



Arab Fire Safety and Security Academy

(AFSSAC)

Fire Science Technology

**Student Program Outcomes and
Achievements**

Program Data

Student profile

The Associate Degree in Fire Science Technology is designed to give students the essential education and Hands-on training needed for entering the fields of firefighting and fire prevention and provides opportunities for professional fire service personnel to advance their knowledge and skills.

Students will receive training in the basic concepts of firefighting and will participate in actual hands-on Evolutions that will give them real experience in the firefighting career field.

Completion of this two-year program will qualify students for the Associate of Applied Science (AAS) in Fire Science Technology. Since the degree program is designed to meet the needs of the part-time student, the program will normally take a minimum of three years to complete. All Fire Science course will be offer in the evening.

Program Outcomes

Upon successful completion of this program, the Fire Science Technology graduate should be able to:

- **Perform fire suppression functions;**

- 1- Define offensive operations versus defensive operations.
- 2- Attack an interior structure fire.
- 3- Operate hose lines.
- 4- Perform exposure protection.
- 5- Attack a vehicle fire.
- 6- Extinguish all classes of fire.
- 7- Attack fires involving electricity.

- **Perform fire prevention functions;**
 - 1-Identify elements of fire safety education programs covering stop, drop, and roll; exit drills in the buildings; and installation and maintenance of smoke alarms.
 - 2-Recognize hazards during a fire safety survey of a residential occupancy.
 - 3-Perform engine company inspection.
- **Perform hazardous materials control functions;**
 - 1- Wear personal protective equipment (PPE) used for hazardous materials incidents.
 - 2- Identify the purpose, advantages, and limitations of structure firefighting, high temperature, chemical, liquid flash, and vapor – protective clothing.
 - 3- Identify respiratory protection in hazard materials incident.
 - 4- Apply techniques used to isolate hazard areas and deny entry.
 - 5- Implement buddy system and back up.
- **Provide emergency care;**
 - 1- Define how the delivery of Emergency Medical Services (EMS) fits into the mission of the fire department.
 - 2- Distinguish between basic life support and advanced life support.
 - 3- Differentiate a combination EMS system from a fire department EMS system.
- **Communicate effectively;**
 - 1- Receive emergency calls.
 - 2- Define fire department radio communication.
 - 3- Use radio codes.
- **Practice safety in the performance of all tasks.**
- **Demonstrate the importance of communication, human relation, professionalism and technical skills in achieving operational results in organizations.**

Courses

Course Number	Course Title	Credits	Prerequisite
General Education Courses			
CMP 101	Introduction to Computer	5	
CMP 102	Advanced Computer Applications	5	CMP 101
ISL 101	Islamic culture -1	3	
ISL 102	Islamic culture -2	3	ISL 101
ENG 101	General English	4	
ENG 143	Specialized English -1	6	ENG 101
ENG 243	Fire Terminology	4	ENG 143
MAT 121	Mathematics -1	4	
MAT 222	Mathematics -2	4	MAT 121
ARB 101	Arabic Language	3	
PHY 101	General Physics	4	
ETH 101	Professional Ethics and Communications Skills	3	
	Subtotal Credit Hours	48	
Required Core Courses			
FST 131	Fire Chemistry	4	
FST 132	Hazardous Materials /Awareness	4	
SFY 104	Vocational and industrial safety	4	
FST 134	Fire fighter I	4	FST 132
FST 135	Vehicle& Machinery rescue	4	
FST 136	Fire protection systems	4	
FST 137	Plans of constructing buildings	4	
FST 241	hazardous materials / operations	5	FST 132
FST 242	Driver/Operator Pumper	6	FST 134
FST 243	Fire hydraulics	6	MAT 222
FST 244	Computer designs	4	CMP 102
FST 245	Fire Inspector I	5	FST 137
FST 246	Fire Investigator	5	FST 134
FST 247	Fire Fighter II	5	FST 134
FST 248	Training methods	4	FST 245
FST 249	Fire Service Instructor I	6	FST 247
FST 250	Fire Administration	4	
FST 252	Cooperative Training (Internship)	4	
FST 251	Graduation Project	3	
	Subtotal Credit Hours	85	
Total Credits for A.A.S. Degree		133	

