FIRE TECHNOLOGY PROGRAM 2021

COMPREHENSIVE PROGRAM REVIEW

TABLE OF CONTENTS

Allan Hancock College Program Review

2015-2021 Comprehensive Program Review

Program review is intended to be a reflective process that builds on the extensive qualitative and quantitative data gathered from not only program reviews and annual updates but also the office of Institutional Research and Planning. The process lays out the program's major directions for the future and is the foundation for institutional planning and resource allocation.

Mission Statements

ALLAN HANCOCK COLLEGE

Allan Hancock College provides quality educational opportunities that enhance student learning and the creative, intellectual, cultural, and economic vitality of our diverse community.

VISION STATEMENT

Allan Hancock College will be the recognized leader in student success through excellence in teaching, learning, and services in an environment of mutual respect.

SHARED VALUES

Student Success
Innovation
Mutual Respect
Lifelong Learning
Diversity
Academic Freedom
Shared Governance
Excellence

We at Allan Hancock College express our values in all that we do. Our commitment is to find innovative ways to enhance student achievement and to always put students first. We operate in a culture of mutual respect and lifelong learning, developing relationships among students and employees to enrich our collective appreciation for diverse ideas, thoughts, and experiences. Our culture is supported by a philosophy that shared governance and academic freedom are primary vehicles in promoting excellence in all teaching, learning, and services through open and honest communication.

EQUAL ACCESS TO ALL

Nondiscrimination Statement: The Board of Trustees of the Allan Hancock Joint Community College District recognizes that diversity in the academic environment fosters cultural awareness, mutual understanding and respect, harmony and creativity while providing positive images for all students. The district is committed to the active promotion of campus diversity including recruitment of and opportunities for qualified members of underrepresented/protected groups, as well as the provision of a work and learning environment conducive to open discussion and free of intimidation, harassment, and unlawful discrimination. The board commits the district to equal opportunity/access for qualified persons in all aspects of its employment program including selection, assignment, promotion and transfer, and with respect to all necessary classifications. The board also assures that all employees and applicants for employment will enjoy equal opportunity regardless of race, color, ancestry, religion, gender, national origin, age, disability, medical condition, status as a Vietnam-era veteran, marital status, or sexual orientation.

Alternate Media Statement: Allan Hancock College will provide, upon request, alternate translation of its general information documents in large print, Braille, E-text, etc., through our Learning Assistance Program

CALIFORNIA COMMUNITY COLLEGE

(a) (1) The California Community Colleges shall, as a primary mission, offer academic and vocational instruction at the lower division level for both younger and older students, including those persons returning to school. Public community colleges shall offer instruction through but not beyond the second year of college. These institutions may grant the associate in arts and the associate in science degree.

(2) In addition to the primary mission of academic and vocational instruction, the community colleges shall offer instruction and courses to achieve all of the following:

(A) The provision of remedial instruction for those in need of it and, in conjunction with the school districts, instruction in English as a second language, adult noncredit instruction, and support services which help students succeed at the postsecondary level are reaffirmed and supported as essential and important functions of the community colleges.

(B) The provision of adult noncredit education curricula in areas defined as being in the state's interest is an essential and important function of the community colleges.

(C) The provision of community services courses and programs is an authorized function of the community colleges so long as their provision is compatible with an institution's ability to meet its obligations in its primary missions.

(3) A primary mission of the California Community Colleges is to advance California's economic growth and global competitiveness through education, training, and services that contribute to continuous work force improvement.

(4) The community colleges may conduct to the extent that state funding is provided, institutional research concerning student learning and retention as is needed to facilitate their educational missions.

I. PROGRAM MISSION

The Allan Hancock College Fire Technology Program is committed to providing excellent educational opportunities that enhance our students learning, hands on skills, job readiness and fitness. All this is done to enhance our student's ability to compete for entry level positions as well as provide the education required to qualify for promotional opportunities while within a career.

The Fire Technology Program is currently in session with its 148th State Certified Firefighter I Academy Program. The Fire Academy has consistently provided foundational training to aspiring firefighters since the late 1960's. The move from the Santa Maria South Campus to the Lompoc Valley Center's Public Safety Training Complex provided a significant improvement in the college's ability to host, administer and maintain Fire Technology programs for many generations to come.

SECTION 1

DEFENITION OF PROGRAMS

INSTRUCTIONAL

Through the National Fire Academy, the Fire and Emergency Services Higher Education (FESHE) model curriculums were produced. Fire Service leaders have produced, through consensus, a standardized undergraduate curriculum that is national in scope, content, and outcomes. This represents a major paradigm shift from a fragmented system of education to one that is unified and integrated. The Allan Hancock College Fire Technology program utilizes the FESHE curriculums to support its six core courses for the degree and certificate programs.

All the courses share student learning outcomes, catalog descriptions, outlines and text recommendations that provide a national core of knowledge and competencies. These course outlines share common content through FESHE's partnership with textbook publishers who write textbooks and faculty supplements that support them.

This curriculum linkage represents a milestone in fire and emergency services education. It provides for a seamless articulation of coursework between institutions and between associate and bachelor's programs.

The Fire Technology Program serves its mission statement through the delivery of the following Programs:

I. Fire Technology Associates Degree / Fire Technology Certificate of Achievement

The Fire Technology Associates Degree program is designed to prepare those interested ia a career in the fire service, either public or private, to upgrade the skills of In-service fire service personnel in their present positions or prepare in-service personnel for promotional opportunities.

The graduate of the Associate in Science In Fire Technology will:

- Demonstrate the skill set necessary for a successful career in the fire service, Enviornmnetal Technology, and /or Emergency Services.
- 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.

Program Requirements

A major of 33 units is required for the associates in science degree.

Required core courses (18 units):

Course Number	Course Title	Unit
FT-101	Fire Protection Organization	3.0
FT-102	Fire Prevention Technology	3.0
FT-103	Fire Protection Equipment and Systems	3.0
FT-104	Building Construction for Fire Protection	3.0
FT-105	Fire Behavior and Combustion	3.0
FT-106	Principles of Fire & Emergency Safety & Survival	3.0

Plus, a minimum of 15 units selected from the following:

Course Number	Course Title	Unit
EMS 301	Emergency Medical Service Academy 1A	6.0
FT-307	Firefighter I Academy 1A	6.0
FT-308	Firefighter I Academy 1B	7.0
FT-347	Fire Hydraulics	3.0
FT=149	Cooperative Work Experience: Occupational	1.0-8.0

All of the Fire Technology core course are delivered in a distance learning format using the Canvas Learning Management System. These courses are routinely full and course sections are doubled to accommodate student volume. FT-347 is also offered as a distance learning course.

Fire Technology Certificate of Achievement

The Fire Technology Associates Degree program is designed to prepare those interested ia a career in the fire service, either public or private, upgrade the skills of In-service fire service personnel in their present positions or prepare in-service personnel for promotional opportunities.

The graduate of the Certificate of Achievement In Fire Technology will:

- Demonstrate the skill set necessary for a successful career in the fire service, Enviornmnetal Technology, and /or Emergency Services.

- 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.

Program Requirements

A major of 33 units is required for the certificate of achievement.

Required core courses (18 units):

Course Number	Course Title	Unit
FT-101	Fire Protection Organization	3.0
FT-102	Fire Prevention Technology	3.0
FT-103	Fire Protection Equipment and Systems	3.0
FT-104	Building Construction for Fire Protection	3.0
FT-105	Fire Behavior and Combustion	3.0
FT-106	Principles of Fire & Emergency Safety & Survival	3.0

Plus, a minimum of 15 units selected from the following:

Course Number	Course Title	Unit
EMS 301	Emergency Medical Service Academy 1A	6.0
FT-307	Firefighter I Academy 1A	6.0
FT-308	Firefighter I Academy 1B	6.0
FT-347	Fire Hydraulics	3.0
FT-149	Cooperative Work Experience: Occupational	1.0-8.0

All Fire Technology core course are delivered in a distance learning format using the Canvas Learning Management System. These courses are routinely full and course sections are doubled regularly to accommodate student volume. FT-347 is also offered as an elective distance learning course.

6 Degree/Certificate Fire Technology

					Academic Year Graduation Desc					
	Program Desc	Degree	Degree Major	Degree Desc (group)	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
Unduplicated	Fire Technology	AS	Fire Technology	Associate in Science	42	39	34	43	46	27
		C1NA	Firefighter Academy	Cert 6-18 Not Approved	53	57	58	51	61	54
		C3	Fire Technology	Certificate 30.5-60 units	35	39	27	33	29	23
Duplicated	Fire Technology	AS	Fire Technology	Associate in Science	42	39	34	43	46	27
		C1NA	Firefighter Academy	Cert 6-18 Not Approved	53	57	58	52	61	54
		C3	Fire Technology	Certificate 30.5-60 units	35	39	27	33	29	23
Unduplicated	Total				107	111	104	106	116	90
Duplicated	Total				130	135	119	128	136	104

In looking at the Fire Technology core courses the recommedation is to remove any Advisories that are left in the programs. We have found that students are confused by the “advisory” pre-requisites and believe they are required. All of the core courses in both programs are stand alone and do not require requisite knowledge to attend.

FIRE TECHNOLOGY

ASSOCIATES or CERTIFICATE

REQUIRED *30*

FT 101 (3)
FIRE PROTECTION ORGANIZATION

FT 102 (3)
FIRE PREVENTION TECHNOLOGY

FT 103 (3)
FIRE PROTECTION SYSTEMS & EQUIPMENT

FT 104 (3)
BUILDING CONSTRUCTION FOR FIRE PROTECTION

FT 105 (3)
FIRE BEHAVIOR & COMBUSTION

FT 106 (3)
PRINCIPLES OF FIRE & EMERGENCY SAFETY & SURVIVAL

FT COORDINATOR: JOHN CECENA
MANDATORY CORE: FT 101-106 (18)
ASSOCIATES DEGREE: 33
CERTIFICATE OF ACIEVEMENT: 33

FACULTY: CORE COURSES
FT 101 : McLeod (PT)
FT 102 : Ceceña (FT)
FT 103 : Densmore (PT)
FT 104 : Ceceña (FT)
FT 105 : Ceceña (FT)
FT 106 : Senior (PT)

FIRE TECHNOLOGY
ELECTIVES (15)

FT 107 (3)
APPARATUS AND EQUIPMENT

FT 130 (3)
PRINCIPLES OF EMERGENCY MANAGEMENT

FT-149 (1-8)
COOPERATIVE WORK EXPERIENCE

FT 310 (4)
FIRE SERVICE PHYSICAL FITNESS

FT 319 (3)
EMERGENCY RESPONSE TO TERRORISM

FT 341 (3)
FIRE HYDRAULICS

FT-307 (6)
FIREFIGHTER 1 ACADEMY 1A

FT-308 (7)
FIREFIGHTER 1 ACADEMY 1B

EMS 301 (6)
EMERGENCY MEDICAL SERVICES ACADEMY – 1A

EMS 319 (3)
EMERGENCY RESPONSE TO TERRORISM

II. Wildland Fire Technology Associates Degree and Certificate Program

The Wildland Fire Technology Associates Degree program is designed to prepare those interested ia a career in the Wildland Fire Services, either public or private, to upgrade the skills of In-service fire service personnel in their present positions or prepare in-service personnel for promotional opportunities.

The graduate of the Associates in Science in Wildland will:

- Demonstrate the skill set necessary for a successful career in the Fire Service.
- Show knowledge of federal and state laws, regulations and codes pertaining to safety and efficiency in an all risk emergencies and scenarios pertaining to fire in the wildland environment.

Program Requirements

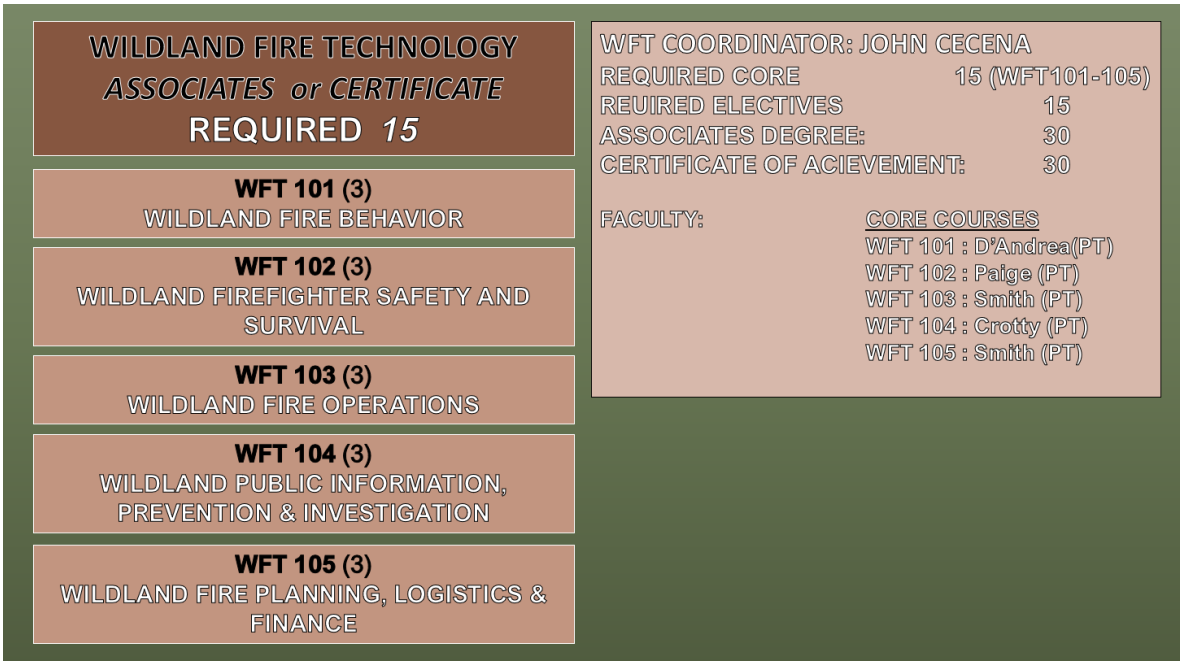
A major of 30 units is required for the associates in science degree. Required core courses

(15 units):

Course Number	Course Title	Units
WFT 101	Wildland Fire Behavior	3.0
WFT 102	Wildland Safety and Survival	3.0
WFT 103	Wildland Fire Operations	3.0
WFT 104	Wildland Public Information Officer, Prevention and Investigation	3.0
WFT 105	Wildland Fire Planning, Logistics and Finance	3.0

Plus, a minimum of 15 units selected from the following:

Course Number	Course Title	Units
WFT 303	Intermediate Incident Command System I-300	1.5
WFT 304	Advanced Incident Command System I-400	1.0
EMS 301	Emergency Medical Services Academy – 1A	6.0
EMS 302	CPR for Healthcare Providers	0.5
FT-101	Fire Protection Organization	3.0
FT-102	Fire Prevention Technology	3.0
FT-103	Fire Protection Equipment and Systems	3.0
FT-104	Building Construction for Fire Protection	3.0
FT-105	Fire Behavior and Combustion	3.0
FT-106	Principles of Fire & Emergency Safety & Survival	3.0
FT 308	Firefighter Academy 1B	7.0



Wildland Fire Technology Certificate

Award Type: Certificate of Achievement (Minimum *18-Units Including Core*)

The graduate of the Certificate of Achievement in Wildland will:

- Demonstrate the skill set necessary for a successful career in the Fire Service.
- Show knowledge of federal and state laws, regulations and codes pertaining to safety and efficiency in an all-risk emergencies and scenarios pertaining to fire in the wildland environment.

Program Requirements

A major of 30 units is required for the associates in science degree. Required core courses (15 units):

Course Number	Course Title	Units
WFT 101	Wildland Fire Behavior	3.0
WFT 102	Wildland Safety and Survival	3.0
WFT 103	Wildland Fire Operations	3.0
WFT 104	Wildland Public Information Officer, Prevention and Investigation	3.0
WFT 105	Wildland Fire Planning, Logistics and Finance	3.0

Plus, a minimum of 15 units selected from the following:

Course Number	Course Title	Units
WFT 303	Intermediate Incident Command System I-300	1.5
WFT 304	Advanced Incident Command System I-400	1.0
EMS 301	Emergency Medical Services Academy – 1A	6.0
EMS 302	CPR for Healthcare Providers	0.5
FT 308	Firefighter Academy 1B	6.0
WFT 302	ICS-200 Basic ICS	
WFT 303	ICS-300 Intermediate ICS	
WFT 304	ICS-400 Advanced ICS	
WFT 311	S-130 Firefighter Training	
WF 312	S-131 Firefighter Type 1	
WFT 313	S-190 Intro to Fire Behavior	
WFT 314	S-200 Initial Attack Incident Commander	
WFT 316	S-215 Fire Operations in the Urban Interface	
WFT 321	S-230 Crew Boss, Single Resource	
WFT 322	S-231 Engine Boss, Single Resource	
WFT 325	S-219 Ignition Operations	
WFT 332	S-290 Intermediate Fire Behavior	
WFT 333	S-300 Extended Attack Incident Commander	
WFT 335	S-330 Task Force/Strike Team Leader	
WFT 337	S-339 Division/Group Supervisor	
WFT 344	S-390 Fire Behavior Calculations	
WFT 347	S-404 Safety Officer	
WFT 358	PMS 925 Facilitative Instructor	
WFT 363	L-280 Followership to Leadership	
WFT 364	L-381 Incident Leadership	
WFT 328	S-244 Field Observer	
WFT 320	S-270 Basic Air Operations	
	Courses requiring equipment. To be taught by hosting agency:	
WFT 317	S-211 Portable Pumps and Water Use	
WFT 318	S-212 Wildland Fire Chainsaws	

The Wildland Fire Technology Degree and Certificate of Achievement Programs

The Wildland Fire Technology Associates Degree and Certificate program has not been consistently delivered for many years. The program has not had a Full-Time Faculty or Part-Time Faculty assigned to it for many years. Upon conception, the Wildland Fire Technology Program was well developed and done so in-line with college requirements. However, the program established three different degree or certificate opportunities. They were as follows:

Wildland Firefighting Technology Operations
Wildland Firefighting Technology Logistics, Finance, Planning
Wildland Firefighting Prevention, Investigation, Prescribed Burning

The three separate degree and certificate opportunities were never fully realized by any consistent student base. The program also had established a significant number of elective courses that were rarely if ever provided yet live in the catalog year after year. This large and cumbersome Wildland Fire Technology degree and certificate program was identified in a recent accreditation process as excessive and needing to change. While good intentioned, the current state of the program has been ineffective.

As of February 2020, a Wildland Fire Technology Steering Committee of Full-time and Part-Time faculty has been established to look at the program as it exists and make the necessary changes to bring a viable and manageable program forward. The first step in this process has already occurred. We will have one Wildland Fire Technology Degree. The previous program had established and shared five core courses. Those course outlines of records (COR) have been reviewed and will be updated as part of the new program. Model curriculums are being researched to support the new degree and certificate program. The second step of the project is to narrow down what elective courses we will be keeping in the course catalog and which we will be sunsetting. This is being done with an eye to what our local government agencies and statewide agencies may request from the college. We also have existing Instructional Service Agreements (ISA's) courses that will need to be kept.

The current goal for the steering committee is to establish the new certificate and degree program and have it ready to go live for the Fall 2021 semester. The program will establish the following new delivery model:

The Five Core courses will be delivered completely online. The current course outline of records has this option already approved.

Current Fire Technology Part-Time Faculty who are wildland fire experts will be assigned to stand up the core courses each semester. Placing the core courses completely online will allow the course offerings to be statewide. This should help establish a student base to keep the program healthy.

The college will need to invest in a marketing campaign to help the program gain momentum. This request will come through the Public Safety Associate Dean.

1. Wildland Fire Technology Associates Degree
2. Wildland Fire Technology Certificate of Completion
3. State Certified Firefighter I Academy
4. California State Fire Marshal In-Service Training Programs
5. Firefighter Internships and Firefighter "Field" Internships
6. Fire Service In-Service Training Programs
7. Instructional Service Agreement (ISA) Training and Partnerships

III. California State Fire Marshall Firefighter I Academy

Firefighter I Academy: The Firefighter I Academy Coordinator has been working hard to make significant changes in the program's curriculum. This has been required by the California State Fire Marshal's Office. The Allan Hancock College Firefighter I Academy is now recognized and certified in California but also throughout the nation. This is due to the recent alterations to the Academy that have allowed it to be certified by the following nationally recognized certifying agencies:

The International Fire Service Accreditation Congress (IFSAC): is a not-for-profit, peer-driven, self-governing system of both fire service certifying entities and higher education fire-related degree programs. IFSAC's mission is to plan and administer a high-quality, uniformly delivered accreditation system with an international scope.

Pro-Board: Was established in 1972, the Pro Board is the original fire service system for the accreditation of agencies that certify candidates to the various disciplines and levels identified in the NFPA Professional Qualification series of standards.

There are over 70 agencies accredited by the Pro Board, and they offer accredited certification to fire service professionals across North America, and around the world.

The quality of the Fire Academy is at an all-time high. The move from the South Campus location to the Public Safety Training Complex has been a quantum leap in the ability for faculty and staff to provide a realistic training environment. Firefighting is a very dangerous profession. Therefore, training for the profession is in turn dangerous. The professionalism of our training cadre's and the safety provided by the fixed facility is key. We strive to provide an extremely realistic training environment while keeping our students safe.

Students must complete the following courses to receive their CSFM Firefighter I Certificate

FT-310	Fire Service Physical Fitness	4 units
FT-307	Firefighter I Academy 1A	6 units
FT-308	Firefighter I Academy 1B	7 units

The Fire Academy Coordinator does have a goal of establishing the Public Safety Training Complex as a certified site to host fire department Physical Agility Testing processes.

IV. California State Fire Marshal In-Service Training Courses

California State Fire Marshal (CSFM) Certifications

Since the opening of the Public Safety Training Complex faculty and staff have worked diligently to bring the facility and its cadre's, curriculums, training buildings and props that are in-line with the state's minimum requirements for site certification. Site certification has occurred on two levels of state qualified Instruction. First, the AHC PSTC was awarded as an ARTP (Accredited Regional Training Program) this status supports the following State Fire Marshal programs.

Firefighter I Academy
Vehicle Extrication
Confined Space Awareness
Hazardous Materials First Responder Operational
Hazardous Materials First Responder Operational Decontamination
Firefighter II Curriculum
Low Angle Rope Rescue Operational
Rescue Systems I
Rescue Systems II
Rope Rescue Technician
Confined Space Rescue Technician
Trench Rescue Technician
Company Officer 2A: Human Resource Management for Company Officers
Company Officer 2B: General Administrative Functions for Company Officers
Company Officer 2C: Fire Inspections and Investigation for Company Officers
Company Officer 2D: All Risk Command Operations for Company Officers
Company Officer 2E: Wildland Incident Operations for Company Officers
Instructor Methodology
ICS -300 Intermediate Incident Command

The AHC PSTC has also been certified to host all of the state's technical rescue programs for the all of the California Fire Service.

Faculty members met and toured the facility with representatives from the State Fire Marshal's office during several visits to certify the site. In addition to state site certification, the acquisition of minimum state tools, and equipment requirements to support our programs is also underway.

ACCREDITED REGIONAL TRAINING PROGRAMS (ARTP)

December 2019

1. Allan Hancock College
   800 South College Drive
   Santa Maria, CA 93454
   (805) 922-6966

2. American River College
   *Affiliated w/ CFRTA & Sac. Metro FD
   5146 Arnold Ave
   Sacramento, CA 95652
   (916) 570-5009

3. Antelope Valley College
   3041 W. Ave K
   Lancaster, CA 93536
   (661) 886-5096

4. Bakersfield College/Olive Drive Training Ctr
   2100 Chester Avenue
   Bakersfield, CA 93301
   (661) 319-1203

5. Butte Community College
   3536 Butte Campus Drive
   Oroville, CA 95965
   (530) 895-2407

6. Chabot Community College
   25555 Hesperian Blvd
   Hayward, CA 94545
   (510) 786-7565

7. City College of San Francisco
   50 Phelan Ave
   San Francisco, CA 94112
   (415) 239-3202

8. College of the Desert
   43-500 Monterey Ave
   Palm Desert, CA 92260
   (760) 568-3083

9. College of the Sequoias
   925 13th Avenue
   Hanford, CA 93230
   (559) 583-2240

10. College of the Siskiyous
    800 College Ave
    Weed, CA 96094
    (530) 938-5261

11. Columbia College
    11600 Columbia College Dr.
    Sonora, CA 95370
    (209) 588-5308

12. Crafton Hills Community College
    11711 Sand Canyon Road
    Yucaipa, CA 92399
    (909) 389-3418

13. El Camino College
    16007 Crenshaw Blvd
    Torrance, CA 90506
    (310) 660-3593

14. Fresno City College
    2930 East Annadale Rd.
    Fresno, CA 93725
    (559) 442-4600

15. Glendale Community College/Verdugo Fire Academy
    1500 North Verdugo Road
    Glendale, CA 91208
    (818) 240-1000

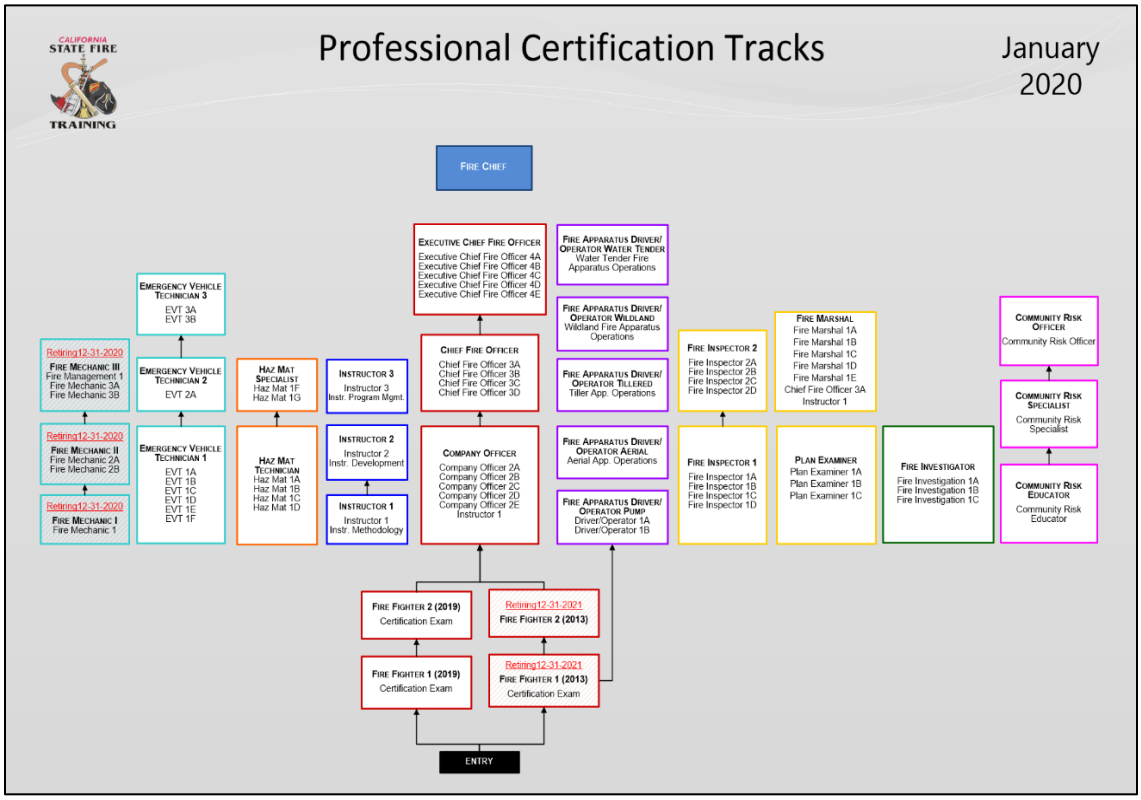
16. Imperial Valley College
    380 East Aten Road
    Imperial, CA 92251
    (760) 222-0177

ACCREDITED TRAINING SITES
Rescue Systems 1 and 2

LOCATION	SITE ADDRESS	RS1	RS2	APPROVED
Fresno	Fresno Fire Department Training Center *1144 E Street, Fresno, CA*	4 Module		04/19/2004
Georgetown	El Dorado Hills USAR – Station 62 *7331 Wentworth Springs Rd, Georgetown, CA*	4 Module		12/19/2016
Glendale	Glendale Fire Department *541 W. Chevy Chase, Glendale, CA*	4 Module		04/9/2009
Grover Beach	Five Cities Fire Authority *701 Rockaway Ave, Grover Beach, CA*	4 Module		08/02/2013
Hayward	Hayward Fire Department Training Ctr. *11401 West Winton Avenue*	4 Module		02/18/2000
Huntington Beach	Central Net Training Center *18301 Gothard Street, Huntington Beach*	4 Module		01/25/2007
Irvine	Orange County Fire Authority *1 Fire Authority Rd. Irvine, CA*	4 Module		05/21/2010
Jamestown	SCC Fire Training Grounds *1500 O'Brynes Ferry Road, Jamestown*	3 Module		10/24/2006
Lathrop-Manteca	Lathrop-Manteca Fire Protection Dist. *800 J St. Lathrop, CA*	2 Module		3/11/2008
Lompoc	Allan Hancock College – Pub. Safety Dept. *One Hancock Drive, Lompoc, CA*	4 Module	4 Module	03/09/2015 02/15/2017
Los Angeles	Los Angeles City Fire Department *5021 N. Sepulveda Sherman Oaks, CA*	4 Module	4 Module	3/06/2007 12/29/2009
Long Beach	Long Beach Fire Department *2241 Argonne Ave, Long Beach CA*	4 Module	4 Module	01/08/2014 01/08/2014
Los Gatos	Santa Clara County Fire Department *485 West Sunnyoaks Ave. Campbell, CA*	2 Module		6/25/2002
Mammoth Lakes	Mammoth Lakes FD *1574 Old Mammoth Rd, Station 2 Mammoth Lakes, CA 93456*	2 Module		10/11/2012
Menlo Park	Menlo Park Fire Protection District *300 Middlefield Rd. Menlo Park, CA*	4 Module	4 Module	11/3/2003
Merced	City of Merced Fire Dept. *99 E 16th Street, Merced CA 95340*	3 Module		06/04/2018
Middletown	CAL FIRE – South Lake County FPD *21095 Highway 175, Middletown CA 95461*	2 Module		06/15/2018
Milpitas	Milpitas Fire Department Training Center *777 South Main Street Milpitas, CA 95035*	4 Module		05/18/2016
Modesto	Modesto Junior College/Reg. Fire Authority *1220 Fire Science Lane, Modesto, CA*	4 Module	4 Module	05/25/2005 04/10/2014
Moffett Field	NASA Ames Fire Department *Moffett Field, Moffett Field, CA*	4 Module	4 Module	09/20/2018 09/20/2018

ACCREDITED TRAINING SITES
Confined Space Rescue Technician

Location	Site Address	Squads	Accredited
Escondido	Escondido Fire Department *310 N. Quince Street Escondido, CA 92025*	2 Squads	08/26/2014
Eureka	Eureka Fire Department *2401 Hillfiker Ln. Eureka, CA 91910*	1 Squad	
Freemont	Fremont Fire Department *7200 Stevenson Blvd., Fremont, CA 94537*	3 Squads	
Fresno	Fresno Fire Department *1144 E Street, Fresno, CA*	3 Squads	11/19/1998
Glendale	Glendale Fire Department *3900 E. Glen Oaks Blvd. Glendale, CA 91204*	3 Squads	04/09/2009
Grover Beach	Five Cities Fire Authority *701 Rockaway Ave. Grover Beach, CA 93433*	2 Squads	10/19/2010
Highland	San Manuel Band of Mission Indians Fire Department *26540 Indian Services Road, Highland, CA 92346*	1 Squad	11/21/2008
Ione	CAL FIRE Academy *4501 State Highway 104, Ione, CA 95640*	3 Squads	09/24/2004
Irvine	Orange County Fire Authority *1 Fire Authority Road, Irvine, CA 92602*	3 Squads	01/12/2010
Jamestown	Sierra Conservation Center Fire Department *5100 O'Byrnes Ferry Road, Jamestown CA 95327*	3 Squads	09/12/2013
Lockeford	Mokelumne Rural Fire District 13157 E. Brandt Road, Lockeford, CA 95237	3 Squads	08/26/2019
Lompoc	Allan Hancock College *One Hancock Drive, Lompoc, CA*	3 Squads	03/09/2015
Long Beach	Long Beach Fire Department *2241 Argonne Avenue, Long Beach, CA 90815*	3 Squads	06/16/2005
Los Angeles	Los Angeles City Fire Department *5101 N. Sepulveda Blvd., Station #88* *Sherman Oaks, CA 91403*	3 Squads	10/21/2011
Los Angeles	Los Angeles County Fire Department *Del Valle Regional Emergency Training Center*	3 Squads	10/28/2008
Mecca	Riverside Co. FD/ CAL FIRE – Mecca Training Site *Colmac 62-300 Gene Welmas Drive, Mecca, CA 92254*	2 Squads	02/15/2012
Merced	Merced Fire Department *1785 Ashby Rd., Merced, CA 95340*	3 Squads	03/26/2013
Milpitas	Milpitas Fire Department Training Center *777 South Main Street, Milpitas, CA 95035*	3 Squads	05/18/2016
Modesto	Modesto Fire Department *1220 Fire Science Lane, Modesto, CA 95354*	3 Squads	08/11/2003


CALIFORNIA STATE FIRE TRAINING
Professional Certification Tracks
January 2020
Fire Chief
Executive Chief Fire Officer
Executive Chief Fire Officer 4A
Executive Chief Fire Officer 4B
Executive Chief Fire Officer 4C
Executive Chief Fire Officer 4D
Executive Chief Fire Officer 4E
Fire Apparatus Driver/ Operator Water Tender
Water Tender Fire Apparatus Operations
Fire Apparatus Driver/ Operator Wildland
Wildland Fire Apparatus Operations
Fire Apparatus Driver/ Operator Tillered
Tiller App. Operations
Fire Apparatus Driver/ Operator Aerial
Aerial App. Operations
Fire Apparatus Driver/ Operator Pump
Driver/Operator 1A
Driver/Operator 1B
Chief Fire Officer
Chief Fire Officer 3A
Chief Fire Officer 3B
Chief Fire Officer 3C
Chief Fire Officer 3D
Company Officer
Company Officer 2A
Company Officer 2B
Company Officer 2C
Company Officer 2D
Company Officer 2E
Instructor 1
Emergency Vehicle Technician 3
EVT 3A
EVT 3B
Emergency Vehicle Technician 2
EVT 2A
Emergency Vehicle Technician 1
EVT 1A
EVT 1B
EVT 1C
EVT 1D
EVT 1E
EVT 1F
Retiring12-31-2020
Fire Mechanic III
Fire Management 1
Fire Mechanic 3A
Fire Mechanic 3B
Retiring12-31-2020
Fire Mechanic II
Fire Mechanic 2A
Fire Mechanic 2B
Retiring12-31-2020
Fire Mechanic I
Fire Mechanic 1
Haz Mat Specialist
Haz Mat 1F
Haz Mat 1G
Haz Mat Technician
Haz Mat 1A
Haz Mat 1B
Haz Mat 1C
Haz Mat 1D
Instructor 3
Instr. Program Mgmt.
Instructor 2
Instr. Development
Instructor 1
Instr. Methodology
Fire Inspector 2
Fire Inspector 2A
Fire Inspector 2B
Fire Inspector 2C
Fire Inspector 2D
Fire Inspector 1
Fire Inspector 1A
Fire Inspector 1B
Fire Inspector 1C
Fire Inspector 1D
Fire Marshal
Fire Marshal 1A
Fire Marshal 1B
Fire Marshal 1C
Fire Marshal 1D
Fire Marshal 1E
Chief Fire Officer 3A
Instructor 1
Plan Examiner
Plan Examiner 1A
Plan Examiner 1B
Plan Examiner 1C
Fire Investigator
Fire Investigation 1A
Fire Investigation 1B
Fire Investigation 1C
Community Risk Officer
Community Risk Officer
Community Risk Specialist
Community Risk Specialist
Community Risk Educator
Community Risk Educator
Fire Fighter 2 (2019)
Certification Exam
Retiring12-31-2021
Fire Fighter 2 (2013)
Fire Fighter 1 (2019)
Certification Exam
Retiring12-31-2021
Fire Fighter 1 (2013)
Certification Exam
ENTRY

V. Firefighter Internship & Firefighter "Field" Internship Programs

Firefighter Internship Programs (CWE): Faculty, working with the college's Career Center has established a unique opportunity for Allan Hancock College Fire and EMS Academy graduates. The Fire Technology Program has established FT-149 to accommodate all Firefighter Internships. The Fire Technology Program has partnered with the following Local Fire Agencies to host Allan Hancock College students in semester long internships:

Santa Barbara County Fire Department	(3 Internship Positions)
Santa Barbara City Fire Department	(3 Internship Positions)
City of Santa Maria Fire Department	(3 Internship Positions)
City of Atascadero Fire Department	(3 Internship Positions)

COURSE DESCRIPTION

Students who are accepted into the Firefighter Internship are required to develop a minimum of three learning objectives. The students' progress towards the learning objectives will be evaluated twice during the semester. A final essay will also be required outlining the students experience and learning objectives outcomes. The course provides supervised manipulative and technical training and work experience in the basic concepts of fire department operations, organizations and emergency response. Firefighter Interns will be assigned various duties at their assigned host Fire Department. Firefighter Interns will report to duty on assigned days and function as the junior member of the crew. The Intern will clean the station and apparatus, respond with the assigned fire company to emergency and non-emergency requests for service, participate in crew training and maintenance projects. This work experience program is designed to assist students in acquiring desirable work habits, attitudes, and skills and fostering positive workplace attitudes.

The Fire Technology has also developed the Firefighter "Field" Internship which allows full time professional Firefighters to earn college credit while completing a semester long internship with the college in partnership with their Fire Service employer. The course description and student learning outcomes are the same as the Firefighter Internship program.

Units earned with either of the Firefighter Internship will apply as elective towards a Fire Technology Associates Degree.

VI. In-Service Training Fire Service Refresher Schools

This is a new area of expansion for the Fire Technology Program. We believe from speaking with our local fire agencies that this type of training is needed and could be well facilitated by the Allan Hancock College Fire Technology program. This type of training could occur on-site at the PSTC or delivered remotely to better serve our fire service partners.

The following Non-Credit Courses have been developed to facilitate this need.

FTNC 7001 Spring Firefighter In-Service Training

FTNC 7002 Fall Firefighter In-Service Training

FTNC 7003 Summer Firefighter In-Service Training

These programs have been designed to work as standalone outreach courses. They are also designed to work within our Instructional Service Agreements with our local fire agencies.

VII. Instructional Service Agreements (ISA) Training and Partnerships

The Fire Technology program has been working with the Coordinator of Contract Education to further develop Instructional Service Agreements with our local fire agencies. We have been researching several successful fire technology contract education programs and have completed the curriculum required to expand in this area. The following courses have been developed to service this area.

FTNC 7001 Spring Firefighter In-Service Training

FTNC 7002 Fall Firefighter In-Service Training

FTNC 7003 Summer Firefighter In-Service Training

These courses have been designed to allow for an annual Certificate of Accomplishment on refresher skills for local fire agencies.

PURPOSE AND GOALS

PURPOSE

The purpose of the Fire Technology program is to provide vocational training both didactic and hands-on to prepare future firefighters from across the state of California for employment. Additionally, the purpose of the fire technology program is to prepare existing Firefighters, Engineers and Chief Officers for promotion. This purpose is serviced by managing and providing the following programs of study and hands on participation.

CURRENT STATE OF THE PROGRAM

The Fire Technology program is functioning well and having success. We are just starting to gain additional momentum in new areas. There is a need to engage in additional outreach to better support enrollments within the Fire Academy and Fire Technology Degree and Certificate programs.

The Fire Technology Program is effective in serving its established purpose. We serve our purpose through the administration of the following programs.

