camino College	X	16007 Crenshaw Blvd.	Torrance, CA 90506
Mr.	David	Wells	Office of Certification and Program Approvals	Emergency Medical Services Agency		10100 Pioneer Blvd., Ste. 200	Santa Fe Springs, CA 90670

Appendix V

El Camino College
Industry & Technology Division
2019 Fire & Emergency Technology Advisory Committee Meeting
Minutes: April 23rd, 2019

Attendees:

Kevin Huben (ECC FTEC Instructor), John Krok (South Bay Regional Public Communications Authority Center Manager), Jacqueline Rifenburg (Los Angeles County Emergency Medical Services Agency Chief), Ryan Carey (ECC FTEC Instructor/minutes)

1) Welcome & Introductions:

- Ryan Carey welcomed and introduced the members of the FTEC Advisory Committee and thanked them for their attendance (1730H).

2) Fire Academy Overview & Discussion:

- The FTEC advisory committee will continue working on the development of a South Bay Regional Training Center. (moved by K. Huben, seconded by J. Krok)

3) EMT Program Overview & Discussion:

- EMT Program enrollment is growing with a total of 15 course sections offered annually in various formats including: night, weekend, 8-week, summer, and winter intersessions. FISDAP is the standardized online training program currently being used for NREMT assessment preparation throughout the EMT Program. Since the use of FISDAP within the ECC EMT Program, first time student pass rates of the NREMT exam have increased.

- Further development of the ECC EMT Refresher Course with multiple annual offerings (moved by K. Huben; seconded by J. Rifenburg).

- Create a certificate for “Emergency Medical Care” (moved by J. Krok, seconded by J. Rifenburg).

- John Kruk provided information regarding Emergency Dispatcher career positions and discussed scheduling dates to recruit students in the ECC Public Safety Club.

- Jacqueline Rifenburg provided updates regarding new Los Angeles County Licensure protocols and requirements for EMTs and Paramedics.

4) Adjourn:

- Ryan Carey thanked everyone for their support and the meeting was adjourned (1905H).

Appendix W

El Camino College

Industry & Technology Division

2018 Fire & Emergency Technology Advisory Committee Meeting
Minutes: April 26th, 2018

Attendees:

Dr. Tim Winchell, Ryan Carey (notes/ minutes), Kevin Huben, William Melendez, Earl Warren, Adam Iqueda, Deborah Zavala, Jon Henderson (Torrance FD)

1) Welcome & Introductions:

Ryan Carey welcomed and introduced the members of the FTEC Advisory Committee and thanked them for their attendance.

2) Fire Academy Overview & Discussion:

- The FTEC advisory committee will continue working on the development of a South Bay Regional Training Center that included the support of the South Bay Fire Chiefs (moved by J. Henderson; seconded by E. Warren).
- Request funds to address the aging/deteriorating fire props at the academy due to safety concerns (moved by W. Melendez; seconded by E. Warren),
- Create a 12 unit certificate for "Basic Fire Technology" (moved by E. Warren; seconded by J. Henderson).
- Further development of a 12 unit certificate for "Fire Scene Investigation" (moved by E. Warren; seconded by J. Henderson).
- Further development of a 12 unit certificate for "Fire Prevention" (moved by W. Melendez; seconded by E. Warren).
- Further development of a certificate for "Fire Explorer" (moved by E. Warren; seconded by J. Henderson).

3) California State Fire Training Certifications:

Jon Henderson (Torrance FD) expressed the continued interest of working with ECC to establish CSFM courses that would be available to offer as in-service training opportunities for their firefighters. The prospect of a future Joint Training Center would be able to incorporate extra classroom and resources to help support a working agreement with the city. Other South Bay Fire departments have expressed similar interests and would be willing to collaborate once the Training Center is complete.

- Need to hire more California State Fire Marshal (CSFM) Certified Instructors to teach additional in-service courses (moved by W. Melendez; seconded by J. Henderson).

4) EMT Program Updates:

- Create a certificate for "Emergency Medical Services" (moved by E. Warren; seconded by A. Iqueda).
- Offer more EMT courses on nights and weekends (moved by J. Henderson; seconded by E. Warren).
- Reactivate/update EMT Refresher and CE courses to be offered (moved by E. Warren; seconded by A. Iqueda).
- Develop a hybrid EMT course (moved by J. Henderson; seconded by A. Iqueda).

5) Adjourn: Ryan thanked everyone for their support and the meeting was adjourned.