Study Schedule

Associate degree in Fire science (Fire Specialist)

	s/l	Code	Title	Prerequisite	Tutorial hours				
					Credits	Lecture	Practical	Exercise	Contact hours
First quarter	1	ENG 101	General English	-----	4	4	0	0	4
	2	ISL 101	Islamic culture -1	-----	3	3	0	0	3
	3	MAT 121	Mathematics -1	-----	4	4	0	2	6
	4	FST 131	Fire Chemistry	-----	4	3	2	0	5
	5	FST 132	Hazardous Materials / Awareness	-----	4	3	2	0	5
Total					19	17	4	2	23

	s/l	Code	Title	Prerequisite	Tutorial hours				
					Credits	Lecture	Practical	Exercise	Contact hours
Second quarter	1	CMP 101	Introduction to Computer applications	-----	5	1	8	0	9
	2	ENG 142	Specialized English -1	ENG101	6	4	4	0	8
	3	PHY 101	Physics	-----	4	3	2	0	5
	4	SFY 104	Vocational and industrial safety	-----	4	3	2	0	5
	Total					19	11	16	0

	s/l	Code	Title	Prerequisite	Tutorial hours				
					Credits	Lecture	Practical	Exercise	Contact hours
Third quarter	1	MAT 222	Mathematics -2	MAT 121	4	4	0	0	4
	2	FST 134	Fire fighter I	FST 132	4	4	0	3	7
	3	FST 135	Vehicle & Machinery rescue	-----	4	3	2	1	6
	4	FST 136	Fire protection systems	-----	4	3	2	0	5
	5	ARB 101	Arabic Language	-----	3	3	0	0	3
Total					19	17	4	4	25

	s/l	Code	Title	Prerequisite	Tutorial hours				
					Credits	Lecture	Practical	Exercise	Contact hours
Fourth quarter	1	ENG 243	Fire Terminology	ENG 142	4	4	0	0	4
	2	CMP 102	Advanced computer applications	CMP 101	5	1	8	0	9
	3	FST 137	Plans of constructing buildings	-----	4	4	0	2	6
	4	FST 241	hazardous materials / operations	FST 132	5	5	0	4	9
	Total					18	14	8	6

Fifth quarter	s/l	Code	Title	Prerequisite	Tutorial hours				
					Credits	Lecture	Practical	Exercise	Contact hours
	1	ISL 102	Islamic culture - 2	ISL 101	3	3	0	0	3
2	FST 242	Driver/Operator Pumper	FST 134	6	4	4	0	8	
3	FST 243	Fire hydraulics	MAT 222	6	4	4	0	8	
4	FST 244	Computer designs	CMP 102	4	2	4	0	6	
Total				19	13	12	0	25	

Sixth quarter	s/l	Code	Title	Prerequisite	Tutorial hours				
					Credits	Lecture	Practical	Exercise	Contact hours
	1	ETH 101	Professional Ethics and Communications Skills	-----	3	3	0	1	4
2	FST 245	Fire Inspector I	FST 137	5	4	2	0	6	
3	FST 246	Fire Investigator	FST 134	5	4	2	0	6	
4	FST 247	Fire Fighter II	FST 134	5	4	2	0	6	
Total				18	15	6	1	22	