1. Fire Technology Associates Degree's and Certificates
2. Wildland Fire Technology Degree's and Certificates
3. California State Certified Firefighter I Academy
4. State Certified Fire Service Promotion Based Course
5. Firefighter Internships / Career Work Experience (CWE)
6. CSFM Certified Rescue Schools
7. CSFM FSTEP Courses
8. In-Service Training & Refresher Programs
9. Instructional Service Agreements (ISA) Contract Education

1. **Fire Technology Associates Degree and Certificate Program**: The FT-101-105 courses have been recently updated & improved and are meeting and exceeding the National Fire Academy developed "FESHE" Model Fire Technology curriculum. Allan Hancock College was one of the first colleges to provide these courses in a distance learning environment the student volume early on was very high as we were servicing a statewide student population. As additional college came online the student volume dipped and leveled off. More recently our student volume has been increasing and we have been doubling up our sections in our core courses to accommodate student loads.

   Our current core course deliveries are effective in providing our student base the opportunity to work online to progress towards their academic goals. We must continue to improve the look, feel and content of our programs each semester. Faculty and Part-Time Faculty members administering these programs must attend internal and external professional development opportunities to keep our courses fresh and in-line with industry standard. The quality of a given program must be evaluated by a detached and removed view to be accurate, unbiased and realistic.

   Recommendation: Establish overall Fire Technology Program Leadership. Evaluate all degree and certificate programs for their adherence to FESHE recommended curriculum and text every 2 years. Evaluate and adjust student learning outcomes (SLO's) and Course Outlines of Record (COR's) as needed.

   The college Canvas Learning Management System (LMS) is working very well. The faculty and student support provided by Canvas has been outstanding. The platform is well designed and maintained and allows for a statewide student base.

2. **Wildland Fire Technology Degree & Certificate Program:** The Wildland Fire Technology program had been basically non-existent. The program as it was written has never had a large enough student base to fully function. We are changing that outcome through recent efforts. An Advisory Committee was established to re-launch a scaled back re-tooled program that we believe will allow for a viable degree and certificate program to exist.

   As we re-launch the program it will not have the volume of student that the current Fire Technology Degree and Certificate program enjoy. We will need to invest in the marketing and support of the effort to re-launch the program and allow it to grow and succeed over time.

3. **California State Certified Firefighter I Academy**

   The Fire Academy is a long-standing well-run program that is a corner stone of Allan Hancock College's reputation. as a vocational school statewide. The Fire Academy and its staff deliver a high quality and efficient program. All State Fire Marshal required curriculums are delivered over a full semester course. All Fire Academy students are also required to attend a fitness program to improve their overall health and fitness while in the program.

4. **California State Certified Promotional Based Programs**

   The Fire Technology program has established and instructor Cadre to deliver the State Fire Marshal Company Officer series. These courses are required in most Fire Captain promotional exams as a pre-requisite for job knowledge. As of 2020 this series of courses has been placed on a two-year rotation.

FTEC 301	Company Officer 2A	Human Resource Management	40 hr.
FTEC 302	Company Officer 2B	General Administrative Functions	20 hr.
FTEC 303	Company Officer 2C	Fire Inspections and Investigation	40 hr.
FTEC 304	Company Officer 2D	All-Risk Incident Command Ops.	40 hr.
FTEC 305	Company Officer 2E	Wildland Incident Management	40 hr.
FTEC 306	Instructor Methodology		40 hr.

   A future effort to expand our student opportunities in this area has been identified and we are working to develop the regular delivery of this new Academy.

   The Central Coast Fire Service Leadership Academy

   Looking forward the Fire Technology Program will be looking to develop a 40-hour Leadership Academy. This will be geared for the fire service but will be relevant and open to all students and faculty. The following courses currently exist in the course catalog and will be bundled to form a certificate of completion for the series.

FT-111 Developing a Personal Philosophy of Leadership	2.0 units
FT-112 Leading Others	1.5 units
FT-113 Organizational Leadership	2.0 units

5. **Firefighter Internship & "Field" Internship Programs:** After a shut down due to COVID these programs are due to restart in the Fall 22 semester. We have established an Advisory Committee made up of Faculty, Staff and Industry partners to help guide the program. We have had three courses thus far and have had several of our Firefighter Interns hired into paid professional positions. This program should continue to produce tremendous opportunity for our students and positively impact their career aspirations.

6. **Career Work Experience (CWE) Firefighter Internship Programs**
   The Fire Service Career Work Experience Programs are well designed and are continuing to be a relevant new program for Allan Hancock College that is rare in California. The program is efficient in its command and control and sustainability. The program is a collateral assignment that is run by an existing Faculty member and augmented by assistance from the Public Safety Facilities Coordinator. An Advisory Committee of the participating fire agencies is established. We are working to build a student fee into the program for the long-term upkeep of required inventory and maintenance of protective clothing and uniforms that are issued to Firefighter Interns for the semester. This will allow for the program to be self-funded and augmented as needed from the Fire Technology budget.

7. **CSFM Certified Rescue Schools**

   This area of instruction represents six State Fire Marshal Urban Search and Rescue Programs. These programs are required throughout the California Fire Service and are marque programs for a facility like the Public Safety Training Complex. Our delivery of these courses attracts Firefighters from throughout California to the PSTC

In-Service Training Programs: We are starting to develop a flow of courses that our local fire agencies and the California fire service can rely on. We have worked hard to garner a good reputation. This requires high level instruction to be matched with industry standard tools and equipment and facilities. We will be working to improve and maintain the following current work efforts.

1. CSFM Company Officer Series (*Required courses to be delivered on a 2-year rotation*)

2. CSFM Urban Search and Rescue Programs (*Provided on a 2-year rotation*)

3. AHC PSTC Central Coast Truck Company Operations Academy

   Under Development: At the request of the Santa Barbara County Fire Chiefs Association, the Central Coast Truck Academy (CCTA). This is a joint effort with the Santa Barbara County Fire Chief's Association. The hope is for this program to begin in the Spring 2023 semester. We have planned for 2 deliveries a year. This program is highly anticipated but is dependent on the construction of a Roof Ventilation Prop which has been funded.

4. Skills Maintenance Programs (SMT): We will be working to develop several skills maintenance programs to support vital skill sets in the California Fire Service.

5. Large scale MOBEX Drills will occur once every two years in support of the California Urban Search and Rescue mission.

6. CSFM FSTEP Course Delivery

GOALS

- Recognize excellence in educational and support programs.

- Advance the mission, vision, goals and Objectives, and learning outcomes of the institution.

- Integrate program review with the planning, assessment, and budget and resources allocation process of the college.

- Strengthen programs through self-study and self-improvement.

- Foster cooperation and communication between programs and services.

The long-term program goals fall into several different categories and have been covered in the body of this document. The areas that will be further developed over the next several years are as follows.

Establish the Fire Technology Coordinator Position, *Spring 2023*

Continue to grow the Fire Technology Associates & Certificate Program

Relaunch the Wildfire Technology Associates & Certificate Program, *Completed*

Continue to develop all Firefighter Internship Programs

Continue to develop the Public Safety Training Complex fixed facilities

Continue to modernize and improve industry standard tools and equipment caches

Participate in SB/SLO County Training Officer Meetings

Develop and Implement the Central Coast Truck Academy, *Spring 2022*

Continue to develop statewide offerings of CSFM FSTEP Courses

Development of the Central Coast Leadership Academy, *Fall 2023*

Develop a marketing strategy, social media, and website upgrades *Spring 2023*

Continue to provide high level CSFM Rescue Schools Annually

Develop and implement the Skills Maintenance Training (SMT) Program, *Fall 2023*

Work to develop additional Instructional Service Agreements (ISA's) Fall 2022

Continue to work with our current Advisory Committee's

Develop High School Outreach Program

Research and develop the Firefighter Safety & Survival Course Fall 2023

Develop the Women's and Girls Fire Camps

STATUS SUMMARY

STUDENT DATA SUMMARY & STATISTICS

I. SUCCESS, RETENTION & EQUITY

The Fire Technology Program is not a large user of college student services. We tend to be a stand-alone vocational training program that is focused on high level instruction and training to prepare our students for success in the job market.

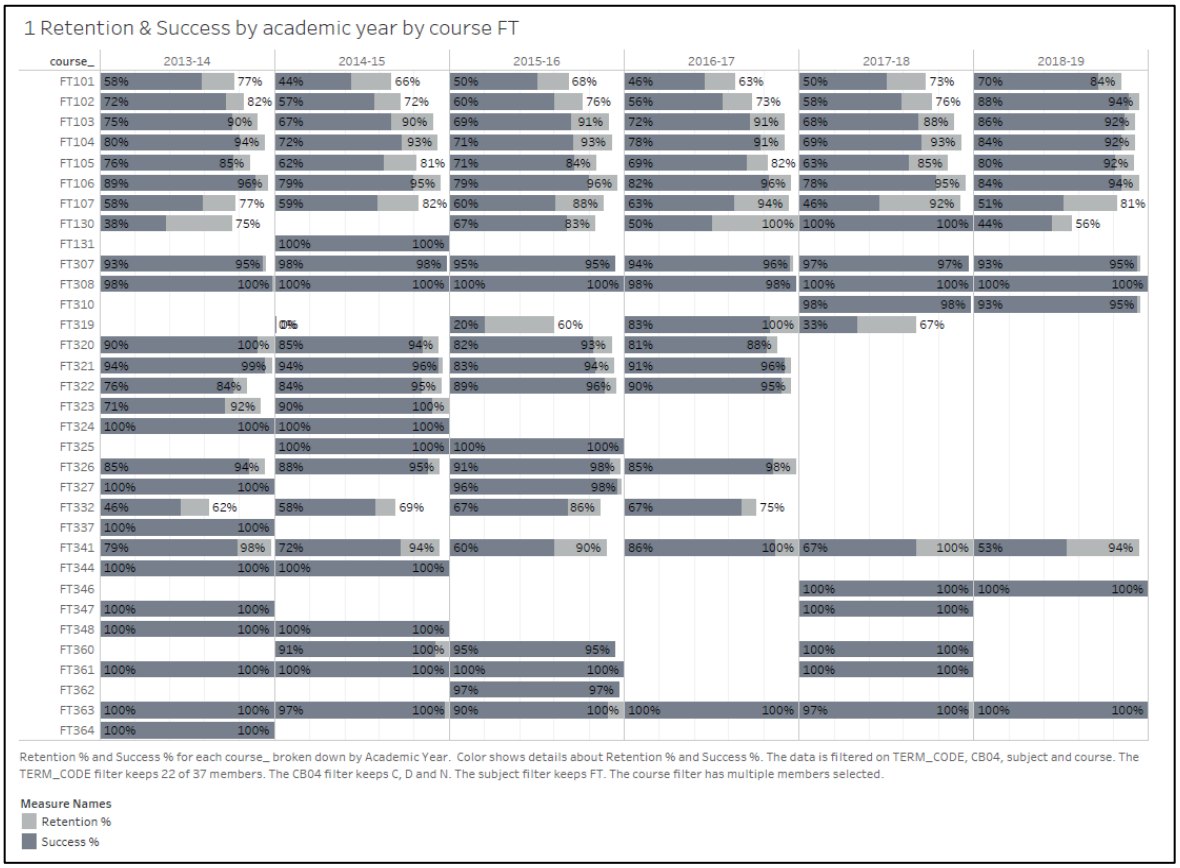
We need to do a better job of making sure our students are aware of all the student services that are available to them during their time as an Allan Hancock College student. Several student service programs are referenced in course syllabi but are not actively marketed by Fire Technology Faculty. The college, however, does a great job of marketing all available programs to students' college wide using the myhancock email system and the college website. This has been seen as the outreach required to service our students' access and awareness of all available programs.

We do use the libraries at the Lompoc Valley Center (LVC) and the Main Campus to host the textbooks that support our Fire Technology degree and certificate programs.

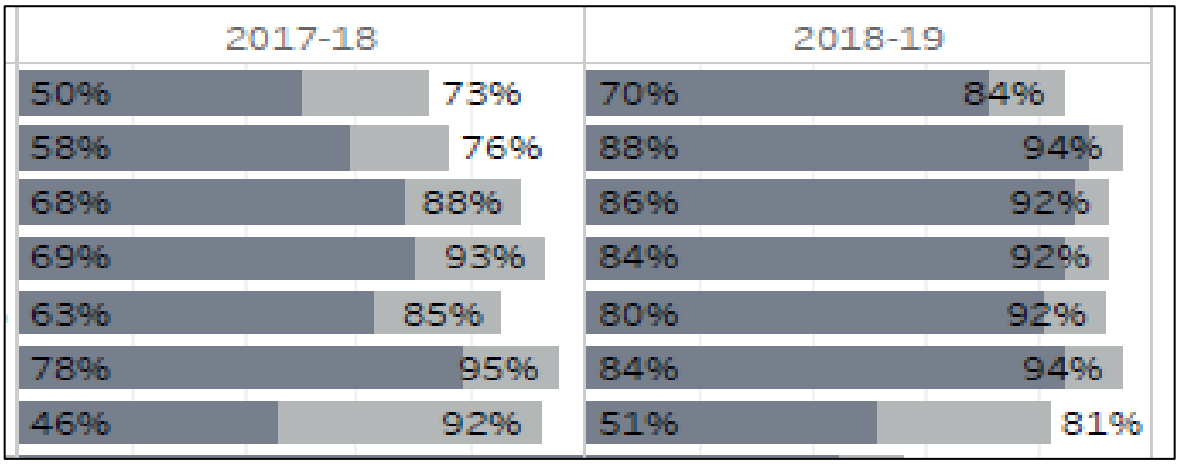
Our community partnerships are strong. They are based in our local Fire and EMS providers. Many of these Public Safety professional play an active role in our Advisory Committee's and help forge the direction for program needs and development.

STUDENT SUCCESS

The following information comes to this document from the Office of Institutional Research and Planning:



As you can see from the data collected in the 2018-2019 field, we have increased our student retention and success rates in our Associates Degree and Certificate programs significantly. This improvement in student retention and success corresponds with the recalibration of the program by a new Full-Time Faculty member. We have also received positive feedback from all students on the quality of the programs and attentiveness of the faculty.



PROGRAM DEMOGRAPHICS

2 Program Demographics FT

course_
All

Choose individual course via filter or see Appendix A for full demographic course details

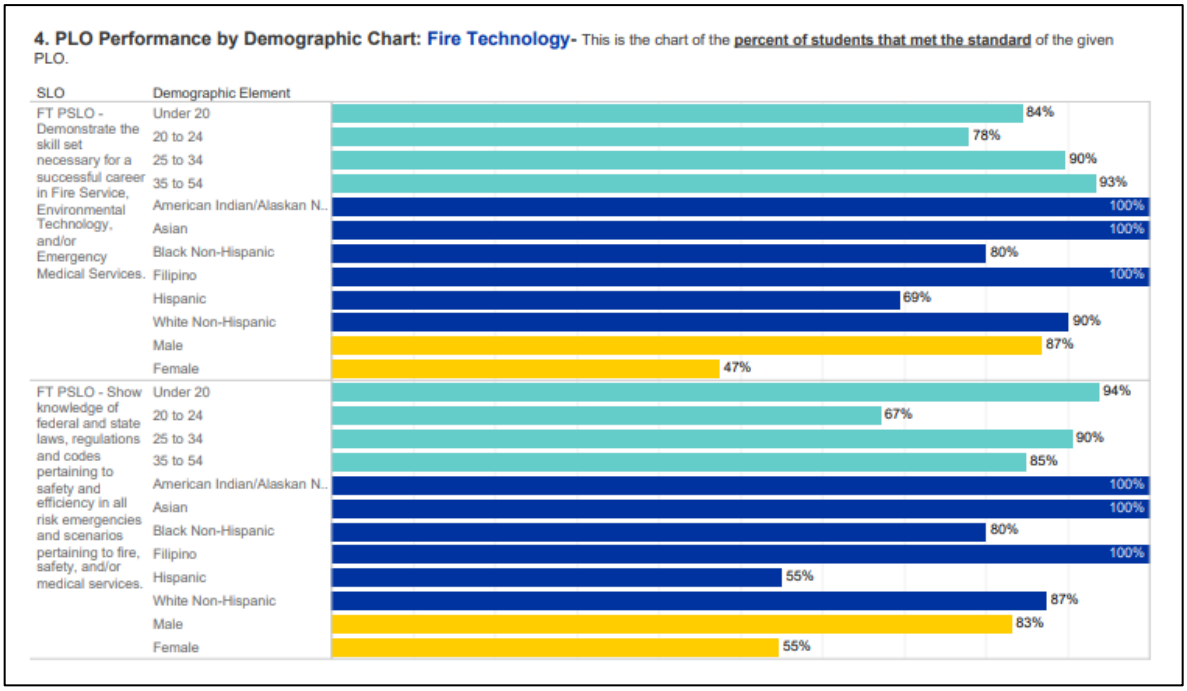
Academic Year

	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19	
Age Category	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES
Under 19	70	19.0	71	13.1	70	14.4	64	14.2	42	7.2	47	12.1
20-24	286	78.1	285	90.7	261	88.4	230	75.4	189	76.7	104	49.9
25-29	262	71.2	268	71.5	256	62.3	176	57.8	136	45.4	65	30.6
30-34	211	37.7	204	33.8	241	50.8	139	32.3	86	19.5	40	14.6
35-39	122	21.5	126	20.7	134	24.1	85	13.8	48	14.2	32	7.7
40-49	130	21.4	126	19.3	112	15.5	55	9.2	31	9.0	12	3.4
50+	26	3.5	24	3.5	19	2.5	10	1.4	9	1.6	5	0.8

	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19	
ETHNICITY	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES
Asian	42	8.2	48	7.9	39	7.8	22	4.1	14	4.6	4	0.9
Black	31	8.7	48	11.0	33	9.7	34	8.0	23	5.3	9	1.7
Filipino	12	1.9	21	5.9	14	4.1	6	0.6	4	1.1	3	1.4
Hispanic	227	52.9	208	50.9	229	58.6	141	36.2	97	28.3	52	18.5
NativeAm	21	6.7	25	7.7	25	4.5	16	3.6	7	1.1	4	0.8
Other					1	0.1	1	0.1				
PacIsl	7	0.9	9	1.6	9	4.0	10	1.9	5	1.7	4	1.0
White	744	173.1	733	167.6	731	169.5	513	137.6	380	131.0	223	93.2

	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19	
	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES
Female	85	23	98	28	78	18	60	15	52	14	28	11
Male	999	229	994	225	1,003	241	677	176	476	159	269	106
Unknown							6	1	2	0	2	0

	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19	
	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES	Headcount	FTES
First Time	80	13	83	15	88	15	45	9	36	7	25	5
First Time Transfer	498	104	465	102	490	102	333	74	270	74	102	40
Continuing	305	80	372	97	391	98	304	88	201	73	159	54
Returning	320	55	243	38	216	43	108	20	66	18	45	18
Special Admit	3	0	3	0	4	0	20	2	4	1	2	0
Grand Total	1,084	252	1,092	253	1,081	258	743	192	530	173	299	117



The Fire Technology program continues to be dominated by student from the age of 19-29. The program is also overwhelmingly attended by white males. The disparity is significant with 223 white males attending in 2018-2019 with the closest group in the same period being Hispanic with only 52 attending. Gender disparity is also apparent as during the 2018-2019 period 269 students were male while only 28 were female. Most Fire Technology students are either first time transfer students or continuing students.

The California Fire Service Industry trends do reflect the demographic and gender gaps that are represented in the above data. Fire Departments across California have made a significant effort to recruit underrepresented groups in recent years. These efforts have been echoed to Allan Hancock College Fire Technology students via Canvas Announcements of recruitment opportunities and outreach programs.

Locally, we are looking to stand up a few outreach programs at the Public Safety Training Complex that will target underrepresented groups. These programs will target high school students and young adult ages 16-21. All above represented data is taken from our students statewide. We will look to improve our outreach to our residents that fall into an underrepresented category with local programs. Future Programs:

Girls Fire Camp
High School Outreach Camps
Fire Service-Related Job Fairs

EQUITY AND OUTCOMES

3 Program Equity Outcomes FT

Percentage Point Gap (PPG)-compare a group outcome to the overall outcome, if group is 3% less or lower than overall then group is disproportionately impacted.
PPG Mod-same as PPG except overall outcome is modified to NOT include group outcome.
PPG Impact-amount of students needed to have a positive outcome in order to have the group reach equity.

Equity Outcomes only work for a single subject. Contact IE to get data for multiple subjects

	Academic Year 2018-19								
	Headcount	Enrollment	FTES	Retention %	PPG Retention Mod	PPG Retention Impact	Success %	PPG Success Mod	PPG Success Impact
Asian	4	9	0.9	88.9%			44.4%		
Black	9	17	1.7	76.5%			64.7%		
Filipino	3	6	1.4	83.3%			83.3%		
Hispanic	52	118	18.5	93.2%	1.4%		84.7%	1.5%	
Native Am	4	7	0.8	71.4%			71.4%		
Pac Isl	4	10	1.0	90.0%			90.0%		
White	223	571	93.2	92.6%	2.4%		84.2%	3.2%	
Unknown	3	7	1.5	100.0%			100.0%		
Grand Total	**302**	**745**	**119.0**	**92.1%**			**83.5%**		

3 Program Equity Outcomes FT

Percentage Point Gap (PPG)-compare a group outcome to the overall outcome, if group is 3% less or lower than overall then group is disproportionately impacted.
PPG Mod-same as PPG except overall outcome is modified to NOT include group outcome.
PPG Impact-amount of students needed to have a positive outcome in order to have the group reach equity.

Equity Outcomes only work for a single subject. Contact IE to get data for multiple subjects

	Academic Year 2018-19								
	Headcount	Enrollment	FTES	Retention %	PPG Retention Mod	PPG Retention Impact	Success %	PPG Success Mod	PPG Success Impact
Female	28	81	11.2	86.4%	-6.4%	6	77.8%	-6.4%	6
Male	272	662	107.5	92.9%	7.4%		84.3%	7.2%	
Unknown	2	2	0.2	50.0%			50.0%		
Grand Total	**302**	**745**	**119.0**	**92.1%**			**83.5%**		

3 Program Equity Outcomes FT

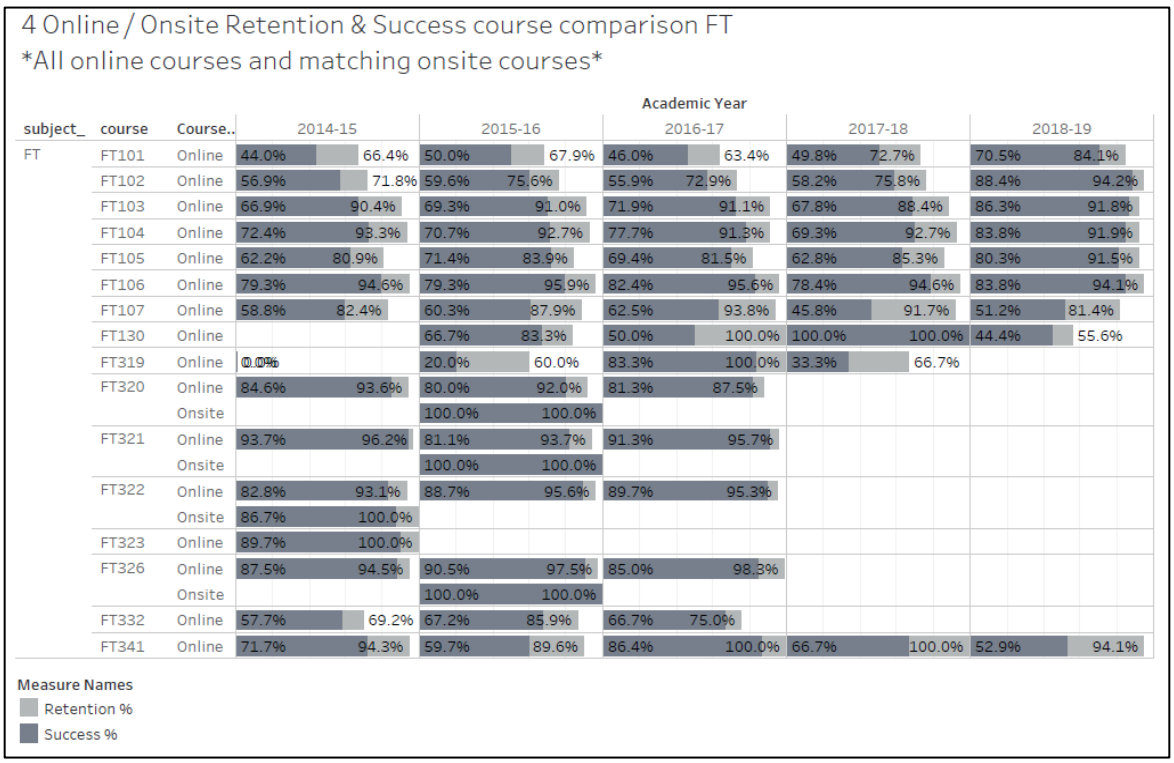
Percentage Point Gap (PPG)-compare a group outcome to the overall outcome, if group is 3% less or lower than overall then group is disproportionately impacted.
PPG Mod-same as PPG except overall outcome is modified to NOT include group outcome.
PPG Impact-amount of students needed to have a positive outcome in order to have the group reach equity.

Equity Outcomes only work for a single subject. Contact IE to get data for multiple subjects

	Academic Year 2018-19								
	Headcount	Enrollment	FTES	Retention %	PPG Retention Mod	PPG Retention Impact	Success %	PPG Success Mod	PPG Success Impact
Female	28	81	11.2	86.4%	-6.4%	6	77.8%	-6.4%	6
Male	272	662	107.5	92.9%	7.4%		84.3%	7.2%	
Unknown	2	2	0.2	50.0%			50.0%		
Grand Total	**302**	**745**	**119.0**	**92.1%**			**83.5%**		

ONLINE PROGRAM RETENTION AND SUCCESS

All the core courses to receive an associate degree of Certificate of Achievement are hosted online. The following are the historical numbers for retention and success in this format.



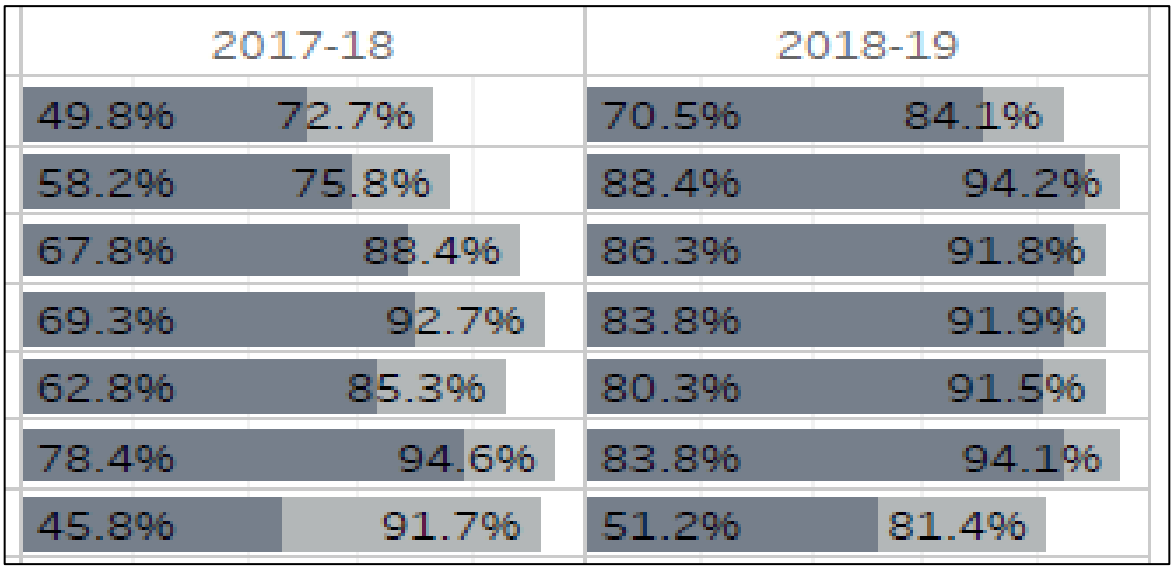
4 Online / Onsite Retention & Success course comparison FT
All online courses and matching onsite courses

Academic Year

subject_	course	Course..	2014-15		2015-16		2016-17		2017-18		2018-19	
FT	FT101	Online	44.0%	66.4%	50.0%	67.9%	46.0%	63.4%	49.8%	72.7%	70.5%	84.1%
	FT102	Online	56.9%	71.8%	59.6%	75.6%	55.9%	72.9%	58.2%	75.8%	88.4%	94.2%
	FT103	Online	66.9%	90.4%	69.3%	91.0%	71.9%	91.1%	67.8%	88.4%	86.3%	91.8%
	FT104	Online	72.4%	93.3%	70.7%	92.7%	77.7%	91.3%	69.3%	92.7%	83.8%	91.9%
	FT105	Online	62.2%	80.9%	71.4%	83.9%	69.4%	81.5%	62.8%	85.3%	80.3%	91.5%
	FT106	Online	79.3%	94.6%	79.3%	95.9%	82.4%	95.6%	78.4%	94.6%	83.8%	94.1%
	FT107	Online	58.8%	82.4%	60.3%	87.9%	62.5%	93.8%	45.8%	91.7%	51.2%	81.4%
	FT130	Online			66.7%	83.3%	50.0%	100.0%	100.0%	100.0%	44.4%	55.6%
	FT319	Online	0.0%		20.0%	60.0%	83.3%	100.0%	33.3%	66.7%		
	FT320	Online	84.6%	93.6%	80.0%	92.0%	81.3%	87.5%				
		Onsite			100.0%	100.0%						
	FT321	Online	93.7%	96.2%	81.1%	93.7%	91.3%	95.7%				
		Onsite			100.0%	100.0%						
	FT322	Online	82.8%	93.1%	88.7%	95.6%	89.7%	95.3%				
		Onsite	86.7%	100.0%								
	FT323	Online	89.7%	100.0%								
	FT326	Online	87.5%	94.5%	90.5%	97.5%	85.0%	98.3%				
		Onsite			100.0%	100.0%						
	FT332	Online	57.7%	69.2%	67.2%	85.9%	66.7%	75.0%				
	FT341	Online	71.7%	94.3%	59.7%	89.6%	86.4%	100.0%	66.7%	100.0%	52.9%	94.1%

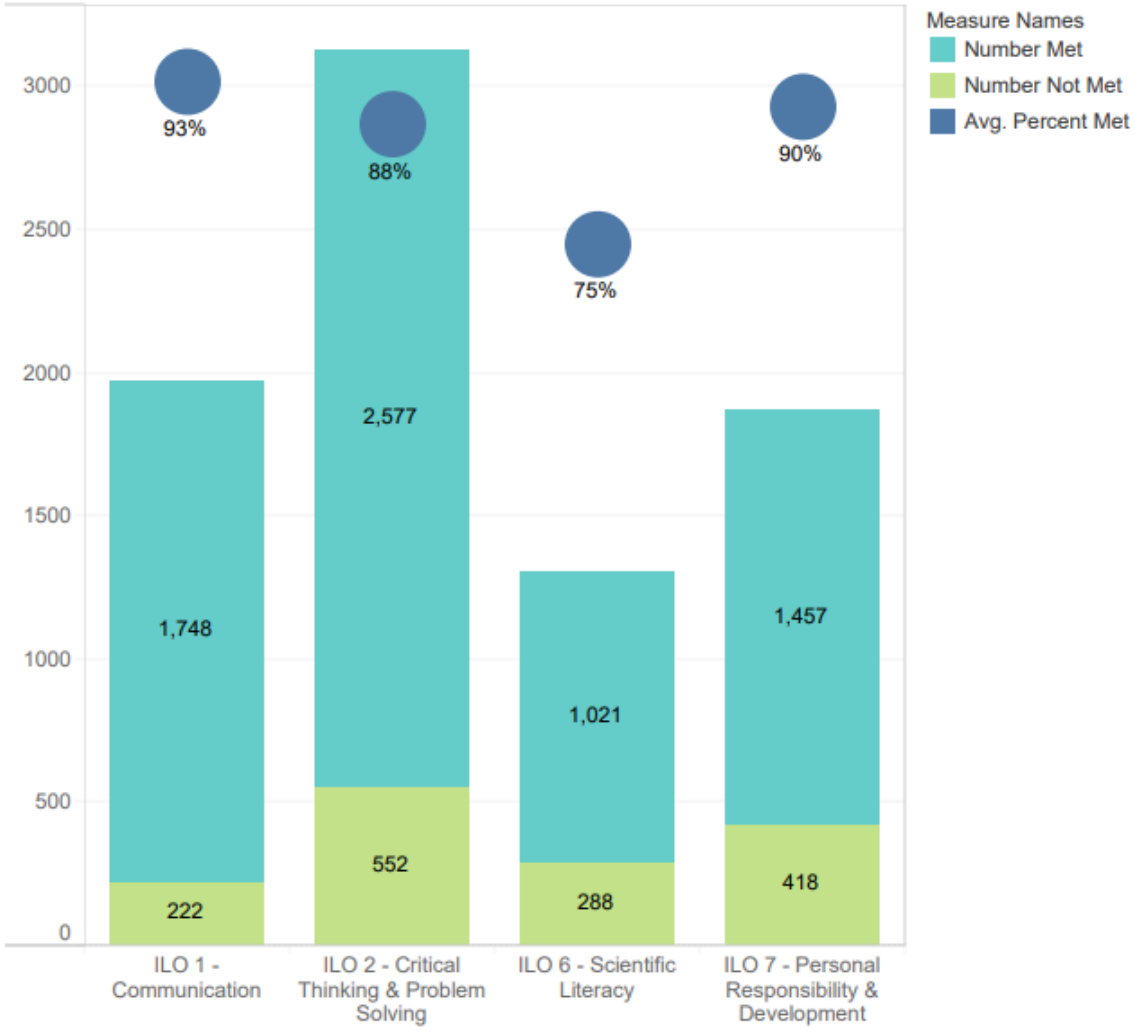
Measure Names
Retention %
Success %

As you can see from the data collected in the 2018-2019 field, we have increased our student retention and success rates in the distance learning format significantly. This improvement in student success corresponds with the recalibration of the program by a new Full-Time Faculty member. We have also received positive feedback from all students on the quality of the programs and attentiveness of the faculty.



2017-18		2018-19	
49.8%	72.7%	70.5%	84.1%
58.2%	75.8%	88.4%	94.2%
67.8%	88.4%	86.3%	91.8%
69.3%	92.7%	83.8%	91.9%
62.8%	85.3%	80.3%	91.5%
78.4%	94.6%	83.8%	94.1%
45.8%	91.7%	51.2%	81.4%

9. ILO Performance Chart: Fire Technology- This is the ILO performance of the program for the past 6 academic years in a table that includes the number of courses that are connected to each ILO.



STUDENT DATA COLLECTION

VII. STUDENT DATA SUMMARY

Positives

1. 45 Responses or 80% of students in the program report that they were highly satisfied with the quality of instruction in the program. Th second category was "Somewhat satisfied and 11% of respondents fell to this category. This gives Fire Technology 91% of its students are reporting that they a satisfied with the quality of instruction in the program.

2. Of 44 Responses 100% advised that they recommend taking Fire Technology Courses at Allan Hancock College.

3. of 45 Respondents 84% advised that they were highly satisfied and the course goals and learning objectives were clear and easy to understand.

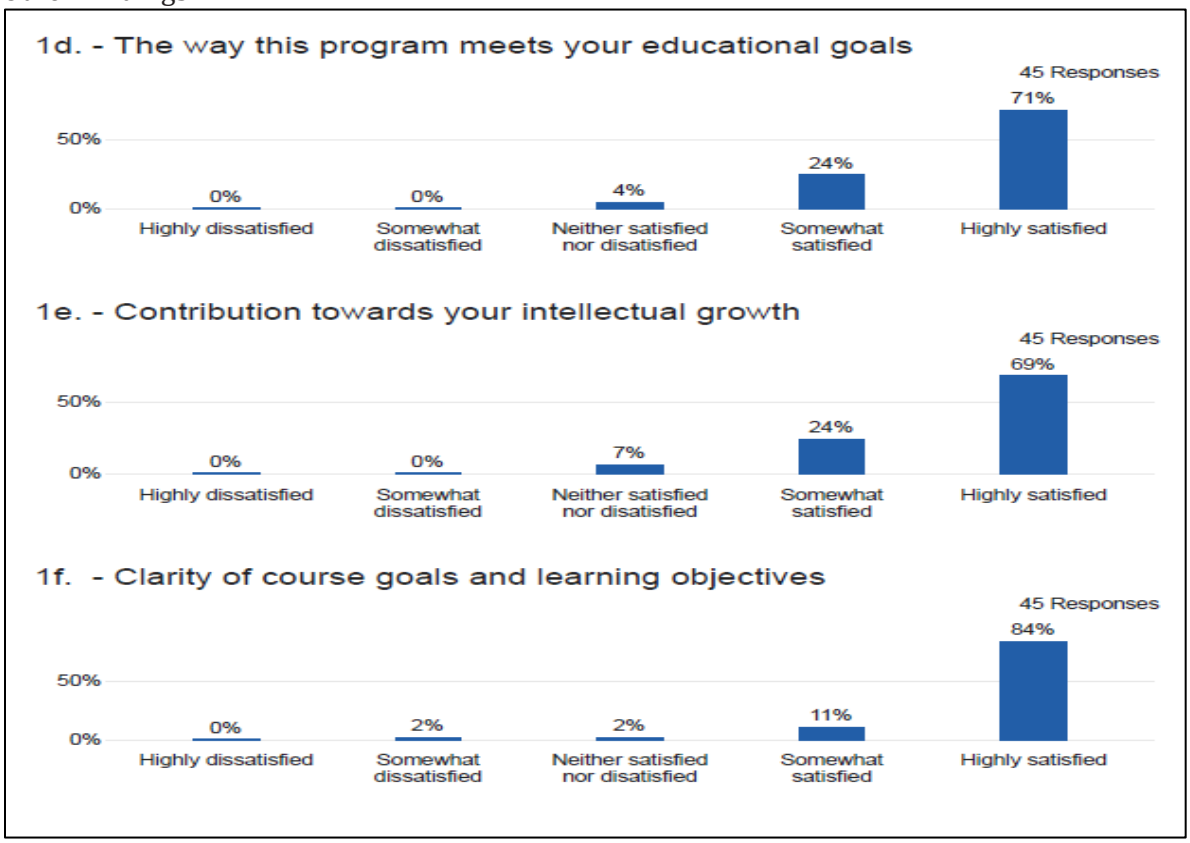
Negatives

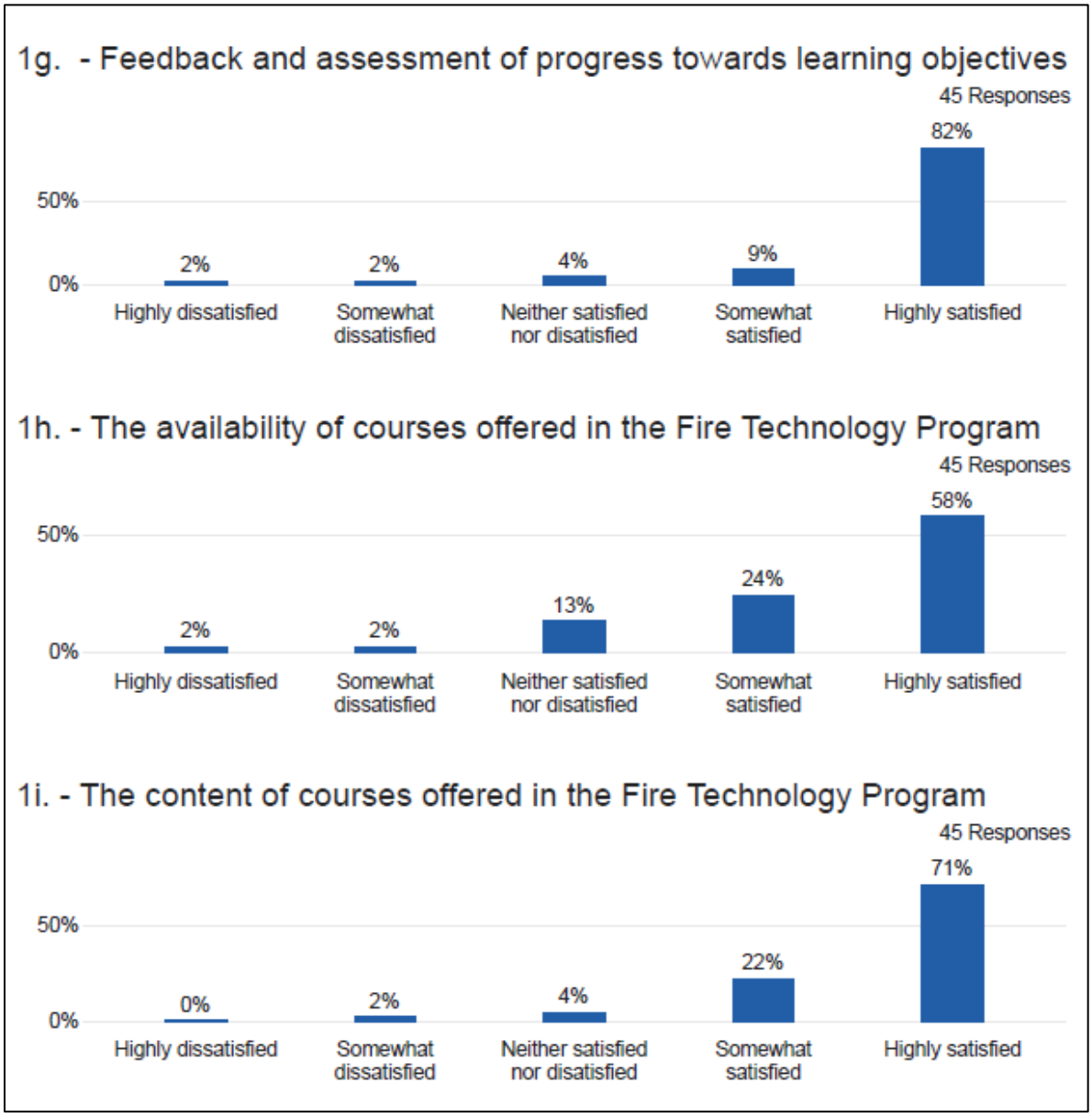
1. Of 37 respondents 27% advised that they were neither satisfied or dissatisfied with advice from the counseling department about the program.

