Fire Service

Central Florida Fire Institute

Fire Science Technology A.S. Degree and Fire Service Certifications:

- Fire Officer I
- Fire Officer II
- Firesafety Inspector I
- Firesafety Inspector II
- Fire Investigator I
- Fire Instructor
- Fire Fighter (Minimum Standards) Career Certificate
- Fire Apparatus Operator Career Certificate

Valencia in collaboration with Central Florida fire agencies has established the premier Central Florida Fire Institute to provide career pathways to meet the needs of the fire service community in Central Florida, nationally, and globally. The programs infuse high quality and diverse learning and development opportunities to advance all professionals in the industry. The Central Florida Fire Institute prepares all levels of fire service professionals including the Fire Fighter, Fire Officer, Fire Inspector, Fire Investigator, and Fire Instructor. Also, the Fire Science Technology Associate in Science degree program provides opportunities for students to continue to the bachelor’s degree in partnership with UCF DirectConnect.

Fire Science Technology

Associate in Science Degree with Specializations in:

- Fire Officer I
- Fire Officer II
- Firesafety Inspector I
- Firesafety Inspector II
- Fire Investigator I

The Fire Science Technology degree program offers the student a scientific understanding of fire hazards and their control with emphasis on effective operating procedures at fires and other emergencies. The program will provide students an enhanced opportunity as current fire fighters and staff to pursue various professional opportunities in Public Safety with multiple educational pathways. General education courses are included to prepare the graduate to communicate and work effectively with all levels of society. Students may choose from five specializations that also can be taken independently as certificate programs. Courses may be available online and in the classroom.

It will prepare students for enhanced employment opportunities to serve their communities. The technical certificates range between 12-24 credit hours in length while integrated into the A.S. Degree.

This program is approved by the Florida Division of the State Fire Marshal, Bureau of Fire Standards and Training. This program prepares students for certifications as Fire Officers, Fire Inspectors, Fire Investigators, and Fire Instructors. In addition, this program can be useful toward a career in other public service careers or to provide supplemental training for persons previously or currently employed in these occupations.

After completion of the program, students are eligible to take state examinations for various certifications in the State of Florida.

Students who are Florida certified Fire Fighters are eligible for up to 10 credit hours toward the A.S. degree upon review.

Students who have completed the EMS 1119/EMS 1119L and EMS 1431 L and/or possess a Florida EMT Certification are eligible for up to 11 credit hours toward the degree upon review.

Students who have successfully completed a state-certified training academy and passed a recognized state certification exam for Fire Officer I, Fire Officer II, Fire Investigator I, Fire Instructor I or Fire Investigator I, may also be eligible to receive college credit for certain courses in this program upon review. For information and requirements, visit the Valencia Web site at [http://valenciacollege.edu/asdegrees/credit_alternative.cfm](http://valenciacollege.edu/asdegrees/credit_alternative.cfm) to view the Alternative Award of Credit agreement and complete a request form. To have the credit awarded, students should bring the required documentation to the Fire Science department for verification and approval. Students are strongly encouraged to consult the Fire Science department office for assistance in determining the best education plan for their career goals.

Completers of the Fire Fighter program with state certification at Osceola County Tech Center (TECO) may be eligible for the award of credit in specific courses in this program. For information and requirements, visit the Valencia Web site at [http://valenciacollege.edu/asdegrees/transferagreements.cfm](http://valenciacollege.edu/asdegrees/transferagreements.cfm) to view the Credit for Approved Industry Certifications agreements.

Several Florida public universities provide opportunities for A.S. degree graduates to pursue a Bachelor’s degree. All of Valencia’s A.S. degrees will transfer into the Bachelor of Applied Science (B.A.S.) degree offered at UCF’s regional campuses, as well as other universities. For more information on UCF’s B.A.S. degree, go to [http://regionalcampuses.ucf.edu/program/applied-science](http://regionalcampuses.ucf.edu/program/applied-science). For other transfer options that may be available, go to [http://valenciacollege.edu/asdegrees/transferagreements.cfm](http://valenciacollege.edu/asdegrees/transferagreements.cfm). Students who want to continue their education should contact their university of choice for acceptance of this degree.

For students who are interested in pursuing UCF’s B.A.S. degree, 36 credit hours of general education courses will be required. Students will have to fulfill the state’s foreign language requirement, which is two years of the same high school foreign language.

Students are strongly encouraged to consult the department office for assistance in determining the best education plan for their career goals.

