2016 Program Review

Fire Science Technology Program

Cecil College

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I. Executive Summary

The Associate of Applied Science, Fire Science Technology degree has been in existence since 2001. The degree was designed in conjunction with the Maryland Fire and Rescue Institute (MFRI). Enrollment in the program is open to all Cecil College students, but it is also offered to eligible Cecil County public high school (CCPS) students. Although the numbers have been small, the degree has provided an educational avenue for fire science students to obtain an associate degree.

The degree is 60 credits: 29 general education credits and 1 elective credit offered by Cecil College, and 30 credits required occupational courses offered by MFRI. The Associate of Applied Science, Fire Science Technology continues the Cecil College tradition of facilitating student growth, providing an educational avenue for stackable credentials, and supporting the development of a career ladder.

II. Program Description

This program provides the degree credential necessary for promotion and advancement of fire science professionals currently employed with the fire service.

III. Program History

The Fire Science Technology program was first offered to Cecil County high school students in 2001. The program is available to Cecil College high school students and anyone attending Cecil College. The articulation agreement between Cecil College and Maryland Fire and Rescue Institute establishes the relationship between courses taken at Cecil College and training received from MFRI that enables eligible students to earn an Associate of Applied Science (AAS) Degree in Fire Science Technology. Cecil College provides the general education courses at Cecil locations and MFRI provides the technical courses at MFRI sites. Students are subject to the policies and procedures of each institution.

IV. Faculty Profile

There are no Cecil College faculty assigned to this program. Students enrolled in this program take only general education courses at Cecil College. Faculty from the MFRI provide the instruction for the occupational aspects of the program.

V. Program Curriculum

Students take the General Education requirements at Cecil College and the required occupational courses are offered by the Maryland Fire and Rescue Institute.

	General Education Requirements	***General Education Code***	***Credits***
BIO 101 or BIO 130	General Biology Principles of Biology	S	3
BIO 111 or BIO 131	General Biology Lab Principles of Biology Lab		1
BIO 208	Human Anatomy and Physiology I	S	3
BIO 218	Human Anatomy and Physiology I Lab		1
BIO 209	Human Anatomy and Physiology II	S	3
BIO 219	Human Anatomy and Physiology II Lab		1
EGL 101	Freshman Composition	E	3
MAT 127	Introduction to Statistics	M	4
PSY 101	Introduction to Psychology	SS	3
SOC 101	Introduction to Sociology	SS	3
SPH 121 or SPH 141	Interpersonal Communications Public Speaking	H	3
	Program Requirements		
ELECT	Elective		1
EMT 106	Emergency Medical Technician		7
FIR 101	Firefighter I		3
FIR 110	Fire Department Safety Officer		2
FIR 114	Aerial Operator		1
FIR 129	Incident Safety Officer		1
FIR 130	Emergency Vehicle Operator		2
FIR 200	Hazardous Materials Technician		2
FIR 201	Firefighter II		2
FIR 202	Truck Company Fireground Operations		1
FIR 203	Fire Officer I		2
FIR 204	Fire Inspector I		4
FIR 206	Firefighter Safety and Survival		1
FIR 207	Fireground Operations		1
FIR 209	Rescue Technician Site Operations		1
FIR 210	Rescue Technician Extrication		1

Total Credits Required in program: 60

VI. Statistical Data

Enrollment and completion rates are continually low. Caucasian men make up the majority of students, with only one female student and no other ethnicities enrolled in the past five years.

2011-2015 Enrollment

	Total Enrollment
FY 2011/2012	6
FY 2012/2013	3
FY 2013/2014	4
FY2014/2015	6

Number of Degrees Awarded / Awarded to Pell Recipients

	Total Degrees	Pell Recipients	% of Total
FY 2011/2012	1	1	100%
FY 2012/2013	0	0	0%
FY 2013/2014	0	0	0%
FY2014/2015	0	0	0%
FY2015/2016	0	0	0%
Total	1	1	100%

Number of Declared Majors that transferred with a minimum 15 credits/ 30 credits

There were zero students for FY 2011-2012 who completed 15-29 credits that transferred out.

Number of Students Earning first 30 semester credit hours of college level course work

	Total First-time Students	Students Who Have Completed 30 College-Level Credits or less	% of Total
FY 2011/2012	0	0	0%
FY 2012/2013	0	0	0%
FY 2013/2014	0	0	0%
FY2014/2015	1	0	0%
FY2015/2016	0	0	0%
TOTAL	1	0	0%

1. Program Evaluation History

Full-time/Part-time Student Enrollment

		Total Enrollment	Full-Time	% of Total	Part-Time	% of Total
FY 2011/2012	Summer 2011	2	0	0%	2	100%
	Fall 2011	5	2	40%	3	60%
	Spring 2012	4	2	50%	2	50%
FY 2012/2013	Summer 2012	1	0	0%	1	100%
	Fall 2012	3	1	33%	2	67%
	Spring 2013	2	0	0%	2	100%
FY 2013/2014	Summer 2013	1	0	0%	1	100%
	Fall 2013	1	0	0%	1	100%
	Spring 2014	4	2	50%	2	50%
FY 2014/2015	Summer 2014	2	0	0%	2	100%
	Fall 2014	2	2	100%	0	0%
	Spring 2015	4	3	75%	1	25%
FY 2015/2016	Summer 2015	1	0	0%	1	100%
	Fall 2015	4	2	50%	2	50%
	Spring 2016	3	1	33%	2	67%

Students by Gender

	Total Enrollment	Female Student	% of Total	Male Students	% of Total
FY 2011/2012	6	1	17%	5	83%
FY 2012/2013	3	0	0%	3	100%
FY 2013/2014	4	0	0%	4	100%
FY2014/2015	6	0	0%	6	100%
FY2015/2016	5	0	0%	5	100%

Students by Ethnicity

	Total Enrollment	White	% of Total
FY 2011/2012	6	6	100%
FY 2012/2013	3	3	100%
FY 2013/2014	4	4	100%
FY2014/2015	6	6	100%
FY2015/2016	5	5	100%

There were no students of other ethnicities enrolled.