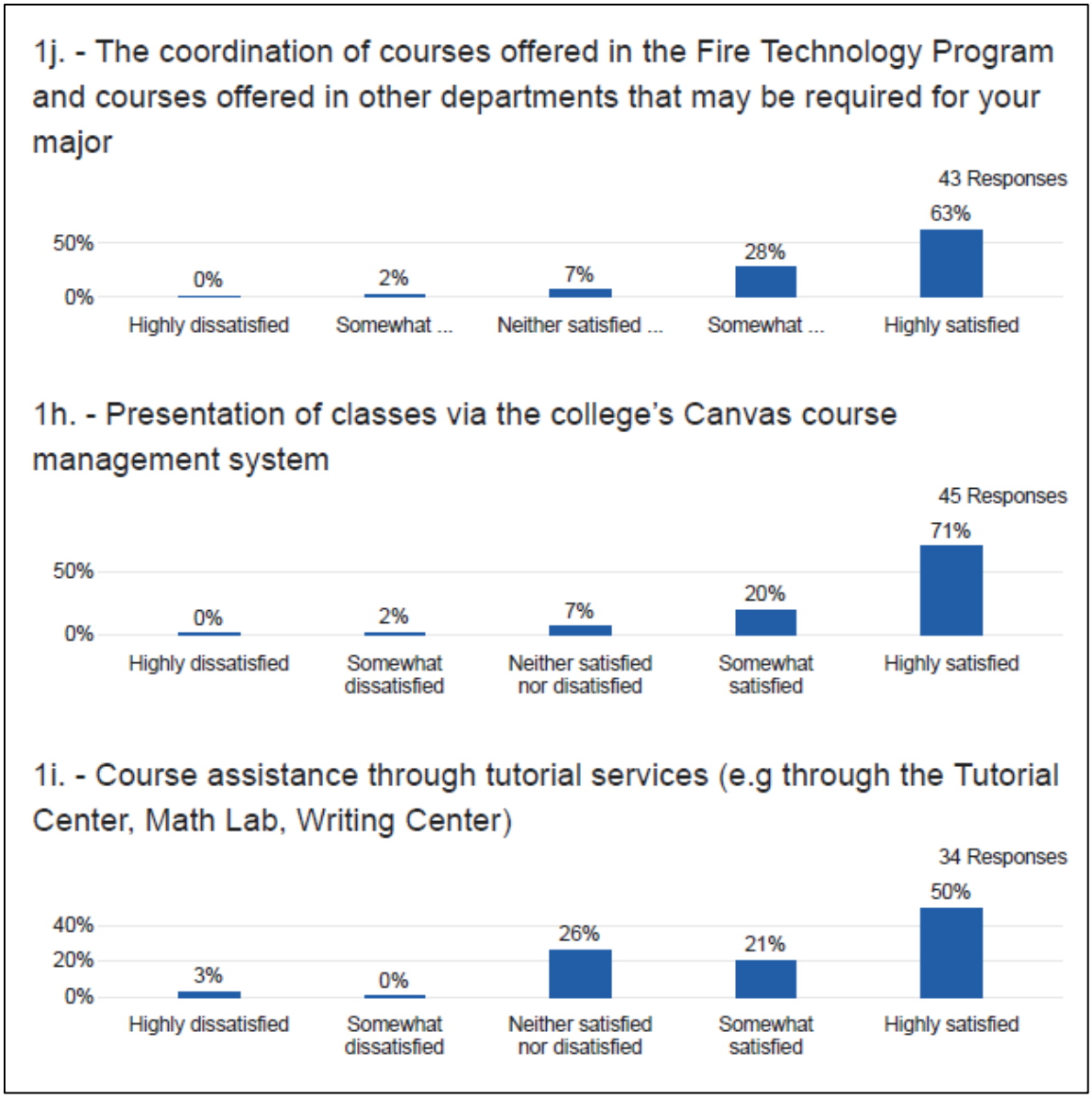
2. Of 45 respondents 31% advised that compared to the beginning of the semester , their aptitude about the Fire Technology Program stayed the same.

3. Of 33 respondents 30% advised that they were neither satisfied or dissatisfied with the availability of appropriate resources in the libraries.

Other Findings




1g. - Feedback and assessment of progress towards learning objectives
45 Responses
82%
50%
2%
2%
4%
9%
0%
Highly dissatisfied
Somewhat dissatisfied
Neither satisfied nor disatisfied
Somewhat satisfied
Highly satisfied
1h. - The availability of courses offered in the Fire Technology Program
45 Responses
58%
50%
24%
13%
2%
2%
0%
Highly dissatisfied
Somewhat dissatisfied
Neither satisfied nor disatisfied
Somewhat satisfied
Highly satisfied
1i. - The content of courses offered in the Fire Technology Program
45 Responses
71%
50%
22%
0%
2%
4%
0%
Highly dissatisfied
Somewhat dissatisfied
Neither satisfied nor disatisfied
Somewhat satisfied
Highly satisfied



SURVEY EVALUATION AND PLANNING

Overall, the Fire Technology is providing a high quality and well received program to ist students. The textbooks assigned to the courses are relevant and score highly with student on relevance. Faculty should work with the Counseling Department to provide better insight into the program to improve student interactions and advice. Course availability was rated by 58% of respondents as highly satisfied and by 24% as somewhat satisfied. Faculty should continue to monitor student registration and add sections as needed to meet student needs. Course content was rated by 93% of respondents as satisfactory with 71% feeling highly satisfied. The Canvas LMS was scores as satisfactory by 93% of respondents. 98% of respondents advised that they intended to take additional Fire Technology courses. 56% of respondents intended to work toward their AA/AS Degree.

The student surveys have clearly indicated that the Fire Technology program is health and serving the needs of our students. We will continue to improve all of our courses and work to keep them current with the industry as well as engaging for our students.

V. FIRE TECHNOLOGY PROGRAM STUDENT BASE

The Public Safety Training Complex is a rare facility in the state of California. Its ability to host high level programs to college level students as well as Volunteer, Paid Call and Professional Firefighters is significant.

Faculty has been working diligently to open the doors of the training center and build partnerships across our local government fire agencies and the greater California fire service.

1. College Level Students looking to get into the Fire Service

   This student population is filling our Fire Academy each semester without issue. The number of applications received for the Academy exceeds the number of positions available each semester. This is largely due to the name and legacy of the Allan Hancock College Fire Academy around California. This student base is also served by the Fire Technology and Wildland Fire Technology Associates Degree and Certificate Programs. The college will need a new marketing and strategy to help the Fire Academy as well as all Fire Technology programs remain relevant with a large student base into the future. New social media accounts have recently been activated to showcase the AHC PSTC and the various programs it provides but more work is needed in this area.

2. Volunteer and Paid-Call Firefighters

   This is a student base that can be increased. There are no fully Volunteer Fire Departments in Santa Barbara County. San Luis Obispo County through California Department of Forestry (Cal Fire) does have many Paid Call Firefighters (PCF's) that

3. Professional Firefighters

   This student base is served by the Fire Technology and Wildland Fire Technology Associates Degree and Certificate Programs. These programs are offered statewide though distance learning and help many firefighters qualify for promotion within their agency. Additional marketing of these programs should be developed and routinely provided to the California Fire Service.

   This student demographic has also been attending courses at the PSTC on a regular basis. The following local agencies are routinely attending courses:

   Santa Barbara County Fire Department
   Santa Barbara City Fire Department
   City of Santa Maria Fire Department
   Five Cities Fire Authority
   Carpinteria / Summerland Fire Department
   Montecito Fire Department
   Vandenberg Fire Department
   Guadalupe Fire Department
   Cal Fire

   We also routinely hosted Firefighters from as far north as Sacramento and as far south as San Diego.

VALADATION TEAM

PROGRAM REVIEW – VALIDATION TEAM MEMBERS

TO: Academic Dean Date: 5/16/2022

From: John Ceceña

We recommend the following persons for consideration for the validation team:

DEPARTMENT Public Safety PROGRAM Fire Technology

Board Policy requires that the validation team be comprised of the dean of the area, one faculty member from a related discipline/program, and two faculty members from unrelated disciplines.

Mitch McCann	Associate Dean Public Safety
(Name)	(Related Discipline/Program)
Dave Whitham	Public Safety Director
(Name)	(Unrelated Discipline/Program)
John Ceceña	Fire Technology Faculty
(Name)	(Unrelated Discipline/Program)

At the option of the self-study team, the validation team may also include one or more of the following: a. someone from a four-year institution in the same discipline; someone from another community college in the same discipline; a high school instructor in the same discipline; a member of an advisory committee for the program. Please complete the following as relevant to your program review.

Leonard Champion (Name) AHC Fire Academy Coordinator (Title)

Affiliation: Full-Time Faculty Telephone Contact Number: ext, 3807

Address 1 Hancock Drive (Mailing) Lompoc, CA 93436 City/State/Zip email address

(Name) (Title)

Affiliation: Telephone Contact Number:

Address (Mailing) City/State/Zip email address

(Name) (Title)

Affiliation: Telephone Contact Number:

Address (Mailing) City/State/Zip email address

APPROVED: Academic Dean Date

29

ARTICULATION OF COURSES

I. CURRENCY AND REVELANCY OF CURRENT CURRICULMS

The Associates Degree and Certificate Core courses are current and relevant. The curriculums are received from the National Fire Academy (NFA) with the latest version being from 2019. This model curriculum is used across the country to create consistency in college level fire service education. All core courses have been designed to meet and exceed the NFA model curriculum.

Our State Fire Marshal programs are informed by the required curriculum as developed and maintained by the California State Fire Marshal's Office (CSFM). These curriculums identify the required course content as well as the Instructor to Student ratio that is required for each course.

II. FIRE TECHNOLOGY PROGRAM / STUDENT LEARNING OUTCOMES

FT-101: FIRE PROTECTION ORIENTATION / STUDENT LEARNING OUTCOMES

By the end of the class, students should be able to:

FT 101 SLO1: List the educational requirements, duties, and information sources, codes, standards, ordinances and regulations that affect fire protection, the functions of a fire prevention bureau and various occupations in the fire service.

FT101 SLO2: Define and analyze the basic components of a fire as a chemical reaction, the major phases of fire, the main factors that influence fire spread and fire behavior, the effects of fire on the environment, and the historical efforts made to protect society against unwanted fires.

FT101 SLO3: Identify and define the types of common fire department apparatus, equipment, personal safety equipment used for firefighting, firefighting strategy and tactics, and the elements of firefighter safety and survival.

FT-102: FIRE PREVENTION TECHNOLOGY / STUDENT LEARNING OUTCOMES

By the end of the class, students should be able to:

FT 102 SLO1: List and identify the educational requirements, duties, functions, jurisdictions, codes, standards, ordinances, and regulations of federal, state, and local agencies and authorities that affect fire prevention.

FT102 SLO2: Define the national fire problem causes, damages, public and firefighter fatalities, along with elements of pre-fire plans and plan review programs.

FT102 SLO3: Design a fire prevention media campaign including brochures, advertising, public service announcements and fire prevention collateral materials for adults and children.

FT-103: FIRE PROTECTION SYSTEMS AND EQUIPMENT SLO'S

By the end of the class, students should be able to:

FT 103 SLO1: Describe fire protection systems in various structures, the components of a fire alarm system along with the different types of detectors and how they detect fire, and the history of sprinkler ordinances and legislation, and identify five different types of non-water based fire suppression systems, the components of sprinkler, standpipe and foam systems, demonstrate and explain portable fire extinguishing systems.

FT103 SLO2: Draw and describe the basic elements of a public water supply system including sources, distribution networks, piping and hydrants.

FT103 SLO3: Identify and analyze the causes of line of duty firefighter deaths, and the training and research into the reduction of risk and accidents.

FT-104: BUILDING CONSTRUCTION FOR FIRE PROTECTION / SLO'S

By the end of the class, students should be able to:

FT 104 SLO1: Identify major types of building construction and the associated hazards and tactical considerations.

FT104 SLO2: Identify the indicators of potential structural failure as they relate to firefighter safety.

FT-105: FIRE BEHAVIOR AND COMBUSTION / STUDENT LEARNING OUTCOMES

By the end of the class, students should be able to:

FT 105 SLO1: Define and describe basic terms and concepts of chemical processes associated with combustion and the physical conditions which determine states of matter and their influences on fire behavior.

FT105 SLO2: Describe fire suppression agents and their properties.

FT105 SLO3: Compare methods and techniques of fire extinguishment.

FT-106: PRINCIPLES OF FIRE AND EMERGENCY SAFETY & SURVIVAL

FT106 SLO1: Identify and explain the 16 life safety initiatives

FT 106 SLO2: Understand the concept of risk assessment and mitigation as it pertains to emergency services.

All Fire Technology Student Learning Outcomes are evaluated each semester by faculty. The Fire Technology Associates Degree and Certificate programs are guided by national curriculum guidance. This guidance comes from the National Fire Academy (NFA) in the form of the Fire and Emergency Services Higher Education (FESHE) Model Curriculum. This document and our Student Learning Outcomes were last updated in May of 2019. This guidance also recommends updated textbooks and supporting materials

The Fire Technology Associates Degree program has altered and updated textbooks as well as in course power point guidance, quiz and test information to keep aligned with the national standards established in the FESHE documents.

III. DISTANCE LEARNING (If applicable):

The Fire Technology Associates Degree and Certificate program offers all core courses 100% online. None of these courses are delivered in person. The following courses are delivered each semester:

Course Number	Course Title	Unit
FT-101 (X2)	Fire Protection Organization	3.0
FT-102 (X2)	Fire Prevention Technology	3.0
FT-103	Fire Protection Equipment and Systems	3.0
FT-104	Building Construction for Fire Protection	3.0
FT-105 (x2)	Fire Behavior and Combustion	3.0
FT-106 (x2)	Principles of Fire & Emergency Safety & Survival	3.0
CWE 149	Firefighter Internships	18

Additionally, one of our elective courses is delivered online

FT-341	Fire Hydraulics	3.0

In total, there are 10 distance learning courses provided in support of the degree and certificate program. These courses are mostly full with wait lists each semester. We have added a second section of FT-101 and FT-102 over the last two semesters to keep up with student demand. We are preparing for additional sections as student demand continues to grow.

Spring 2020 Enrollment

Course Number	Number of Sections	Student Count	Units
FT-101	2 Sections	57	6
FT-102	2 Sections	67	6
FT-103	1 Section	36	3
FT-104	1 Section	40	3
FT-105	2 Sections	56	6
FT-106	2 Sections	69	6
FT-341	1 Section	12	3
CWE-149	4 Sections	15	18
Totals:	11 Sections	352	51

To provide for academic rigor in our online courses we have established mandatory student discussions. We have also instituted significant feedback from faculty on the discussion topic. Additionally, we have instituted the use of the comment section in each of the assignments issued over the semester.

Students are provided announcements throughout the semester from faculty to highlight job opportunities, fire service current events and volunteer opportunities.

FIRE TECHNOLOGY
APPROVED COURSE OUTLINES OF RECORD

Board Approval: 01/20/1998
PCA Established:
DL Conversion: 05/13/2003
Date Reviewed: Fall 2020
Catalog Year: 2020 - 2021

Allan Hancock College
Course Outline

Discipline Placement: Fire Technology

Department: Public Safety

Prefix and Number: FT 101

Catalog Course Title: Fire Protection Organization

Banner Course Title: Fire Protection Organization

Units and Hours

	Hours per Week	Total Hours per Term (Based on 16-18 Weeks)	Total Units
Lecture	3.000	48.0 - 54.0	
Lab	0.000	0.0 - 0.0	
Outside-of-Class Hours	6.000	96.0 - 108.0	
Total Student Learning Hours	9.0	144.0 - 162.0	3.0
Total Contact Hours	3.0	48.0 - 54.0	

Number of Times Course may be Repeated
None

Grading Method
Letter Grade or Pass/No Pass

Requisites

None

Entrance Skills

None

Catalog Description

Provides an introduction to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection; fire loss analysis; organization and function of public and private fire protection services, fire departments as part of local government; laws and regulations affecting fire services, fire service nomenclature, specific protection functions, basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Course Content

Lecture

1. Introduction to Fire Technology
    a. scope and content of fire technology curriculum
        i. college certificate of completion
        ii. associate degree
        iii. bachelor degree
        iv. state certification requirements
    b. career potential assessment
        i. assessing an agency
        ii. applying for the job
        iii. employment processes
        iv. physical fitness assessment
        v. career counseling
    c. affirmative action
        i. cultural difference
            A. gender stereotypes
            B. ethnic stereotypes
            C. cross cultural and gender communications
        ii. equal employment opportunity commission
            A. what is E.E.O.C.
            B. it's history
            C. it's history and application in the fire service
                I. case studies and discussion
        iii. affirmative action
            A. what is A.A.
            B. it's history
            C. it's history and application in the fire service
                I. case studies and discussion
    d. available training programs
        i. in-service
        ii. regional
        iii. state
        iv. national
    e. personnel development programs
        i. need for physical fitness
        ii. aspects of firefighter safety and survival
2. Fire Protection Career Opportunities
    a. public fire protection careers
        i. federal agencies
        ii. state agencies
        iii. local agencies
    b. private fire protection career
        i. industrial
        ii. insurance
        iii. apparatus and equipment
        iv. fire protection systems
3. Public Fire Protection
    a. history of fire protection
        i. United States fire protection development
        ii. social, political, and economic implications of the fire problem
        iii. major causes of fires in the United States
    b. fire losses
        i. deaths and injuries
        ii. property damage

d. defense planning
i. built environment
ii. ISO grading schedule
iii. master planning
iv. mutual/automatic aid
v. community role
vi. wildland/urban interface

4. Public and Private Support Organizations
a. types of organization
i. national
ii. federal
iii. state
iv. local
b. advisory and regulatory agencies
i. public
ii. private
c. private fire suppression organizations
i. contract services
ii. industrial fire brigades
d. proprietary services

5. Chemistry
a. introduction to the characteristics and behavior of fire
i. fire triangle
ii. fire tetrahedron
iii. fire classifications
iv. fire hazard properties of materials
v. extinguishing agents and methods
vi. phases of fire
vii. methods of heat transfer

6. Fire Department Resources
a. department facilities
i. administrative offices
ii. dispatch/communications centers
iii. fire stations
iv. training facilities
b. types of apparatus and their functions
i. pumpers/engines
ii. aerial apparatus
iii. water tenders
iv. rescue
v. special
c. equipment and tools carried on apparatus
d. personal safety equipment

7. Operational Functions of a Fire Department
a. emergency operations
b. fire prevention
c. training
d. administration
e. non-emergency operations
i. fire station daily activities/routine
ii. apparatus and equipment maintenance
iii. support services

8. Emergency Operations
a. personnel
i. positions
ii. fire company structure
iii. administration

b. alarm system
c. standard operating procedures

9. Fire Prevention
   a. personnel/positions
   b. responsibilities of the fire prevention bureau
      i. inspections
      ii. records and reports
      iii. investigations
      iv. plan review
      v. hazard abatement
      vi. public education
      vii. enforcement
   c. company inspection programs
   d. fire information reporting systems
10. Training
   a. personnel and positions
   b. skill development/maintenance
   c. performance standards
11. Fire Administration
   a. personnel and positions
   b. functions
      i. budgets
      ii. intra- and interdepartmental relationships (communication)
      iii. management cycle
      iv. management by objectives
   c. relationship of fire department with other agencies
   d. rules and regulations
      i. department policies
      ii. contracts and memoranda of understanding
      iii. standard operating procedures
   e. internal and external influences
      i. fire service labor organizations
      ii. health and safety regulations
      iii. equal employment opportunity and affirmative action programs
      iv. California Joint Apprenticeship Program local political bodies
      v. professional associations
   f. computer applications
12. Codes and Ordinances
   a. federal, state, and local
      i. kinds of codes
      ii. purpose of codes
      iii. contents of codes
   b. responsibility for enforcement
   c. relationship of codes and standards
   d. relationship of Federal, State, And Local Regulations
13. Fire Protection Systems and Equipment
   a. public and private systems
      i. water supplies
      ii. suppression systems
      iii. detection and alarm systems
      iv. special hazard systems
   b. extinguishing agents
14. Emergency Incident Management
   a. introduction to strategy development
   b. relationship of strategy to tactics
   c. incident command system

Course Objectives

At the end of the course, the student will be able to:

1. analyze and describe the differences between the certificate, two year, four-year degree programs, and state certification.
2. describe the educational requirements, duties, and information sources for various occupations in fire protection.
3. identify the basic components of fire as a chemical reaction, the major phases of fire, and the main factors that influence fire spread and fire behavior-
4. identify the effects of fire on the environment and the historical efforts made to protect society.
5. identify the major organizations that contribute to fire protection.
6. define and describe the purpose and scope of fire departments.
7. identify the types of common fire department apparatus, equipment, and personal safety equipment used for fire fighting.
8. identify the various codes, standards, ordinances, and regulations that affect fire protection.
9. identify the various types of public and private fire protection equipment and systems.
10. define the common elements of a fire prevention bureau.
11. identify the various applications of computers in the fire service.
12. define fire fighting strategy and tactics.
13. describe the basic elements of fire fighter safety and survival.

Methods of Instruction

- Demonstration
- Distance Learning
- Lecture

Assignments

- **Outside Assignments**
  Written work, essays, and reports
- **Other Assignments**
  1. Skill Practice 2. Problem Solving activity/exercise 3. Observation Or Activity Related To Course Demonstrations
- **Sample Assignment(s)**
  1. Prepare, with a group, a written and oral analysis of a fire technology related subject chosen and researched by the group. The student will demonstrate an ability to operate within a team environment to research and present information. 2. Explain, both in writing and verbally, the various career options available in fire protection for two or more hypothetical individuals, given specific descriptions of those individuals. 3. Given the positions and functions within a fire department, develop an organization chart of a medium-sized fire department. 4. Describe in writing current activities or changes in operations in fire service agencies from research of trade-technical magazines and analyze their effects on the fire service.

Methods of Evaluation

- Exams/Tests
- Quizzes
- Papers
- Class Participation
- Home Work
- Other

- Other

  1. Computational and writing assignments, including: A. Written Homework B. Term or Other Paper C. Reading Reports in current literature and making class presentations D. Other as determined by instructor 2. Skill demonstrations, including: A. Class Participation B. Field Work C. Skill Performance in classroom demonstrations D. Other as determined by instructor 3. Quizzes, Mid-term and Final Exam, including: A. Subjective Items B. Objective Items C. Performance Test 4. Sample essay question A. Describe the differences in fire protection opportunities between the public and private sectors

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Texts and Other Instructional Materials

Adopted Textbook

1. IFSTA *IFSTA Fire & Emergency Services Orientation and Terminology* 2015

Supplemental Texts

1. National Fire Protection Association Handbook, latest edition
2. Introduction to Fire Science, McLaughlin
3. International Fire Service Training Association , Orientation and Indoctrination, Vol. 35100, latest edition
4. Opportunities in Fire Protection Services, Ronny J. Coleman
5. Principles of Fire Protection, Bugbee
6. Introduction to Fire Protection, Klinoff

Instructional Materials

None

Student Learning Outcomes

1. FT101 SLO1 - List the educational requirements, duties, and information sources, codes, standards, ordinances, and regulations that affect fire protection, the functions of a fire prevention bureau and various occupations in fire protection.
2. FT101 SLO2 - Define and analyze the basic components of fire as a chemical reaction, the major phases of fire, the main factors that influence fire spread and fire behavior, the effects of fire on the environment, and the historical efforts made to protect society against unwanted fire.
3. FT101 SLO3 - Identify and define the types of common fire department apparatus, equipment, personal safety equipment used for firefighting, firefighting strategy and tactics, and the elements of fire fighter safety and survival.

Distance Education

Delivery Methods

- Internet

Instructor Initiated Contact Hours Per Week: 3.000

Contact Types

1. Email Communication (group and/or individual communications)
2. Discussion Board
3. Telephone Contacts
4. Other (please specify)

   I meet on-campus with students at least once a semester for those who desire face to face interaction.

Adjustments to Assignments

Instructors may employ a variety of online tools to make the necessary adjustments in an ERT/ DE setting for this course.

Adjustments to Assignments
Instructors may employ a variety of online tools to make the necessary adjustments in an ERT/ DE setting for this course.

- Assignments will be submitted primarily through the district Course Management System(CMS).
- Students can submit multiple files types, type in a textbox to submit their assignments, or submit links to their work in the cloud or other web related service such as Google Docs.
- Students can also submit assignments through district email or the messaging service in the district CMS.
- The district CMS contains many tools instructors can use to facilitate different assignment types.
- Instructors may use the assignments tool and / or discussion tool to facilitate student to student interaction.
- Instructors may use the feedback features of the district CMS to facilitate instructor - initiated contact.
- When appropriate, instructors may use group assignments.

Possible tools employed to adjust for ERT / DE course may include, but not limited to:

- District CMS assignments
- Threaded discussion forums
- District Email
- District CMS messaging service
- Announcements in the district CMS
- Feedback of student work through use of Speed Grader or other tools
- Synchronous audio / videoconferencing(Zoom, Cranium Café)
- Interactive mobile technologies
- Chat, text, Twitter
- Telephone
- Virtual offices hours
- Other: None

Adjustments to Evaluation Tools

- ERT/DE courses allow for multiple evaluation tools with online technology.
- This course will be able to use interactive quizzes which allow for automated assessment performance for certain question types and the use of the mastery gradebook.
- If the assessment requires necessary student authentication, the instructor can employ machine automated proctoring services available through the current district CMS.
- Use of these features (quizzes, discussions, and assignments) provide the necessary tools to evaluate student progress toward the objectives of the course.

Strategies to Make Course Accessible to Disabled Students
All courses must meet the WCAG 2.0 level AA standards including but not limited to the items listed below:

1. Images, graphs, charts or animation. A text equivalent or alt text is provided for every non-text element, including all types of images and animated objects. This will enable a screen reader to read the text equivalent to a blind student.
2. Multimedia. Equivalent alternatives for any multimedia presentation are synchronized with the presentation. Videos and live audio must be closed captioned. For archived audio, a transcript maybe sufficient.
3. Documents and other learning materials. PDFs, Microsoft Word documents, PowerPoint presentations, Adobe Flash and other content must be as accessible as possible. If it cannot be made accessible, consider using HTML or, if no other option is available, provide an accessible alternative. PDF documents must be properly tagged for accessibility.
4. Timed quizzes/exams. Extended time on quizzes and exams is one of the most common accommodations. Instructions for extending time in Canvas.
5. Outside webpages and links
6. Ensure that all webpages meet 508 standards by testing through Cynthia Says. Follow the Accessibility Guidelines WCAG 2.0 Level AA
7. Ensure links make sense out of context. Every link should make sense if the link text is read by itself. Screen reader users may choose to read only the links on a web page. Certain phrases like "click here" and "more" must be avoided.

8. Applications, software, and outside learning systems. All required outside applications and/or learning systems (e.g MyMathLab, Aleks, etc.) are accessible OR an alternative is provided. Test with WebAIM WAVE toolbar.
9. Avoid text images. Images of text are avoided, OR an alternative is provided. (Examples of images of text are PDFs made from scanned pages, and word art.)
10. Color contrast. Text and background color have sufficient contrast on all documents, PowerPoints, and webpages both inside and outside of the LMS.
11. Text objects. If the shape, color, or styling of any text object conveys information, that information is conveyed in plain text as well.
12. Disability statement. The course syllabus contains the college's suggested Disability Statement as well as current information on the location and contact information for the Learning Assistance Program (LAP).

Inform Students
Students will be informed via email and course introduction orientation in Canvas.
Additional Comments
none

Generated on: 5/14/2022 6:12:38 PM

Board Approval: 01/20/1998
PCA Established:
DL Conversion: 05/13/2003
Date Reviewed: Fall 2020
Catalog Year: 2020 - 2021

Allan Hancock College
Course Outline

Discipline Placement: Fire Technology
Department: Public Safety
Prefix and Number: FT 102
Catalog Course Title: Fire Prevention Technology
Banner Course Title: Fire Prevention Technology

Units and Hours

	Hours per Week	Total Hours per Term (Based on 16-18 Weeks)	Total Units
Lecture	3.000	48.0 - 54.0	
Lab	0.000	0.0 - 0.0	
Outside-of-Class Hours	6.000	96.0 - 108.0	
Total Student Learning Hours	9.0	144.0 - 162.0	3.0
Total Contact Hours	3.0	48.0 - 54.0	

Number of Times Course may be Repeated
0

Grading Method
Letter Grade Only

Requisites

Advisories
Completion of or concurrent enrollment in

Advisories
FT 101 Fire Protection Organization

Entrance Skills

None

Catalog Description

Provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationship of fire prevention with fire safety education and detection and suppression systems.

Course Content

Lecture

1. History and Development of Fire Prevention
    a. philosophy of fire prevention as a fire department function
    b. early fire prevention efforts in America
    c. the insurance industry and fire prevention
    d. fire disasters as an incentive for fire prevention efforts
    e. relationship of fire prevention to reduction of life and property loss
    f. trends in fire prevention
2. Fire Prevention Organizations
    a. public
        i. federal
            A. U.S. Fire Administration
            B. other
        ii. state
            A. California State Fire Marshal
            B. other
        iii. local
            A. city fire departments
            B. fire districts
            C. volunteer fire companies
    b. private
        i. National Fire Protection Association
        ii. Underwriter's Laboratories
        iii. Factory Mutual
3. Organization of a Fire Prevention Bureau
    a. functions
        i. inspection
        ii. code enforcement
        iii. plan review
        iv. public education
        v. fire investigation
        vi. weed abatement
        vii. records management
    b. fire prevention duties and responsibilities
        i. Fire Chief
        ii. fire protection engineer
        iii. Fire Marshal/Prevention Officer
        iv. inspector, sworn
        v. inspector, civilian
        vi. fire company member
    c. fire prevention tools of the trade
        i. uniform
        ii. protective clothing
        iii. vehicle(s)
        iv. code rooks
        v. related reference publications
        vi. printed forms
        vii. non-computerized files
        viii. computerized files
        ix. plan review materials
        x. camera
        xi. hydrant flow test equipment
        xii. explosion meter
        xiii. other tools (measuring tape, flashlight, etc.)

xiii. other tools (measuring tape, flashlight, etc.)

4. Building Codes and Fire Prevention
    a. model building codes
        i. Uniform Building Code
        ii. building officials and code administrators
        iii. Standard Building Code
    b. other codes
        i. State Building Code (Title 24, California Code of Regulations)
        ii. National Electric Code
        iii. Uniform Mechanical Code
    c. building department/fire department interface
5. Fire Codes and Fire Prevention
    a. Uniform Fire Code
        i. format
        ii. the permit system
        iii. the code as a "maintenance" document
    b. Title-19, California Code of Regulations
        i. state equivalent of Uniform Fire Code
        ii. applicable to state buildings & others
    c. National Fire Codes
    d. other fire codes in the United States
6. Structural Elements
    a. building construction types
    b. occupancy classification
    c. exiting requirements
7. Inspection Procedures
    a. review of records
    b. other preparation
    c. the approach
    d. the inspection tour
    e. identification and documentation of hazards
    f. the exit interview
    g. follow-up
    h. reports
8. Identification of Hazards
    a. common vs. special hazards
    b. hazard types
        i. exiting
        ii. structural deficiencies
        iii. hazardous solids, liquids and gases
        iv. electrical hazards
        v. building access
    c. non-structural hazards
        i. vegetation
        ii. transportation
        iii. outdoor storage
        iv. rubbish
    d. deficiencies in fire protection equipment and systems
        i. fire extinguishers
        ii. sprinkler systems
        iii. detection and alarm systems
        iv. "special" systems
        v. water supplies
9. Abatement and Mitigation of Hazards
    a. authority for hazard correction
    b. legal and moral responsibilities of hazard control
    c. prioritizing hazards
    d. notices of violation
    e. plans of correction
    f. the citation process
10. Fire Investigation

10. Fire Investigation
    a. arson fires
    b. accidental fires
    c. cause and origin determination
11. Public Fire Safety Education
    a. exit drills
    b. fire watches
    c. high rise fire safety
    d. other educational activities
    e. media relations
12. Plan Review
    a. buildings
    b. fire protection systems
    c. water supplies
    d. underground flammable liquid tanks
    e. life safety systems
    f. residential subdivisions
13. Report Preparation and Record Keeping
    a. recording fire injuries, deaths and property losses
    b. measuring the effectiveness of the fire prevention bureau
    c. computerized record keeping
    d. record keeping for inspections
    e. periodic reports

Course Objectives

At the end of the course, the student will be able to:

1. describe the origin and history of fire prevention efforts in the United States.
2. identify the basic fire prevention functions of a fire department.
3. identify the responsibility and authority for fire prevention inspections and related activities.
4. explain and identify principles and procedures used to correct fire hazards.
5. identify occupancies and building construction types.
6. identify hazards of use, storage, and transfer of flammable liquids and gases and other hazardous materials.
7. explain basic exiting requirements.
8. identify basic electrical fire hazards.
9. identify operational deficiencies in sprinkler systems and special fixed fire protection systems.
10. identify operational deficiencies of standpipe systems.
11. identify operational deficiencies of detection and alarm systems.
12. identify principles of placement, operation and inspection of portable fire extinguishers.
13. describe basic principles of fire cause determination as they relate to fire prevention and fire investigation.
14. identify the plan review function of a fire prevention bureau.
15. identify the relationship between fire safety education and fire prevention.
16. identify the importance of report preparation and records management in fire prevention efforts.

Methods of Instruction

- Distance Learning
- Lecture

Assignments

- **Outside Assignments**
  Examples 1. Define the principal functions of a fire prevention bureau. 2. Analyze the relationship between fire prevention efforts and the resulting reduction of life and property loss. 3. Describe, in writing, the major types of fire hazards that could be found on a thorough commercial fire inspection. 4. Describe, in writing, the basic hazard correction process used by the modern fire prevention bureau; given a simulated exercise the student will analyze and determine which codes would be used and how they would be applied. A. Study B. Skill Practice C. Problem Solving Activity Or Exercise D. Written Work, Essays And Reports E. Observation or Activity Related To Course F. Lab Demonstrations G. Answer Questions H. Required Reading I. Simulation Exercises J. Field Trips

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Methods of Evaluation

- **Exams/Tests**
- **Quizzes**
- **Papers**
- **Home Work**
- **Class Performance**
- **Other**
  1. Computational and writing assignment, including: A. Written homework B. Term or other paper C. Reading report D. Other 2. Skill demonstrations, including: A. Class performance B. Field work C. Skill performance D. Other 3. Quizzes, mid-term and final exam, including: A. Subjective items B. Objective items C. Performance test 4. Sample essay question A. Identify the fire prevention functions of a fire department and who is responsible for each. Describe the internal checks and balances for these functions, and how they work.

Texts and Other Instructional Materials

Adopted Textbook

1. IFSTA *IFSTA Fire Inspection & Code Enforcement* 2016

Supplemental Texts

1. Fire Prevention: Inspection and Code Enforcement, Diamantes
2. Introduction to Fire Prevention, current edition, by James C. Robertson, Macmillan Publishing Co., New York (ISBN 0-02-477090-6)
3. Fundamentals of Fire Prevention, Willexistence
4. Fire Protection Handbook, National Fire Protection Association, Latest Edition

Instructional Materials

None

Student Learning Outcomes

1. FT102 SLO1 - List and identify the educational requirements, duties, functions, jurisdictions, codes, standards, ordinances, and regulations of federal, state, and local agencies and authorities that affect fire prevention.
2. FT102 SLO2 - Define the national fire problem causes, damages, public and firefighter fatalities, along with elements of pre-fire plan and plan review programs.
3. FT102 SLO3 - Design a fire prevention media campaign including brochures, advertising, public service announcements and fire prevention collateral materials for adults and children.

Distance Education

Delivery Methods

- Internet

Instructor Initiated Contact Hours Per Week: 3.000

Contact Types

1. Email Communication (group and/or individual communications)
2. Discussion Board
3. Telephone Contacts
4. Other (please specify)
   I meet on-campus with students at least once a semester for those who desire face to face interaction.

Adjustments to Assignments

Instructors may employ a variety of online tools to make the necessary adjustments in an ERT/ DE setting for this course.

- Assignments will be submitted primarily through the district Course Management System(CMS).
- Students can submit multiple files types, type in a textbox to submit their assignments, or submit links to their work in the cloud or other web related service such as Google Docs.
- Students can also submit assignments through district email or the messaging service in the district CMS.
- The district CMS contains many tools instructors can use to facilitate different assignment types.
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- When appropriate, instructors may use group assignments.

Possible tools employed to adjust for ERT / DE course may include, but not limited to:

- District CMS assignments
- Threaded discussion forums
- District Email
- District CMS messaging service
- Announcements in the district CMS
- Feedback of student work through use of Speed Grader or other tools
- Synchronous audio / videoconferencing(Zoom, Cranium Café)
- Interactive mobile technologies
- Chat, text, Twitter
- Telephone
- Virtual offices hours
- Other: None

Adjustments to Evaluation Tools

- ERT/DE courses allow for multiple evaluation tools with online technology.
- This course will be able to use interactive quizzes which allow for automated assessment performance for certain question types and the use of the mastery gradebook.
- If the assessment requires necessary student authentication, the instructor can employ machine automated proctoring services available through the current district CMS.
- Use of these features (quizzes, discussions, and assignments) provide the necessary tools to evaluate student progress toward the objectives of the course.