Students wishing to transfer any credits from this program to another institution must accept responsibility for securing approval from the transfer institution.

Although scheduling may not always provide for the following progression of courses, students should use the course sequence as a guide in program planning. This is found at [valenciacollege.edu/asdegrees/fire-science](http://valenciacollege.edu/asdegrees/fire-science).

All degree-seeking students must satisfy entry-testing requirements and satisfactorily complete all mandatory courses in reading, student success, mathematics, English, and English for Academic Purposes in which the student is placed.
Program Outcomes:

- Qualify for the Fire Officer I certification.
- Qualify for the Fire Officer II certification.
- Apply group dynamics and team building in fire service experiences.
- Demonstrate understanding of fire service management skills in human resources and various means to communicate them to the public.
- Demonstrate fire service management skills in human resources and situational leadership.
- Demonstrate the ability to design and present in-service training.
- Identify and interpret human resource law in the fire service environment.

Course | Title | Credits
--- | --- | ---
**EN 1101** Humanities | English Composition I (See Gen. Ed. Requirement) (GR) | 3
**Mathematics or Science** | General Psychology (See Gen. Ed. Requirement) | 3
Total General Education Credits | 15

**Fire Officer I Specialization**

The Fire Officer I specialization is designed to incorporate the theory applications necessary to become a certified Fire Officer I. Students must be a Florida certified Firefighter and complete this program to be eligible to apply and test with the Bureau of Fire Standards and Training for a Fire Officer I certification.

Program Outcomes:

- Apply group dynamics and team building in fire service experiences.
- Perform effective communication in the fire service environment.
- Demonstrate knowledge of fire situational analysis and its impact on firefighter safety.
- Demonstrate knowledge of the fire inspection process.
- Demonstrate knowledge of inspection practices for fire protection systems.
- Demonstrate knowledge of the incident management system.
- Demonstrate knowledge of the five categories of terrorist incidents.
- Demonstrate knowledge of the effects of building construction on fire fighting.
- Demonstrate knowledge of principles of leadership.
- Demonstrate the ability to design and present in-service training.
- Demonstrate knowledge of the five main observable tactical considerations and the 15 points of size-up.

Course | Title | Credits
--- | --- | ---
FFP 1109 | Fire Department Occupational Safety and Health | 3
FFP 1505 | Fire Prevention | 3
FFP 1540 | Private Fire Protection Systems I | 3
FFP 1824 | Basic Incident Management | 1
FFP 1825 | Intermediate Incident Management System | 1
FFP 1832 | Emergency Response to Terrorism: Basic Concepts | 1
FFP 2120 | Building Construction for the Fire Service | 3
FFP 2720 | Company Officer | 3
FFP 2740 | Fire Service Course Delivery | 3
FFP 2810 | Fire Fighting Tactics and Strategy I | 3
FFP 2811 | Fire Fighting Tactics and Strategy II | 3
* Electives | Any course with a FFP prefix, CGS 2100 Computer Fundamentals and Applications, SLS 1122 Student Success, OST 1335 Business Communications, ENC 1210 Technical Communication and up to one course from each general education area of the General Education Requirements. | 18
Total Credits | 45
General Education Requirements | 15
TOTAL DEGREE CREDITS | 60

**Fire Officer II Specialization**

The Fire Officer II specialization is designed to incorporate the theory and applications necessary to become a certified mid-management Fire Officer II. Students must be a Florida certified Fire Officer I and complete this program to be eligible to apply with the Bureau of Fire Standards and Training for a Fire Officer II certification.

Program Outcomes:

- Apply group dynamics and team building in fire service experiences.
- Perform effective communication in the fire service environment.
- Demonstrate knowledge of the principles of chemical reaction: oxidation, reduction and combustion.
- Demonstrate the ability to differentiate between accidental and incendiary fire causes.
- Demonstrate knowledge of fire service public information policies and various means to communicate them to the public.
- Demonstrate fire service management skills in human resources and situational leadership.
- Demonstrate the ability to design and present in-service training.
- Identify and interpret human resource law in the fire service environment.

