



2015-16 WORKFORCE PROGRAM REVIEW

PROGRAM NAME: Fire Science

Report Preparer: _____ Keeley Bowman / Pat McAuliff _____ Phone Ext. ___6597/6837_____

WORKFORCE PROGRAM REVIEW

The timeframe of program review is five years, including the year of the review. Data being reviewed for any item should go back the previous four years, unless not available. Questions regarding forms, calendars & due dates should be addressed to Kathleen Fenton (ext. 3737) or David Liska (ext. 3714) in the Institutional Effectiveness Office.

1. WHAT DOES YOUR WORKFORCE PROGRAM DO?

A. What is the workforce program and its context? Provide evidence to make a case for each assertion made.

The Fire Officer Program at Collin College exists to provide professional firefighters with a mechanism to earn promotions within area fire departments to supervisory levels. The Fire Officer Program accomplishes this by offering a collection of courses leading to state certifications. The courses follow the curriculum guidelines established by the National Fire Protection Association and regulated by the Texas Commission on Fire Protection. The program functions under the guidance of the Fire Science Program Advisory Committee.

The Fire Officer Program involves intense classroom and on-line instruction. The program prepares students to take four state certification exams while earning credits for the Fire Officer Certificate and Associate of Applied Science Degree in Fire Officer. The duration of the certificate program is two semesters.

2. WHY WE DO THE THINGS WE DO: PROGRAM RELATIONSHIP TO THE COLLEGE MISSION, CORE VALUES & STRATEGIC PLAN

The question of “why we do the things we do?” is one which focuses on the mission of the program, goals and priorities, and the role of the program within the discipline and college. You do not need to repeat the college mission, core values or strategic goals. Provide program-specific evidence of actions that support the case that the program and its faculty contribute to fulfillment of the college mission, core values, and goals.

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- A. Provide program-specific evidence of actions that support the case that the program and its faculty contribute to fulfillment of the college [mission](#).

The Fire Officer Program fulfills the Collin mission statement by offering students the necessary education and training to earn state certifications in two disciplines (Fire Instructor and Fire Officer), and to obtain an associate degree in Applied Science. This level of education is necessary for promotion within the fire service.

- B. Provide program-specific evidence of actions that support the case that the program and its faculty contribute to fulfillment of the college [core values](#).

Learning: State exam results for students in the Fire Officer program are evidence that students are active in the learning process. Faculty are committed to the learning process by challenging students to learn in both on-line and face-to-face instructional delivery methods.

Service and Involvement: Faculty in the Fire Officer program are involved in college service through participation in the annual Health and Safety Fair at the Central Park Campus. Faculty arranges for displays of fire apparatus and medical units from area fire departments. The displays are staffed with students working alongside on-duty Fire Officers and firefighters.

Creativity and Innovation: Fire Officer Program students are required to participate in learning activities that include individual and team efforts. Students are required to develop sample lesson plans and deliver an instructional course to classmates on subjects that are not related to the fire service.

Academic Excellence: The program seeks academic excellence by following state established curricula. Overall pass rates for students in the Fire Officer program average of 94% on state certification exams.

Dignity and Respect: All students are treated with respect and dignity. The Collin College Fire Officer program does not discriminate based on race, color, religion, age, sex national origin, disability or veteran status.

Integrity: Fire service professionals routinely demonstrate integrity in their everyday activities while on the job. Fire Officer Program faculty members reinforce the importance of integrity in course instruction through real world examples of failed integrity within the Fire Officer profession.

- C. Provide program-specific evidence that supports how the program supports the college [strategic plan](#).

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Strategic Goal #1: Improve academic success by implementing strategies for completion. Students in the Fire Officer program are encouraged to be successful. Many of the students seeking the Fire Officer Certificate do not take the remaining courses after completing the four courses leading to state certifications. Those having academic difficulty are encouraged to seek additional learning through the many resources provided by Collin College, as well as guidance from faculty members.

Strategic Goal #2: Provide access to innovative higher education programs that prepare students for constantly changing academic, societal and career/workplace opportunities. The Fire Officer program is designed specifically for the purpose of preparing students for career advancement. Fire service trends indicate a growing number of agencies requiring associates or bachelor's degree for employee promotion to Officer or Chief Officer Ranks within the fire department. Collin's Fire Officer Program prepares students to meet this trend.