Strategies to Make Course Accessible to Disabled Students

All courses must meet the WCAG 2.0 level AA standards including but not limited to the items listed below:

1. Images, graphs, charts or animation. A text equivalent or alt text is provided for every non-text element, including all types of images and animated objects. This will enable a screen reader to read the text equivalent to a blind student.
2. Multimedia. Equivalent alternatives for any multimedia presentation are synchronized with the presentation. Videos and live audio must be closed captioned. For archived audio, a transcript maybe sufficient.
3. Documents and other learning materials. PDFs, Microsoft Word documents, PowerPoint presentations, Adobe Flash and other content must be as accessible as possible. If it cannot be made accessible, consider using HTML or, if no other option is available, provide an accessible alternative. PDF documents must be properly tagged for accessibility.
4. Timed quizzes/exams. Extended time on quizzes and exams is one of the most common accommodations. Instructions for extending time in Canvas.
5. Outside webpages and links
6. Ensure that all webpages meet 508 standards by testing through Cynthia Says. Follow the Accessibility Guidelines WCAG 2.0 Level AA
7. Ensure links make sense out of context. Every link should make sense if the link text is read by itself. Screen reader users may choose to read only the links on a web page. Certain phrases like "click here" and "more" must be avoided.
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10. Color contrast. Text and background color have sufficient contrast on all documents, PowerPoints, and webpages both inside and outside of the LMS.
11. Text objects. If the shape, color, or styling of any text object conveys information, that information is conveyed in plain text as well.
12. Disability statement. The course syllabus contains the college's suggested Disability Statement as well as current information on the location and contact information for the Learning Assistance Program (LAP).

Inform Students

Students will be informed via email and course introduction orientation in Canvas.

Additional Comments

Board Approval: 01/20/1998
PCA Established:
DL Conversion: 05/13/2003
Date Reviewed: Fall 2020
Catalog Year: 2020 - 2021

Allan Hancock College
Course Outline

Discipline Placement: Fire Technology
Department: Public Safety
Prefix and Number: FT 103
Catalog Course Title: Fire Protection Equipment and Systems
Banner Course Title: Fire Protection Equipment Syst

Units and Hours

	Hours per Week	Total Hours per Term (Based on 16-18 Weeks)	Total Units
Lecture	3.000	48.0 - 54.0	
Lab	0.000	0.0 - 0.0	
Outside-of-Class Hours	6.000	96.0 - 108.0	
Total Student Learning Hours	9.0	144.0 - 162.0	3.0
Total Contact Hours	3.0	48.0 - 54.0	

Number of Times Course may be Repeated
None

Grading Method
Letter Grade Only

Requisites

Advisories
Completion of or concurrent enrollment in

Advisories
FT 101 Fire Protection Organization

Entrance Skills

Upon entering this course, the student should be able to:

FT 101 - Fire Protection Organization

- identify the basic components of fire as a chemical reaction, the major phases of fire, and the main factors that influence fire spread and fire behavior-
- identify the major organizations that contribute to fire protection.
- define and describe the purpose and scope of fire departments.

- identify the types of common fire department apparatus, equipment, and personal safety equipment used for fire fighting.
- identify the various types of public and private fire protection equipment and systems.
- define fire fighting strategy and tactics.
- describe the basic elements of fire fighter safety and survival.

Catalog Description

Provides information relating to 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.

Course Content

Lecture

1. Fire Cause and Effect Overview
    a. hazards of materials
    b. building construction
    c. heat and smoke control
2. Portable Fire Extinguishers
    a. description and classification
    b. effectiveness ratings
    c. distribution and installation
    d. types: application, operation, inspection, and maintenance
3. Characteristics of Protection Systems And Equipment For Special Hazards
    a. general arrangement and equipment for special hazards
    b. carbon dioxide systems
    c. dry chemical systems
    d. foam: protein, AFFF, Class "A"
    e. foam: high expansion
    f. emulsifiers and chemical surfactant
    g. water spray systems
    h. inert gas blanketing
    i. halogenated hydrocarbon agent systems
    j. explosion Suppression systems
    k. engineered and pre-engineered systems
4. Public And Private Water Supplies, Equipment, And Services For Fire Protection
    a. elementary principles of hydraulics
    b. water supplies for community fire protection
    c. fire protection requirements, public/private water systems
    d. water supply testing fundamentals
5. Sprinkler Protection
    a. types of sprinkler systems
        i. wet pipe
        ii. dry pipe
        iii. pre-action
        iv. combined dry pipe and pre-action
        v. deluge, high density, hydraulically designed systems
    b. standard installation requirements
    c. special hazards and installations conditions
    d. exposure protection
    e. plans review procedure
    f. inspection and testing procedures
    g. residential sprinkler systems

6. Protective Signaling Systems
    a. local signaling systems
    b. auxiliary signaling systems
    c. remote station systems
    d. proprietary systems
    e. emergency voice/alarm communications systems
    f. central station systems
    g. types of signals
    h. protective signaling system circuits
    i. interfacing with municipal signaling systems
7. Standpipe Systems
    a. Class I
    b. Class 11
    c. Class III
    d. combined systems
8. Heat and Smoke Control Systems
    a. fire doors, windows and walls
    b. fire shutters
    c. smoke and fire dampers
    d. curtain boards
    e. smoke towers
    f. mechanical roof vents

Course Objectives

At the end of the course, the student will be able to:

1. compare smoke and fire movement in various types of construction and the relationship to systems and equipment.
2. describe organizations that provide information or service to fire protection systems.
3. define types, classifications, and effectiveness ratings of fire extinguishers.
4. describe distribution, installation, and test requirements for fire extinguishers.
5. list types, components, and operation of fire protection systems and equipment for special hazards.
6. identify water supply requirements, distribution systems, and testing for public and private fire protection.
7. explain the application of hydraulic theory for fire protection.
8. list types, components, and operation of automatic and special sprinkler systems.
9. list types of standpipe systems and water supply requirements.
10. compare detection, alarm, and supervisory devices and systems.
11. Compare heat and smoke control devices and hardware.

Methods of Instruction

- **Distance Learning**
- **Lecture**

Assignments

- **Other Assignments**
  Examples 1. Within a given scenario analyze, prepare, and present a fire protection system that demonstrates complete coverage: a) residential; b) commercial; c) industrial; d) school occupancy with regards to sprinkler, hood & duct and special application protection. A. study B. skill practice C. problem solving activity or exercise D. written work, essays and reports E. observation or activity related to course F. lab demonstrations G. answer questions H. required reading I. simulation exercises J. field trips

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Methods of Evaluation

- **Exams/Tests**
- **Quizzes**
- **Papers**
- **Home Work**
- **Class Performance**
- **Other**
  1. Computational and writing assignment, including: A. Written homework B. Term or other paper C. Reading report D. Other 2. Skill demonstrations, including: A. Class performance B. Field work C. Skill performance D. Other 3. Quizzes, mid-term and final exam, including: A. Subjective items B. Objective items C. Performance test 4. Sample essay question A. Describe the distribution, installation, and test requirements for portable fire extinguishers

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Texts and Other Instructional Materials

Adopted Textbook

1. IFSTA *IFSTA Fire Detection & Suppression Systems* 2016

Supplemental Texts

1. California Code of Regulation, Title 19
2. Private Fire Protection And Detection, International Fire Service Training Association
3. NFPA Handbook, latest edition, National Fire Protection Association
4. NFPA Standards, National Fire Protection Association

Instructional Materials

None

Student Learning Outcomes

1. FT103 SLO1 - Describe fire protection systems in various structures, the components of a fire alarm system along with the different types of detectors and how they detect fire, and the history of sprinkler ordinances and legislation, and identify five different types of non-water based fire suppression systems, the components of sprinkler, standpipe and foam systems, demonstrate and explain portable fire extinguishing systems.
2. FT103 SLO2 - Draw and describe the basic elements of a public water supply system including sources, distribution networks, piping and hydrants.
3. FT103 SLO3 - Identify and analyze the causes of line of duty firefighter deaths, and the training and research into the reduction of risk and accidents.

Distance Education

Delivery Methods

- Internet

Instructor Initiated Contact Hours Per Week: 3.000

Contact Types

1. Email Communication (group and/or individual communications)
2. Discussion Board
3. Telephone Contacts
4. Testing

Adjustments to Assignments
Instructors may employ a variety of online tools to make the necessary adjustments in an ERT/ DE setting for this course.

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- Interactive mobile technologies
- Chat, text, Twitter
- Telephone
- Virtual offices hours
- Other: None

Adjustments to Evaluation Tools

- ERT/DE courses allow for multiple evaluation tools with online technology.
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3. Documents and other learning materials. PDFs, Microsoft Word documents, PowerPoint presentations, Adobe Flash and other content must be as accessible as possible. If it cannot be made accessible, consider using HTML or, if no other option is available, provide an accessible alternative. PDF documents must be properly tagged for accessibility.
4. Timed quizzes/exams. Extended time on quizzes and exams is one of the most common accommodations. Instructions for extending time in Canvas.
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6. Ensure that all webpages meet 508 standards by testing through Cynthia Says. Follow the Accessibility Guidelines WCAG 2.0 Level AA
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11. Text objects. If the shape, color, or styling of any text object conveys information, that information is conveyed in plain text as well.
12. Disability statement. The course syllabus contains the college's suggested Disability Statement as well as current information on the location and contact information for the Learning Assistance Program (LAP).

Inform Students

Students will be informed via email and course introduction orientation in Canvas.

Additional Comments

N/A

Generated on: 5/14/2022 6:27:43 PM

Board Approval: 11/18/1997
PCA Established:
DL Conversion: 05/13/2003
Date Reviewed: Fall 2020
Catalog Year: 2020 - 2021

Allan Hancock College
Course Outline

Discipline Placement: Fire Technology
Department: Public Safety
Prefix and Number: FT 104
Catalog Course Title: Building Construction for Fire Protection
Banner Course Title: Build Construction/Fire Protec

Units and Hours

	Hours per Week	Total Hours per Term (Based on 16-18 Weeks)	Total Units
Lecture	3.000	48.0 - 54.0	
Lab	0.000	0.0 - 0.0	
Outside-of-Class Hours	6.000	96.0 - 108.0	
Total Student Learning Hours	9.0	144.0 - 162.0	3.0
Total Contact Hours	3.0	48.0 - 54.0	

Number of Times Course may be Repeated
None

Grading Method
Letter Grade Only

Requisites

Advisories
Completion of or concurrent enrollment in

Advisories
FT 101 Fire Protection Organization

Entrance Skills

Upon entering this course, the student should be able to:

FT 101 - Fire Protection Organization

- identify the basic components of fire as a chemical reaction, the major phases of fire, and the main factors that influence fire spread and fire behavior-
- identify the effects of fire on the environment and the historical efforts made to protect society.
- identify the major organizations that contribute to fire protection.
- define and describe the purpose and scope of fire departments.

- identify the types of common fire department apparatus, equipment, and personal safety equipment used for fire fighting.
- identify the various codes, standards, ordinances, and regulations that affect fire protection.
- identify the various types of public and private fire protection equipment and systems.
- define the common elements of a fire prevention bureau.
- identify the various applications of computers in the fire service.
- define fire fighting strategy and tactics.
- describe the basic elements of fire fighter safety and survival.

Catalog Description

A study of the components of building construction that relates to fire safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning 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.

Course Content

Lecture

1. Orientation .
    a. attendance and grading
    b. course review
2. Introduction
    a. history of building construction
    b. governmental functions, building and fire codes
    c. fire risks and fire protection
    d. fire loss management and life safety
    e. pre-fire planning and fire suppression strategies
3. Principles of Construction
    a. terminology and definitions
    b. building and occupancy classification
    c. characteristics of building materials
    d. types and characteristics of fire loads
    e. effects of energy conservation
4. Building Construction
    a. structural members
        i. definitions, descriptions and carrying capacities
        ii. effects of loads
    b. structural design and construction methods
    c. system failures
5. Principles of Fire Resistance
    a. standards of construction
    b. fire intensity and duration
    c. theory vs. reality
6. Fire Behavior vs. Building Construction
    a. flame spread
    b. smoke and fire containment
        i. construction and suppression systems
        ii. HVAC systems
        iii. rack storage
7. Wood Construction
    a. definitions and elements of construction
    b. types of construction
    c. fire stopping and fire retardants

8. Ordinary Construction
    a. definitions and elements of construction
    b. structural stability and fire barriers
9. Steel Construction
    a. definitions and elements of construction
    b. structural stability, fire resistance and fire protection of elements
10. Concrete Construction
    a. definitions and elements of construction
    b. structural stability and fire resistance
11. High Rise Construction
    a. early vs. modern construction
    b. vertical and horizontal extension of fire and smoke
    c. fire protection and suppression

Course Objectives

<u>At the end of the course, the student will be able to:</u>

1. define occupancy designations of the building code.
2. name the construction classifications that correspond to designated occupancies.
3. differentiate between the loads that are placed on a building and describe each type of load.
4. list and compare the structural members of various types of construction.
5. define flame spread, it's hazards, contributing factors and possible solutions.
6. demonstrate fire inspection practices that are applicable to individual buildings.
7. identify firefighting practices and procedures that have developed for different types of construction.
8. describe the basic elements of firefighter safety and survival.

Methods of Instruction

- **Discussion**

  Multiple Discussion assignments through the semester to connect students with each other and with the instructor.

- **Distance Learning**

Assignments

- **Outside Assignments**
  1. required reading, writing and other outside class assignments A. study B. skill practice C. problem solving activity and exercises D. written work, essays and reports E. observation or activity related to course F. lab/demonstrations G. answer questions H. required reading I. simulation exercises J. field trips

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Methods of Evaluation

- Exams/Tests
- Quizzes
- Class Participation
- Home Work
- Other
    1. Computational and writing assignments, including A. written homework B. reading reports in current literature and making class presentations C. term or other papers D. other as determined by instructor 2. Skill demonstrations, including A. class participation B. skill performance in classroom demonstrations C. field work D. other as determined by instructor 3. Quizzes, mid-term and final examinations, including A. subjective items B. performance tests C. objective items Sample Essay Question: Describe the five basic building construction types and the describe the strengths and weaknesses of each during firefighting operations. Include both fire spread issues as well as safe operating concerns.

Texts and Other Instructional Materials

Adopted Textbook

1. Glenn P. Corbett and Francis L. Brannigan *Building Construction for the Fire Services* Edition: 5th 2016

Supplemental Texts

1. California Code of Regulations Title 19.
2. National Fire Protection Association Handbook, latest edition
3. National Fire Protection Associations Standards
4. California Code of Regulations Title 19
5. International Fire Service Training Association - Building Construction
6. Handouts 1. List of applicable National Fire Protection Association Standards 2. Diagrams of fire protection and building construction systems 3. Excerpts from appropriate codes as necessary
7. IFSTA. Building Construction. Latest edition
8. National Fire Protection Association Handbook, National Fire Protection Associations Standards. Latest edition
9. Building Construction for the Fire Service, Francis L. Brannigan, latest edition

Instructional Materials

None

Student Learning Outcomes

1. FT104 SLO1 - Identify major types of building construction and the associated hazards and tactical considerations.
2. FT104 SLO2 - Identify the indicators of potential structural failure as they relate to firefighter safety.

Distance Education

Delivery Methods

- Internet

Instructor Initiated Contact Hours Per Week: 3.000

Contact Types

1. Email Communication (group and/or individual communications)
2. Discussion Board
3. Telephone Contacts

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- Chat, text, Twitter
- Telephone
- Virtual offices hours
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- ERT/DE courses allow for multiple evaluation tools with online technology.
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- Use of these features (quizzes, discussions, and assignments) provide the necessary tools to evaluate student progress toward the objectives of the course.

Strategies to Make Course Accessible to Disabled Students
All courses must meet the WCAG 2.0 level AA standards including but not limited to the items listed below:

1. Images, graphs, charts or animation. A text equivalent or alt text is provided for every non-text element, including all types of images and animated objects. This will enable a screen reader to read the text equivalent to a blind student.
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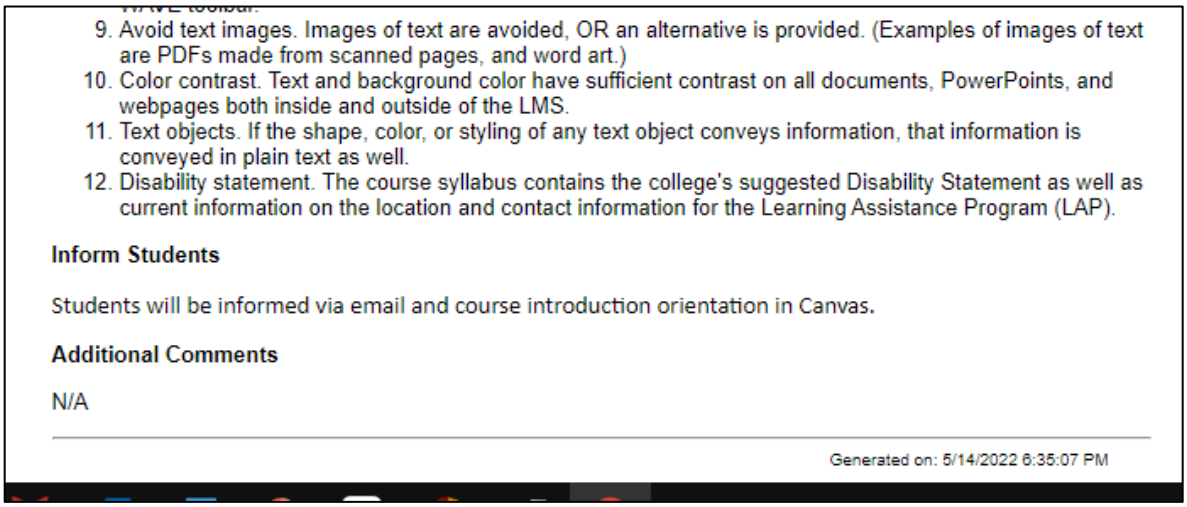

9. Avoid text images. Images of text are avoided, OR an alternative is provided. (Examples of images of text are PDFs made from scanned pages, and word art.)
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12. Disability statement. The course syllabus contains the college's suggested Disability Statement as well as current information on the location and contact information for the Learning Assistance Program (LAP).

Inform Students

Students will be informed via email and course introduction orientation in Canvas.

Additional Comments

N/A

Generated on: 5/14/2022 6:35:07 PM

Board Approval: 01/20/1998
PCA Established:
DL Conversion: 05/13/2003
Date Reviewed: Fall 2020
Catalog Year: 2021 - 2022

Allan Hancock College
Course Outline

Discipline Placement: Fire Technology
Department: Public Safety
Prefix and Number: FT 105
Catalog Course Title: Fire Behavior and Combustion
Banner Course Title: Fire Behavior & Combustion

Units and Hours

	Hours per Week	Total Hours per Term (Based on 16-18 Weeks)	Total Units
Lecture	3.000	48.0 - 54.0	
Lab	0.000	0.0 - 0.0	
Outside-of-Class Hours	6.000	96.0 - 108.0	
Total Student Learning Hours	9.0	144.0 - 162.0	3.0
Total Contact Hours	3.0	48.0 - 54.0	

Number of Times Course may be Repeated
None

Grading Method
Letter Grade Only

Requisites

Advisories
FT 101 Fire Protection Organization

Entrance Skills

Upon entering this course, the student should be able to:

FT 101 - Fire Protection Organization

- analyze and describe the differences between the certificate, two year, four-year degree programs, and state certification.
- describe the educational requirements, duties, and information sources for various occupations in fire protection.
- identify the basic components of fire as a chemical reaction, the major phases of fire, and the main factors that influence fire spread and fire behavior-
- identify the effects of fire on the environment and the historical efforts made to protect society.

- define and describe the purpose and scope of fire departments.
- identify the types of common fire department apparatus, equipment, and personal safety equipment used for fire fighting.
- identify the various codes, standards, ordinances, and regulations that affect fire protection.
- identify the various types of public and private fire protection equipment and systems.
- define the common elements of a fire prevention bureau.
- identify the various applications of computers in the fire service.
- define fire fighting strategy and tactics.
- describe the basic elements of fire fighter safety and survival.

Catalog Description

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

Course Content

Lecture

1. Introduction to Chemistry and Physics
    a. matter and energy
    b. the atom and its parts
    c. chemical symbols – chemical equations, periodic chart and atomic weights and mass
    d. molecules
    e. energy and work
    f. forms of energy – sources of energy and ignition
    g. transformation of energy
    h. laws of energy
2. Evolution of Fire Science
    a. define fire
    b. fire in history
    c. factors in fire research
    d. visualization and scale models in fire research
    e. International (SI) Systems of Measurement
        i. units of measurement for mass, energy
        ii. English Units of measurement
        iii. length, size, area, volume
        iv. weight, flow rates, pressure
3. Combustion in Natural Fires
    a. forms of natural fire
    b. candle flame as a basic diffusion flame
4. Heat Transfer
    a. energy vs. heat
    b. conduction, convection, radiation
    c. heat flux significance in heat transfer
    d. heat transfer computations
5. Ignition
    a. piloted and autoignition
    b. ignition temperatures of solids
    c. formulas to predict ignition time of solids
6. Flame Spread
    a. different types
    b. theory in terms of distance heated and ignition time
    c. compute flame spread speeds on solids
7. Burning Rate
    a. factors influencing energy release rate
    b. burning and energy release rate formulas
    c. heat – gasification and combustion

d. energy release rate signatures

8. Fire Plumes
    a. calculate flame height
    b. estimate temperature above a fire
    c. behavior of flame plumes
    d. buoyancy
9. Combustion Products
    a. nature and levels
    b. yield and concentration in smoke
    c. hazards or combustion products in smoke
10. Compartment Fires
    a. fire development
    b. flashover
    c. fully developed fires
    d. ventilation factors
    e. fire-induced flows
    f. computation
        i. vent flow rates
        ii. compartment smoke temperatures
11. Fire Analysis
    a. analytical applications – fire safety design and fire investigation
    b. fire modeling

Course Objectives

At the end of the course, the student will be able to:

1. describe the basic laws differentiating matter and energy.
2. explain basic terminology, definitions, and phenomena of chemistry.
3. identify some of the basic chemical symbols used in chemical formula writing.
4. explain the three physical states of matter and how each is affected by fire.
5. identify how fire changes the physical states of matter.
6. identify various methods and techniques of fire extinguishment based on development of the flame plume.
7. compare and contrast flashover and backdraft in a compartment fire.

Methods of Instruction

- Distance Learning
- Lecture

Assignments

- Other Assignments

  1. Prepare a term paper utilizing the text The Chemical History of a Candle and why the experiments listed are valid today. 2. Compute the flame spread characteristics of a room in the residence where the student lives. Identify the live load, weight of live load, and whether dead load will be a factor in fire spread. 3. Explain, analyze, compare and present the theory of fire and compare the applications of various extinguishment techniques. 4. During the semester every student will be required to develop a position paper and classroom presentation of the fire behavior issues of a fire in the news.

Methods of Evaluation

- **Exams/Tests**
- **Quizzes**
- **Papers**
- **Home Work**
- **Class Performance**
- **Other**
  1. Computational and writing assignments, including A. written homework B. reading reports in current literature and making class presentations C. term or other papers D. other as determined by instructor 2. Skill demonstrations, including A. class participation B. skill performance in classroom demonstrations C. field work D. other as determined by instructor 3. Quizzes, mid-term and final examinations, including A. subjective items B. performance tests C. objective items Sample Essay Question: Describe the ignition probabilities of synthetic vs. cellulosic materials with a smoldering cigarette and explain the fire behavior issues.

Texts and Other Instructional Materials

Adopted Textbook

1. Gann, Richard and Friedman, Raymond *Principles of Fire Behavior and Combustion* 2015

Supplemental Texts

1. National Fire Protection Association Handbook, latest edition
2. Fire Emergency Service Source Book, latest edition
3. Fundamentals and Principles of Fire Protection Chemistry, Richard Tuve
4. Principles of Fire Behavior, James G. Quintiere, Delmar Publishers, ISBN 0-8273-7732-0
5. The Chemical History of a Candle, Michael Faraday, Cherokee Publishing Company, Atlanta Georgia, ISBN 0-87797-209-5

Instructional Materials

None

Student Learning Outcomes

1. FT105 SLO1 - Define and describe basic terms and concepts of chemical processes associated with combustion and the physical conditions which determine states of matter and their influence on fire behavior.
2. FT105 SLO2 - Describe fire suppression agents and their properties.
3. FT105 SLO3 - Compare and contrast methods and techniques of fire extinguishment.

Distance Education

Delivery Methods

- Internet

Instructor Initiated Contact Hours Per Week: 3.000

Contact Types

1. Email Communication (group and/or individual communications)
2. Discussion Board
3. Telephone Contacts
4. Other (please specify)
   I meet on-campus with students at least once a semester for those who desire face to face interaction.

Adjustments to Assignments
Instructors may employ a variety of online tools to make the necessary adjustments in an ERT/ DE setting for this course.

- Assignments will be submitted primarily through the district Course Management System(CMS).
- Students can submit multiple files types, type in a textbox to submit their assignments, or submit links to their work in the cloud or other web related service such as Google Docs.
- Students can also submit assignments through district email or the messaging service in the district CMS.
- The district CMS contains many tools instructors can use to facilitate different assignment types.
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- Instructors may use the feedback features of the district CMS to facilitate instructor - initiated contact.
- When appropriate, instructors may use group assignments.

Possible tools employed to adjust for ERT / DE course may include, but not limited to:

- District CMS assignments
- Threaded discussion forums
- District Email
- District CMS messaging service
- Announcements in the district CMS
- Feedback of student work through use of Speed Grader or other tools
- Synchronous audio / videoconferencing(Zoom, Cranium Café)
- Interactive mobile technologies
- Chat, text, Twitter
- Telephone
- Virtual offices hours
- Other: None

Adjustments to Evaluation Tools

- ERT/DE courses allow for multiple evaluation tools with online technology.
- This course will be able to use interactive quizzes which allow for automated assessment performance for certain question types and the use of the mastery gradebook.
- If the assessment requires necessary student authentication, the instructor can employ machine automated proctoring services available through the current district CMS.
- Use of these features (quizzes, discussions, and assignments) provide the necessary tools to evaluate student progress toward the objectives of the course.

Strategies to Make Course Accessible to Disabled Students
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1. Images, graphs, charts or animation. A text equivalent or alt text is provided for every non-text element, including all types of images and animated objects. This will enable a screen reader to read the text equivalent to a blind student.
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3. Documents and other learning materials. PDFs, Microsoft Word documents, PowerPoint presentations, Adobe Flash and other content must be as accessible as possible. If it cannot be made accessible, consider using HTML or, if no other option is available, provide an accessible alternative. PDF documents must be properly tagged for accessibility.
4. Timed quizzes/exams. Extended time on quizzes and exams is one of the most common accommodations. Instructions for extending time in Canvas.
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12. Disability statement. The course syllabus contains the college's suggested Disability Statement as well as current information on the location and contact information for the Learning Assistance Program (LAP).

Inform Students

Students will be informed via email and course introduction orientation in Canvas.

Additional Comments

N/A

Generated on: 5/14/2022 6:40:57 PM

Board Approval: 06/21/2011
PCA Established:
DL Conversion: 10/16/2012
Date Reviewed: Fall 2020
Catalog Year: 2021 - 2022

Allan Hancock College
Course Outline

Discipline Placement: Fire Technology

Department: Public Safety

Prefix and Number: FT 106

Catalog Course Title: Principles of Fire & Emergency Safety & Survival

Banner Course Title: Princ of Fire & Emer Saf & Sur

Units and Hours

	Hours per Week	Total Hours per Term (Based on 16-18 Weeks)	Total Units
Lecture	3.000	48.0 - 54.0	
Lab	0.000	0.0 - 0.0	
Outside-of-Class Hours	6.000	96.0 - 108.0	
Total Student Learning Hours	9.0	144.0 - 162.0	3.0
Total Contact Hours	3.0	48.0 - 54.0	

Number of Times Course may be Repeated
None

Grading Method
Letter Grade Only

Requisites

None

Entrance Skills

None

Catalog Description

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

Course Content

Lecture

1. Introduction (6 hours)
    a. History of fire service culture
    b. Organization culture
    c. Individual role in culture/behavior
    d. of line fo duty deaths and injuries
    e. Defining the nature of the problem
2. The national context, health and safety (9 hours)
    a. NFPA, OSHA
    b. Medical and fitness standards
    c. Data Collection (NFIRS)
    d. Research/investigation NIST, NIOSH
3. Training, equipment, response (9 hours)
    a. Training, certification, credentialing
    b. Apparatus and equipment
    c. Emergency response - response to emergency scenes
    d. Violent incidents
    e. Emerging technologies
4. Organizational health and safety profile (9 hours)
    a. Personal and organizational accountability
    b. Present condition/culture
    c. Investigations - internal
    d. Analyzing your profile
    e. Utilizing grants to meet needs
5. Risk Management (9 hours)
    a. Risk managemeny concepts and practices
    b. Unsafe acts
    c. Empowerment definition
6. Prevention
    a. Home fire spinklers
    b. Code enforcement
    c. Public education/fire and life safety
    d. Counseling and psychological support

Course Objectives

At the end of the course, the student will be able to:

1. Define and describe the need for cultural and behavioral change within the emergency services relating to safety, incorporating leadership, supervision, accountability and personal responsibility.
2. Explain the need for enhancements of personal and organizational accountability for health and safety.
3. Define how the concepts of risk management affect strategic and tactical decision-making.
4. Describe and evaluate circumstances that might constitute an unsafe act.
5. Explain the concept of empowering all emergency services personnel to stop unsafe acts.
6. Validate the need for national training standards as they correlate to professional development inclusive of qualifications, certifications, and re-certifications.
7. Defend the need for annual medical evaluations and the establishment of physical fitness criteria for emergency services personnel throughout their careers.
8. Explain the vital role of local departments in national research and data collection systems.
9. Illustrate how technological advancements can produce higher levels of emergency services safety and survival.
10. Explain the importance of investigating all near-misses, injuries and fatalities.
11. Discuss how incorporating the lessons learned from investigations can support cultural change throughout the emergency services.
12. Describe how obtaining grants can support safety and survival initiatives.
13. Formulate an awareness of how adopting standardized policies for responding to emergency scenes can minimize near-misses, injuries and deaths.

14. Explain how the increase in violent incidents impacts safety for emergency services personnel when responding to emergency scenes.
15. Recognize the need for counseling and psychological support for emergency services personnel, their families, as well as, identify access to local resources and services.
16. Describe the importance of public education as a critical component of life safety programs.
17. Discuss the importance of fire sprinklers and code enforcement.
18. Explain the importance of safety in the design of apparatus and equipment.

Methods of Instruction

- **Lecture**
- **Methods of Instruction Description:**
  Video Research Project Textbook reading

Assignments

- **Other Assignments**
  Assigned Readings Writing Assignments Term Project

Methods of Evaluation

- **Quizzes**
- **Research Projects**
- **Writing Requirements**

Texts and Other Instructional Materials

Adopted Textbook

1. Ford, Travis *Fire & Emergency Services Safety & Survival* 2016

Supplemental Texts

1. Firefighter Life Summit Initial Report and additional summits reports (Wildland firefighting, Health - Wellnes- fitness, Structural firefighting, Emergency Vehicles and Roadway Safety, Culture Change) at www.everyonegoeshome.com

Instructional Materials

None

Student Learning Outcomes

1. FT106 SLO1 - Describe the principles and history of fire service organizational culture and the need for cultural and behavioral changes relating to safety; incorporating leadership, supervision, accountability, and personal responsibility throughout emergency services.
2. FT106 SLO2 - Describe various concepts in risk management that affect strategic and tactical decision making.
3. FT106 SLO3 - Describe how national research and data collection, public education, grants, technical advancements, and national training/fitness standards can influence safety when responding to emergencies.

Distance Education

Delivery Methods

- Internet

Instructor Initiated Contact Hours Per Week: 3.000

Contact Types

1. Other (please specify)

   I meet on-campus with students at least once a semester for those who desire face to face interaction.

2. Email Communication (group and/or individual communications)

   Weekly

3. Discussion Board

   Weekly

4. Telephone Contacts

   As needed

Adjustments to Assignments

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- Other: None

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Inform Students

Students will be informed via email and course introduction orientation in Canvas.

Additional Comments

N/A

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I. WILDLAND FIRE TECHNOLOGY / STUDENT LEARNING OUTCOMES

WFT-101: WILDLAND FIRE BEHAVIOR / STUDENT LEARNING OUTCOMES

By the end of the class, students should be able to:

WFT101 SLO1: Define and utilize a common language for fire prediction use.

WFT101 SLO2: Identify the environmental factors and indicators of change which require continuous monitoring in make predictions of wildland fire behavior.

WFT101 SLO3: Identify and discuss methods for making predictions of wildland fire behavior.

WFT-102: WILDLAND FIRE SAFETY AND SURVIVAL

WFT102 SLO1: Display an understanding of the 10 Standard Fire Orders and 18 Watchout Situations.

WFT102 SLO2: Discuss methods to communicate these items to other firefighters and supervisors.

WFT-103: WILDLAND FIRE OPERATIONS

WFT103 SLO1: Identify and discuss methods for the safe and effective use of aerial resources.

WFT103 SLO2: Identify how to best utilize resources on a wildland incident.

WFT-104: WILDLAND FIRE P.I.O., PREVENTION, AND INVESTIGATION

WFT104 SLO1: Describe the roles and functions of the information officer.

WFT104 SLO2: Describe fire prevention and investigation communications.

WFT-105: WILDLAND FIRE PLANNING, LOGISTICS, AND FINANCE

WFT105 SLO1: Describe the functions of planning, logistics and finance as related to the control of wildland fires.

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III. DISTANCE LEARNING (If applicable):

The Wildland Fire Technology Associates Degree and Certificate program offers all core courses 100% online. None of these courses are delivered in person. The following courses are delivered each semester:

Course Number	Course Title	Unit
WFT-101	Wildland Fire Behavior	3.0
WFT-102	Wildland Fire Safety and Survival	3.0
WFT-103	Wildland Fire Operations	3.0
WFT-104	Wildland Public Information, Prevention, & Investigation	3.0
WFT-105	Wildland Fire, Planning, Logistics and Finance	3.0

***The Wildland Fire Technology Degree and Certificate program is in its second semester after being reconfigured and re-launched. The program is supported completely by Part-Time Faculty. Enrollment started slow and has improved. Marketing will be key to allow the program to gain momentum.*

To provide for academic rigor in our online courses we have established mandatory student discussions. We have also instituted significant feedback from faculty on the discussion topic. Additionally, we have instituted the use of the comment section in each of the assignments issued over the semester.

Students are provided announcements throughout the semester from faculty to highlight job opportunities, fire service current events and volunteer opportunities.

V. CURRENCY AND REVELANCY OF CURRENT CURRICULMS

The Associates Degree and Certificate Core courses in both Fire Technology and Wildland Fire Technology are current and relevant. The curriculums are received from the National Fire Academy (NFA) with the latest version being from 2019. This model curriculum is used across the country to create consistency in college level fire service education. All core courses have been designed to meet and exceed the NFA model curriculum.

Our State Fire Marshal programs are informed by the required curriculum as developed and maintained by the California State Fire Marshal's Office (CSFM). These curriculums identify the required course content as well as the Instructor to Student ratio that is required for each course.

WILDLAND FIRE TECHNOLOGY
APPROVED COURSE OUTLINES OF RECORD

Board Approval: 12/15/1998
PCA Established:
DL Conversion: 05/13/2003
Date Reviewed: Fall 2020
Catalog Year: 2020 - 2021

Allan Hancock College
Course Outline

Discipline Placement: Fire Technology
Department: Public Safety
Prefix and Number: WFT 101
Catalog Course Title: Wildland Fire Behavior
Banner Course Title: Wildland Fire Behavior

Units and Hours

	Hours per Week	Total Hours per Term (Based on 16-18 Weeks)	Total Units
Lecture	3.000	48.0 - 54.0	
Lab	0.000	0.0 - 0.0	
Outside-of-Class Hours	6.000	96.0 - 108.0	
Total Student Learning Hours	9.0	144.0 - 162.0	3.0
Total Contact Hours	3.0	48.0 - 54.0	

Number of Times Course may be Repeated
None

Grading Method
Letter Grade or Pass/No Pass

Requisites

Advisories
WFT 302 Basic Incident Command System I-200

Entrance Skills

Upon entering this course, the student should be able to:

WFT 302 - Basic Incident Command System I-200

- describe and explain the use or purpose of each of the twelve principal ICS features.
- explain how the organization expands and contracts.
- list the principal facilities, where they may be located, and how they are used.
- describe the need for proper incident resource management.
- describe the check in process at a wildland fire incident.

Catalog Description

A study of wildland fire behavior. Topics include influences that affect basic wildland fire behavior, the seven factors that must be continuously monitored in making wildland fire behavior predictions, and identification of the tools necessary to make spot fire behavior predictions.

Course Content

Lecture

1. Introduction
2. Fire Behavior Factors Affecting the Start and Spread of Wildland Fire
3. Fire Weather
4. Fire Environment
5. Basic Weather Processes
6. Temperature/Humidity Relationships
7. Atmospheric Stability and Clouds
8. General and Local Winds
9. Topographic Influences on Fire Behavior
10. Fuels
11. Fuel Moisture
12. Keeping Current with the Weather
13. Combining Influences Affect Basic Fire Behavior
14. Wildland Fire Behavior in the Third Dimension
15. Wildland Fire Environment Factors and Indicators
16. Allignment of Forces
17. Accident Avoidance
18. Final Examination

Course Objectives

At the end of the course, the student will be able to:

1. analyze the combining influences that affect basic wildland fire behavior.
2. describe the necessity of constant monitoring wildland fire behavior.
3. identify the seven wildland fire environment factors which must be continously monitored in making wildland fire behavior predictions.
4. describe the indicators of change for each of the seven wildland fire environment factors.
5. use a common language for fire prediction use.
6. implement the method for information transfer.
7. discuss the elements of the Campbell Prediction System and understand methods used in making wildland fire behavior predictions.

Methods of Instruction

- Lecture

Assignments

- **Outside Assignments**
  Sample: Compare and contrast the three major influences of fuels, weather, and topography that comprise the fire environment.

Methods of Evaluation

- Exams/Tests
- Quizzes
- Class Participation
- Writing Requirements
- Other
  The evaluation process will include classroom participation, performance evaluations, written assignments, quizzes, attendance, and a written final examination. Sample: What is a blow-up condition in a wildland fire, how can it be predicted, and what steps can be taken to protect the personnel assigned to the fire?

Texts and Other Instructional Materials

Adopted Textbook

1. Teie, William C *Firefighter's Handbook on Wildland Fire Behavior* Edition: 4th 2018

Supplemental Texts

1. Supplemental Texts 1. Ground Cover Fire Fighting for Structural Firefighters, International Fire Service Training Association 2. National Wildfire Coordination Group a. Intermediate Fire Behavior Student Workbook S-290 (NFES 2891) b. Incident Response Pocket Guide (IRPG), PMS 461 (NFES 1077) c. Wildland Fire Incident Management Field Guide PMS 210 d. Fireline Handbook Appendix B: Fire Behavior, PMS 410-2 e. Fire Behavior Reference Guild, PMS 437 f. Fire Weather (NFES 1174)

Instructional Materials
None

Student Learning Outcomes

1. WFT101 SLO1 - Define and utilize a common language for fire prediction use.
2. WFT101 SLO2 - Identify the environmental factors and indicators of change which require continuous monitoring in make predictions of wildland fire behavior.
3. WFT101 SLO3 - Identify and discuss methods for making predictions of wildland fire behavior.

Distance Education

Delivery Methods

- Internet

Instructor Initiated Contact Hours Per Week: 3.000

Contact Types

1. Email Communication (group and/or individual communications)
2. Discussion Board
3. Testing

Adjustments to Assignments
Instructors may employ a variety of online tools to make the necessary adjustments in an ERT/ DE setting for this course.

Adjustments to Assignments
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- District CMS assignments
- Threaded discussion forums
- District Email
- District CMS messaging service
- Announcements in the district CMS
- Feedback of student work through use of Speed Grader or other tools
- Synchronous audio / videoconferencing(Zoom, Cranium Café)
- Interactive mobile technologies
- Chat, text, Twitter
- Telephone
- Virtual offices hours
- Other: None

Adjustments to Evaluation Tools

- ERT/DE courses allow for multiple evaluation tools with online technology.
- This course will be able to use interactive quizzes which allow for automated assessment performance for certain question types and the use of the mastery gradebook.
- If the assessment requires necessary student authentication, the instructor can employ machine automated proctoring services available through the current district CMS.
- Use of these features (quizzes, discussions, and assignments) provide the necessary tools to evaluate student progress toward the objectives of the course.