Course | Title | Credits
--- | --- | ---
FFP 1109 | Fire Department Occupational Safety and Health | 3
FFP 1111 | Fire Chemistry | 3
FFP 2610 | Fire Cause and Origin Determination | 3
FFP 2706 | Fire Service Public Information Officer | 3
FFP 2741 | Fire Service Course Design | 3
FFP 2770 | Ethical and Legal Issues for the Fire Service | 3
FFP 2780 | Fire Administration | 3
* Electives | Any course with a FFP prefix, CGS 2100 Computer Fundamentals and Applications, SLS 1122 Student Success, OST 1335 Business Communications, ENC 1210 Technical Communication and up to one course from each general education area of the General Education Requirements. | 24

**Firesafety Inspector I Specialization**

The Firesafety Inspector I specialization is designed to incorporate the theory and applications necessary to become a certified Firesafety Inspector I. Career opportunities include Fire Inspector, Fire Marshal. These careers include building inspection to detect fire hazards and enforce local ordinances and State laws, or investigate and gather facts to determine cause of fires and explosions. Students who complete the program in Firesafety Inspector I will be eligible to apply and test with the Bureau of Fire Standards and Training for Firesafety Inspector I certification.

Program Outcomes:

- Apply group dynamics and team building in fire service experiences.
- Perform effective communication in the fire service environment.
Program Outcomes:
- Demonstrate knowledge of inspection practices for fire protection systems
- Define types of building classifications and construction types.
- Demonstrate ability to properly classify types of occupancies.
- Demonstrate ability to interpret conventions, symbols, and notes on architectural drawings of residential, light and heavy commercial buildings.

Course | Title | Credits
--- | --- | ---
FPP 1109 | Fire Department Occupational Safety and Health | 3
FPP 1505 | Fire Prevention | 3
FPP 1540 | Private Fire Protection Systems I | 3
FPP 2120 | Building Construction for the Fire Service | 3
FPP 2510 | Fire Codes and Standards | 3
FPP 2521 | Blueprint Reading and Plans Review | 3
* Electives | Any course with a FFP prefix, CGS 2100 Computer Fundamentals and Applications, SLS 1122 Student Success, OST 1335 Business Communications, ENC 1210 Technical Communication and up to one course from each general education area of the General Education Requirements. | 27

**Total Credits**
- General Education Requirements: 15
- TOTAL DEGREE CREDITS: 60

**Firesafety Inspector II Specialization**

This Firesafety Inspector II specialization is designed to incorporate the theory and applications necessary to become a certified Firesafety Inspector II. Career opportunities include Fire Inspector, Fire Marshal, and Fire Service Administrator that have responsibility for such tasks as inspecting properties that store, handle, and use hazardous materials to ensure compliance with laws, codes, and regulations, and issuing hazardous materials permits to facilities found in compliance. Students must be a Florida certified Fire Fighter, Firesafety Inspector, or Police Officer and complete this program to be eligible to apply with the Bureau of Fire Standards and Training for a Fire Inspector II certification.

**Program Outcomes:**
- Apply group dynamics and team building in fire service experiences
- Perform effective communication in the fire service environment.
- Demonstrate knowledge of the principles of chemical reaction: oxidation, reduction and combustion.
- Demonstrate an understanding of pre-engineered systems; extinguishing agents; alarm systems associated with pre-engineered systems; and inspection procedures.
- Demonstrate the ability to differentiate between accidental and incendiary fire causes.
- Demonstrate knowledge of fire service public information policies and various means to communicate them to the public.

Course | Title | Credits
--- | --- | ---
FPP 1109 | Fire Department Occupational Safety and Health | 3
FPP 1111 | Fire Chemistry | 3
FPP 2541 | Private Fire Protection Systems II | 3
FPP 2610 | Fire Cause and Origin Determination | 3
FPP 2706 | Fire Service Public Information Officer | 3

* Electives | Any course with a FFP prefix, CGS 2100 Computer Fundamentals and Applications, SLS 1122 Student Success, OST 1335 Business Communications, ENC 1210 Technical Communication and up to one course from each general education area of the General Education Requirements. | 30

**Total Credits**
- General Education Requirements: 15
- TOTAL DEGREE CREDITS: 60

**Fire Investigator I Specialization**

Fire Investigator I specialization is open to firefighters and police officers and is designed to incorporate the theory and applications necessary to become a certified Fire Investigator I. Career opportunities include Fire Inspector, Fire Investigator, Fire Marshal, and Law Enforcement Investigator. These occupations include the examination of fire sites and collection of evidence such as glass, metal fragments, charred wood, and accelerant residue for use in determining the cause of a fire; coordination with other agencies; instructing children about the dangers of fire; dusting evidence or portions of fire scenes for latent fingerprints. Students must be a Florida certified fire fighter, Firesafety Inspector, or Police Officer and must complete this program to apply and test with the Bureau of Fire Standards and Training for Fire Investigator I certification.