Strategic Goal #3: Engage faculty, students and staff in improving a district-wide culture of adherence to the Collin College Core Values. Fire Officer Program faculty and students are involved in the college community through participation in the annual Health and Safety Fair. Faculty and students interact with college and community members with demonstrations of fire department apparatus and equipment, and fire extinguisher use through digital simulation.

Strategic Goal #4: Enhance the College's presence in the community by increasing awareness, cultivating relationships, building partnerships and developing resources to respond to current and future needs. Fire Officer Program faculty member Capt. Vance McCauley (Ret.) is a member of the Collin County Arson Task Force. His participation in the group builds community awareness for the Fire Officer program and all that Collin College has to offer.

3. WHY WE DO THE THINGS WE DO: PROGRAM RELATIONSHIP TO MARKET DEMAND BY EMPLOYERS

Make a case with evidence to show that employers need and hire the program's graduate.

Texas has the second highest concentration of firefighters in the United States, with over 5,000 employed in the Dallas area. Career Coach reports 1,445 Municipal Fire Fighting and Prevention Supervisors (Fire Officers) are employed in the region. This number is expected to increase by 6.9% over the next years, with an estimated 91 job openings, and 337 approaching retirement age. According to Career Coach, salaries range from \$59K/yr. to \$112k/yr. Over 97% of the students in the Fire Officer Certificate and AAS-Fire Officer program are employed by area fire departments and are seeking education to meet promotional requirements within their agencies.



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The program benefits from the support and involvement of the Fire Science Advisory Committee. The committee is comprised of 13 active participants – 8 Fire Chiefs, 3 Fire Officers, and 2 civilian members. The members attend two committee meetings per year. Certification exam pass rates are discussed at each meeting indicating that the demand is being met for the promotional requirements from the rank of Firefighter to Fire Officer. Some Fire Chiefs on the committee require Fire Officer Certification for promotion to the rank of Fire Captain.

There are other programs in the area helping to meet local demands, but Collin College is the only program in the region to offer Fire Officer Certification for semester hour credit. Tarrant County College offers individual state certification courses as continuing education, but students completing these courses cannot apply credits towards an Associate degree. This gives Collin a strong competitive edge in meeting market demand by employers.

4. WHY DO WE DO THE THINGS WE DO: PROGRAM RELATIONSHIP TO MARKET DEMAND BY STUDENTS

Make a case with evidence to show that students want the Degree or Certificate using the enrollment history. Include any plan for increasing program enrollment.

The overall number of students completing the Fire Officer Certificate or AAS Fire Officer is low when compared to the number of students enrolled in Fire Officer Program courses. This is an ongoing trend that is a direct result of students earning state certifications in specific components of the Fire Officer program before completing all of the courses identified in the program. In some cases, employers require the state certifications – not college program completion for promotion. The larger fire departments typically require program completion for promotion, but rapid growth experienced in the area’s smaller departments creates a more urgent need for a lesser level of training. Fire Officer Program students meet the lesser requirement, then tend to quit taking classes because they have accomplished their immediate employment goal.

In an effort to increase the number of Fire Officer Certificate program completers, the Fire Science Advisory Committee examined the possibility of deleting some of the non-certification courses within the certificate program, but retaining the courses for the AAS Fire Officer requirement. This would shorten the length of the certificate program serving as an incentive to complete the program. Making this change would not impact the quality of the program.