Strategies to Make Course Accessible to Disabled Students
All courses must meet the WCAG 2.0 level AA standards including but not limited to the items listed below:

1. Images, graphs, charts or animation. A text equivalent or alt text is provided for every non-text element, including all types of images and animated objects. This will enable a screen reader to read the text equivalent to a blind student.
2. Multimedia. Equivalent alternatives for any multimedia presentation are synchronized with the presentation. Videos and live audio must be closed captioned. For archived audio, a transcript maybe sufficient.
3. Documents and other learning materials. PDFs, Microsoft Word documents, PowerPoint presentations, Adobe Flash and other content must be as accessible as possible. If it cannot be made accessible, consider using HTML or, if no other option is available, provide an accessible alternative. PDF documents must be properly tagged for accessibility.
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5. Outside webpages and links
6. Ensure that all webpages meet 508 standards by testing through Cynthia Says. Follow the Accessibility Guidelines WCAG 2.0 Level AA
7. Ensure links make sense out of context. Every link should make sense if the link text is read by itself. Screen reader users may choose to read only the links on a web page. Certain phrases like "click here" and "more" must be avoided.

8. Applications, software, and outside learning systems. All required outside applications and/or learning systems (e.g MyMathLab, Aleks, etc.) are accessible OR an alternative is provided. Test with WebAIM WAVE toolbar.
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10. Color contrast. Text and background color have sufficient contrast on all documents, PowerPoints, and webpages both inside and outside of the LMS.
11. Text objects. If the shape, color, or styling of any text object conveys information, that information is conveyed in plain text as well.
12. Disability statement. The course syllabus contains the college's suggested Disability Statement as well as current information on the location and contact information for the Learning Assistance Program (LAP).

Inform Students
The course syllabus gives information on accessing inline services and messages throughout the semester direct them to services that may be utilized to assist them in research and additional information.
Additional Comments
none

Generated on: 5/15/2022 3:09:20 PM

Board Approval: 12/15/1998
PCA Established:
DL Conversion: 05/13/2003
Date Reviewed: Fall 2020
Catalog Year: 2020 - 2021

Allan Hancock College
Course Outline

Discipline Placement: None
Department: Public Safety
Prefix and Number: WFT 102
Catalog Course Title: Wildland Firefighter Safety and Survival
Banner Course Title: Wild Fire Safety & Survival

Units and Hours

	Hours per Week	Total Hours per Term (Based on 16-18 Weeks)	Total Units
Lecture	3.000	48.0 - 54.0	
Lab	0.000	0.0 - 0.0	
Outside-of-Class Hours	6.000	96.0 - 108.0	
Total Student Learning Hours	9.0	144.0 - 162.0	3.0
Total Contact Hours	3.0	48.0 - 54.0	

Number of Times Course may be Repeated
None

Grading Method
Letter Grade or Pass/No Pass

Requisites

Advisories
WFT 302 Basic Incident Command System I-200

Entrance Skills

Upon entering this course, the student should be able to:

WFT 302 - Basic Incident Command System I-200

- describe and explain the use or purpose of each of the twelve principal ICS features.
- explain how the organization expands and contracts.
- list the principal facilities, where they may be located, and how they are used.
- describe the need for proper incident resource management.
- describe the check in process at a wildland fire incident.

Entrance Skills Other (Legacy)

Explain how resources are allocated in the Incident Command System.

Catalog Description

An exploration of the situations and conditions that result in fire shelter deployments, serious injuries and fatalities for wildland firefighters. (F)

Course Content

Lecture

1. Introduction
2. Watch-out Situations (Survival Checklist)
3. The Fire Environment
4. Fuel Characteristics
5. Fuel Moisture
6. Fuel Temperature
7. Terrain
8. Winds
9. Atmospheric Stability
10. Fire Behavior
11. Use of Indicators
12. Safety Orientation
13. Firefighter Preparedness
14. Use of Tools and Equipment
15. Firing devices
16. Use of Water
17. Suppression
18. Securing the Control Line
19. Use of Maps
20. Scouting, Patrolling, and Communicating
21. Standards for Survival
22. Examination

Course Objectives

At the end of the course, the student will be able to:

1. describe safety issues related to wildland firefighting.
2. portray firefighting activities based on current and expected fire behavior.
3. illustrate current weather conditions and how to obtain forecasts.
4. describe how instructions are given and understood.
5. obtain current information on fire status.
6. describe communication procedures on a wildland fire.
7. identify safety zones and escapes routes.
8. evaluate and identify when lookouts are required in potentially hazardous situations.

Methods of Instruction

- Lecture

Assignments

- **Other Assignments**
  Sample: Describe the types of firing devices used in wildland firefighting, and explain the differences in wildland fire fighting operations and during prescribed burning.

Methods of Evaluation

- **Exams/Tests**
- **Quizzes**
- **Class Participation**
- **Writing Requirements**
- **Other**
  The evaluation process will include classroom participation, performance evaluations, written assignments, quizzes, attendance, and a written final examination. Sample: List the fire orders used in wildland firefighting. Explain each, and describe each one in a specific life safety issue as applied to wildland firefighting.

Texts and Other Instructional Materials

Adopted Textbook

1. Teie, William C *Firefighter's Handbook on Wildland Firefighting, Strategy, Tactics, and Safety* Edition: 4th 2018

Supplemental Texts

1. Supplemental Texts 1. National Wildfire Coordination Group a. Incident Response Pocket Guide (IRPG), PMS 461 (NFES 1077) b. Wildland Fire Incident Management Field Guide, PMS 2100 (NFES 2943)

Instructional Materials

None

Student Learning Outcomes

1. WFT102 SLO1 - Display an understanding of the 10 Standard Fire Orders and 18 Watchout Situations.
2. WFT102 SLO2 - Discuss methods to communicate these items to other firefighters and supervisors.

Distance Education

Delivery Methods

- Internet

Instructor Initiated Contact Hours Per Week: 3.000

Contact Types

1. Email Communication (group and/or individual communications)
2. Discussion Board
3. Testing
4. Other (please specify)
   10 hrs Completion of task evaluations by proctor

Adjustments to Assignments
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- Interactive mobile technologies
- Chat, text, Twitter
- Telephone
- Virtual offices hours
- Other: None

Adjustments to Evaluation Tools

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Strategies to Make Course Accessible to Disabled Students
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Inform Students
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Additional Comments
None

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Board Approval: 12/15/1998
PCA Established:
DL Conversion: 05/13/2003
Date Reviewed: Fall 2020
Catalog Year: 2020 - 2021

Allan Hancock College
Course Outline

Discipline Placement: Fire Technology
Department: Public Safety
Prefix and Number: WFT 103
Catalog Course Title: Wildland Fire Operations
Banner Course Title: Wildland Fire Operations

Units and Hours

	Hours per Week	Total Hours per Term (Based on 16-18 Weeks)	Total Units
Lecture	3.000	48.0 - 54.0	
Lab	0.000	0.0 - 0.0	
Outside-of-Class Hours	6.000	96.0 - 108.0	
Total Student Learning Hours	9.0	144.0 - 162.0	3.0
Total Contact Hours	3.0	48.0 - 54.0	

Number of Times Course may be Repeated
None

Grading Method
Letter Grade Only

Requisites

Advisories
WFT 302 Basic Incident Command System I-200

Entrance Skills

Upon entering this course, the student should be able to:

WFT 302 - Basic Incident Command System I-200

- describe and explain the use or purpose of each of the twelve principal ICS features.
- explain how the organization expands and contracts.
- list the principal facilities, where they may be located, and how they are used.
- describe the need for proper incident resource management.
- describe the check in process at a wildland fire incident.

Entrance Skills Other (Legacy)

6. explain how resources are allocated in the Incident Command System.

Catalog Description

An exploration of the command structure and operational processes for ground and air operations in the control of wildland fires.

Course Content

Lecture

1. Introduction
2. Safety/Supervision Issues During Wildland Firefighting
3. Positive Interpersonal and Interagency Working Relationships.
4. Mobilization Kit for wildland fire fighters
5. Mobilization
6. Incident Operations
7. Initial Attack Resources Do Not Contain Fire
8. Aviation Programs with Emphasis on Fire Suppression.
9. Aviation Management and Safety
10. Aircraft Missions
11. Helicopter Landing Areas
12. Examination

Course Objectives

At the end of the course, the student will be able to:

1. identify strategy for controlling small wildland fires with initial attack forces.
2. develop a plan for utilization of resources in wildland fire control.
3. recognize situations which indicate problem or extreme wildland fire behavior.
4. describe the standard fire orders.
5. specify correct aircraft loading and off loading procedures for personnel and cargo.
6. describe procedure to take in the event of an emergency landing for aircraft.
7. list ten hazardous situations involving aircraft and describe the action for each.
8. define tactical and logistical aircraft use.
9. describe safety procedures during water, foam, or retardant dropping operations.
10. describe the proper procedure to follow if caught in a fire retardant drop zone.
11. define the four types of landing areas used in helicopter operations.

Methods of Instruction

- Lecture

Assignments

- **Sample Assignment(s)**

  Compare and contrast the uses of ground and air operations in the control of a wildland fire.

Methods of Evaluation

- Exams/Tests
- Quizzes
- Class Participation
- Writing Requirements
- Other

  The evaluation process will include classroom participation, performance evaluations, written assignments, quizzes, attendance, and a written final examination. Sample written exercise: What specific wildland fire control processes can be used in a small wildland fire?

Texts and Other Instructional Materials

Adopted Textbook

1. Teie, William C *Firefighter's Handbook on Wildland Firefighting, Strategy, Tactics, and Safety* Edition: 4th 2018

Supplemental Texts

1. Supplemental Texts 1. Ground Cover Fire Fighting for Structural Firefighters, International Fire Service Training Association 2. NFES Incident Command System 3. National Wildfire Coordination Group a. Firefighter Training Student Reference Tool S-130 b. Incident Response Pocket Guide (PMS 461) c. Wildland Fire Incident Management Field Guide PMS 210

Instructional Materials

None

Student Learning Outcomes

1. WFT103 SLO1 - Identify and discuss methods for the safe and effective use of aerial resources.
2. WFT103 SLO2 - Identify how to best utilize resources on a wildland incident.

Distance Education

Delivery Methods

- Internet

Instructor Initiated Contact Hours Per Week: 3.000

Contact Types

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Inform Students
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Additional Comments
None

Generated on: 5/15/2022 3:18:53 PM

Board Approval: 12/15/1998
PCA Established:
DL Conversion: 05/13/2003
Date Reviewed: Fall 2020
Catalog Year: 2020 - 2021

Allan Hancock College
Course Outline

Discipline Placement: None

Department: Public Safety

Prefix and Number: WFT 104

Catalog Course Title: Wildland Public Information Officer, Prevention, and Investigation

Banner Course Title: Wild Fire PIO, Prev. Inv.

Units and Hours

	Hours per Week	Total Hours per Term (Based on 16-18 Weeks)	Total Units
Lecture	3.000	48.0 - 54.0	
Lab	0.000	0.0 - 0.0	
Outside-of-Class Hours	6.000	96.0 - 108.0	
Total Student Learning Hours	9.0	144.0 - 162.0	3.0
Total Contact Hours	3.0	48.0 - 54.0	

Number of Times Course may be Repeated
None

Grading Method
Letter Grade Only

Requisites

Advisories
WFT 302 Basic Incident Command System I-200

Entrance Skills

Upon entering this course, the student should be able to:

WFT 302 - Basic Incident Command System I-200

- describe and explain the use or purpose of each of the twelve principal ICS features.
- explain how the organization expands and contracts.
- list the principal facilities, where they may be located, and how they are used.
- describe the need for proper incident resource management.
- describe the check in process at a wildland fire incident.

Entrance Skills Other (Legacy)

Explain how resources are allocated in the Incident Command System.

Catalog Description

Presents the roles and functions of the information officer, emphasizing fire prevention and investigation communications.

Course Content

Lecture

1. Introduction
2. The Role and Responsibilities of the Information Officer
3. Developing a Public Information Strategy as the Incident Expands
4. Establishing an Information Center
5. Field Information Operations; Gathering and Assembling Information
6. Working with the News/Media
7. Special Situations
8. Introduction to Fire Prevention
9. History of Wildland Fire Prevention
10. Cooperative Forest Fire Prevention (CFFP)
11. Fire Prevention Signs and Posters
12. Interagency Cooperation
13. National Fire Danger Rating System (NFDRS)
14. California Campfire Permits
15. California Burning Permits
16. Smokey Bear
17. Children's Fire Prevention Programs
18. Inspecting Fire Prone Property
19. Spark Arresters
20. Industrial Inspections
21. Powerline Fire Prevention
22. Railroad Fire Prevention
23. Media relations for fire prevention
24. Basic Fire Investigation
25. Fire Cause Problem Identification
26. Preparation for Investigation
27. Fire Scene Activities
28. Case Preparation
29. Cause Determination
30. Examination

Course Objectives

At the end of the course, the student will be able to:

1. describe the role of an Information Officer in incident management.
2. describe the duties and responsibilities of and Information Officer.
3. describe the kinds and sources of information needed by an Information Officer.
4. describe situations that require special handling.
5. list the job responsibilities in fire prevention.
6. explain how public service is used in the fire prevention program.
7. identify the types and uses of signs and posters.
8. utilize the benefits of cooperation in fire prevention and cooperative agreements.
9. explore the National Fire Danger Rating System.
10. initiate and complete a fire prevention school program.

Methods of Instruction

- Lecture

Assignments

- **Sample Assignment(s)**

  Compare and contrast the functions of wildland fire prevention, and wildland fire investigation.

Methods of Evaluation

- Exams/Tests
- Quizzes
- Class Participation
- Other

  The evaluation process will include classroom participation, performance evaluations, written assignments, quizzes, attendance, and a written final examination. Sample written exercise: Describe the legal use of Smokey Bear in fire prevention, include all of the various uses of the Smokey Bear Symbol.

Texts and Other Instructional Materials

Adopted Textbook
None

Supplemental Texts

1. Supplemental Texts 1. Firefighters Handbook on Wildland Firefighting 4th Edition 2. NFES Incident Command System 3. National Wildfire Coordination Group a. Fire Prevention Education P-101 (NFES 2880) b. Fire Prevention Education Student Workbook P-101 (NFES 2881) c. Wildland Fire Observations and Origin Scene Protection for First Responders FI-110 (NFES 2747) d. Student Workbook FI-110 (NFES 2748) e. Wildfire Origin and Cause Determination Handbook, PMS 412 (NFES 1874) f. Incident Response Pocket Guide (IRPG), PMS 461 (NFES 1077) g. Introduction to Incident Information S-203 Student Workbook (NFES 2915) h. National Fire Danger Rating System Reference Material, PMS 933 (NFES 2687) i. Interagency Standards for Fire and Fire Aviation Operations Fire Investigation (NFES 2724)

Instructional Materials
None

Student Learning Outcomes

1. WFT104 SLO1 - Describe the roles and functions of the information officer.
2. WFT104 SLO2 - Describe fire prevention and investigation communications.

Distance Education

Delivery Methods

- Internet

Instructor Initiated Contact Hours Per Week:
None

Contact Types

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2. Discussion Board
3. Testing

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Adjustments to Evaluation Tools

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Additional Comments
None

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Board Approval: 12/15/1998
PCA Established:
DL Conversion: 12/14/2004
Date Reviewed: Fall 2020
Catalog Year: 2020 - 2021

Allan Hancock College
Course Outline

Discipline Placement: Fire Technology
Department: Public Safety
Prefix and Number: WFT 105
Catalog Course Title: Wildland Fire Planning, Logistics, and Finance
Banner Course Title: Wld Fire Plan Log Fin.

Units and Hours

	Hours per Week	Total Hours per Term (Based on 16-18 Weeks)	Total Units
Lecture	3.000	48.0 - 54.0	
Lab	0.000	0.0 - 0.0	
Outside-of-Class Hours	6.000	96.0 - 108.0	
Total Student Learning Hours	9.0	144.0 - 162.0	3.0
Total Contact Hours	3.0	48.0 - 54.0	

Number of Times Course may be Repeated
None

Grading Method
Letter Grade Only

Requisites

Advisories
WFT 302 Basic Incident Command System I-200

Entrance Skills

Upon entering this course, the student should be able to:

WFT 302 - Basic Incident Command System I-200

- describe and explain the use or purpose of each of the twelve principal ICS features.
- explain how the organization expands and contracts.
- list the principal facilities, where they may be located, and how they are used.
- describe the need for proper incident resource management.
- describe the check in process at a wildland fire incident.

Entrance Skills Other (Legacy)

6. Explain how resources are allocated in the Incident Command System

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Catalog Description

Explores the roles, responsibilities and functions of the planning, logistics, and finance sections that are utilized during the control of wildland fires.

Course Content

Lecture

1. Introduction
    a. Staff/students
    b. Agenda
    c. Topics and required performance levels.
    d. Identification of facilities related to job.
    e. Review of Incident Command System
2. Managing the Planning Section
    a. Obtain briefing from Incident Commander.
    b. Activate planning section units.
    c. Reassign initial attack personnel to incident positions.
    d. Prepare written objectives.
    e. Provide briefing for subordinates.
    f. Advise general staff of any significant changes in incident status.
    g. Prepare and provide incident traffic plan.
    h. Supervise planning section units.
    i. Prepare and distribute Incident Commander's orders.
    j. Instruct Planning Section Units on distribution of incident information.
3. Supervise preparation of Incident Action Plan
    a. Requirements and reporting schedules for all ICS organizational elements.
    b. Present general incident control objectives including alternatives.
    c. Participate in discussion of specific control operations being considered:
    d. Resource availability
    e. Situation status
    f. Situation predictions
    g. Weather
    h. Communications capabilities.
    i. Environmental impact and cost of resource use information.
    j. Operations support and service needs are coordinated with logistics section.
    k. Document Incident Action Plan to Incident Commander, Section Chiefs, etc.
4. Assemble Information on Alternative Strategies
    a. Review current situation status, resource status, weather, and prediction reports.
    b. Develop alternative strategies using technical specialists and operations personnel.
    c. Identify resources required to implement alternative control operations.
    d. Document alternatives for presentation to Incident Commander and staff.
5. Specialized Resources
    a. As part of the planning function, identify the need for technical specialists.
    b. Types of specialists
    c. Where and how specialists are used.
    d. Personnel with special knowledge/experience to be assigned to planning section.
6. Compile and Display Incident Status Information
    a. Incident Status summary information is to be displayed at a common location.
    b. Receive information from:
        i. Situation Unit
        ii. Resources Unit
        iii. Incident weather prediction
        iv. Infrared imagery or visual aerial observation.

c. Review information for accuracy.
d. Specify location and method of display.
e. Ensure that all reports are displayed.
f. Repeat procedures at intervals specified by the Incident Commander.

7. Introduction to the logistics section
   a. Duties and responsibilities of logistics section.
   b. Logistics section positions.
   c. Staffing required for various positions.
   d. Appropriate logistics section personnel.
   e. Plan preliminary organization of logistics section.
   f. Identify units to be activated.
   g. Estimate personnel required
   h. Compare preliminary plan with personnel ordered, as appropriate.
   i. Identify additional personnel needed.
   j. Assign work locations and work tasks to logistics section personnel.
   k. Notify resources unit section units activated including names and locations.
8. Logistics Section Organization
   a. Confirm arrival of dispatched logistics section personnel.
   b. Assemble and brief logistic section personnel.
   c. Provide summary of incident.
   d. Provide summary of current logistics activities.
   e. Review initial operations of logistics section with section personnel.
   f. Given instructions for initial operations to section personnel.
9. Preparation of the Incident Action Plan
   a. Planning Meeting.
   b. Strategy and tactics for next operational period.
   c. Service and support capabilities.
   d. Logistical capabilities required for selected plan.
10. Introduction to the Finance section
   a. Finance Section responsible for cost analysis aspects of incident.
   b. Identify and order supply and support needs for finance section.
   c. Develop an operations plan for finance function on incident.
   d. Determine need for commissary operation.
   e. Meet with assisting and cooperating agency representatives as required.
   f. Provide input in all planning sessions on finance matters.
   g. Daily contact with agency(s) administrative headquarters on finance matters.
   h. Personnel time records are transmitted to home agencies according to policy.
   i. Participate in all demobilization planning.
   j. Obligation documents initiated at incident are properly prepared and completed.
   k. Agency administration personnel on incident related business management issues.
   l. Maintain Unit Log (ICS Form 214).
11. Major Responsibilities and Procedures of finance section
   a. IC briefing to obtain financial information, administrative guidelines and constraints.
   b. Attend Planning meeting to gather information on overall strategy.
   c. Identify and order supply and support needs for finance section.
   d. Develop an operating plan for finance function on incident.
   e. Prepare work objectives for subordinates, brief staff, make assignments.
   f. Determine need for commissary operation.
   g. Inform incident commander and general staff when section is fully operational.
   h. Meet with assisting and cooperating agency representatives as required.
   i. Provide input in all planning sessions on finance matters.
   j. Daily contact with agency(s) administrative headquarters on finance matters.
   k. All personnel time records are transmitted t home agencies according to policy.
   l. Participate in all demobilization planning.
   m. Obligation documents initiated at the incident are properly prepared and completed.
   n. Transfer fiscal documents from incident to responsible agency.
   o. Agency administration personnel on incident related business management issues.
   p. Maintain Unit Log (ICS 214)
12. Demobilization
   a. Review latest situation status and incident prediction information.
   b. Estimate current and future requirements for resources.

c. Identify and list potentially surplus resources.
d. Prepare assignment list specifying resources to be released.
e. Demobilization plan to staff, Incident Command Staff, and agency dispatch centers.

13. Examination

Course Objectives

At the end of the course, the student will be able to:

1. describe the planning function.
2. list the types of information necessary to understand the current situation.
3. collect information necessary to predict probable course of incident events.
4. prepare alternative strategies for the incident.
5. list the types of facilities, services, and material utilized at a wildland fire.
6. describe the units and functions within the logistics section.
7. identify the command structure within the logistics section.
8. describe the units and functions within the finance section.
9. list the reasons why the finance operation is tied to the jurisdictional agency.

Methods of Instruction

- Lecture

Assignments

- Other Assignments
  Sample: Compare, contrast and diagram the planning, logistics, finance functions at a wildland fire incident. Include layout of a facility that will encompass the three functions.

Methods of Evaluation

- Exams/Tests
- Quizzes
- Class Participation
- Writing Requirements
- Other
  The evaluation process will include classroom participation, performance evaluations, written assignments, quizzes, attendance, and a written final examination. Sample written exercise: Describe the positions in the planning section in a wildland fire.

Texts and Other Instructional Materials

Adopted Textbook

1. Teie, William C *Firefighter's Handbook on Wildland Firefighting, Strategy, Tactics, and Safety* Edition: 4th 2018

Supplemental Texts

1. Supplemental Texts 1. Ground Cover Fire Fighting for Structural Firefighters, International Fire Service Training Association 2. NFES Incident Command System 3. National Wildfire Coordination Group a. Interagency Incident Management Handbook PMS 902 b. Planning Section Trainee Workbook S-440 (NFES 1963) c. Incident Response Pocket Guide (IRPG), PMS 461 (NFES 1077) d. Wildland Fire Incident Management Field Guide PMS 210

Instructional Materials
None

Student Learning Outcomes

1. WFT105 SLO1 - Describe the functions of planning, logistics and finance as related to the control of wildland fires.

Distance Education

Delivery Methods

- Internet

Instructor Initiated Contact Hours Per Week:
None

Contact Types

1. Email Communication (group and/or individual communications)
2. Discussion Board
3. Testing

Adjustments to Assignments
Instructors may employ a variety of online tools to make the necessary adjustments in an ERT/ DE setting for this course.

- Assignments will be submitted primarily through the district Course Management System(CMS).
- Students can submit multiple files types, type in a textbox to submit their assignments, or submit links to their work in the cloud or other web related service such as Google Docs.
- Students can also submit assignments through district email or the messaging service in the district CMS.
- The district CMS contains many tools instructors can use to facilitate different assignment types.
- Instructors may use the assignments tool and / or discussion tool to facilitate student to student interaction.
- Instructors may use the feedback features of the district CMS to facilitate instructor - initiated contact.
- When appropriate, instructors may use group assignments.

Possible tools employed to adjust for ERT / DE course may include, but not limited to:

- District CMS assignments
- Threaded discussion forums
- District Email
- District CMS messaging service
- Announcements in the district CMS
- Feedback of student work through use of Speed Grader or other tools
- Synchronous audio / videoconferencing(Zoom, Cranium Café)
- Interactive mobile technologies
- Chat, text, Twitter
- Telephone
- Virtual offices hours
- Other: None

Adjustments to Evaluation Tools

- ERT/DE courses allow for multiple evaluation tools with online technology.
- This course will be able to use interactive quizzes which allow for automated assessment performance for certain question types and the use of the mastery gradebook.
- If the assessment requires necessary student authentication, the instructor can employ machine automated proctoring services available through the current district CMS.

- Use of these features (quizzes, discussions, and assignments) provide the necessary tools to evaluate student progress toward the objectives of the course.

Strategies to Make Course Accessible to Disabled Students
All courses must meet the WCAG 2.0 level AA standards including but not limited to the items listed below:

1. Images, graphs, charts or animation. A text equivalent or alt text is provided for every non-text element, including all types of images and animated objects. This will enable a screen reader to read the text equivalent to a blind student.
2. Multimedia. Equivalent alternatives for any multimedia presentation are synchronized with the presentation. Videos and live audio must be closed captioned. For archived audio, a transcript maybe sufficient.
3. Documents and other learning materials. PDFs, Microsoft Word documents, PowerPoint presentations, Adobe Flash and other content must be as accessible as possible. If it cannot be made accessible, consider using HTML or, if no other option is available, provide an accessible alternative. PDF documents must be properly tagged for accessibility.
4. Timed quizzes/exams. Extended time on quizzes and exams is one of the most common accommodations. Instructions for extending time in Canvas.
5. Outside webpages and links
6. Ensure that all webpages meet 508 standards by testing through Cynthia Says. Follow the Accessibility Guidelines WCAG 2.0 Level AA
7. Ensure links make sense out of context. Every link should make sense if the link text is read by itself. Screen reader users may choose to read only the links on a web page. Certain phrases like "click here" and "more" must be avoided.
8. Applications, software, and outside learning systems. All required outside applications and/or learning systems (e.g MyMathLab, Aleks, etc.) are accessible OR an alternative is provided. Test with WebAIM WAVE toolbar.
9. Avoid text images. Images of text are avoided, OR an alternative is provided. (Examples of images of text are PDFs made from scanned pages, and word art.)
10. Color contrast. Text and background color have sufficient contrast on all documents, PowerPoints, and webpages both inside and outside of the LMS.
11. Text objects. If the shape, color, or styling of any text object conveys information, that information is conveyed in plain text as well.
12. Disability statement. The course syllabus contains the college's suggested Disability Statement as well as current information on the location and contact information for the Learning Assistance Program (LAP).

Inform Students
The course syllabus gives information on accessing on-line services and messages throughout the semester direct students to services that may be utilized to assist them in research and obtaining additional information.
Additional Comments
None

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REVIEW OF PRE-REQUISITES, COREQUISITES AND ADVISORIES

REVIEW OF PREREQUISITES FIRE TECHNOLOGY

Course Number	Course Title	Unit
FT-101	Fire Protection Organization	None
FT-102	Fire Prevention Technology Requisite: None	3.0
FT-103	Fire Protection Equipment and Systems Requisite: None	3.0
FT-104	Building Construction for Fire Protection Requisite: None	3.0
FT-105	Fire Behavior and Combustion Requisite: None	3.0
FT-106	Principles of Fire & Emergency Safety & Survival Requisite: None	3.0

REVIEW OF COREQUISITES FIRE TECHNOLOGY

Course Number	Course Title	Unit
FT-101	Fire Protection Organization	None
FT-102	Fire Prevention Technology Corequisite: None	3.0
FT-103	Fire Protection Equipment and Systems Corequisite: None	3.0
FT-104	Building Construction for Fire Protection Corequisite: None	3.0
FT-105	Fire Behavior and Combustion Corequisite: None	3.0
FT-106	Principles of Fire & Emergency Safety & Survival Corequisite: None	3.0

REVIEW OF ADVISORIES FIRE TECHNOLOGY

Course Number	Course Title	Unit
FT-101	Fire Protection Organization	None
FT-102	Fire Prevention Technology Advisory: Concurrent enrollment in FT-101	3.0
FT-103	Fire Protection Equipment and Systems Advisory: Concurrent enrollment in FT-101	3.0
FT-104	Building Construction for Fire Protection Advisory: Concurrent enrollment in FT-101	3.0
FT-105	Fire Behavior and Combustion Advisory: Concurrent enrollment in FT-101	3.0
FT-106	Principles of Fire & Emergency Safety & Survival Advisory: None	3.0

*****Faculty will be working to remove "advisories" from the Fire Technolgy core courses as they have been interpreted falsly and have confused students. Each of the core courses stands alone. No advisory is necessary.*

REVIEW OFPREREQUISITES WILDLAND FIRE TECHNOLOGY

Course Number	Course Title	Unit
WFT-101	Wildland Fire Behavior Prerequisite: None	3.0
WFT-102	Wildland Fire Safety and Survival Prerequisite: None	3.0
WFT-103	Wildland Fire Operations Prerequisite: None	3.0
WFT-104	Wildland Public Information, Prevention, & Investigation Prerequisite: None	3.0
WFT-105	Wildland Fire, Planning, Logistics and Finance Prerequisite: None	3.0

REVIEW OF COREQUISITES WILDLAND FIRE TECHNOLOGY

Course Number	Course Title	Unit
WFT-101	Wildland Fire Behavior Corequisite: None	3.0
WFT-102	Wildland Fire Safety and Survival Coerequisite: None	3.0
WFT-103	Wildland Fire Operations Corequisite: None	3.0
WFT-104	Wildland Public Information, Prevention, & Investigation Corequisite: None	3.0
WFT-105	Wildland Fire, Planning, Logistics and Finance Corequisite: None	3.0

REVIEW OF ADVISORIES WILDLAND FIRE TECHNOLOGY

Course Number	Course Title	Unit
WFT-101	Wildland Fire Behavior Advisory: WFT-302, Basic ICS I-200	3.0
WFT-102	Wildland Fire Safety and Survival Prerequisite: WFT-302, Basic ICS I-200	3.0
WFT-103	Wildland Fire Operations Prerequisite: WFT-302, Basic ICS I-200	3.0
WFT-104	Wildland Public Information, Prevention, & Investigation Prerequisite: WFT-302, Basic ICS I-200	3.0
WFT-105	Wildland Fire, Planning, Logistics and Finance Prerequisite: WFT-302, Basic ICS I-200	3.0

DEGREE AND CERIFICATE REQUIREMENTS

I. Fire Technology Associates Degree / Fire Technology Certificate of Achievement

The Fire Technology Associates Degree program is designed to prepare those interested ia a career in the fire service, either public or private, to upgrade the skills of In-service fire service personnel in their present positions or prepare in-service personnel for promotional opportunities.

The graduate of the Associate in Science In Fire Technology will:

- Demonstrate the skill set necessary for a successful career in the fire service, Enviornmnetal Technology, and /or Emergency Services.

- 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.

Program Requirements

A major of 33 units is required for the associates in science degree.

Required core courses (18 units):

Course Number	Course Title	Unit
FT-101	Fire Protection Organization	3.0
FT-102	Fire Prevention Technology	3.0
FT-103	Fire Protection Equipment and Systems	3.0
FT-104	Building Construction for Fire Protection	3.0
FT-105	Fire Behavior and Combustion	3.0
FT-106	Principles of Fire & Emergency Safety & Survival	3.0

Plus, a minimum of 15 units selected from the following:

Course Number	Course Title	Unit
EMS 301	Emergency Medical Service Academy 1A	6.0
FT-307	Firefighter I Academy 1A	6.0
FT-308	Firefighter I Academy 1B	6.0
FT-347	Fire Hydraulics	3.0
FT=149	Cooperative Work Experience: Occupational	1.0-8.0

All of the Fire Technology core course are delivered in a distance learning format using the Canvas Learning Management System. These courses are routinely full and course sections are doubled to accommodate student volume. FT-347 is also offered as a distance learning course.

Fire Technology Certificate of Achievement

The Fire Technology Associates Degree program is designed to prepare those interested ia a career in the fire service, either public or private, upgrade the skills of In-service fire service personnel in their present positions or prepare in-service personnel for promotional opportunities.

The graduate of the Certificate of Achievement In Fire Technology will:

- Demonstrate the skill set necessary for a successful career in the fire service, Enviornmnetal Technology, and /or Emergency Services.

- 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.

Program Requirements

A major of 33 units is required for the certificate of achievement.

Required core courses (18 units):

Course Number	Course Title	Unit
FT-101	Fire Protection Organization	3.0
FT-102	Fire Prevention Technology	3.0
FT-103	Fire Protection Equipment and Systems	3.0
FT-104	Building Construction for Fire Protection	3.0
FT-105	Fire Behavior and Combustion	3.0
FT-106	Principles of Fire & Emergency Safety & Survival	3.0

Plus, a minimum of 15 units selected from the following:

Course Number	Course Title	Unit
EMS 301	Emergency Medical Service Academy 1A	6.0
FT-307	Firefighter I Academy 1A	6.0
FT-308	Firefighter I Academy 1B	6.0
FT-347	Fire Hydraulics	3.0
FT-149	Cooperative Work Experience: Occupational	1.0-8.0

All Fire Technology core course are delivered in a distance learning format using the Canvas Learning Management System. These courses are routinely full and course sections are doubled regularly to accommodate student volume. FT-347 is also offered as an elective distance learning course.

**** *A minimum of 18 units of degree or certificate work must be completed at Allan Hancock College.*

II. Wildland Fire Technology Associates Degree and Certificate Program

The Wildland Fire Technology Associates Degree program is designed to prepare those interested ia a career in the Wildland Fire Services, either public or private, to upgrade the skills of In-service fire service personnel in their present positions or prepare in-service personnel for promotional opportunities.

The graduate of the Associates in Science in Wildland will:

- Demonstrate the skill set necessary for a successful career in the Fire Service.
- Show knowledge of federal and state laws, regulations and codes pertaining to safety and efficiency in an all-risk emergencies and scenarios pertaining to fire in the wildland environment.

Program Requirements

A major of 30 units is required for the associates in science degree. Required core courses

(15 units):

Course Number	Course Title	Units
WFT 101	Wildland Fire Behavior	3.0
WFT 102	Wildland Safety and Survival	3.0
WFT 103	Wildland Fire Operations	3.0
WFT 104	Wildland Public Information Officer, Prevention and Investigation	3.0
WFT 105	Wildland Fire Planning, Logistics and Finance	3.0

Plus, a minimum of 15 units selected from the following:

Course Number	Course Title	Units
WFT 303	Intermediate Incident Command System I-300	1.5
WFT 304	Advanced Incident Command System I-400	1.0
EMS 301	Emergency Medical Services Academy – 1A	6.0
EMS 302	CPR for Healthcare Providers	0.5
FT-101	Fire Protection Organization	3.0
FT-102	Fire Prevention Technology	3.0
FT-103	Fire Protection Equipment and Systems	3.0
FT-104	Building Construction for Fire Protection	3.0
FT-105	Fire Behavior and Combustion	3.0
FT-106	Principles of Fire & Emergency Safety & Survival	3.0
FT 308	Firefighter Academy 1B	6.0

Wildland Fire Technology Certificate

Award Type: Certificate of Achievement (Minimum *18-Units Including Core*)

The graduate of the Certificate of Achievement in Wildland will:

- Demonstrate the skill set necessary for a successful career in the Fire Service.
- Show knowledge of federal and state laws, regulations and codes pertaining to safety and efficiency in an all risk emergencies and scenarios pertaining to fire in the wildland environment.

Program Requirements

A major of 30 units is required for the associates in science degree. Required core courses (15 units):

Course Number	Course Title	Units
WFT 101	Wildland Fire Behavior	3.0
WFT 102	Wildland Safety and Survival	3.0
WFT 103	Wildland Fire Operations	3.0
WFT 104	Wildland Public Information Officer, Prevention and Investigation	3.0
WFT 105	Wildland Fire Planning, Logistics and Finance	3.0

Plus, a minimum of 15 units selected from the following:

Course Number	Course Title	Units
WFT 303	Intermediate Incident Command System I-300	1.5
WFT 304	Advanced Incident Command System I-400	1.0
EMS 301	Emergency Medical Services Academy – 1A	6.0
EMS 302	CPR for Healthcare Providers	0.5
FT 308	Firefighter Academy 1B	6.0
WFT 302	ICS-200 Basic ICS	
WFT 303	ICS-300 Intermediate ICS	
WFT 304	ICS-400 Advanced ICS	
WFT 311	S-130 Firefighter Training	
WF 312	S-131 Firefighter Type 1	
WFT 313	S-190 Intro to Fire Behavior	
WFT 314	S-200 Initial Attack Incident Commander	
WFT 316	S-215 Fire Operations in the Urban Interface	
WFT 321	S-230 Crew Boss, Single Resource	
WFT 322	S-231 Engine Boss, Single Resource	
WFT 325	S-219 Ignition Operations	

WFT 332	S-290 Intermediate Fire Behavior
WFT 333	S-300 Extended Attack Incident Commander
WFT 335	S-330 Task Force/Strike Team Leader
WFT 337	S-339 Division/Group Supervisor
WFT 344	S-390 Fire Behavior Calculations
WFT 347	S-404 Safety Officer
WFT 358	PMS 925 Facilitative Instructor
WFT 363	L-280 Followership to Leadership
WFT 364	L-381 Incident Leadership
WFT 328	S-244 Field Observer
WFT 320	S-270 Basic Air Operations

Courses requiring equipment. To be taught by hosting agency:

WFT 317	S-211 Portable Pumps and Water Use
WFT 318	S-212 Wildland Fire Chainsaws

**** *A minimum of 18 units of degree or certificate work must be completed at Allan Hancock College.*

COURSE REVIEW VERIFICATION

Discipline: Fire Technology Year: 2021

As part of the program evaluation process, the self-study team has reviewed the course outlines supporting the discipline/program curriculum. The review process has resulted in the following recommendations:

1. The following course outlines are satisfactory as written and do not require modification (list all such courses):

   FT 101, 102,103,104,105 / WFT 101, 102,103,104,105

2. The following courses require minor modification to ensure currency. The self study team anticipates submitting such modifications to the AP&P, FALL 20____ SPRING 20____:

   N/A

3. The following courses require major modification. The self study team anticipates submitting such modifications to the AP&P committee, FALL 20____ SPRING 20____:

   N/A

GRADUATION REQUIREMENTS: General Education (GE), Multicultural/Gender Studies (MCGS) and Health & Safety (H&W) Courses.

The following courses were reviewed as meeting an **AHC GE** requirement. The AP&P GE Criteria and Category Definitions (GE Learning Outcomes) forms were submitted to the AP&P for review on: _____

The following courses were reviewed as meeting the **MCGS** requirement. The AP&P MCGS Criteria and Category Definitions (MCGS Learning Outcomes - To Be Developed) forms were submitted to the AP&P for review on: _____

The following courses were reviewed as meeting the **H&W** requirement. The AP&P H&W Studies Criteria (To Be Developed) and Category Definitions (H&W Learning Outcomes - To Be Developed) forms were submitted to the AP&P chair for review on: _____

Course Review Team Members:

	Signatu	10/1/2021
	Signature	Date
	Signature	Date

Signature AP&P Chair Date

Signature Academic Dean Date

09/02/11 DD

ADVISORY COMMITTEES

Fire Technology Advisory Committees

The Fire Technology Program is provided guidance through several Advisory Committees. These groups help provide direction to the direction of the program. The following are the groups which provide regular feedback to the Fire Technology Program.

California Fire Training Directors Association (CFTDA): This is a group of California Community College Fire Technology and or Fire Academy Directors that meet regularly to discuss curriculum, textbooks, and state fire training compliance in their efforts. The group provides a great opportunity to discuss different methods of administering Fire Technology programs and Fire Academies. The AHC Fire Academy Coordinator and Fire Technology full-time faculty are assigned to this effort.