2. General Education Objectives

The College defines general education as the portion of the curriculum devoted to the development of the skills, knowledge and abilities essential to all students, regardless of chosen majors. The course distribution is intended to ensure that students have mastered and demonstrated a familiarity with core knowledge basic to all college-level work. The general education courses required for the Fire Science Technology program include: Anatomy and Physiology I and II with labs; Freshman Composition; Introduction to Statistics; Introduction to Psychology; Introduction to Sociology; and Interpersonal Communications. The student will get a well-rounded education that includes Science, English, Social Science, Humanities, Math, and Computer Literacy. When all general education courses are completed for the Associate of Applied Science degree, the student should be able to demonstrate college-level competency in: critical and creative thinking skills and problem-solving strategies; writing; oral communications; quantitative analysis; computer literacy and in the ability to work productively with information technology; awareness of ethics, cultural diversity, artistic expression, health and wellness issues, and the physical and social environment; and information literacy including finding, evaluating and using information effectively.

3. Program Strengths

The Fire Science Technology program allows for any graduate of the program to pursue a career in the field of Fire Science. Additionally, it creates an opportunity for Cecil County public high school students enrolled in the Fire Science program to obtain college credits while still enrolled in high school. The AAS in Fire Science Technology degree also creates a degree pathway for firefighters and others employed in that field through credential assessment.

4. Program Weaknesses

The program suffers from low enrollment and a low completion rate. Anecdotally, one reason is the reluctance of potential program students to take anatomy and physiology courses, which they view as marginally relevant to the Fire Science Technology program. After discussion with program stakeholders and current faculty who teach the MFRI courses, this will be reviewed and re-evaluated in the upcoming year, potentially altering the degree requirements while still ensuring the degree remains relevant and reflects best practices in Fire Science Technology.

5. Program Opportunities

There are multiple career opportunities for students who complete the Fire Science Technology program. Firefighting, disaster planning, emergency services, fire inspection, fire investigation, and fire safety are the primary entry level fields for which the graduates are qualified. Additionally, CCPS has

expanded the Fire Science program potentially creating more eligible students. Adult students, who are not of high school age, are also eligible to take MFRI coursework at CCPS.

6. Program Threats

The program suffers from continual low enrollment. At the present time, only high school guidance counselors are permitted to discuss the program with the high school students and many of them are not aware of the intricacies of the program. This will also be reviewed over the upcoming year and various marketing options will be assessed with the appropriate departments at Cecil College and Cecil Department of Emergency Services.

VII. Other Program Information

1. Advisory Council/Board

There is no Advisory Council for this program. All of the Fire Technology content is taught by the Maryland Fire and Rescue Institute – University of Maryland.

VIII. Adequacy of Available Technology

The technology at Cecil College is adequate to meet the needs of the students. There are computer labs on campus and a Help Desk to assist students with technology issues.

IX. Adequacy of Facilities

The physical facilities at Cecil College are adequate to meet the needs of the students. The Anatomy and Physiology classroom and labs are equipped with current, state-of-the art materials to facilitate student learning/success. Theory classrooms are equipped with tables and chairs.

X. Articulation Agreements

Cecil College and the Maryland Fire and Rescue Institute - University of Maryland have negotiated an articulation agreement, renewed on June 1, 2015, in order to offer articulated credit for some Maryland Fire and Rescue Institute training courses.

XI. Program Goals and Objectives

Program Goals	Timetable for Completion	Required resources	Obstacles to completion (if any)
1. a) Demonstrate the entry level knowledge, communication skills, written and verbal, and the	a) General Education credits can be completed in three full time semesters	No special resources required	Developmental and prerequisite course requirements, credit load, and/or course availability may affect a student's individual progress. Students should consult their degree audit at MyCecil or an academic advisor for individual degree planning.
b) professional abilities associated with the field of fire science with the ability to incorporate field strategies and tactics associated with various fire situations and to effectively operate a fire pumper or aerial apparatus	b) Goal to be achieved with the Maryland Fire and Rescue Institute curriculum		
2. Demonstrate the ability to function as a fire officer within a fire service program, including the ability to perform effectively as a safety officer on the scene of an emergency, to recognize and mitigate various hazardous materials situations and to work with a team to perform fire suppression techniques specific to the incident while maintaining a full situational awareness to rescue, HAZMAT, investigation, and safety issues.	Goal to be achieved with the Maryland Fire and Rescue Institute curriculum		
3. Work effectively within the organizational structure of a company and manage a company level training program.	Goal to be achieved with the Maryland Fire and Rescue Institute curriculum		
4. Demonstrate an understanding and incorporate into their practice the laws and ordinances related to fire prevention.	Goal to be achieved with the Maryland Fire and Rescue Institute curriculum		
5. Provide field management of a patient at the EMT level.	Goal to be achieved with the Maryland Fire and Rescue Institute curriculum		

XII. Recommendations

Review similar programs from other Maryland Community Colleges. Review the need for Anatomy I and II with labs in the Fire Science Technology program. Investigate recruitment methods to increase interest and enrollment in the program.

XIII. Approvals

Signature of the Chair of the Academic Affairs Committee Anand Patel Date 6-1-2016

Signature of the Dean of Nursing and Health Professions Date 6/1/2016

Signature of the Chief Academic Officer Date 6-1-2016