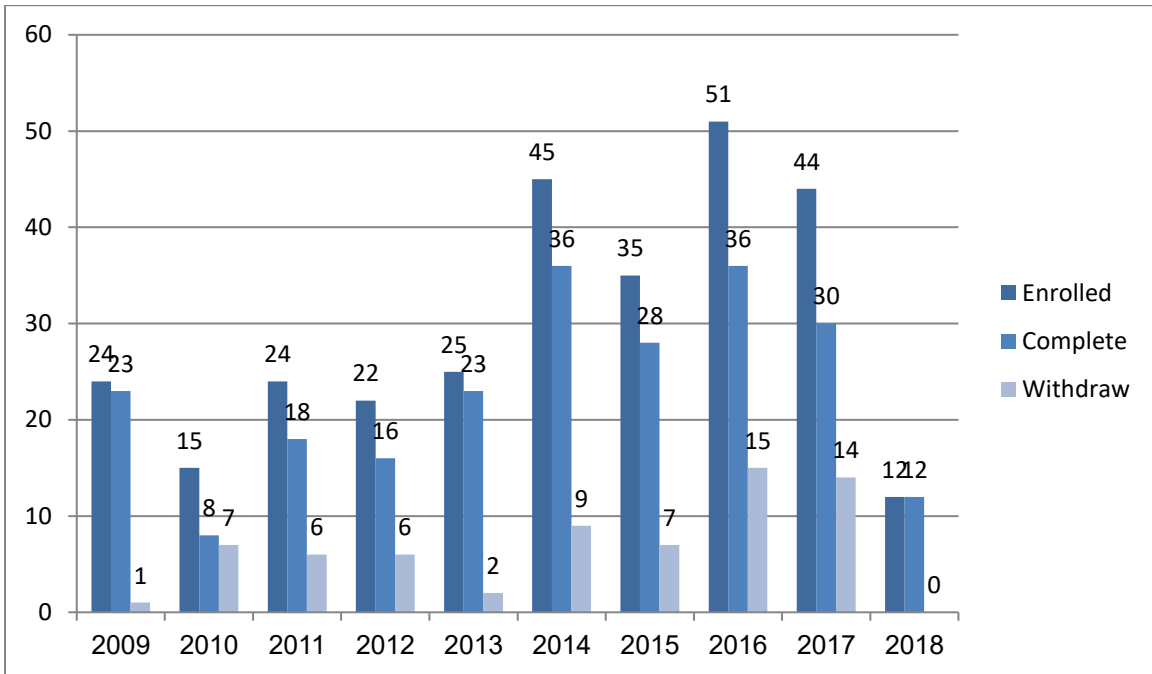
Seventh quarter	s/l	Code	Title	Prerequisite	Tutorial hours				
					Credits	Lecture	Practical	Exercise	Contact hours
	1	FST 248	Training methods	FST 245	4	3	2	0	5
2	FST 249	Fire Service Instructor I	FST 247	6	5	2	0	7	
3	FST 250	Fire Administration	-----	4	3	2	0	5	
4	FST 251	Graduation Project	-----	3	0	6	0	6	
Total				17	11	12	0	23	

Eighth quarter	s/l	Code	Title	Prerequisite	Tutorial hours				
					Credits	Lecture	Practical	Exercise	Contact hours
1	FST 252	Cooperative training (Internship)	All previous courses	4	400 hrs.				

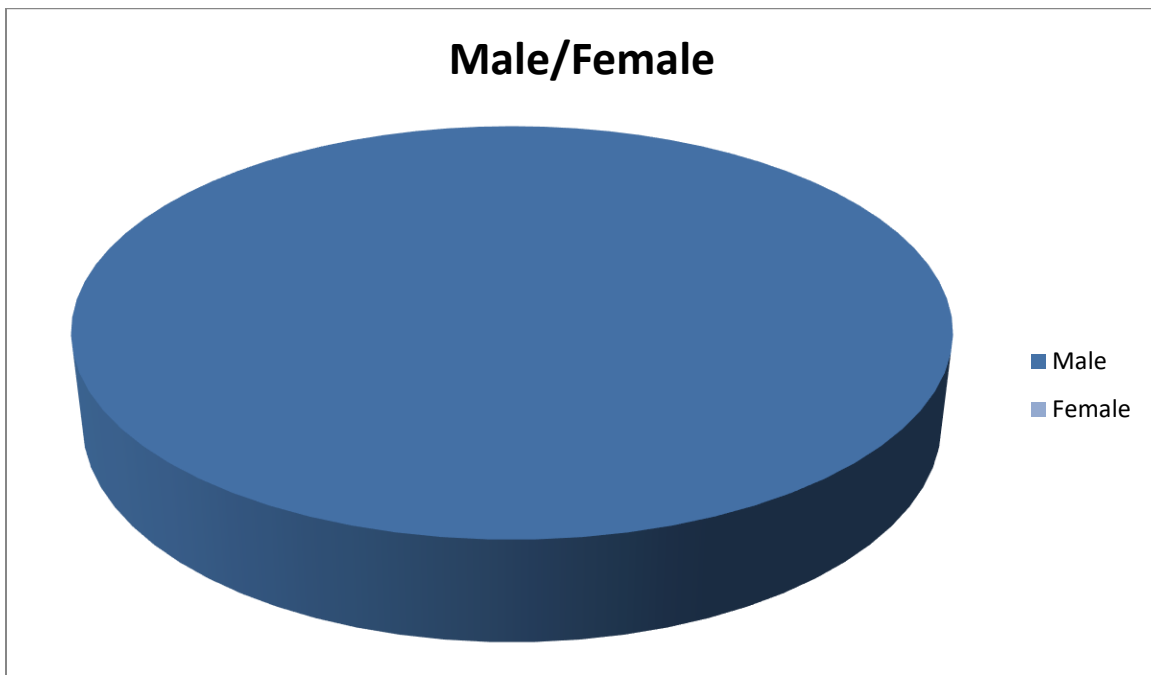
Total				Tutorial hours				
				Credits	Lecture	Practical	Exercise	Contact hours
				133	98	62	13	173