Santa Barbara County Fire Chief Officers: This group represents the Fire Department leadership element for all fire agencies in Santa Barbara County. This group coordinates the operational areas response, resources, and training. The group is serviced by the Santa Barbara County Training Officers Association which implements the required or recommended training as directed by the Chiefs group. Allan Hancock College representation with this group occurs regularly or on an as needed basis based on training and the college's involvement.

Santa Barbara County Fire Training Officers Association: Santa Barbara County Training Officers Association which implements the required or recommended training as directed by the Chiefs group. The group meets regularly to plan and organize the delivery of training courses to firefighters across Santa Barbara County. Allan Hancock College representation with this group occurs regularly or on an as needed basis based on training and the college's involvement.

San Luis Obispo County Fire Chiefs Association: This group represents the Fire Department leadership element for all fire agencies in San Luis Obispo County. This group coordinates the operational areas response, resources, and training. The group is serviced by the San Luis Obispo County Training Officers Association which implements the required or recommended training as directed by the Chiefs group. Allan Hancock College representation with this group occurs regularly or on an as needed basis based on training and the college's involvement.

San Luis Obispo County Fire Training Officers Association: San Luis Obispo County Training Officers Association which implements the required or recommended training as directed by the Chiefs group. The group meets regularly to plan and organize the delivery of training courses to firefighters across San Luis Obispo County. Allan Hancock College representation with this group occurs regularly or on an as needed basis based on training and the college's involvement.

Wildland Fire Advisory Committee: This group consists of professionals in the Wildland Fire Field that meet to assist with the development and delivery of Wildland Fire topics including semester length degree core courses, Fire Academy course and statewide Wildland Fire curriculums. The group along with the Public Safety Department, Chair have recently re-established the Wildland Fire Associates Degree and Certificate programs.

Firefighter Internship Steering Committee: This group meets to plan, discuss, and implement the semester length Firefighter Internship program. The program is supported by the following departments:

Santa Barbara County Fire Department

Santa Barbara City Fire Department

Santa Maria City Fire Department

Atascadero Fire Department

All agencies regularly host college interns as part of the program. The group meets prior to each semester to plan for the onboarding of new Firefighter Interns.

Women's Fire Camp Success Team Steering Committee: This is a very new group that has been established as part of a "Success Teams" project to support the outreach and recruitment of more female candidates for the Fire Academy and the Fire Technology Program.

OVERALL PROGRAM STRENGTHS

OVERALL PROGRAM STRENGTHS

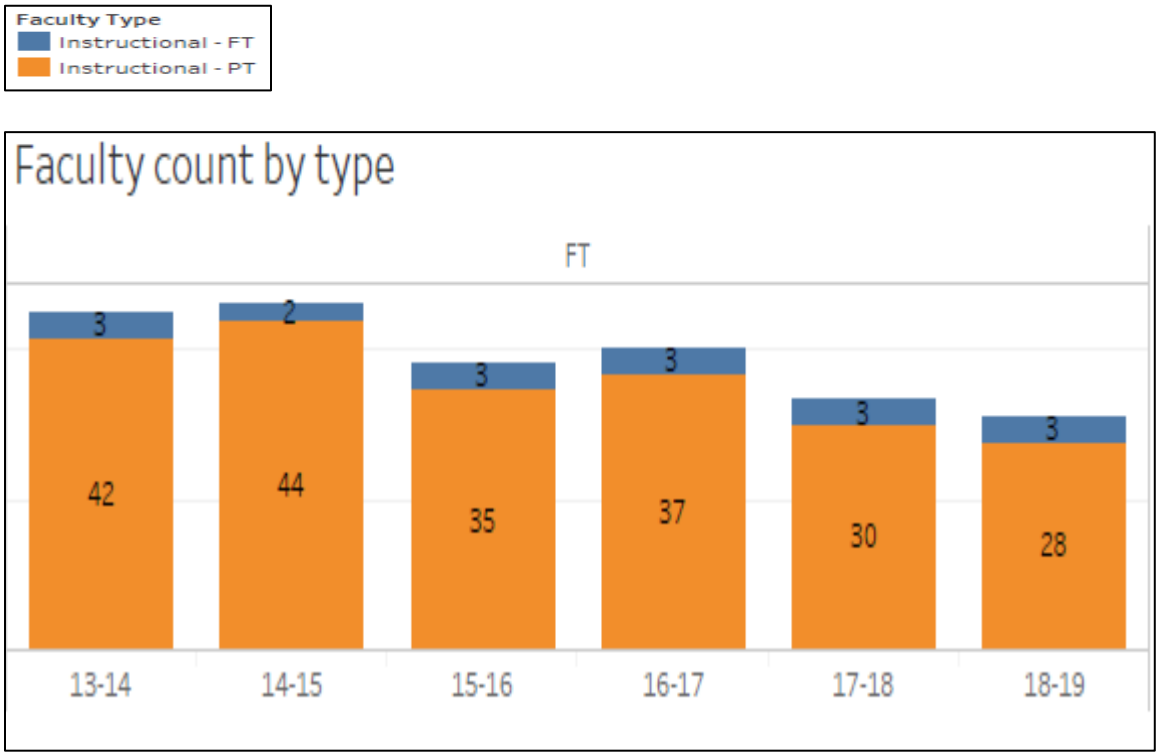
The Fire Technology Programs overall program strengths lies in the following areas:

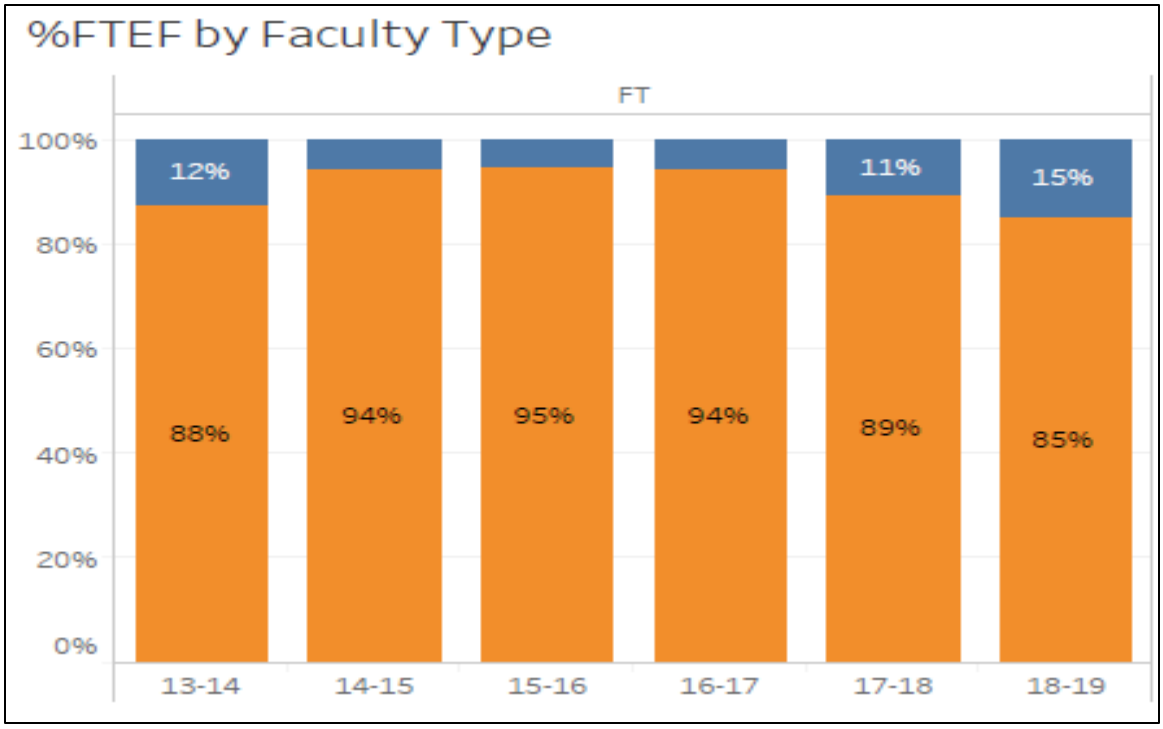
1. AHC Personnel: Full-Time Faculty - Part-Time Faculty - Support Staff

The AHC PSTC is blessed with a highly motivated workforce. The group functions as a team with a student-centered approach. As we look to the future, we will be expanding our course offerings. This may require the onboarding of new faculty or part-time faculty. At a minimum it will require additional development of our existing Part-Time Faculty members.

Faculty / Part-Time Faculty

The Fire Technology program is currently staffed with just **two** full-time faculty members. A Fire Academy Coordinator and an Assistant Professor, Fire Technology. These two positions are focused on *two completely different missions*. This is very important to understand. It is our belief that as we grow an additional Assistant Professor Fire Technology should be pursued. The appropriate leadership and command and control of the Fire Technology mission will be discussed later in this document. The below graph depicts the significant disparity in full-time to part-time faculty use in the Fire Technology program*. Additionally, the 3 Full-Time represented in the below graph is incorrect it is now 2.*




%FTEF by Faculty Type
FT
100%
80%
60%
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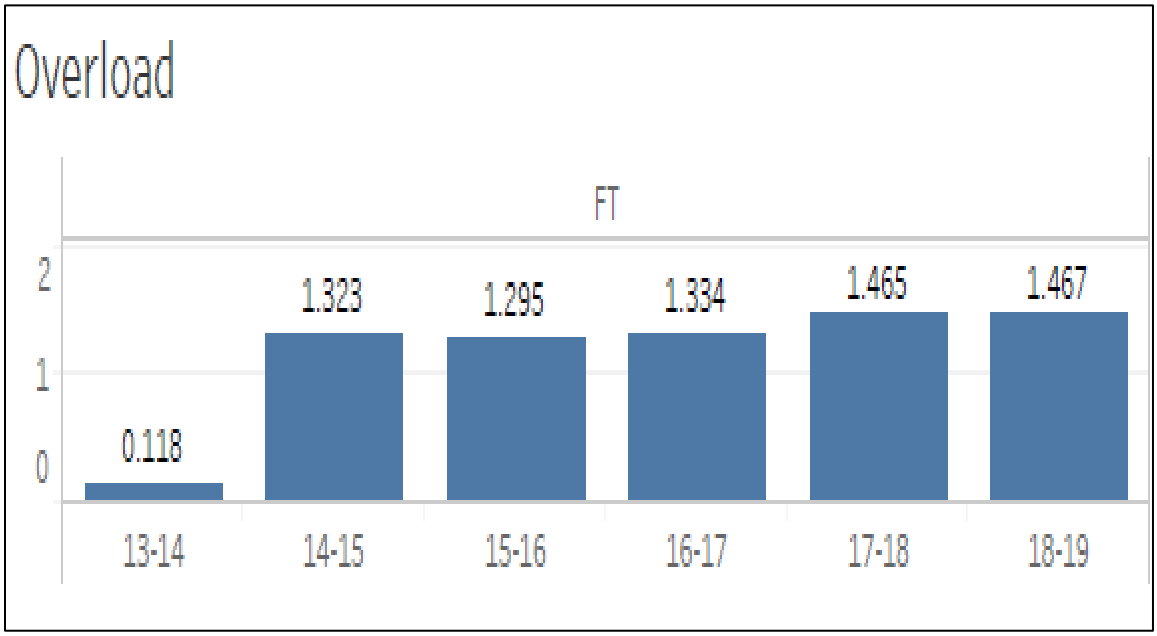
20%
0%
12%
88%
94%
95%
94%
11%
89%
15%
85%
13-14
14-15
15-16
16-17
17-18
18-19


Overload
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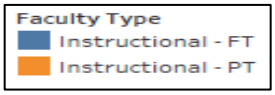
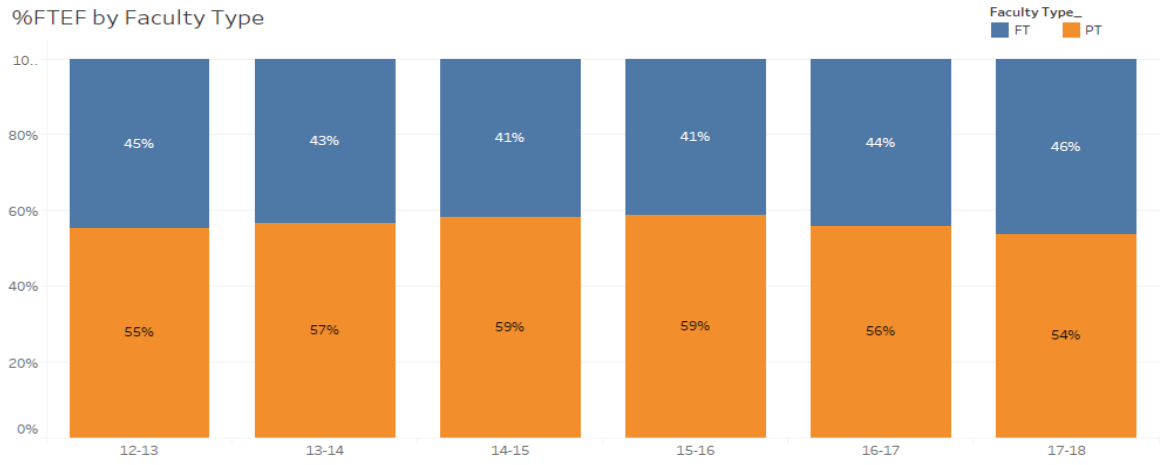

Faculty Type
Instructional - FT
Instructional - PT

7 FTEF+Overload by Faculty Type Allan Hancock College

Instruction Type	Faculty Type	Academic Year 2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
Instructional	Instructional - FT	270.689	277.160	288.448	307.136	313.022	314.389
	Instructional - PT	334.887	358.454	379.747	356.486	332.909	314.401
	Total	605.576	635.614	668.195	663.622	645.931	628.790
NonInstructional	NonInstructional - FT	74.437	78.174	74.123	76.788	76.504	79.857
	NonInstructional - PT	30.412	35.530	37.100	33.873	35.866	29.230
	Total	104.849	113.704	111.223	110.661	112.370	109.087
Grand Total		710.425	749.318	779.418	774.283	758.301	737.877

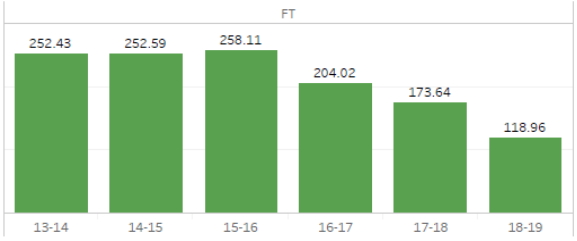
%FTEF by Faculty Type



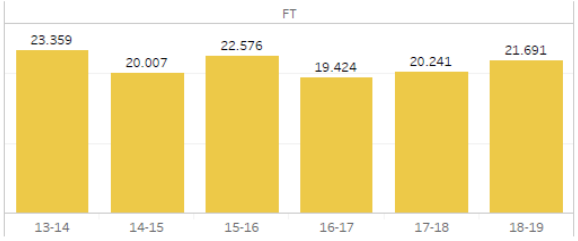
7 FTEF+Overload, FTES & Efficiency - FT

Academic Year 2013-2014			2014-2015			2015-2016			2016-2017			2017-2018			2018-2019		
FTEF+	FTES	FTES / FTEF	FTEF+	FTES	FTES / FTEF	FTEF+	FTES	FTES / FTEF	FTEF+	FTES	FTES / FTEF	FTEF+	FTES	FTES / FTEF	FTEF+	FTES	FTES / FTEF
23.359	252.43	10.8	20.007	252.59	12.6	22.576	258.11	11.4	19.424	204.02	10.5	20.241	173.64	8.6	21.691	118.96	5.5

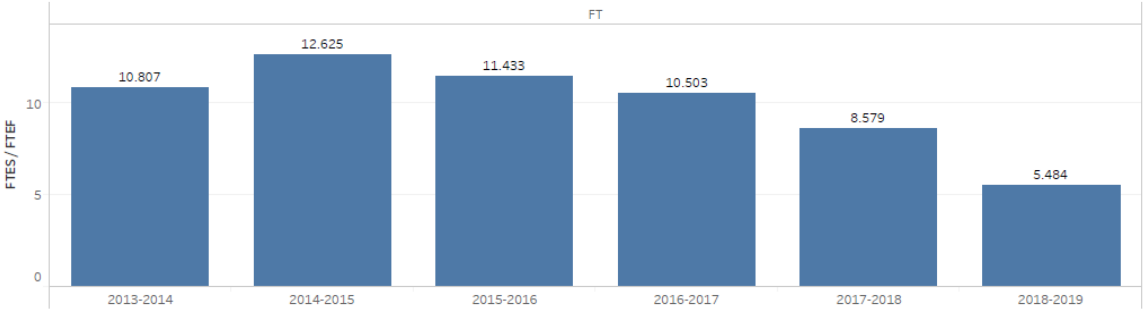
FTES



FTEF



FTEF/ FTES



Part-Time Faculty

The Fire Technology program currently enlists the help of 15 Part-Time Faculty members. Most of these members are focused on supporting the delivery of the Firefighter I Academy. Some of the 15 Part-Time Faculty members are assigned distance learning courses as part of the Fire Technology Degree and Certificate programs.

Support Staff / Secretarial

The Fire Technology program currently receives assistance from the following support staff positions:

PSTC Facilities Coordinator
PSTC Department Secretary
PSTC Secretary

2. The AHC California State Firefighter I Academy

The Fire Academy is a long-standing well-run program that is a corner stone of Allan Hancock College's reputation. as a vocational school statewide. The Fire Academy and its staff deliver a high quality and efficient program. All State Fire Marshal required curriculum are delivered over a full semester course. All Fire Academy students are also required to attend a fitness program to improve their overall health and fitness while in the program. This is a tremendous program and develops high quality recruits who are prepared to enter the job market.

3. Distance Learning Associates and Certificate Program Fire Technology

The Fire Technology Program has for many years held all its degree and certificate core courses completely online. This has allowed for a statewide student base and has provided a steady volume of students over time. As more college's move to the online format, it will be important for AHC to maintain high level programs that are recognized for their quality, rigor, and ease of access and use.

4. Fixed Facilities / Training Center

One of the major strengths of the Fire Technology Program is the 60 plus acre training center that features the following fire service training props.

Training Tower

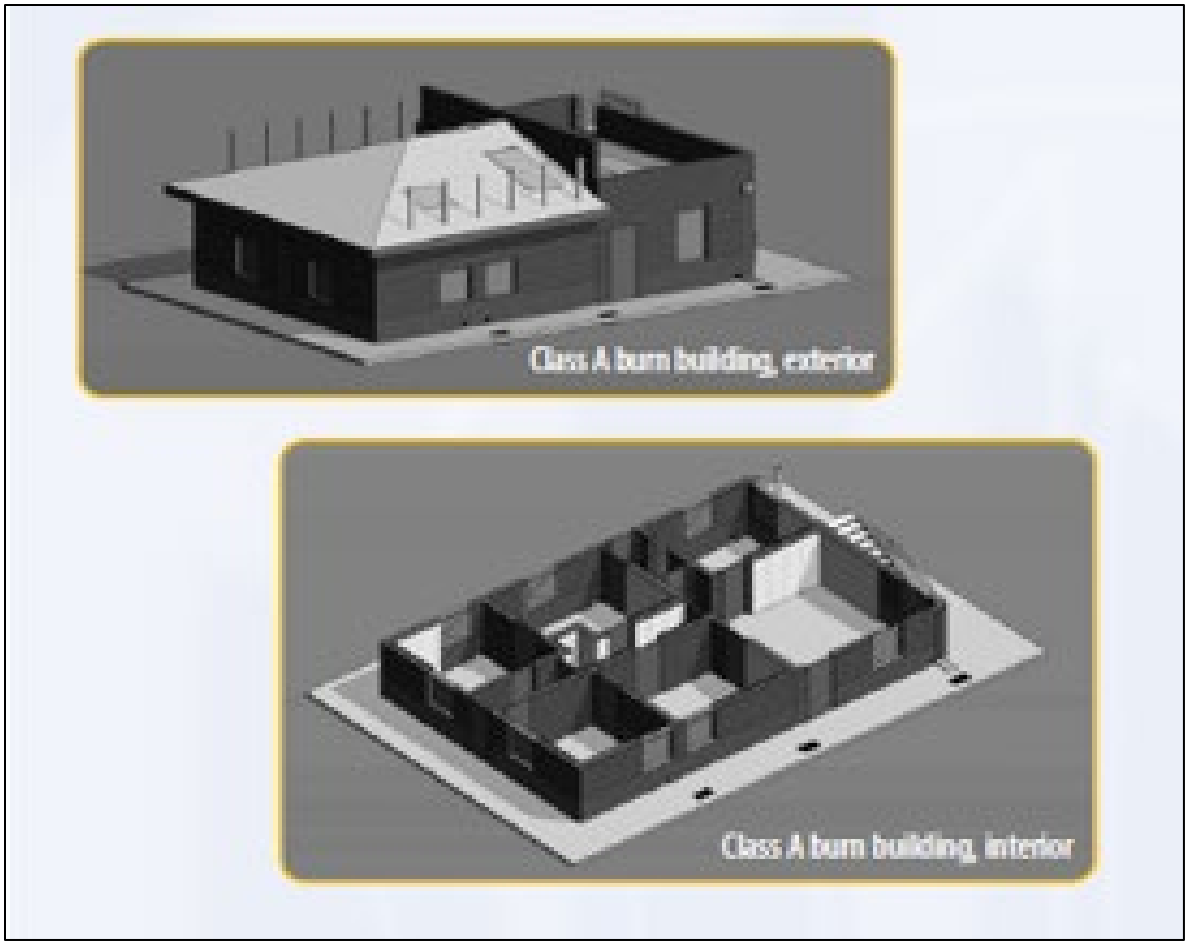
The six-story training tower features a Fire Blast propane live fire simulation capability. This allows the college to meet the required live fire requirement in the states Firefighter I curriculum. Fire scenarios can be practiced on multiple floors. The tower is equipped with standpipe and sprinkler systems for additional hose-lay and Engine Company Operations training. The tower also allows for Rope Rescue Technician level rope rescue training. There is also a vertical shaft that allows for confined space operations to also be practiced. All floors are available for Interior Building Shoring evolutions. The exterior of the building also allows for Exterior Shore training scenarios. Several large-scale trainings exercised within the training tower since 2014.

Most recently in 2019 the training tower doubled as a simulated collapsed college dormitory. Two of California's Urban Search and Rescue Regional Task Forces deployed to the PSTC and conducted rescue operations for a 12-hour operational period. The tower allows for simulated smoke as well as noise to create a realistic training environment for our students and our partner Fire Agencies.

Class A Fire Building

The Class A building was designed to allow for Class A combustibles to be burned safely to meet the following skills that have been identified in the California State Fire Marshall Firefighter I curriculum:

Live Fire Training (Class A Fuels: wood, paper, straw)
Search and Rescue
Vertical Ventilation
Horizontal Ventilation
Thermal Imaging Training
Interior Hose Stream Deploymnet and Management


Class A burn building, exterior
Class A burn building, interior

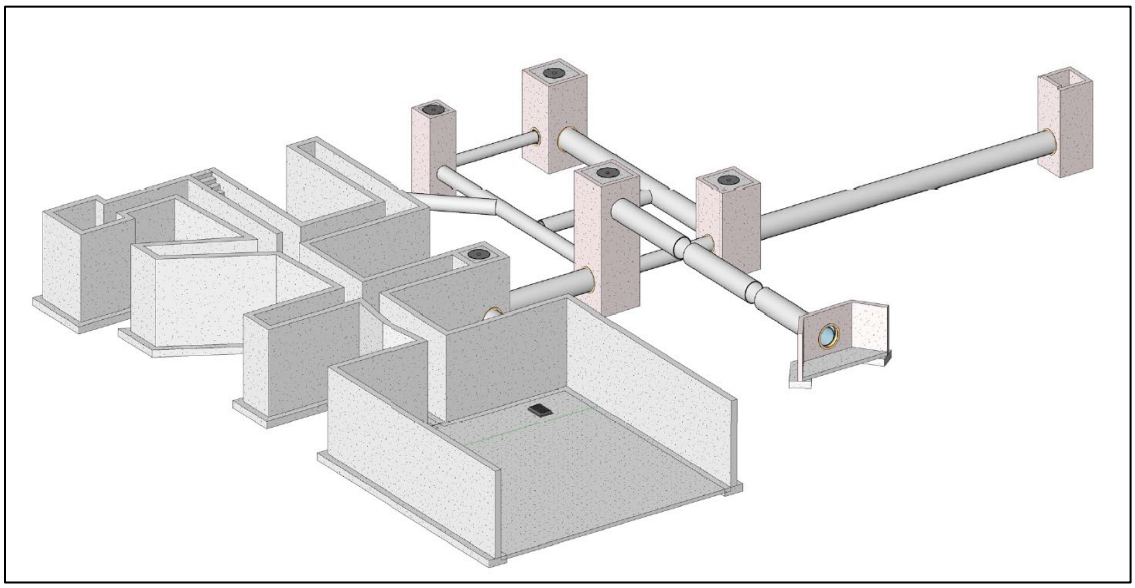
Trench Rescue Prop

The Trench Rescue Prop has served the PSTC well. It has supported the following CSFM course curriculmns:

Trench Rescue Technician
Confined Space Awareness (Required curriculm for Firefighter I)

This is a zero maintenance prop that will on occasion need the grates that cover it to be repaired or replaced. The prop will be available to service our student needs for many years to come.

An additional use of the Trench Rescue prop is being developed by Faculty. Local governmnet fire departmnets are in need of annual Trench Rescue refresher training. These would be single day 8 hour sessions delivered by AHC Faculty in support of the local governmnet and in some cases statewide Firefighter participation. In addition to Firefighter Training, Industry Partnerships may also be pursued to provide further training and use.

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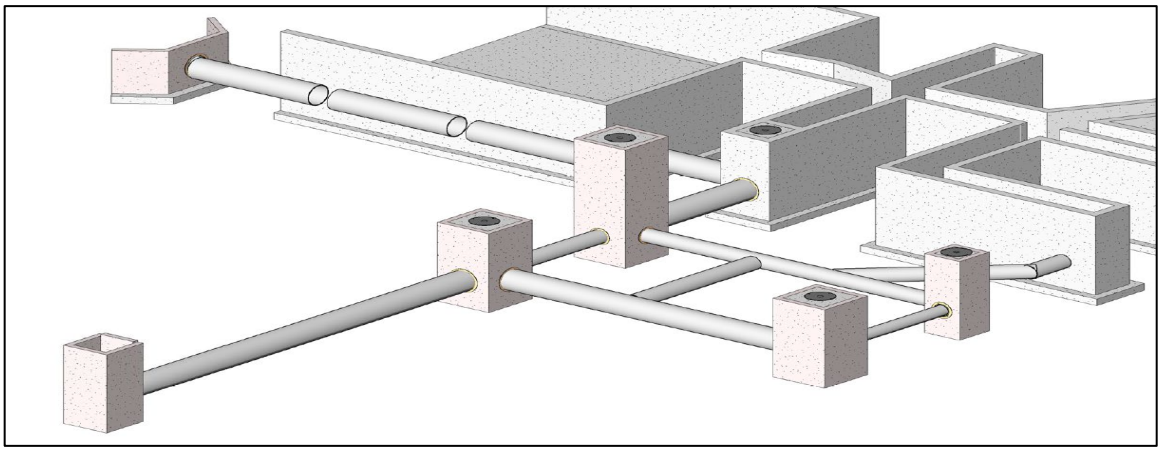
Confined Space Rescue Props

The Confined Space Rescue Prop is certified by the CSFM and has served the PSTC well. It has supported the following CSFM course curriculmns:

Confined Space Rescue Rescue Technician
Confined Space Awareness (Required curriculm for Firefighter I)

This is a zero maintenance prop that will on occasion need to be cleaned and cleared or insects and varments due to its undergound status. This is routinely done prior to any course delivery. We will need to maintain the props ability to be washed out and drain. It appears that the drain that was provided is clogged and in need of repair. Faculty will continue to pursue this issue. A recent repair has occurred to divert roof drainage from the prop. This has helped stabalize the long term viability. The prop will be available to service our students as well as Firefighters from throught out California for many years to come.

An additional use of the Confined Space Rescue prop is being developed by Faculty. Local governmnet fire departmnets are in need of annual Confined Space Rescue refresher training. These would be single day 8 hour sessions delivered by AHC Faculty in support of the local governmnet and in some cases statewide Firefighter participation. In addition to Firefighter Training, Industry Partnerships may also be pursued to provide further training and use.

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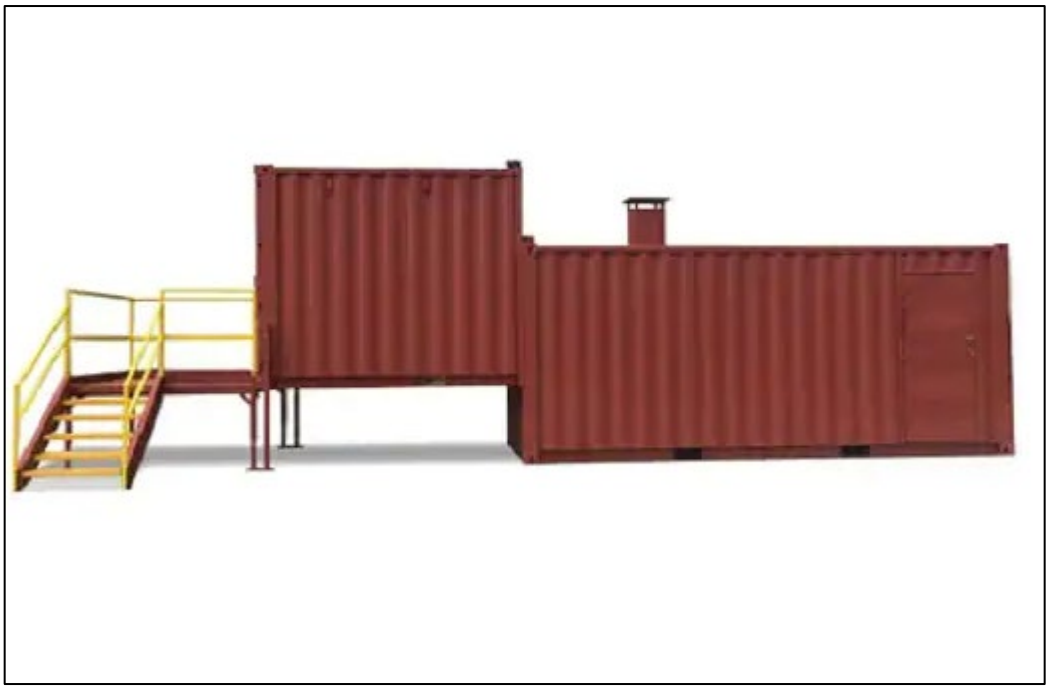
Flashover Simulator (Draiger Phase I)

The Flashover Simulator is used each semester to support the 'Live Fire" requirement in the CSFM Firefighter I curriculmn. The Fire Academy supports this requirement by delivering the CSFM Fire Control 3B program. This program provides an additional state certification to graduating students and is supported by AHC Academy Faculty that are CSFM Certified Instructors. The Fire Control 3B program provides the following required four evolutions to students.

1. Fire Chemistry and Behavior
2. Interior Fire Attack
3. Exterior Fire Attack
4. Vertical Ventilation

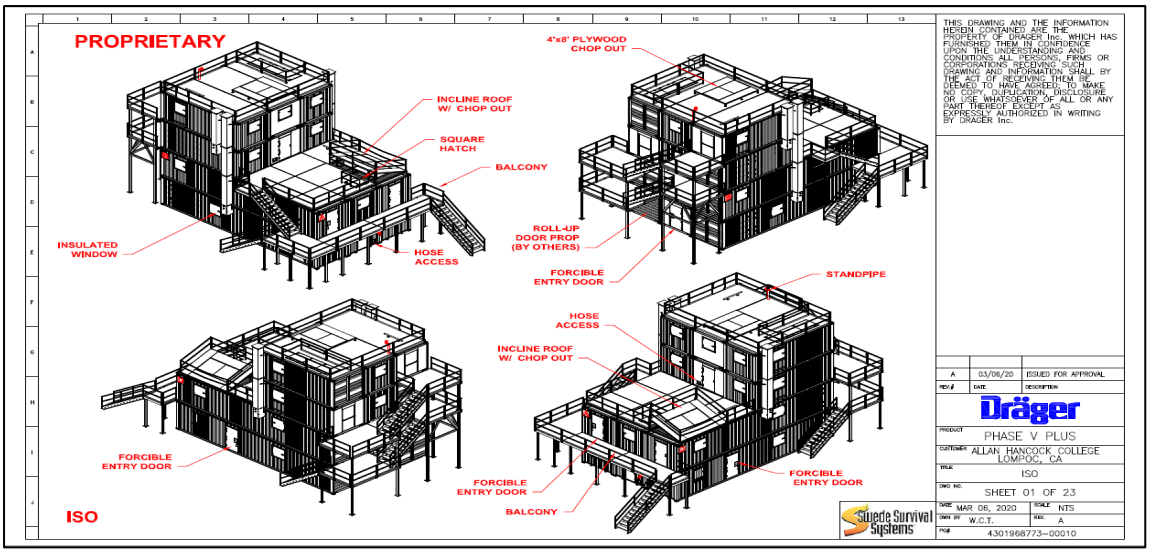
The fire chemistry portion of the Fire Control 3B curriculmn is delivered in the Flashover Simulator.



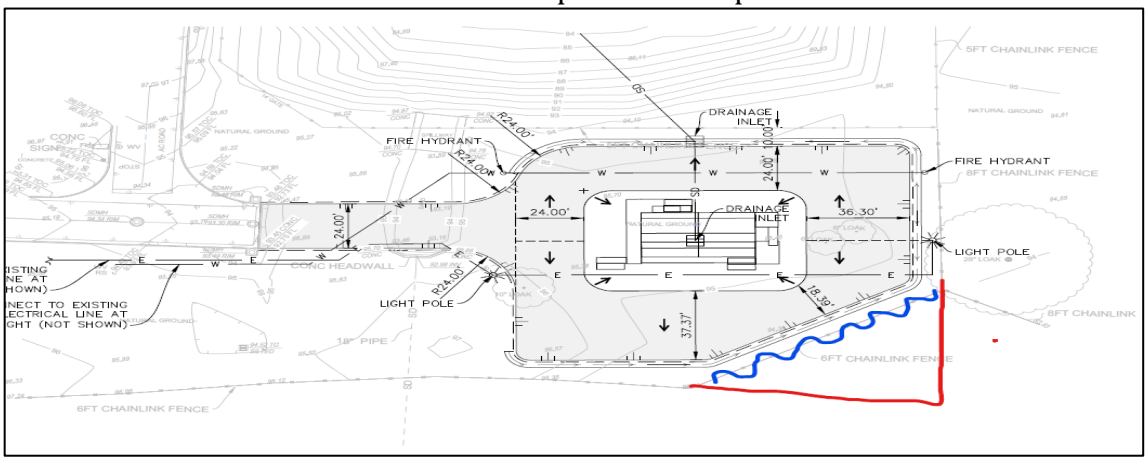
Phase V Fire Training Simulator

This prop had been in developed to overcome the contruction failures of the Class A building. The Class A building was evaluated for repair and it was deemed to be cost prohibitive. The college was better served purchasing a new prop that will serve the needs of the college and the experience of our students for many years to come.

The training grounds were expanded onto already owned college land. This area was improved to support the delivery of the new Phase V prop. The drill ground expansion provided two additional fire hydrants and drill ground area to accommodate fire apparatus. This project has been mostly completed as of the Fall 2021 semester. We are still short two light stansions and pavement repair for the entry into the drill area.



Drill Ground Expansion Footprint



Classroom Facilities

The classroom facilities used by the Fire Technology program are mostly the Fire Academy Classroom 5-107 and Classroom 5-109. Both classrooms are well supported with audio visual capability and produce a productive learning enviornmnet.

ASSESSMENT PLAN

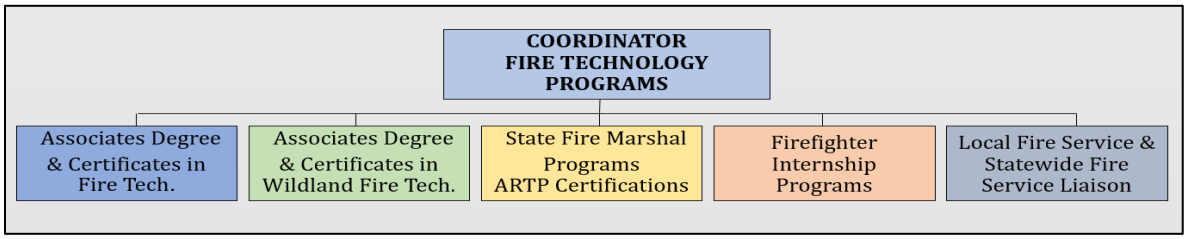
NEEDED IMPROVEMENTS

I. FIRE TECHNOLOGY PROGRAM

The Fire Technology Program is doing well however we can improve. Hundreds of students each semester enroll in our Associates Degree and Certificate program. Our Fire Academy is consistently full and has a statewide reputation for being one of the best in California. The Public Safety Training Complex is one of the finest training centers on the west coast. With that being said, the following areas have been identified areas of improvement.

Command and Control / Program Leadership

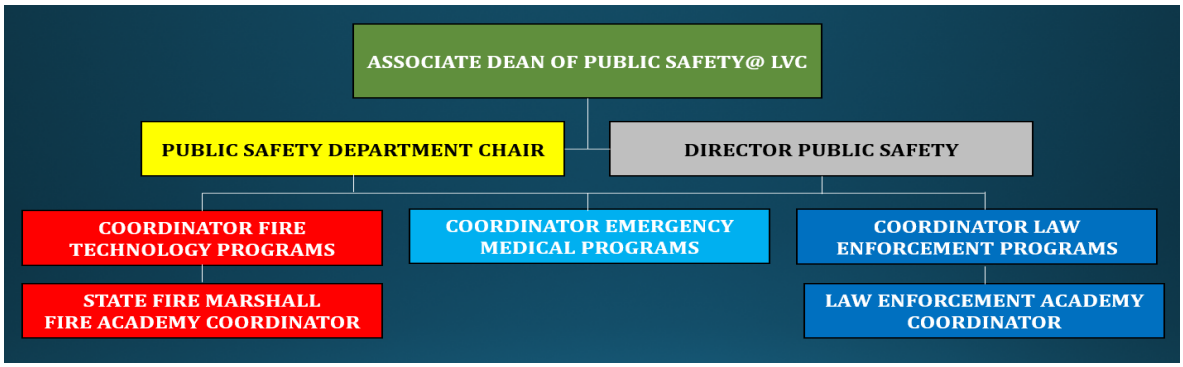
The Fire Technology Program currently has no official leadership. Individual efforts are occurring to allow for a level of success, but the current mode of operation is limited. The current leadership elements within Public Safety are juggling several responsibilities. Our suggestion to rectify this current "struggle" is to formally establish leadership in the Fire Technology program. This can be done by establishing a Coordinator of Fire Technology Full-Time Faculty position with a .2 reassign time built into the Association contract. Our current Faculty can facilitate this change with help from the college. The span of control for this position would be as displayed below. The effective span of control for anyone in a leadership position is generally 5:1. The proposed organizational structure maintains this ratio and should allow for many years of stability and growth in Fire Technology programs.



It is critical to allow for a leadership element to look up and out for the overall long-term health and stability of the Fire Technology program. New opportunities can be pursued, and untapped program opportunities can be tapped and developed. Without this type of leadership investment, we will not be operating as efficiently and effectively as we could. This request to establish a Coordinator of Fire Technology Programs position is the most important request in this comprehensive program review. Our hope is that current Public Safety leadership will work with the college to make this a reality as the fiscal impact for the organizational gain would be minimal.