**Program Outcomes:**
- Apply group dynamics and team building in fire service experiences.
- Perform effective communication in the fire service environment.
- Demonstrate knowledge of the principles of chemical reaction: oxidation, reduction and combustion.
- Demonstrate knowledge of classifications, controls and applications of automatic sprinkler systems.
- Demonstrate knowledge of inspection practices for fire protection systems.
- Define types of building classifications and construction types.
- Demonstrate knowledge of various types of building construction and their effect on fire propagation, smoke generation and control.
- Demonstrate knowledge of the path of travel of fire, heat and smoke.
- Demonstrate the ability to differentiate between accidental and incendiary fire causes.

Course | Title | Credits
--- | --- | ---
FPP 1109 | Fire Department Occupational Safety and Health | 3
FPP 1111 | Fire Chemistry | 3
FPP 1540 | Private Fire Protection Systems I | 3
FPP 2120 | Building Construction for the Fire Service | 3
FPP 2610 | Fire Cause and Origin Determination | 3
* Electives | Any course with a FFP prefix, CGS 2100 Computer Fundamentals and Applications, SLS 1122 Student Success, OST 1335 Business Communications, ENC 1210 Technical Communication and up to one course from each general education area of the General Education Requirements. | 30

**Total Credits**
- General Education Requirements: 15
- TOTAL DEGREE CREDITS: 60

**NOTES:**
1. CGS 2100 is a transferable course.
2. Students who are Florida certified Fire Fighters are eligible for up to three credits toward the A.S. degree upon review.
3. Students who have completed the EMS 1119/EMS 1119L and EMS 1431 L and possess an EMT Certification are eligible for up to 11 credit hours toward the degree upon review.
4. Recommended Electives include SLS 1122 Student Success.
5. Students planning to transfer to UCF should select from these science courses: MGF 1106, MAC 1105, MAC 1114, MAC 2233, MAC 2311, MAC 2312, and MAC 2313, and STAT 2023.
6. Students planning to transfer to UCF should select from these humanities courses: EUH 2000, EUH 2001, ARH 2050, ARH 2051, LIT 2110, LIT 2120, MUL 1010, PHI 2100, REL 2000, and THE 1020.

+ This course must be completed with a grade of C or better.
* This course has a prerequisite; check description in Valencia catalog.

All specialized courses are offered at the Criminal Justice Institute Campus located at 8600 Valencia College Lane (near the East Campus) in Orlando.

General education courses are in bold print in the course listing.

Several Florida public and private universities provide opportunities, in addition to the Articulated A.S. to B.S. transfer option, for A.S. degree graduates to pursue a Bachelor’s degree. Information on some of these transfer options, including UCF’s Bachelor of Applied Science (B.A.S.) degree, may be found at valenciacollege.edu/asdegrees/transferagreements.cfm.

Students who want to continue their education should contact their university of choice for acceptance of this degree. For students who are interested in pursuing UCF’s B.A.S. degree, 36 credit hours of general education courses will be required. Students will also have to fulfill the state’s foreign language requirement, which is two years of the same high school foreign language or two semesters of the same college-level foreign language. It is also recommended that those students take PSY 2012 General Psychology rather than SYG 2000 Introductory Sociology.

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### Fire Service Certifications

#### Fire Officer I – Certification

Fire Officer I courses are designed to incorporate the theory and applications necessary to become a certified Fire Officer I. Students must be a Florida certified Fire Fighter and complete these courses to be eligible to apply and test with the Bureau of Fire Standards and Training for a Fire Officer I certification.

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>FFP 1505</td>
<td>Fire Prevention</td>
<td>3</td>
</tr>
<tr>
<td>FFP 1540</td>
<td>Private Fire Protection Systems I</td>
<td>3</td>
</tr>
<tr>
<td>FFP 1824</td>
<td>Basic Incident Management</td>
<td>1</td>
</tr>
<tr>
<td>FFP 1832</td>
<td>Emergency Response to Terrorism: Basic Concepts</td>
<td>1</td>
</tr>
<tr>
<td>FFP 2120</td>
<td>Building Construction for the Fire Service</td>
<td>3</td>
</tr>
<tr>
<td>FFP 2740</td>
<td>Fire Service Course Delivery</td>
<td>3</td>
</tr>
<tr>
<td>FFP 2810</td>
<td>Fire Fighting Tactics and Strategy I</td>
<td>3</td>
</tr>
<tr>
<td>FFP 2811</td>
<td>Fire Fighting Tactics and Strategy II</td>
<td>3</td>
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<td><strong>Total Credits</strong></td>
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<td><strong>24</strong></td>
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#### Fire Officer II – Certification

Fire Officer II courses are designed to incorporate the theory and applications necessary to become a certified mid-management Fire Officer II. Students must be a Florida certified Fire Officer I and complete these courses to be eligible to apply with the Bureau of Fire Standards and Training for a Fire Officer II certification.