Grand total of course credit hours (the total contact hours × 10) + 400	2130
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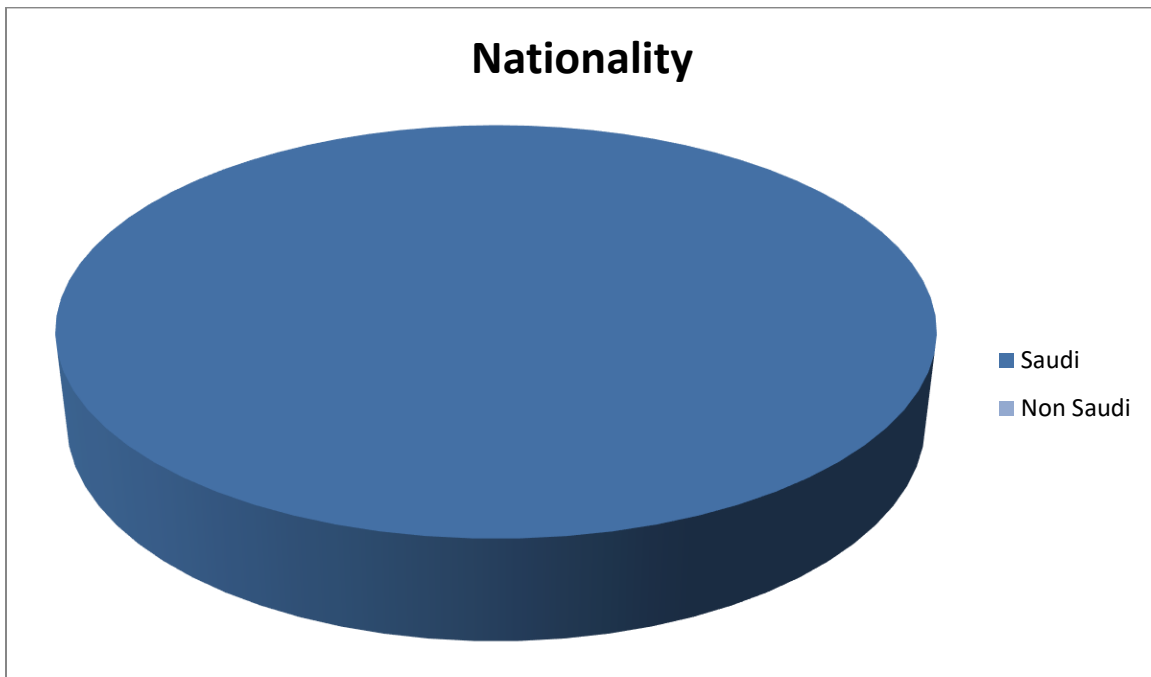
Student Demographic