Public Safety Department Coordination and Communication

The Public Safety Training Complex Training Complex has a significant opportunity for growth in its program deliveries. Clear lines of responsibility and communication and coordination within the Public Safety program coordinators and administrators will be critical to maximize program efficiency and growth. The following is a proposed command structure to facilitate this appropriate coordination and communication goal.



II. Marketing

As stated in the body of this document the Allan Hancock College Public Safety Training Complex (PSTC) is uniquely qualified to become a statewide hub to support the greater fire service mission. We will need to work with the college to better market our current course offerings and begin building a network of contacts around California who can count on the PSTC to be a foundation for training and education.

We are largely relying on our legacy of being a long-time provider of respected fire service programs to draw in students from our local area and from throughout the state. A significant effort needs to be undertaken to modernize our marketing of the Fire Technology program and the Public Safety Training Complex statewide to increase enrollment of students into the future. (excerpt from 2018-2019 Annual Updates)

IV. Training Tower

Required Upgrades: The tower is mostly complete and has only required routine maintenance on its Fire Blast Live Fire Simulator system to date. This will be an ongoing maintenance item. We should work to establish an annual budget to allow for regular upkeep of this vital training system. The tower windows and doors need repair and in some cases re-design due to the prevalent wind at the LVC. Funding has ben provided through "Deferred Maintenance" to manage this issue through 2025.

The tower would be well served by four forcible entry props on the interior and on different floors. This will assist in the training of Firefighters and Police Officers at the PSTC. Additionally, the State Fire Marshal Rope Rescue Technician (RRT) curriculum requires simulated tower rescues. This has been difficult to simulate in several CSFM RRT courses. There is a need to acquire a tower to be located on the BRAVO side of the tower and anchored to the tower for security.

The current Training Tower as referenced is in need of a training tower enhancement to help facilitate several courses. This improvement will allow for rescue operations from wind turbines, tower cranes, cell towers and lattice work to all be accurately simulated.

V. Class A Burn Building

Required Upgrades: The Class A Fire Building was unfortunatly built with signifigant flaws. This was adressed in a successful agreement between the builder and the college. The main flaw is the buildings inability to withstand repeated live fire training scenarios without damage to the building occuring in some areas. The building has yet to have a single fire set in it due to this reality. Additionall, the concrete surrounding the building creates a hazard to students due to the slope and grade implemented upon original construction. This area will need to be re-designed and improved to create a safer long term solution.

Faculty will be working to identify alternative uses of the building that would allow for some live fire interior and exterior attack and ventilation scenarios to benefit our students experience. This will require building modifications to keep the long term integrity of the building sound. The exterior concrete skirt creates hazards to our students due to large fall hazards. A re-design of this area to allow for safer footing as well as approprite brainage would be appropriate.

The other above mentioned Firefighter I training curriculmns are successfully conducted each semester from within the Class A Building. Additionally, the building is used to teach Interior Building Shores in the CSFM Rescue Sysytems I and CSFM Rescue Systems II State Fire Marshal courses.

Excerpts from Fire Technology Annual Updates

> ***The Burn Building****: has several issues that have prevented it from ever being used as intended. It was recommended that: 1) any areas exposed to direct flame be thermally protected to prevent structural damage 2) all doors and windows open and close freely, 3) extreme elevation changes of the exterior surfacing be modified as to not create a hazardous condition.*
>
> ***This structure has since been deemed not usable as intended and alternate site for live fire training is being established.*
>
> ***Concrete surfacing:*** *around the Fire Tower and burn building has been identified as substandard, with excessive cracking and poor finish work. It was recommended that the concrete be removed and re-poured to enough depth with reinforcement.*
>
> *** This issue is still outstanding*

VI. Trench Rescue Prop

Required Upgrades:The Trench Prop requires no upgrades. The only required upgrades needed are with the equipment required to simulate trench rescue operations. The following equipment should be pursued over time;

Finland Form Shoring Panels (12)
Speed Shore System
Paratech Gold and Grey Shoring Systems
Low Pressure Air Bag System
High Pressure Air Bag System
Air Monitors

VII. Confined Space Rescue Props

Required Upgrades: The Confined Space Prop requires no upgrades. The outdrain on the prop needs to be cleared to allow for the cleaning and maintenance of the prop over time. The PSTC would benefit from a few equipmnet upgrades needed to support Confined Space Rescue training. The following equipment should be pursued over time;

Confined Space Rescue Equipment Needs:

3 Air Carts with Air Hose and Escape Packs
4 Gas Air Monitors with Remote air sampling (6)
Electric Ventilation Fan (3)
Retrieval Lines (12 Drop Bags)
Arizona Vortex (1)
Class III Harnesses (12)
Yates Spec Pacs (1)

Excerpt from Annual Updates:

> ***The Confined Space Rescue Prop:*** *was designed as part of a functioning storm drain system, making it potentially hazardous for training use. It was recommended that the drain from the roof be re-routed and that the storm drain be protected from entry by vermin and debris.*
>
> ***Roof drains that entered the prop have been diverted, A metal screen has been installed to eliminate the vermin issue. The outflow drain still needs repair as it clogged with construction debris.*

VIII. Flashover Simulator (Draeger Phase I)

Required Upgrades: This prop has reached end of life. It has been used successfully for many years and is now due for replacement. It will continue to support the needs of the Academy however maintenance will be required until a new unit can be procurred. Specifically the doors to the burn room will need to be repaired as they are currently warped from years of use.

VIIII. Multi-Story Live Fire Trainer (Draeger Phase V)

Required Upgrades: The access into this area of the training center presents a hazard due to the concrete and asphalt work. The entry access needs to be smoothed out to provide a softer entry. The light standards referenced in the above plan were not installed due to lack of funding. Minimal upkeep will be required to maintain this props ability to serve our students.

X. Classroom Facilities

Needed Upgrades:The Fire Academy Classroom 5-107 is in need of repairs or upgrades to its floors. The carpet in the center isle of the classroom is worn through due to heavy traffic and use. It may be better served to be a tile or laminate in the high traffic area. The overhead projector has reached end of life and is due for replacement with a superior unit.

Classroom 5-109 is used to deliver local gevernmnet courses as well as statewide course offerings. The classroom is designed to be broken into two with an existing moving wall. The classroom audio visual equipmnet is currently wired to support the classroom when it is not split. An additional computer and audio visual podium would be required to support a two classroom set up. The PSTC owns a second podium but it is not equipted. The A/V would also need to be modified to support a two classroom functionality. The two overhead projectors have reached end of life and are due for replacement with superior units.

The lights in classroom 5-109 were installed in a position that blocks the presentation screens. This is a simple repair and will be pursued. An additional 120v plugs needs to be established in the refreshment areas of the classroom.

As the EMS Paramedic Academy comes online in Fall of 2022 classroom space will become a premium. A long term look at the facility classroom space identifies the need for two fully functional portable classrooms to be located near the current exterior lunch area. One classroom has been completed. The second will need to be pursued. These classrooms and the space to support them are being factored into the development of the western portion of the training grounds.

Space and wiring is in place for additional LED Screens to support instruction in classrooms 5-109. The purchase of LED TV's to finish the A/V in the room would improve the rooms function and capability. As with all IT items, in time they will degrade. All classroom overhead projectors will need to be upgraded as well as computers prior to the next comprehensive review.

XI. Drafting Pit

Requred Upgrades: The drafting pit that was built as part of the Training Centers original construction is flawed in its design and unusable. The prop will need to be redeveloped to allow college students as well as local fire agencies to benefit from its presence.

Excepts from Annual Updates:

> ***The Pump Test Drafting Pit:*** *was incorrectly installed and is not suitable for use as intended. It was recommended that the tank be pulled and reinstalled to the correct depth for operations.*
>
> *** This prop has not yet been evaluated for repair or alternative*

XII. Western Drill Ground Development Project

Roof Prop / Equipment Garage / Exterior Bathroom / Portable Classroom

A signifigant need exist in the development of the western portion of the training grounds. This area has been identified to support the construction of a replacement Roof Ventilation prop. This prop will support several student curriculums:

CSFM Firefighter I (Fire Academy)
Central Coast Truck Academy (Santa Barbara County Fire Chiefs)
Local Governmnet and Statewide Training

The Roof ventilation Prop will provide a safe realistic opportunity for students to practice roof ventilation during structure fires. The prop will support both simulated residential and commercial ventilation operations. It will also support steep roof operations and provide roof construction examples. Funding for this project has been established through "Deffered Maintenance" funds.

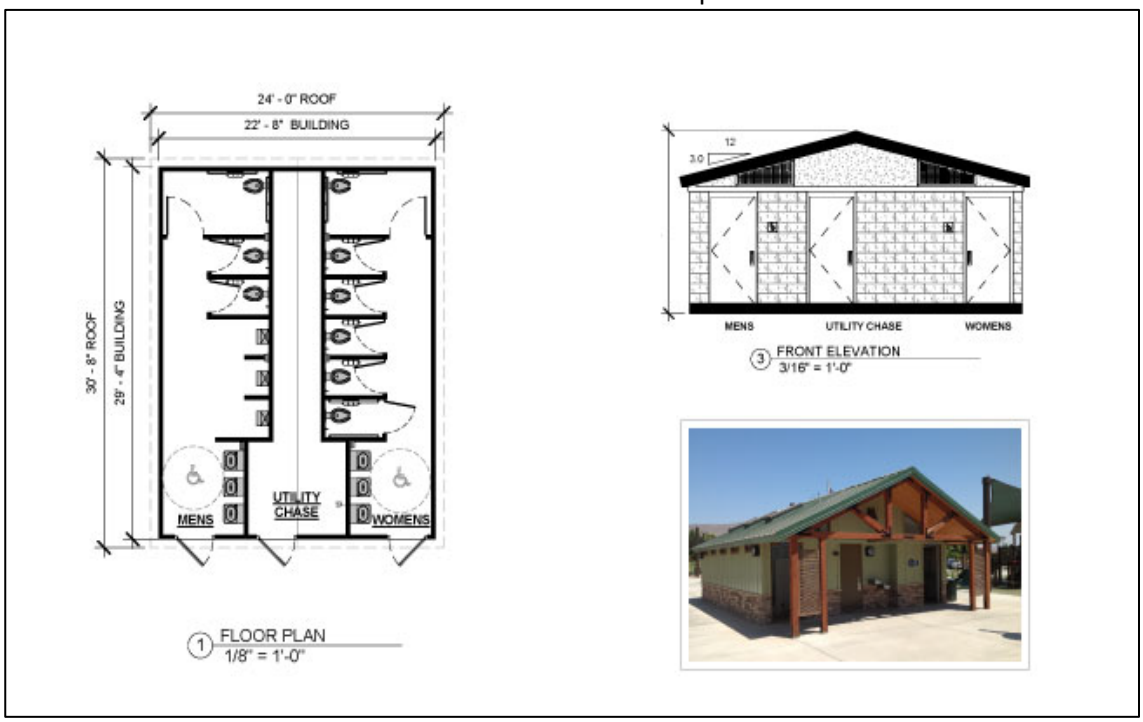
As part of the Roof Prop project we hope to develop the Equipmnet and Lumber Garage. This structure will house the saws, tools and lumber required to service the prop while training.

An Exterior Bathroom has been identified in the colleges five year plan. This will allow students to use the restrooms while training without having to come into Building 5. This will reduce wear and tear on Building 5 floors and facilities. It will also keep dirty and wet student from entering the building during training. The Exterior Bathroom is intended to be a Camp Ground style open air facility with a mens and womens side with an exterior wash station. A water fill station for students would also be appropriate to support student hydration while training. As part of this project we have identified the need for a firefighter turnout wash room to service Fire Academy and In-Service Training.

Roof Ventilation Prop Examples




Exterior Bathroom Example



Equipment Garage Example

Portable Classrooms Example

The full development of the western portion of the drill grounds will represent the build out of this section of the training center. Long term planning may justify two portable classrooms to assist with the classroom needs of the following programs:

Fire Academy

Police Academy

Dispatch Academy

EMS Academy

Paramedic Academy

In-Service Training

Public Meetings

Training

Ample space currently exists to support the proposed props and classroom upgrades to the Western Drill Ground area.

XII. The College Five-Year Construction Plan Identified Improvements Excerpt from the 5-Year Plan

Public Safety Training Complex (PSTC) Facilities – Lompoc Valley Center
This project would improve and add to the functionality of the outdoor training facilities at the Public Safety Training Complex. In addition to the improvements listed below, the Facilities Master Plan recommends the exploration of the space requirements to support the additional training needs that are identified in the Educational Master Plan and the determination of the potential need for additional land area. Mitigating measures for proposed development within the conservation area and buffer zone will be explored and considered in the determination of project feasibility.

- Expand the off-road driving track.
- Provide an access gate to skid pad area.
- Provide additional paving at the scenario buildings.
- Build restrooms for the outdoor training area.
- Build additional burn buildings.
- Expand the fire technology simulated street area.
- Add tanker, rail cars, and aircraft props for rescue training.

The status of the Fire Technology related projects are as follows:

1. Build restroom for outdoor training area: Project not underway
2. Build additional burn buildings: One Project approved and underway
3. Expand the Fire Technology simulated street area. Project completed
4. Add tanker, rail cars and aircraft fro rescue training: Project not underway

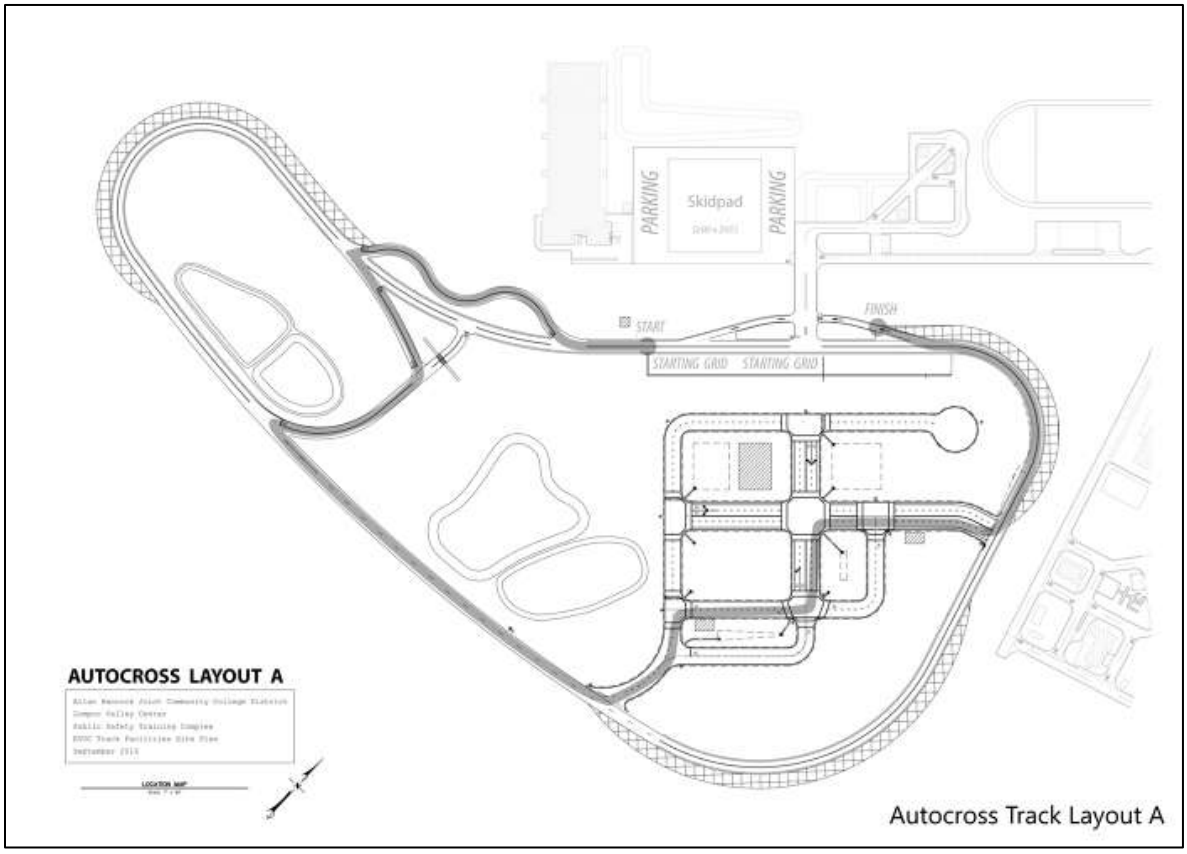
Detail for #1: The exterior restroom is being proposed as part of the Western Drill Ground Developmnet Project.

Detail for # 2: The Phase V project has been funded, approved and mostly completed. Several additional building will be proposed as part of the college's 5-year construction plan for the simulated street area project expansion.

Detail for # 3: The expansion od the fire technology simulated street are has occurred. We will now work over-time to add structures to simulate fire and rescue scenarios.

Detail for # 4: The addition of tankers and aircraft can occur with very minimal cost. Rail Cars and Tanker Rail cars have been offered for free. Our effort to bring these training aids to the training center will require that a rail spur is developed and that the cost for moving the rail cars is funded.

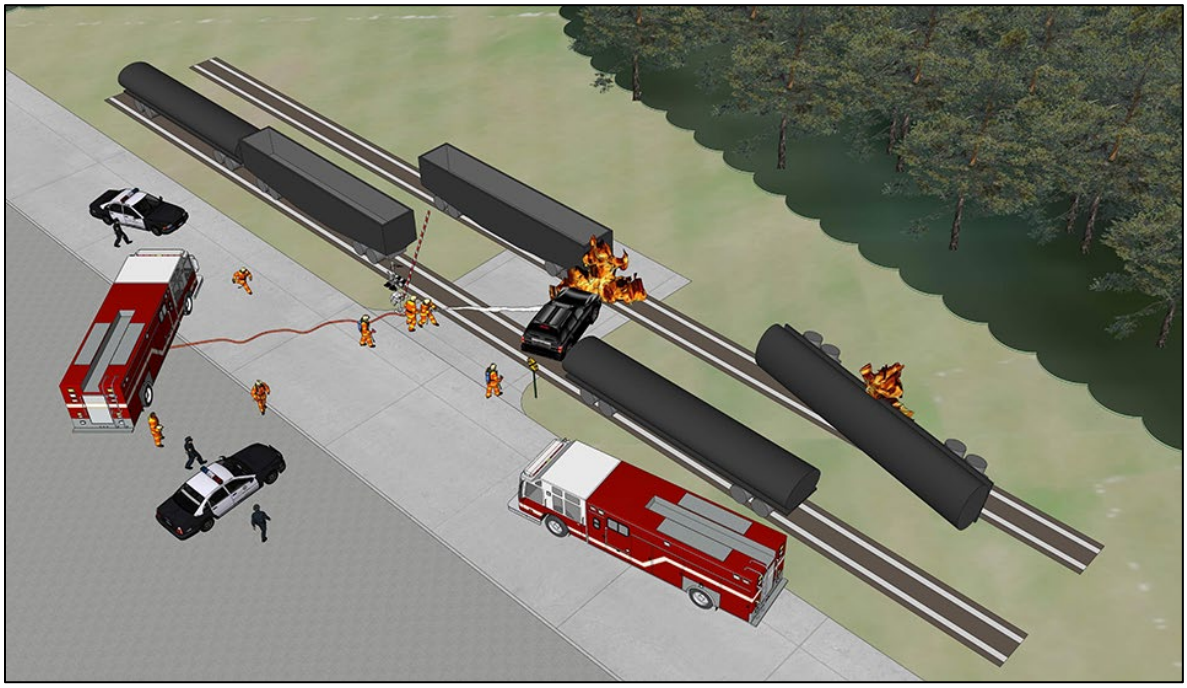
Fire Technology City Grid Improvements



EXAMPLE: Structures to support Fire Technology Simulated Street Area

It is the intention os Fire Technology Faculty to We bring the #4 project forward after the Western Drill Ground Project is completed. Examples of the above projects are below:

EXAMPLE: Rail Car Props



Example: Aircraft Prop

ANNUAL UPDATES

ALLAN HANCOCK COLLEGE
Start here. Go anywhere.

Instructional Program Review – Annual Update
2019

Date:	October 16, 2019
Program and Department:	Fire Technology
CTE Program?	☒ Yes ☐ No
Additional programs included in this review:	
Date of last comprehensive review:	2013-2014 (4/11/2013)
Submitted By:	
Attachments (* as needed):	☐ 6-year assessment plan – All programs, when applicable ☐ 2-year scheduling plan ☐ Justification for Resource Requests (if needed)

I. Alignment of the Program with the AHC Mission

AHC Mission: Allan Hancock College provides quality educational opportunities that enhance student learning and the creative, intellectual, cultural, and economic vitality of our diverse community.

a. Have there been any changes that would require a change to your Program Mission?

AHC Firefighter Internship Program

The Fire Technology Program has been working closely with the college CTE Staff to launch two new Firefighter Internship programs. These programs will take Fire and EMS Academy students and place them in a Career Work Experience program for up to two semesters. This new program will require a new budget code under Fire Technology and an annual request of $5000. This will allow for the purchase and upkeep of personal protective equipment and clothing need for the AHC Firefighter Interns.

** Current Firefighter Internship Partner Fire Agencies

City of Santa Maria Fire Department

City of Santa Barbara Fire Department

Santa Barbara County Fire Department

Atascadero City Fire Department

State Fire Training Programs

We have been working diligently to develop the Public Safety Training Complex into a statewide training center as the facilities are unique and deserving of statewide prominence. The training center is still in need of investing in the required tools and equipment needed to deliver many State Fire Marshal programs. We have been making steady progress in this area.

Local Fire Service Outreach Programs

One of the core missions of the Fire Technology Program is to be a resource to the local fire agencies in the Santa Barbara County area as well as statewide outreach. The training center has been contacted to provide courses that we could host several times per year. These programs require further investment in a few key training props at the training center.

The Santa Barbara County Fire Chiefs Association has requested the development of a Regional Truck Operations Academy. They are looking to partner with the AHC PSTC in this endeavor. We are looking to support the following improvements.

Roof Ventilation Roof Prop (High Priority Item)

Forcible Entry Props

Hand Tool Improvements

Power Tool Improvements

b. Explain how your program mission aligns with the college mission.

The college mission and values can be found here:
http://www.hancockcollege.edu/public_affairs/mission.php

ALLAN HANCOCK MISSION STATEMENT

Allan Hancock College provides quality educational opportunities that enhance student learning and the creative, intellectual, cultural, and economic vitality of our diverse community.

The Allan Hancock College Fire Technology Program is very much in line with the college's mission statement:

Provide quality educational opportunities: The College has supported the development of the Public Safety Training Complex at the Lompoc Valley Center extended campus. This is a state-of-the-art facility and stands as a monument of the college's commitment to training California's vital first responders for years to come.

Enhance student learning and creative, intellectual, cultural and economic vitality of our diverse community: The College has provided the environment and the instructional staff to support all of the above outcomes. Our Fire Technology students come from all backgrounds and are immersed into a challenging and thought-provoking group of curriculums. All of our programs are delivered with the goal of positive student outcomes and demonstrate that discipline, focus and hard work will equal success.

II. Student Success, Program Accessibility and Program Capacity

*Data for this section provided by the office of Institutional Effectiveness.

FT	2013-14	2014-15	2015-16	2016-17	2017-18	95% of 5 yr. avg.
Sections	61	63	71	48	41	54
Headcount	1,084	1,092	1,081	747	533	862
Enrollment	2,345	2,305	2,361	1,649	1,256	1884
Retention % F2F	99.20%	99.40%	98.10%	97.50%	98.90%	93.69%
Retention % Online	87.00%	84.20%	86.50%	82.90%	83.90%	80.66%
Retention %	88.80%	86.30%	88.10%	83.90%	87.20%	82.52%
Success % F2F	98.60%	97.30%	97.50%	96.70%	98.50%	92.83%
Success % Online	73.90%	67.00%	70.20%	68.10%	62.30%	64.89%
Success %	77.70%	71.30%	74.00%	70.20%	70.10%	69.03%

FTEC	2013-14	2014-15	2015-16	2016-17	2017-18	95% of 5 yr. avg.
Sections					1	1
Headcount					15	14
Enrollment					15	14
Retention % F2F					100.00%	95.00%
Retention % Online						
Retention %					100.00%	95.00%
Success % F2F					100.00%	95.00%
Success % Online						
Success %					100.00%	95.00%

FT	2013-14	2014-15	2015-16	2016-17	2017-18	95% of 5 yr. avg.
FTES	252.43	252.59	258.11	204.02	173.64	216.75
FTEF+	20.684	20.007	22.576	18.513	20.241	19.38
FTES/FTEF	12.2	12.63	11.43	11.02	8.58	10.61

FTEC	2013-14	2014-15	2015-16	2016-17	2017-18	95% of 5 yr. avg.
FTES					1.14	1.08
FTEF+					0	0.00
FTES/FTEF						

FT	2013-14	2014-15	2015-16	2016-17	2017-18	95% of 5 yr. avg.
Degrees	42	39	34	43	46	38.8
Certificates	88	96	84	84	90	84.0
Total	130	135	118	127	136	122.7

a. Please comment on data and trends

The data trend shows a leveling out of an initial *very* large enrollment in the distance learning Fire Technology degree program. This is to be expected as Allan Hancock College was one of the first college's to embrace the distance learning domain in Fire Technology. Since 2013 several additional fire technology programs have been stood up in different college's around the state. This competition identifies the need for the college to improve its marketing for the Fire Science A.S. Degree. As of Fall 2019 we have doubled the sections of FT-101 and FT-102 due to student volume which represents a program that is growing.

The data trends also show that the Fire Service career and the need for the training to support the pursuit of that goal are still in high demand. The data trends are in-line with the rise and reduction of student enrollment. Our program has seen a rise and a fall in enrollment over the last 3 years. *We are largely relying on our legacy of being a long-time provider of respected fire service programs to draw in students from our local area and from throughout the state. A significant effort needs to be undertaken to modernize our marketing of the Fire Technology program and the Public Safety Training Complex statewide* to *increase enrollment of students into the future*.

The course catalog and the number of sections provided by the program is currently receiving a much-needed overhaul which should update and focus the program and it efforts. Lastly, the development of the Firefighter Internship (CTE) programs will immediately increase enrollment of current and past students. It will also in time increase the number of certificates / degrees earned from the program.

b. If this year's figures for the program are below the set standard explain steps you will take to improve.

Not Applicable

c. If your program offers certificates and/or degrees, has existed for at least five years and has awarded fewer than 6 degrees/certificates over the last two years explain the reason for the low number and your plan to improve.

Not Applicable

d. Describe how the program works to promote student success (completions job placement, transfer). Include teaching innovations and use of academic and student support.

The Fire Technology program works to provide the education necessary for entry level Firefighters as well as Firefighters looking to promote from within their agency. Entry level Firefighters are exposed to the Jobs program as part of the Firefighter Academy. This program exposes its students to the development of a resume and provides guidance on appearance, demeanor and the entry level firefighter interview process. Fire Academy student complete several mock interviews as part of the curriculum. This student success guidance is also re-enforced in the FT-101 -FT-106 core distance learning courses which lead to a certificate or degree. As of spring 2018 the Fire Technology department has launched the Firefighter and Firefighter "Field" Internship programs. These programs will place Allan Hancock students in the workforce and provide real world experience and expose to the professionals and employers in the field. Two of our past Fire Academy and Firefighter Internship program have been hired with the Santa Maria Fire Department. Several additional Interns are close to being hired. This is a clear sign that this program is helping our students bridge the gap from our Academies and degree work to a career.

The Allan Hancock College Public Safety Training Complex enjoys a distinct certification within the State Fire Marshal's Training Section. The AHC PSTC is recognized as a "Accredited Regional Training Program" (ARTP) in California. This status allows the college to offer the Firefighter 1 Academy as well as the entire State Fire Training course catalog on-site. This can occur as long as the appropriate number of state certified instructors and the appropriate lecture and state certified lab facilities are present.

California State Fire Marshal's Firefighter 1 Academy

The Fire Technology Program is currently in session with its 144nd Firefighter 1 Academy Program. The Fire Academy has consistently provided foundational training to aspiring firefighters since the late 1960's. The move from the Santa Maria South Campus to the Lompoc Valley Center's Public Safety Training Complex provided a significant improvement in the college's ability to host, administer and maintain Fire Technology programs. The training center is still dealing with several original construction flaws that have yet to be repaired. The lack of repairs has rendered these facilities unusable since the training centers opening in 2103. The following shortfalls are listed in the college's 2020-2024 5-year construction plan document.

e. List any notable accomplishments of the program (student awards, honors, or scholarships can be listed here also)

Several of our Fire Technology students have secured full-time paid professional Firefighting careers.

III. Quality and Innovation in the Program and Curriculum Review

Please refer to the current SLO data set for your program found at:
http://research.hancockcollege.edu/student_learning_outcomes/matrix.html#Top

a. Are you on track in your assessment plan for course and program SLOs? If not, please explain why.

Yes these will be included in the comprehensive program review.

b. Have you shared your assessments or improvement plans with your department, program or advisory committee? If so, what actions resulted? If not, how do you plan to do so in the future?

Yes the Fire Technology Program currently has two advisory committees that inform the work effort of the program;

Santa Barbara County Fire Training Officers Association

Allan Hancock College Firefighter Internship Steering Committee

c. Did any of section, course or program improvement plans indicate that your program would benefit from specific resources in order to support student learning and/or faculty development? If so, please explain.

Yes, the Santa Barbara County Fire Chief's Association is looking to partner with the College to develop a Regional Truck Company Operations Academy. They will be providing resources to support the program that would be hosted at the AHC PSTC. The major need currently is the construction of a large roof prop to allow for residential and commercial vertical ventilation work to be safely taught to students. We are looking to produce a bid and secure funding to bring this proposed project to life.

d. In reviewing your outcomes and assessments have you identified any and all that indicate a modification should be made to the course outline, the student learning outcomes or the program outcomes? Please state what modifications you will be making.

The Fire Technology program must adhere to the California State Fire Marshal's Office curriculums and the National Fire Academy FESHE Model Curriculums. These are standards that established the certification of various skill sets and certified programs consistent throughout the state and nation. The state of California routinely updates their curriculums to keep them relevant. We are currently working to get the necessary curriculum upgrades through the college's approval process to improve several existing courses.

e. Have all course outlines been reviewed within the last 5 years? If not, please explain the plan to bring course outlines up to date and include timelines for the review and submission to AP&P.

Yes, Ft-101 through FT-105 have been routinely reviewed. FT-106 and FT-107 are due for a review of the program content and format.

f. For **CTE courses/programs only**, as per §55003, have prerequisits, corerequisites and advisories (PCAs) for courses and/or programs been reviewed within the last 2 years?

Yes, the Firefighter Internship programs have been reviewed and approved.

IV. Focus and Engagement of the Program

a. Summarize major trends and opportunities as well as challenges that have emerged in the program

Major Trends: There are several areas of focus that we will be pursuing as we move forward:

CSFM Company Officer Training: The Fire Technology program is working to provide theses vital leadership programs to local agencies as well as hosting firefighters from around the state.

Urban Search and Rescue Training: The Fire Technology program is working to develop Cadre as well as the required tools and equipment to support these programs for many years to come. We have completed CSFM site certifications on all courses and have hosted several courses successfully. However, we have had to rely on local government equipment to help make these programs a reality.

The Truck Academy: The Santa Barbara County Fire Chiefs Association has requested the development of a Regional Truck Operations Academy to assist their members develop the skill sets necessary to perform these vital functions safely. The previously mentioned roof prop as well as forcible entry props and saws are a current shortfall in making this program a reality.

In-Service Training Programs: Local Fire Agencies have requested that the Fire Technology program assist with the development and delivery of several In-Service Training programs to help maintain proficiency in several areas of the trade. The Fire Technology Program will be working with the SBCO Training Officers Association to identify areas of need and an effort to support training sessions to begin in 2020.

AHC PSTC Marketing: The Fire Technology program is in significant need of a marketing strategy to attract students from around the state. A Website, social media platforms and various other outreach methods need to be explored and implemented to provide growth towards the future success of the training center outside of its current programs..

b. List any (internal or external) conditions that have influenced the program in the past year.

Internal conditions that have influenced the program:

Lack of repair and upgrade of long standing original construction shortfalls rendering fixed facility training opportunities unusable.

The need to market the Public Safety Training Complex as a statewide training center.

A shortfall still exists with loose equipment and training props to support state fire curriculums.

Storage for current and future Fire Technology equipment will need to be addressed.

The Fire Technology program is in need of a golf cart to support the programs students safety and needs.

Data for Program with Vocational TOP Codes (CTE):
http://www.hancockcollege.edu/institutional_effectiveness/reports.php
Please review the data and comment on any trends.

c. Current industry employment and wage data (please cite sources)

Percentile	10%	25%	50% (Median)	75%	90%
Hourly Wage	$11.77	$16.06	$23.60	$32.03	$40.18
Annual Wage (2)	$24,490	$33,400	$49,080	$66,610	$83,570

d. Industry employment and wage trends

Experience Affects Fire Fighter Salaries	
Late-Career	▲39%
Experienced	▲17%
Mid-Career	▲3%
National Average	**$44,000**
Entry-Level	▼10%

Pay by Experience for a Fire Fighter has a positive trend. An entry-level Fire Fighter with less than 5 years of experience can expect to earn an average total compensation of $40,000 based on 668 salaries provided by anonymous users. Average total compensation includes tips, bonus, and overtime pay. A Fire Fighter with mid-career experience which includes employees with 5 to 10 years of experience can expect to earn an average total compensation of $45,000 based on 374 salaries. An experienced Fire Fighter which includes employees with 10 to 20 years of experience can expect to earn an average total compensation of $51,000 based on 349 salaries. A Fire Fighter with late-career experience which includes employees with greater than 20 years of experience can expect to earn an average total compensation of $61,000 based on 136 salaries

e. TOP code employment CORE indicator report

Fire Technology TOP code 213300

f. Advisory committee recommendations

Develop the Regional Truck Academy. Develop In-Service Training programs. Continue to support the Firefighter Internship program.

V. Continuous Improvement of the Program

a. Status of Final Plan of Action – Post Validation
Summarize the progress made on the recommendations from your last comprehensive program review plan of action

PLAN OF ACTION	ACTION TAKEN/RESULT AND STATUS
Construct and Occupy the AHC PSTC	Fire, Safety and EMS occupied the AHC PSTC in 2013
Establish existing programs at the AHC PSTC	All Fire, Safety and EMS programs are active

b. List any new resources that the program received in the past year and the results

Source	Specific Resource	Est. Amount $	Impact on program or course outcomes
Equipment Prioritization 2016	Rope Gear Confined Space Gear	$18,991	Established the start of the required CSFM tools and equipment to support program delivery and student success.
Equipment Prioritization 2017	Rope Gear Rescue Equipment	$10,000	Continue to replace outdated equipment and build required tool caches
Equipment Prioritization 2018	Rope Gear Rescue Equipment	$10.163	Established the start of the required CSFM tools and equipment to support program delivery and student success.

c. List any new or modified recommendations below, including rationale for these in the table.

Program Improvement Plan (Program ,Priority Number, year)	Anticipated Outcome (Goal)	Program Goal Status (Indicate if this goal is ongoing from a previous Annual Or Comprehensive Program Review or new this year).	Alignment to Strategic Directions and planning goals (see " Alignment to Strategic Directions" Attached	Activities	Justification (Evidence of need)	Resource Request (From table Below)	Anticipated Completion Date or On-going
2018	Improved Marketing of the AHC PSTC Training Center	On Going	Increase institutional effectiveness	Website Development	Currently no active program marketing	$5,000	On-Going

2018	Repair of original Construction errors	Old problem new to the program review	Student experience is limited due to out of service props and facilities	Fire Academy In-Service Training	Repair of original PSTC construction	TBD	On Going
2018	New Goal Roof Prop Construction	Ongoing	Meet local industry training needs, prepare students for the workforce	Fire Academy In-Service Training	Advisory Committee request	TBD	On Going
Complete CSFM tools and equipment needs	Ongoing	Align with CSFM Course deliveries and required curriculums	Fire Academy and In-Service Training	Fire Technology	Advisory Committee's	TBD	On Going

d. Summary of request for resources. Please list the type of request (facility, technology, staffing, equipment, other) and rank their priority.

Resource Requests (Program, RRX year)	Item	Program Goal	Type	One-time cost	On-going cost (per fiscal year)	Anticipated Completion Date or On-going
1. Fire Technology		Roof Prop Construction	Facility	$100,000.00	$5,000	On-Going
2. Fire Technology		CSFM Curriculum Alignment	Equipment	$20,000.00	$ 1,000	On Going
3. AHC PSTC Marketing		Website Development	Technology	$5,000.00	$1,000	On-Going
4. Golf Cart		Student success and safety	Equipment	$10,000	TBD	Spring 2020
5. Facility Repairs		All onsite Props to safely function for students	Facility	TBD	TBD	On Going

Date:	September 1, 2018
Program and Department:	Fire Technology
CTE Program?	☒ Yes ☐ No
Additional programs included in this review:	Firefighter Apprentiship Programs (CTE)
Date of last comprehensive review:	2013-2014 (4/11/2013)
Submitted By:	John Ceceña, Fire Technology Faculty
Attachments (* as needed):	☐ 6-year assessment plan – All programs, when applicable ☐ 2-year scheduling plan ☐ Justification for Resource Requests (if needed)

I. Alignment of the Program with the AHC Mission

AHC Mission: Allan Hancock College provides quality educational opportunities that enhance student learning and the creative, intellectual, cultural, and economic vitality of our diverse community.

a. Have there been any changes that would require a change to your Program Mission? YES

AHC Firefighter Internship Program

The Fire Technology Program has been working closely with the college CTE Staff to launch two new Firefighter Internship programs. These programs will take Fire and EMS Academy students and place them in a Career Work Experience program for up to two semesters. This new program will require a new budget code under Fire Technology and an annual request of $5000. This will allow for the purchase and upkeep of personal protective equipment and clothing need for the AHC Firefighter Interns.

State Fire Training Programs

We have been working diligently to develop the Public Safety Training Complex into a statewide training center as the facilities are unique and deserving of statewide prominence. The training center is in need of investing in the required tools and equipment needed to deliver many State Fire Marshal programs.

Local Fire Service Outreach Programs

One of the core missions of the Fire Technology Program is to be a resource to the local fire agencies in the Santa Barbara County area as well as statewide outreach. The training center has been contacted to provide courses that we could host several times per year. These programs require further investment in a few key training props at the training center.

The Santa Barbara County Fire Chiefs Association has requested the development of a Regional Truck Operations Academy. They are looking to partner with the PSTC in this endeavor. We are looking to support the following improvements.

Roof Ventilation Roof Prop

Forcible Entry Props

Hand Tool Improvements

Power Tool Improvements

b. Explain how your program mission aligns with the college mission.

The college mission and values can be found here:
http://www.hancockcollege.edu/public_affairs/mission.php

ALLAN HANCOCK MISSION STATEMENT

Allan Hancock College provides quality educational opportunities that enhance student learning and the creative, intellectual, cultural, and economic vitality of our diverse community.

The Allan Hancock College Fire Technology Program is very much in line with the college's mission statement:

Provide quality educational opportunities: The college has supported the development of the Public Safety Training Complex at the Lompoc Valley Center extended campus. This is a state-of-the-art facility and stands as a monument of the college's commitment to training California's vital first responders for years to come.

Enhance student learning and creative, intellectual, cultural and economic vitality of our diverse community: The college has provided the environment and the instructional staff to support all of the above outcomes. Our Fire Technology students come from all backgrounds and are immersed into a challenging and thought-provoking group of curriculums. All of our programs are delivered with the goal of positive student outcomes and demonstrate that discipline, focus and hard work will equal success.