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<thead>
<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td>FFP 1111</td>
<td>Fire Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>FFP 2610</td>
<td>Fire Cause and Origin Determination</td>
<td>3</td>
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<tr>
<td>FFP 2706</td>
<td>Fire Service Public Information Officer</td>
<td>3</td>
</tr>
<tr>
<td>FFP 2741</td>
<td>Fire Service Course Design</td>
<td>3</td>
</tr>
<tr>
<td>FFP 2770</td>
<td>Ethical and Legal Issues for the Fire Service</td>
<td>3</td>
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<tr>
<td>FFP 2780</td>
<td>Fire Administration</td>
<td>3</td>
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<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>18</strong></td>
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### Firesafety Inspector I – Certification

Firesafety Inspector I courses are designed to incorporate the theory and applications necessary to become a certified Firesafety Inspector I. Career opportunities include Fire Inspector, Fire Marshal. These careers include building inspection to detect fire hazards and enforce local ordinances and State laws, or investigate and gather facts to determine cause of fires and explosions. Students who complete these courses in Firesafety Inspector I will be eligible to apply and test with the Bureau of Fire Standards and Training for Firesafety Inspector I certification.
Fire Instructor courses are designed to prepare the student to design and utilize a lesson plan and present a class. This curriculum is intended to facilitate the development of nationally applicable performance standards for uniformed fire service personnel. The courses prepare the prospective instructor to design, present and develop a training curriculum; evaluate the performance of assigned firefighting personnel; direct the training of firefighters, assigning of instructors to training classes, and providing supervisors with reports on training progress and status. Students must have six years of experience as a regular member of an organized fire department and must complete these courses to be eligible to apply and test with the Bureau of Fire Standards and Training for a Fire Instructor I certification.

<table>
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<tr>
<td>FFP 2510</td>
<td>Fire Codes and Standards</td>
<td>3</td>
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<tr>
<td>FFP 2521</td>
<td>Blueprint Reading and Plans Review</td>
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<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>15</strong></td>
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</table>

Fire Investigator I – Certification

Fire Investigator I courses are open to firefighters and police officers and is designed to incorporate the theory and applications necessary to become a certified Fire Investigator I. Career opportunities include Fire Inspector, Fire Investigator, Fire Marshal, and Fire Service Administrator that have responsibility for such tasks as inspecting properties that store, handle, and use hazardous materials to ensure compliance with laws, codes, and regulations, and issuing hazardous materials permits to facilities found in compliance. Students must be a Florida certified Fire Fighter, Fire Safety Inspector, or Police Officer and complete these courses to be eligible to apply with the Bureau of Fire Standards and Training for a Fire Investigator I certification.

<table>
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<td>Fire Chemistry</td>
<td>3</td>
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<tr>
<td>FFP 2541</td>
<td>Private Fire Protection Systems II</td>
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<tr>
<td>FFP 2610</td>
<td>Fire Cause and Origin Determination</td>
<td>3</td>
</tr>
<tr>
<td>FFP 2706</td>
<td>Fire Service Public Information Officer</td>
<td>3</td>
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<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>12</strong></td>
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</tbody>
</table>

Fire Investigator II – Certification

Fire Investigator II courses are designed to incorporate the theory and applications necessary to become a certified Fire Investigator II. Career opportunities include Fire Inspector, Fire Marshal, and Fire Service Administrator that have responsibility for such tasks as inspecting properties that store, handle, and use hazardous materials to ensure compliance with laws, codes, and regulations, and issuing hazardous materials permits to facilities found in compliance. Students must be a Florida certified Fire Fighter, Fire Safety Inspector, or Police Officer and complete these courses to be eligible to apply with the Bureau of Fire Standards and Training for a Fire Investigator II certification.