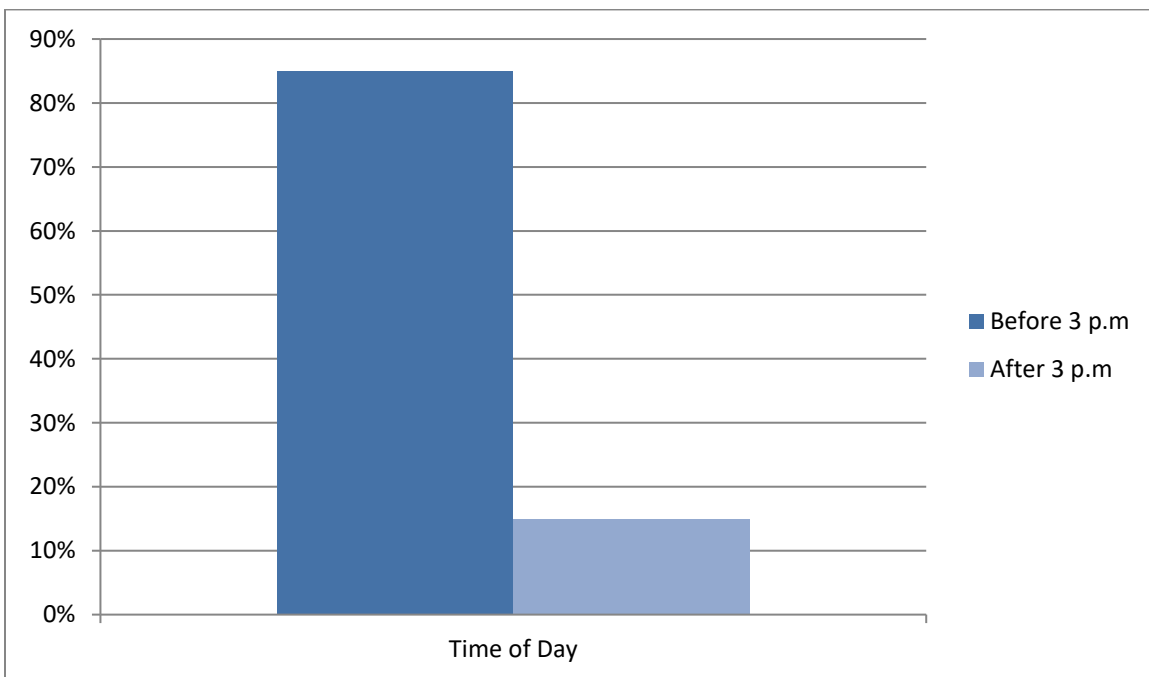
Demographic Trends



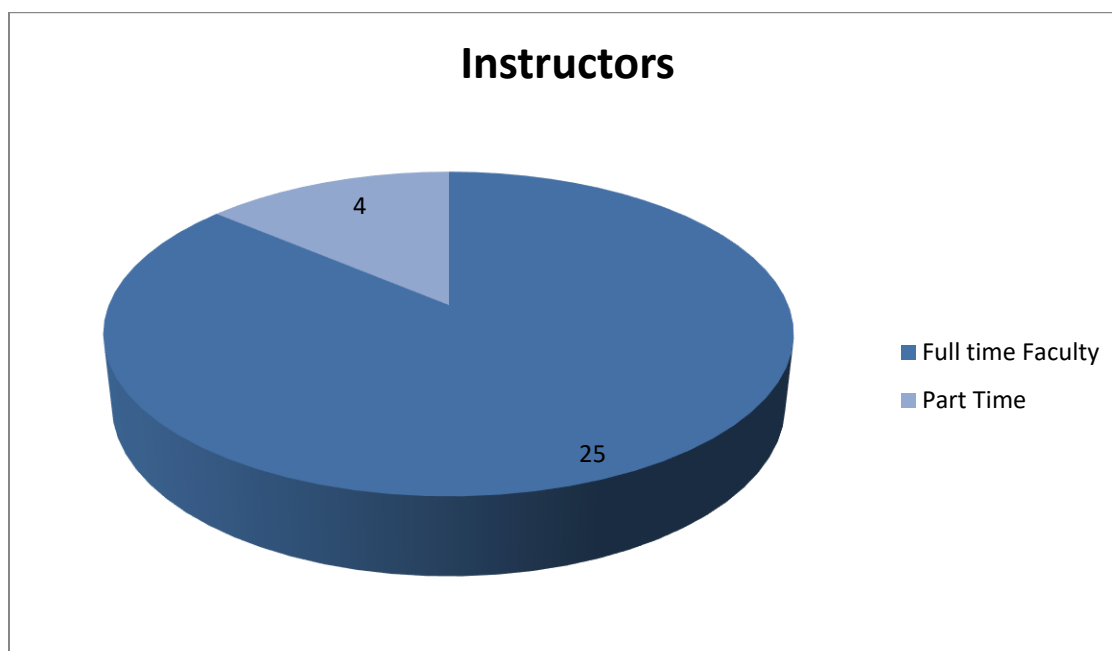
Nationality



Schedule



Instructors



Placement

<p>Class of 2009 Related placement.....100%</p>	<p>Class of 2014 Related placement.....100%</p>
<p>Class of 2010 Related placement.....100%</p>	<p>Class of 2015 Related placement.....100%</p>
<p>Class of 2011 Related placement.....100%</p>	<p>Class of 2016 Related placement.....100%</p>
<p>Class of 2012 Related placement.....100%</p>	<p>Class of 2017 Related placement.....100%</p>
<p>Class of 2013 Related placement.....100%</p>	<p>Class of 2018 Related placement.....(100%)</p>
<p>Class of 2019 Related placement.....(TBA)</p>	

Sample of Employers For Graduates

- King Abd Allah University For Science and Technology (KAUST)
- King Abd Allah Economic city (KAEC)
- King Abd Allah Medical city (KAMC)
- Royal Saudi Navy Forces
- Royal Saudi Air Force
- Ministry of National Guard (KSA)
- Civil Aviation (Domestic Airports KSA)
- Saudi Electricity Company (SEC)
- Saudi Sicli Company (KSA)
- United Cement Industrial Company (KSA)
- Petro Rabigh
- Halwani Bros
- Rajhi Steel
- Saudi Advanced Industries Company (SAIC) (Ibn Rushd petrochemicals)

Career Choices

- Opportunities for employment based on completion level
 - a. Firefighter
 - b. Driver Operator
 - c. Fire Inspector
 - d. Fire Investigator
- Higher level positions, requiring experience and exams, are:
 - a. Lieutenant
 - b. Captain
 - c. District Chief
 - d. Deputy Chief
 - e. Assistant Chief