II. Student Success, Program Accessibility and Program Capacity

TOP Code Subject.. course		2014-2015	2015-2016	2016-2017
Grand Total	Enrollment	1,980	2,310	1,668
	Sections_	48	67	46
	Avg Class Size_	41.3	34.5	36.3
	Day 1 Waitlist	11	57	6
	FTES	228.9	254.7	206.6
	FTEF - FT	1.066	1.066	0.850
	FTEF - PT	16.897	19.998	16.556
	FTEF - Overload	1.323	1.295	1.167
	FTEF Total	19.286	22.359	18.573
	FTES / FTEF	11.9	11.4	11.1

	2014-2015	2015-2016	2016-2017	Set Standard (95% of previous 5 year avg)
Success %	70.1%	73.5%	69.3%	69.1%
Success % - DL	67.6%	70.2%	67.5%	--
Success % - F2F	99.3%	98.2%	96.2%	--
Retention %	85.8%	87.9%	83.8%	82.3%
Retention % - DL	84.6%	86.5%	82.9%	--
Retention % - F2F	99.3%	98.5%	97.2%	--
Certificates	96	84	84	83
Degrees	39	35	43	37
Total Awards	135	119	127	120

a. Please comment on data and trends

The data trends show that the Fire Service career and the need for the training to support the pursuit of that goal are still in high demand. The data trends are in-line with the rise and reduction of student enrollment. Our program has seen a rise and a fall in enrollment over the last 3 years. *We are largely relying on our legacy of being a long-time provider of respected fire service programs to draw in students from our local area and from throughout the state. A significant effort needs to be undertaken to modernize our marketing of the Fire Technology program and the Public Safety Training Complex statewide* to *increase enrollment of students into the future*. The course catalog and the number of sections provided by the program is currently receiving a much-needed overhaul which should update and focus the program and it efforts. Lastly, the development of the Firefighter Internship (CTE) programs will immediately increase enrollment of current and past students. It will also in time increase the number of certificates / degrees earned from the program.

b. If this year's figures for the program are below the set standard explain steps you will take to improve.

Not Applicable

c. If your program offers certificates and/or degrees, has existed for at least five years and has awarded fewer than 6 degrees/certificates over the last two years explain the reason for the low number and your plan to improve.

Not Applicable

d. Describe how the program works to promote student success (completions job placement, transfer). Include teaching innovations and use of academic and student support.

The Fire Technology program works to provide the education necessary for entry level Firefighters as well as Firefighters looking to promote from within their agency. Entry level Firefighters are exposed to the Jobs program as part of the Firefighter Academy. This program exposes its students to the development of a resume and provides guidance on appearance, demeanor and the entry level firefighter interview process. Fire Academy student complete several mock interviews as part of the curriculum. This student success guidance is also re-enforced in the FT-101 -FT-105 core distance learning courses which lead to a certificate or degree. New in the Spring will be the Firefighter Apprentiship programs. These programs will place Allan Hancock students in the workforce and provide real world experience and expose to the professionals and employers in the field.

e. List any notable accomplishments of the program (student awards, honors, or scholarships can be listed here also)

Over the last 4 years the Fire Technology Program has facilitated the following certificates and degrees:

Fire Technology Certificate of Completions: 264

A.S. Degree in Fire Technology: 117

III. Quality and Innovation in the Program and Curriculum Review

Please refer to the current SLO data set for your program found at:
http://research.hancockcollege.edu/student_learning_outcomes/matrix.html#Top

a. Are you on track in your assessment plan for course and program SLOs? If not, please explain why.

The Fire Technology program needs a comprehensive review of its course catalog. The courses need to be evaluated for their relevancy and accuracy against the industry standard. Much of this work has already been completed. The programs comprehensive review is due in 2019 and the updating of core curriculums, certificates and degrees will be addressed as part of that project.

b. Have you shared your assessments or improvement plans with your department, program or advisory committee? If so, what actions resulted? If not, how do you plan to do so in the future?

We have shared our current course catalog with the department Dean and the college's Matriculation officer. A clear plan of work is in place to remedy our current shortfalls.

c. Did any of section, course or program improvement plans indicate that your program would benefit from specific resources in order to support student learning and/or faculty development?

The Allan Hancock College Public Safety Training Complex enjoys a distinct certification within the State Fire Marshal's Training Section. The AHC PSTC is recognized as a "Accredited Regional Training Program" (ARTP) in California. This status allows the college to offer the Firefighter 1 Academy as well as the entire State Fire Training course catalog on-site. This can occur as long as the appropriate number of state certified instructors and the appropriate lecture and state certified lab facilities are present.

California State Fire Marshal's Firefighter 1 Academy

The Fire Technology Program is currently in session with its 142nd Firefighter 1 Academy Program. The Fire Academy has consistently provided foundational training to aspiring firefighters since the late 1960's. The move from the Santa Maria South Campus to the Lompoc Valley Center's Public Safety Training Complex provided an significant improvement in the college's ability to host, administer and maintain Fire Technology programs. The training center is still dealing with several original construction flaws that have yet to be repaired. The lack of repairs has rendered these facilities unusable since the training centers opening in 2103. The following shortfalls are listed in the college's 2020-2024 5-year construction plan document.

***The Burn Building**: has several issues that have prevented it from ever being used as intended. It was recommended that: 1) any areas exposed to direct flame be thermally protected to prevent structural damage 2) all doors and windows open and close freely, 3) extreme elevation changes of the exterior surfacing be modified as to not create a hazardous condition.*
***The Confined Space Rescue Prop:** was designed as part of a functioning storm drain system, making it potentially hazardous for training use. It was recommended that the drain from the roof be re-routed and that the storm drain be protected from entry by vermin and debris.*
***The Pump Test Drafting Pit:** was incorrectly installed and is not suitable for use as intended. It was recommended that the tank be pulled and reinstalled to the correct depth for operations.*

***Concrete surfacing:** around the Fire Tower and burn building has been identified as substandard, with excessive cracking and poor finish work. It was recommended that the concrete be removed and re-poured to sufficient depth with reinforcement.*

The current needs assessment for the training center other than the above listed deficiencies are as follows;

1. Tools and Equipment upgrades to provide industry standard resources to our Fire Technology Students. These requirements are in-line with the state of California's Firefighter 1 and Firefighter 2 curriculums.

2. Tools and Equipment upgrades to support the State Fire Marshals Urban Search and Rescue courses. The AHC PSTC is a state certified site and routinely hosts firefighters from our local governments and from throughout the state. We are working to bolster our current inventory of tools and equipment to continue to provide the highest level of lecture and lab sessions in these courses as possible.

3. Audio Visual capability improvement in the main classroom facilities to support fire service simulations. This is based in a software program upgrade that allows for real-time fire and disaster simulation for students learning how to use the National Incident Management Systems (NIMS). Strategy and tactics for multiple response scenarios can be exercised and allow for the highest quality classroom learning environment.

d. In reviewing your outcomes and assessments have you identified any and all that indicate a modification should be made to the course outline, the student learning outcomes or the program outcomes? Please state what modifications you will be making.

The Fire Technology program must adhere to the California State Fire Marshal's Office curriculums and the National Fire Academy FESHE Model Curriculums. These are standards that established the certification of various skill sets and certified programs consistent throughout the state and nation. The state of California routinely updates their curriculums to keep them relevant. We are currently working to get the necessary curriculum upgrades through the college's approval process to improve several existing courses.

e. Have all course outlines been reviewed within the last 5 years? If not, please explain the plan to bring course outlines up to date and include timelines for the review and submission to AP&P.

The comprehensive program review that will be due in 2019 will include the review of the current course outlines and the forwarding of new submissions to the AP&P committee. This work is already underway.

f. For **CTE courses/programs only**, as per §55003, have pre-requisits, corerequisites and advisories (PCAs) for courses and/or programs been reviewed within the last 2 years?

We are currently working with the college's CTE staff to launch two new Firefighter Internships in the Spring. All appropriate program guidance will be reviewed as part of this new effort.

IV. Focus and Engagement of the Program

a. Summarize major trends and opportunities as well as challenges that have emerged in the program

Major Trends: There are several areas of focus that we will be pursuing as we move forward:

CSFM Company Officer Training: The Fire Technology program is working to provide theses vital leadership programs to local agencies as well as hosting firefighters from around the state.

Urban Search and Rescue Training: The Fire Technology program is working to develop Cadre as well as the required tools and equipment to support theses programs for many years to come. We have completed CSFM site certifications on all courses and have hosted several courses successfully. However, we have had to rely on local government equipment to help make these programs a reality.

The Truck Academy: The Santa Barbara County Fire Chiefs Association has requested the development of a Regional Truck Operations Academy to assist their members develop the skill sets necessary to perform these vital functions safely. The previously mentioned roof prop as well as forcible entry props and saws are a current shortfall in making this program a reality.

Wildland Firefighter Academy: As we continue to experience significant wildfires in our state we believe we should develop a formal wildland academy to help in the training of wildland firefighters. This program is being vetted and we hope to start providing an early summer session annually next year.

AHC PSTC Marketing: The Fire Technology program is in significant need of a marketing strategy to attract students from around the state. A Website, social media platforms and various other outreach methods need to be explored and implemented to provide growth towards the future success of the training center outside of its current programs..

b. List any (internal or external) conditions that have influenced the program in the past year.

Internal conditions that have influenced the program:

Lack of repair and upgrade of long standing original construction shortfalls rendering fixed facility training opportunities unusable.

The need to market the Public Safety Training Complex as a statewide training center.

A shortfall is loose equipment and training props to support state fire curriculmns.

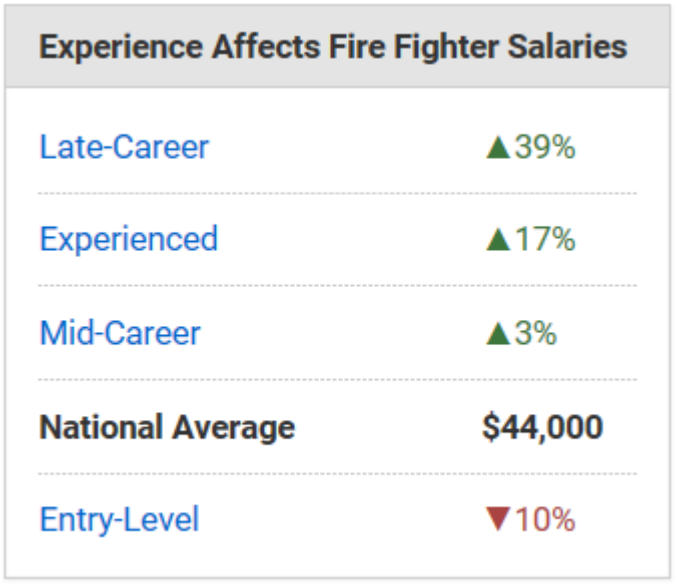
Data for Program with Vocational TOP Codes (CTE):
http://www.hancockcollege.edu/institutional_effectiveness/reports.php
Please review the data and comment on any trends.

c. Current industry employment and wage data (please cite sources)

Percentile	10%	25%	50% (Median)	75%	90%
Hourly Wage	$11.77	$16.06	$23.60	$32.03	$40.18
Annual Wage (2)	$24,490	$33,400	$49,080	$66,610	$83,570

US Department of Labor

d. Industry employment and wage trends



Pay by Experience for a Fire Fighter has a positive trend. An entry-level Fire Fighter with less than 5 years of experience can expect to earn an average total compensation of $40,000 based on 668 salaries provided by anonymous users. Average total compensation includes tips, bonus, and overtime pay. A Fire Fighter with mid-career experience which includes employees with 5 to 10 years of experience can expect to earn an average total compensation of $45,000 based on 374 salaries. An experienced Fire Fighter which includes employees with 10 to 20 years of experience can expect to earn an average total compensation of $51,000 based on 349 salaries. A Fire Fighter with late-career experience which includes employees with greater than 20 years of experience can expect to earn an average total compensation of $61,000 based on 136 salaries.

e. TOP code employment CORE indicator report

Fire Technology TOP code 213300

f. Advisory committee recommendations

Fire Technology Faulty does participate in two fire service committee's and uses these committee's as advisory to their needs of the program. Santa Barbara County Fire Chiefs Association San Luis Obispo County Training Officers Association

V. Continuous Improvement of the Program

a. Status of Final Plan of Action – Post Validation
Summarize the progress made on the recommendations from your last comprehensive program review plan of action

PLAN OF ACTION	ACTION TAKEN/RESULT AND STATUS
Construct and Occupy the AHC PSTC	Fire, Safety and EMS moved to the PSTC 2013
Establish existing programs at the PSTC	Fire, EMS Academy are active Fire Tech active

b. List any new resources that the program received in the past year and the results

Source	Specific Resource	Est. Amount $	Impact on program or course outcomes
Equipment Prioritization 2016	Rope Gear Confined Space Gear	$18,991	Established the start of the required CSFM tools and equipment to support program delivery and student success.
Equipment Prioritization 2017	Rope Gear Rescue Equipment	$10,000	Continue to replace outdated equipment and build required tool caches
Equipment Prioritization 2018	Rope Gear Rescue Equipment	$10.163	Established the start of the required CSFM tools and equipment to support program delivery and student success.

c. List any new or modified recommendations below, including rationale for these in the table.

Program Improvement Plan (Program ,Priority Number, year)	Anticipated Outcome (Goal)	Program Goal Status (Indicate if this goal is ongoing from a previous Annual Or Comprehensive Program Review or new this year).	Alignment to Strategic Directions and planning goals (see " Alignment to Strategic Directions" Attached	Activities	Justification (Evidence of need)	Resource Request (From table Below)	Anticipated Completion Date or On-going
2018	Repair of original construction errors	Old problem new to the program review	Student experience is limited due to out of service facilities	Fire Academy	Repair of incorrectly built training props	TBD	Spring 2019
2018	New Vital Training Prop Established at the PSTC	New Goal	Aligned with the support of the Fire Academy and Regional Training	Roof Ventilation	State Fire Requirements, SBCO Fire Chiefs requested outreach	$1,000	Spring 2019
2018	Forcible Entry Prop	New Goal	Aligned with support of the Fire Academy	Forcible Entry Operations	State Fire Requirements, SBCO Fire Chiefs requested outreach	$15,000	Fall 2018
2018	Complete CSFM Course tools and equipment upgrades	New to the program review	Aligned with CSFM Course delivery capability statewide	US&R Rescue Schools CSFM Courses	Regional and statewide need for programs	$20,000	Fall 2019

2018	Support of Fire Academy and statewide training Saws, hooks, axes and irons	Re-enforce existing programs and expand with new programs	Aligned with the support of the Fire Academy and Regional Training	Fire Academy Regional Truck Academy	Needs Assessment SBCO Fire Chiefs Assoc Request	$25,000	Fall 2019

d. Summary of request for resources (please attach resource request form). Please list the type of request (facility, technology, staffing, equipment, other) and rank their priority.

Resource Requests (Program, RRX year)	Item	Program Goal	Type	One-time cost	On-going cost (per fiscal year)	Anticipated Completion Date or On-going
Facility Repairs	See AHC's 5 year Facilities Plan	Fully Functional Facility	Facility		TBD	Fall 2019
Roof Prop Construction		Establish a much-needed training prop to enhance student experience and allow for expanded course deliveries	Facility		$2000	Spring 2019
Forcible Entry Prop		Establish a much-needed training prop to enhance student	Equipment	$15,000	$1000	Fall 2018

		experience and allow for expanded course deliveries				
CSFM Rescue Schools Tool Cache's		Complete tools to support the local government and statewide outreach training	Equipment	$20,000	$1,000	Fall 2019
Truck Academy Tools and Equipment		Tools required to support fire academy training as well as regional and statewide course offerings	Equipment	$20,000	$2,000	Fall 2019

PLAN OF ACTION - PRE-VALIDATION
Six Year

DEPARTMENT: Public Safety PROGRAM: Fire Technology

List below as specifically as possible the actions which the department plans to take as a result of this program review. Be sure to address any problem areas which you have discovered in your analysis of the program. Number each element of your plans separately and for each, please include a target date. Additionally, indicate by the number each institutional goal and objective which is addressed by each action plan. (See Institutional Goals and Objectives)

RECOMMENDATIONS TO IMPROVE **STUDENT LEARNING OUTCOMES** AND ACHIEVMENT	**Theme/Objective/ Strategy Number AHC from Strategic Plan**	**TARGET DATE**
To stay current with National Fire Academy FESHE SLO's	Section 1	2022-29

RECOMMENDATIONS TO ACCOMMODATE CHANGES IN **STUDENT CHARACTERISTICS**	**Theme/Objective/ Strategy Number AHC from Strategic Plan**	**TARGET DATE**
Enrollment Changes Recruitment of more females and minorities in all programs	Section 2	2022-29
Demographic Changes Identified severe gap in female participation	Section 2	2022-29

RECOMMENDATIONS TO IMPROVE THE **EDUCATIONAL ENVIRONMENT**	**Theme/Objective/ Strategy Number AHC from Strategic Plan**	**TARGET DATE**
Curricular Changes Curriculmn determined by National Fire Academy and CSFM	Section 1	2022-29
Co-Curricular Changes CSFM Curriculmns are required as are FESHE Model Curriqlumn	Section 1	2022-29
Neighboring College and University Plans Cal Poly San Luis Obispo / No Fire Technology Program		
Related Community Plans None		

25

ASSIGNMENT OF RESPONSIBILITIES

ANALYSIS OF RESOURCES AND RESPONSIBILITIES

Human Resource Use: The Fire Technology Associates Degree and Certificate program is currently staffed by the following 3 faculty members:

1 Full-Time Faculty: Assistant Professor Fire Technology who carries a full load (12-units) plus release time for Public Safety Department Chair duties.

1 Part-Time Faculty: 2 sections of FT-101 (6-Units a semester)
1 Part-Time Faculty: 1 section of FT-103 (3 Units per semester)
1 Part-Time Faculty: 2 sections of FT-106 and 1 Section of FT-347 (9-Units a semester)

1 Full-Time Fire Academy Coordinator

Reallocation of Human Resources to better meet student needs: As has been previously stated in this document, the Fire Technology Program needs to formalize its leadership.

Recommendation: *Allow the current full-time faculty member to become the Coordinator of Fire Technology Programs. This will require the on-boarding of one new part-time faculty member and or the increased use of current Part-Time Faculty to take a portion of the course load off of the current Full-Time Faculty member to allow for some release. This will allow for the Current Full-Time Faculty member to look up and out and lead. This will absolutely improve our overall program management and growth. The span of control for this position and additional details have been established on page 48 of this document*.

Physical Resource Use: The Fire Technology Program has inventories of physical resources that live in three areas.

Firefighter I Academy: The Fire Academy has for many years made do with mostly donated equipment and apparatus. This has worked well for many years. The program will routinely need to repair or replace equipment. It is important to put industry standard tools and equipment in the hands of our students. The current equipment budget for the academy is very small ($1000) we will need to work to increase that line item to better maintain and equip the Fire Academy and its students.

CSFM In-Service Training: The CSFM In-Service Training program equipment cache is in fair condition and is growing to meet capacity slowly each semester with existing budgets. The college has assisted with additional funding with the Equipment Prioritization process and that has really helped. We have also worked to pursue grant funding to provide a boost to the end goal for the inventory needs to support all our In-Service Training programs. The ancillary benefit to procurement in this area is that in many cases the equipment can be used to service Fire Academy students as well.

Firefighter Internships: The Firefighter Internship program has a small inventory of equipment to support its students. This program is very stable and will not require more than its requested budget of $1,000 per semester. The line item of $1,000 per semester has not yet been funded. We will continue to establish that budget for the programs long term success.

Technology Use: The Fire Technology program is serviced by the classrooms and facilities at the Public Safety Training Complex. This has worked very well. Recommendations for improvement to the facilities have been addressed in this document.

Fiscal Resource Use: The Fire Technology budget is appropriate. The program is not in need of any significant program increases. Small increases over-time along with good program management should keep us moving towards our goals and maintaining our current efforts.

EXECUTIVE SUMMARY

MAJOR FINDINGS

PROGRAM STRENGTHS

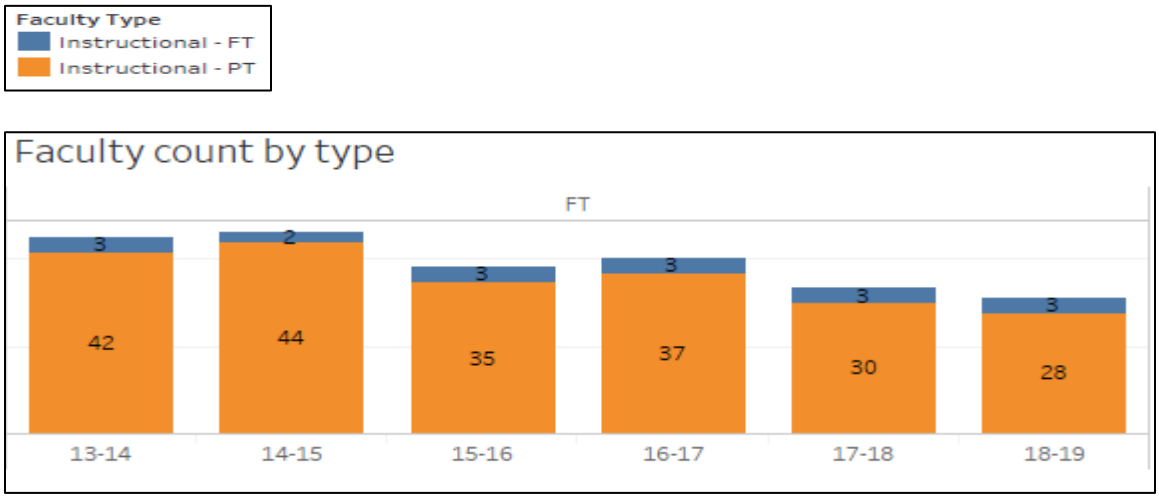
The Fire Technology Programs overall program strengths lies in the following areas:

1. AHC Personnel: Full-Time Faculty - Part-Time Faculty - Support Staff

The AHC PSTC is blessed with a highly motivated workforce. The small group functions as a team with a student-centered approach. As we look to the future, we will be expanding our course offerings. This may require the on-boarding of new faculty or part-time faculty. At a minimum it will require additional development of our existing Part-Time Faculty members.

Faculty / Part-Time Faculty

The Fire Technology program is currently staffed with just **two** full-time faculty members. A Fire Academy Coordinator and an Assistant Professor, Fire Technology. These two positions are focused on *two completely different missions*. This is very important to understand. It is our belief that as we grow an additional Assistant Professor Fire Technology should be pursued. Additionally, the current Full-time Faculty Professor should become the Coordinator for Fire Technology. Leadership is critical for the long-term service, growth, maintenance, and success, of the program. Currently no clear leadership exists (see pg147). The below graph depicts the significant disparity in full-time to part-time faculty use in the Fire Technology program*. Additionally, the 3 Full-Time represented in the below graph is incorrect it is now 2.*



2. The AHC California State Firefighter I Academy

The Fire Academy is a long-standing well-run program that is a corner stone of Allan Hancock College's reputation. as a vocational school statewide. The Fire Academy and its staff deliver a high quality and efficient program. All State Fire Marshal required curriculum are delivered over a full semester course. All Fire Academy students are also required to attend a fitness program to improve their overall health and fitness while in the program. This is a tremendous program and develops high quality recruits who are prepared to enter the job market.

3. Distance Learning Associates and Certificate Program Fire Technology

The Fire Technology Program has for many years held all its degree and certificate core courses completely online. This has allowed for a statewide student base and has provided a steady volume of students over time. As more college's move to the online format, it will be important for AHC to maintain high level programs that are recognized for their quality, rigor, and ease of access and use.

4. Fixed Facilities / Training Center

One of the major strengths of the Fire Technology Program is the 60 plus acre training center. The Public Safety Training Complex is still in its infancy for developing its potential. The potential will be realized through continued facility modifications and growth. Innovative program development is already underway that will continue to grow the outreach and partnership with our local fire service partners.

The quality of the Public Safety Training Complex is significant. The training center is a pleasure to be a part of. It has already successfully trained 1000's of Firefighters, Police Officers, Environmental Specialist and Emergency Medical Technician. It sits ready to do the same for many generations to come. While this is true, we need to take the next steps in growing the infrastructure, equipment cache's, traditions, and delivery capability of the training center. This is already occurring, and we will be working in the next two years to set the foundation for many years to come.

Several tools and equipment items, and infrastructure improvements have been identified and are part of this document. We have a plan, and we are now working to pursue the resources needed to bring the plan to bear.

The Fire Technology Program is effective in serving its established purpose. We serve our purpose through the administration of the following programs.

Fire Technology Associates Degree's and Certificates
Wildland Fire Technology Degree's and Certificates
California State Certified Firefighter I Academy
State Certified Fire Service Promotion Based Course
Firefighter Internships / Career Work Experience (CWE)
CSFM Certified Rescue Schools
CSFM FSTEP Courses
In-Service Training & Refresher Programs
Instructional Service Agreements (ISA) Contract Education

It appears that our foundational programs will continue to succeed moving forward. They are long standing programs in the state with decades of success. We should look to improve marketing and not rely on legacy.

5. Local Fire Agency Collaboration

There are several Advisory Boards in place helping to inform the effort of the college. Several of their relevant suggestions have been included in this report. Fire Technology Faculty are working hard to help mold and develop a future rich in collaboration and investment in the success of our Fire Technology students as well as all the Firefighters from across California that come to train with us at the AHC PSTC.

CONCERNS

As more Community Colleges and Universities stand up distance learning platforms for the Associates Degree and Certificate in Fire Technology, we will need to compete for students more than in the past. We have lost students to this trend. However, we seem to be very stable now, as most college's that intended to start new programs have already done so. We will need to market our programs more than in the past. We will also need to market the Public Safety Training Complex as a destination for California Firefighters.

RECOMMENDATIONS

Establish the Coordinator Fire Technology position from existing faculty. This will allow for a clear leadership element to exist within Fire Technology. The coordinator can then work to advance the long-term goals and objectives of the program while maintaining current levels of service.

The long-term program goals fall into several different categories and have been covered in the body of this document. The areas that will be further developed over the next several years are as follows.

Establish the Fire Technology Coordinator Position, *Spring 2023*

Continue to grow the Fire Technology Associates & Certificate Program

Relaunch the Wildfire Technology Associates & Certificate Program, *Completed*

Continue to develop all Firefighter Internship Programs

Continue to develop the Public Safety Training Complex fixed facilities

Continue to modernize and improve industry standard tools and equipment caches

Participate in SB/SLO County Training Officer Meetings

Develop and Implement the Central Coast Truck Academy, *Spring 2022*

Development of the Central Coast Leadership Academy, *Fall 2022*

Develop a marketing strategy, social media, and website upgrades *Spring 2021*

Continue to provide high level CSFM Rescue Schools Annually

Develop and implement the Skills Maintenance Training (SMT) Program, *Fall 2020*

Work to develop additional Instructional Service Agreements (ISA's)

Continue to work with our current Advisory Committee's

Develop High School Outreach Program

Develop Girls Fire Camp

As we look to the future several needs exist to maintain and increase this student base.

1. Delivery of current CSFM programs on a regular basis

Since the last comprehensive program review Fire Technology leadership has been working diligently to develop State Fire Marshal Certified Instructor Cadres. We have reached the end goal of having enough Cadre to support the programs regularly delivered. We must now work to maintain these Cadre's with professional development programs to maintain their teaching skills and technical knowledge.

2. Development of Skills Maintenance Courses (SMT)

Fire Departments are in a constant state of training. This is a difficult task for any fire department to manage. We believe that the AHC PSTC can help with this part of the Fire Service Mission. This will be accomplished by building relationships and trust with our local fire service partners. Over time we believe that an ISA (Instructional Service Agreement) with the SB County Fire Chief Associations Partner Agencies may be the best way to benefit all parties involved. These agreements do currently exist but are limited. Work has already started to expand the use of ISA's and strengthen the relationship between the college and its fire service partners.

3. Instructional Service Agreements (ISA)

Fire Technology faculty have worked with the college to establish three new courses that will help to service Instructional Service Agreements with our local fire agencies. Engauge with all local fire agencies:

FTNC 7001 Spring Advanced Firefighter Training
FTNC 7002 Summer Advanced Firefighter Training
FTNC 7003 Fall Advanced Firefighter Training

These courses as well as others already in the course catalog will encourage a strong partnership with local government fire agencies.

An emerging trend that the college should be in tuned into is the new requirement by many fire agencies across California now requiring the California State Fire Marshal's Company Officer Program completion to qualify for promotion. The college is uniquely qualified and capable of providing this course of study for many years to come.

4. Interaction with the SB County & SLO County Training Officers Associations

Trust is earned and not given. Fire Technology leadership has been working for years now to build trust with our local fire agencies as well as fire agencies from throughout the state. Trust is earned by being a consistent and trusted part of the team's effort. As we progress, we must perform and do our part to keep the trust that has been built to date. It is critical for the college to understand that for most fire service representatives, the college is a complete mystery. They do not understand the rules and regulations that the college must play by. It is critical that Faculty and Administrators create clear sight lines through this issue for our partner fire agencies. Otherwise, the college process will appear cumbersome and fire departments will disengage and focus on their own efforts. Fire Technology does have a seat at the table of the Santa Barbara County and San Luis Obispo County Training Officers Association meetings. We will continue to attend and work to find partnering opportunities that benefit all involved.

5. Establishing the AHC PSTC as a premier Fire Service training center in CA.

We believe we need to establish a marketing plan that will support these goals. Our success has been fair without a marketing strategy. The time has come to invest in the professional marketing of all AHC PSTC programs. This will require improves social media efforts as well as improved website content and capability. A routine long-term strategy should be developed and maintained.

6. Statewide Truck Operations Academies

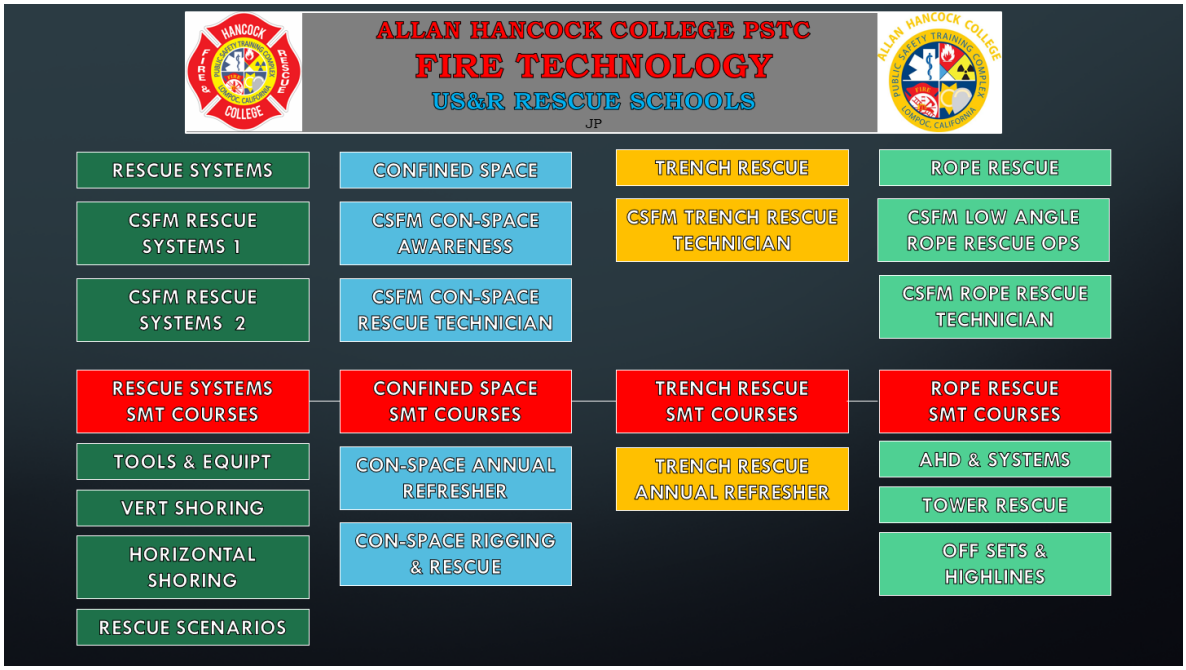
Our local Fire Departments have reached out to us and requested a Truck Company Operations Academy. This occurred in 2018. We are still working to develop the fixed facility props required to reliably host a program of this nature for many years to come. As previously mentioned, we are getting close. The final piece will be the construction of a large roof ventilation prop in the Western Drill Ground Development project that was previously proposed. This type of training is in high demand across California. We have been working hard to established curriculum, a Cadre of Instructors and the equipment needed to support the delivery of this program. It will quickly become known around the state and run for years to come. A program like this exposes our training center and all its programs to Firefighters from across California.

7. Partner with the California Specialized Training Institute (CSTI)

As CSTI goes through an enhancement of its mission to include Urban Search and Rescue (US&R) Training, the Public Safety Training Complex is uniquely located and capable of supporting a partnership to help train California's firefighters in technical; rescue kills and capabilities.

FIRE SERVICE ACADEMIES UNDER DEVELOPMENT

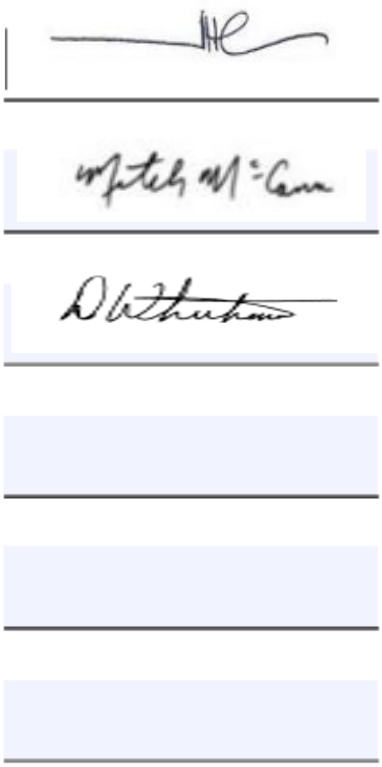
1. Central Coast Truck Company Operations Academy (Level I & Level II)
2. Central Coast Leadership Academy
3. Central Coast Engine Company Operations Academy
4. Central Coast Firefighter Survival School



URBAN SEARCH AND RESCUE PROGRAMS UNDER DEVELOPMENT

1. Rescue Systems Skills Maintenance Course (SMT)
2. Confined Space Rescue (SMT)
3. Trench Rescue (SMT)
4. Rope Rescue (SMT)

VALIDATION TEAM SIGNATURE PAGE (follows the Executive Summary report)



(this page follows the Executive Summary and Validation Team Signature page)

PLAN OF ACTION – POST-VALIDATION
(Sixth-Year Evaluation)

DEPARTMENT Public Safety PROGRAM Fire Technology

In preparing this document, refer to the Plan of Action developed by the discipline/program during the self-study, and the recommendations of the Validation Team. Note that while the team should strongly consider the recommendations of the validation team, these are recommendations only. However, the team should provide a rationale when choosing to disregard or modify a validation team recommendation.

Identify the actions the discipline/program plans to take during the next six years. Be as specific as possible and indicate target dates. Additionally, indicate by the number each institutional goal and objective which is addressed by each action plan. (See Institutional Goals and Objectives) The completed final plan should be reviewed by the department as a whole.

Please be sure the signature page is attached.

RECOMMENDATIONS TO IMPROVE DESIRED **STUDENT OUTCOMES** AND IMPROVE STUDENT PERFORMANCE	**Theme/Objective/ Strategy Number AHC from Strategic Plan**	**TARGET DATE**
Continue to keep programs in-line with FESHE guidance		2022

RECOMMENDATIONS TO ACCOMMODATE CHANGES IN **STUDENT CHARACTERISTICS**	**Theme/Objective/ Strategy Number AHC from Strategic Plan**	**TARGET DATE**
Enrollment Changes Increase program marketing to underrepresented groups		Fall 2022
Demographic Changes Market to women and minorities as identified in data.		2022

RECOMMENDATIONS TO IMPROVE THE **EDUCATIONAL ENVIRONMENT**	**Theme/Objective/ Strategy Number AHC from Strategic Plan**	**TARGET DATE**
Curricular Changes FESHE and CSFM curriculmns required		2022
Co-Curricular Changes N/A		
Neighboring College and University Plans N/A		
Related Community Plans Most require FESHE and CSFM as well		2022

RECOMMENDATIONS THAT REQUIRE ADDITIONAL RESOURCES	Theme/Objective/ Strategy Number AHC from Strategic Plan	TARGET DATE
Facilities See page of Program Review pg. 146 for details		Fall 2022
Equipment See page of Program Review pg. 162-186 & pg. 200 for details		Fall 2022
Staffing Recommend formalized FT Coordinator see pg. 147		Fall 2022

VALIDATION TEAM RECOMMENDTIONS Disregarded or modified (if appropriate)	REASON	ACTION/CHANGE
Recommendation		
Recommendation		
Recommendation		

6- Year Comprehensive Projected Funding Requests

FIRE TECHNOLOGY

1. Requesting a Fire Technology Coordinator Position to provide formal leadership to all of the programs that currently fall under Fire Technology.

2.	CSFM US&R School Tools and Equipment	$20,000
3.	Central Coast Truck Operations Academy	$50,000
4.	Central Coast Leadership Academy	$10,000
5.	Central Coast Girls Fire Camp	$15,000
6.	Firefighter Internship Programs	$10,000
7.	CSFM US&R Programs	$50,000
8.	Firefighter I Academy	
	Fire Hose	$15,000
	Chainsaws (2)	$ 2,000
	Mannequin Coveralls (7)	$ 500
	Radios and Batteries	$ 2,000
	Ground Ladders (8)	$11,000
	Structure Helmets	$11,000
	Commercial Washers (4) *Turnout Cleaning*	$40,000
	Biddle FF Agility Test Training Site	$40,000
	Turnouts (5)	$20,000
	Auto Extrication Prop	$25,000
	Golf Cart / Gator	$15,000
	Self-Contained Breathing Apparatus	$350,00
9.	Fire Technology Facilities	
	Classroom Portable Double Wide	$100,000
	PSTC Warehouse	$500,000
	Lumber & Equipment Storage Fire Tech Shop	$200,000
	Roof Prop (Funded)	$150,000
	Exterior Bathroom (College 5-Year Plan)	
	Additional Burn Buildings (College 5-Year Plan)	
	Rail Car and Aircraft Props (College 5-Year Plan)	

LABOR MARKET DATA

2018-2028 Occupational Employment Projections (Demand)

Santa Maria-Santa Barbara Metropolitan Statistical Area

(Santa Barbara County)

SOC Level[1]	SOC Code[2]	Occupational Title	Base Year Employment Estimate 2018[3][4]	Projected Year Employment Estimate 2028	Numeric Change 2018-2028[5]	Percent-age Change 2018-2028	Exits [6]	Transfers [7]	Total Job Openings [8]	Median Hourly Wages [9]	Median Annual Wages [9]	Entry Level Education [10][11]	Work Experience [10][11]	On-the-Job Training [10][11]
3	33-2000	Fire Fighting and Prevention Workers	350	400	50	14.3%	80	190	320	$0.00	$0	N/A	N/A	N/A
4	33-2011	Firefighters	310	360	50	16.1%	60	170	280	$38.41	$79,882	Postsecondary non-degree award	None	Long-term on-the-job training
Total									**600**					

Source: www.labormarketinfo.edd.ca.gov

SB County Program Completions (Supply)

Top6 Program Title	2017-18	2018-19	2019-20	Latest 3 year Avg
213350 Fire Academy	59	53	21	44
Totals	**59**	**53**	**21**	**44**

Source: https://coeccc.net/our-resources/

PLAN OF ACTION – Post-Validation

Review and Approval

Plan Prepared By

John Ceceña Date: Fall 2021

Date:

Date:

Date:

Date:

Reviewed:

Department Chair*

Date: 11/17/2021

*Signature of Department Chair indicates approval by department of Plan of Action.

Reviewed:

Dean of Academic Affairs

Date: 11.19.2021

Vice President, Academic Affairs

Robert Curry (Jul 6, 2022 11:29 PDT)

Date: Jul 6, 2022

Fire Tech 6 yr PR 2021 Final 2

Final Audit Report 2022-07-06

Created:	2022-07-06
By:	Lisa Gutierrez (lisa.gutierrez@hancockcollege.edu)
Status:	Signed
Transaction ID:	CBJCHBCAABAA2vBdEIaF5dd5cEmTmrbHbv8BuDpO_GjD

"Fire Tech 6 yr PR 2021 Final 2" History

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