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>FFP 1111</td>
<td>Fire Chemistry</td>
<td>3</td>
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<tr>
<td>FFP 2610</td>
<td>Fire Cause and Origin Determination</td>
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<td>FFP 2617</td>
<td>Fire Service Public Information Officer</td>
<td>6</td>
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<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>12</strong></td>
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Fire Fighter (Minimum Standards)

Career Certificate

Vocational Credit – Limited-Access

Application Process (To be Announced)

Admission Requirements:

Admission to this program is limited. Students must meet the following criteria:

- Must be at least 18 years of age
- Possess a high school diploma or a GED
- Must be a Florida certified EMT-Basic or Paramedic
- Have no convictions of significant misdemeanors or felonies
- Be of good moral character
- Must be in good physical condition

The Fire Fighter I course provides both practical applications and an orientation to the fire service. This course includes many functions required of a fire fighter such as: fire service safety; fire behavior; building construction; protective clothing; SCBA; portable extinguishers; ropes and knots; building search and victim removal; forcible entry tools; constructions techniques; ground ladders; ventilation; water supply; coupling; loading and rolling hose; laying, carrying and advancing hose; water streams; Class A, C, D; vehicle and wildland fire control; sprinkler system fundamentals; salvage; overhaul and protecting evidence of fire cause; fire department communication; equipment and techniques; fire prevention and public fire education. The course also includes Awareness-Level Hazardous Materials Training. Upon completion of the program and a written state certification examination, the student will receive a Certificate of Competency from the Bureau of Fire Standards and Training as a Firefighter I.

The student must successfully complete the requirements and receive a Certificate of Competency for Fire Fighter I to enter Fire Fighter II. The Fire Fighter II course prepares the student to meet the requirements to become a state certified fire fighter. Course content includes implementing the incident management system; construction materials and building collapse; rescue and extrication tools; vehicle extrication and special rescue; hydrant flow and operability hose; tools and appliances; foam fire systems; ignitable liquid and gas fire control; fire detection; alarm and suppression systems; fire cause and origin; radio communications and incident reports pre-incident survey and wildlife fire fighting. Students must complete the program to be eligible and to test for certification with the Florida Bureau of Fire Standards and Training for a Fire Fighter II. This exam encompasses both written and practical skills tests. Certification is required in the state of Florida for fire fighters.

Program Outcomes:

- Demonstrate knowledge of fire department organization, procedures and responsibilities
Demonstrate knowledge of personal protective equipment
Demonstrate knowledge of ventilation practices
Demonstrate the proper use of ropes, tools and equipment
Demonstrate proper use of fire hose, nozzles and appliances

Course Title Contact Vocational Hours Credits
FFP 0010 Fire Fighter I 206 6.867
* FFP 0020 Fire Fighter II 192 6.4
FFP 0363 Emergency Vehicle Operator Course 20 0.667
Total Career Certificate Clock Hrs. 418 13.934

* This course has a prerequisite; check description in Valencia catalog.

Fire Apparatus Operator
Career Certificate
Vocational Credit - Limited-Access

Application Process (To be Announced)

Admission Requirements:
Students must meet the following criteria:
· Be a state certified fire fighter.

This program includes an understanding of hydraulics and fluid dynamics, principles of fire department water supply, nomenclature and operations of fire apparatus, appliances, municipal and rural water systems, maintenance, and safety in operational procedures. Students will learn the use of safety procedures, tools, equipment, materials, and processes related to fire fighting. Practical applications will be provided through lab and field training experiences.

Program Outcomes:
· Perform basic hydraulic calculations that will give the proper flow rate, tip pressure and pumping capacity
· Demonstrate knowledge of National Fire Protection Association (NFPA) 1901 and applicable state laws and rules by listing and discussing key provisions of each as they relate to fire apparatus
· Demonstrate knowledge of friction loss by defining friction loss and calculating it over different lengths and diameters of fire hose
· Demonstrate the ability to effectively drive fire apparatus by driving the serpentine course, the alley dock exercise, opposite alley dock exercise, and the diminishing clearance exercise without error
· Demonstrate the ability to draft tandem and relay pumping by performing drafting, tandem, and relay pumping operations
· Demonstrate knowledge of gauges and valves by identifying and reading all gauges on a typical fire apparatus as well as identifying and operating all valves on a typical fire apparatus

Course Title Contact Vocational Hours Credits
FFP 0360 Fire Apparatus Operator 80 2.667
Total Career Certificate Clock Hrs. 80 2.667