 - f. Fire Service Instructor

Program outcomes
6 years Average
(TVTC* Comprehensive Exams)

Program Outcomes	Measurement 100% of the students enrolled successfully complete:	Student Enrolled	Student that Passed	Student that Withdrew	Student that Failed	Meets Criteria Yes/NO
1- Graduates will understand and be able to play their role in the career of firefighter.	FST 131 FST 134 FST 135 FST 247	190	152 (80%)	38	7	Yes
2- Graduates will understand and be able to play their role in Hazardous material accidents.	FST 132 FST 241	190	152 (80%)	38	7	Yes
3- Graduates will successfully demonstrate communication skills.	ETH 101	190	152 (80%)	38	7	Yes
4- Graduates will be able to manage an emergency incident using appropriate strategies and tactics.	FST 250	190	152 (80%)	38	7	Yes
5- Graduates will demonstrate a working knowledge of fire apparatus maintenance, fire pump operations, and mobile water supply.	FST 242	190	152 (80%)	38	7	Yes
6- Graduates will demonstrate the ability to conduct a basic fire investigation.	FST 246	190	152 (80%)	38	7	Yes
7- Graduates will be able to explain and demonstrate fire inspection practices.	FST 136 FST 137 FST 234 FST 245	190	152 (80%)	38	7	Yes
8- Graduates will be able to play his role as fire service instructor.	FST 248 FST 249	190	152 (80%)	38	7	Yes

*TVTC (Technical Vocational Training Corporation)

(The students who withdrew or failed take a retest and passed)

Award Types Available

- A.A.S. Fire Science Technology Certificate.
- Courses Transcript.