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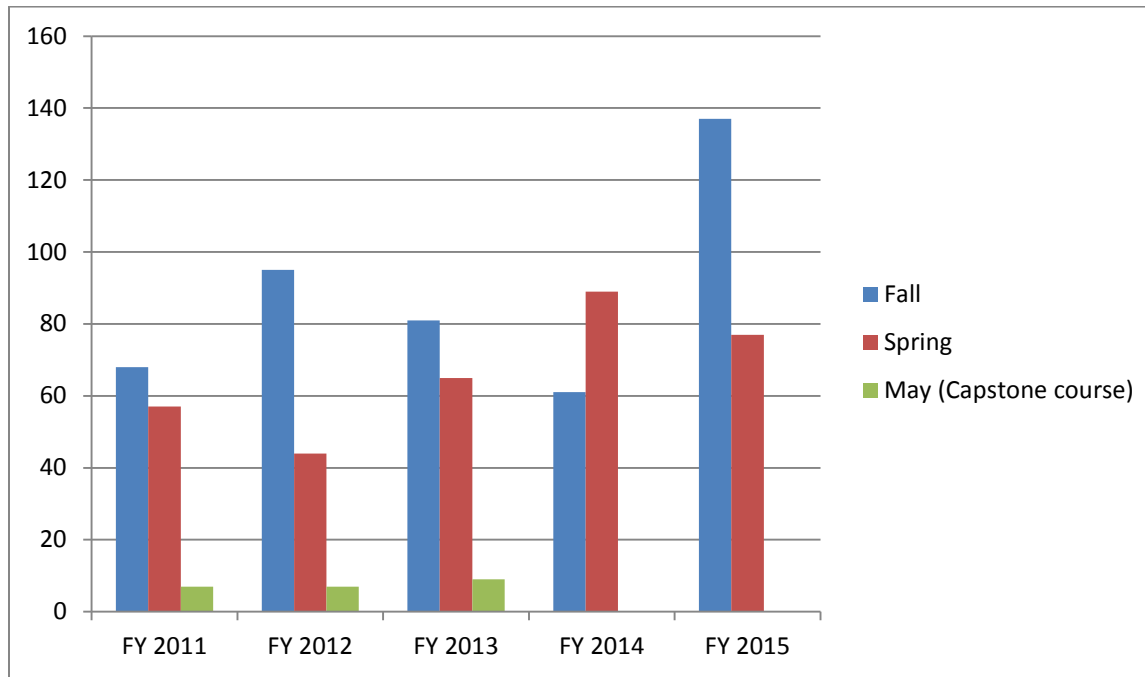


Figure 1. Enrollments in Fire Officer Certificate Courses compared to enrollments in the required Capstone course to complete the certificate. Capstone course did not make in FY 2014, and was not offered in 2015 due to demolition of fire training facility.

Are We Doing Things Right?

5. WHY WE DO THE THINGS WE DO: DOES THE PROGRAM CURRICULUM LEAD TO COMPLETION?

Make a case with evidence to show the program offers a clear pathway to completion. Include any plan for raising the number of completers.

The total number of completers in the Fire Science for the last five years is 70, averaging 14 per year. However, a sharp decrease in the number of completers during FY 2014 and FY 2015 is a result from not offering the capstone course FIRT 2351 Company Fire Officer. The course was not offered as a direct result of the demolition of the Live-Fire Training building located on the Central Park Campus.

In an attempt to increase the number of completers in the future, the Fire Science Advisory Committee approved a proposal to remove the FIRT 2351 Company Fire Officer course from the Fire Officer Certificate program requirements, and remove the lab component of the course until a new live-fire training facility is constructed. The course will remain a requirement of the AAS degree, but not the Certificate.

Many students taking courses leading to state certifications (FIRT- 1343, 2305, 1343, 2307) reach a point of satisfaction and many do not continue through completion of the certificate program requirements. This is evident by comparing the number of enrollments in Maymester when the capstone course is offered to Fall and Spring enrollments each year (Figure 1). For some students it is simply a matter of the class schedule conflicting with summer family vacations. Students are not leaving the program for another institution.

6. HOW WELL DO WE DO CURRICULUM THINGS AND WHO THINKS SO?

A. Show evidence that the THECB standards listed below have been met. For any standard not met, describe the plan for bringing the program into compliance.

1. Credit Hour Standard: There are no more than 60 credit hours in the program plan.

Number of semester credit hours (SCH) in the program plan: 60 .

(See Appendix A) [AAS - Fire Officer Certification - Effective Fall 2013.pdf](#)

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2. **Completers Standard: Average 25 completers over the last five years or five completers per year.**

Number of completers: _____70_____.

Fire Science 43.0201	FY2011	FY2012	FY2013	FY2014	FY2015
AAS	7	2	1	1	2
Certificate	9	5	8	0	0
MSA	7	16	6	5	1
Program Total	23	23	15	6	3

Figure 2. Program Completers for FY2011 through FY2015

3. **Licensure Standard: 90% of first time test takers pass the Licensure exam.**

If applicable, include the licensure pass rate: _____ 94% _____

Retention Standard: 78% of census day students should earn a grade in the class.

Include the retention rate: _____ 97.09% _____

Course Completion Rate Averages for FY2011 through FY2015

FIRT 1315	86.9%
FIRT 1327	98.9%
FIRT 1338	98.7%
FIRT 1342	99.6%
FIRT 1343	98.1%
FIRT 1349	100%
FIRT 2305	98.7%
FIRT 2307	97.6%
FIRT 2309	96.7%
FIRT 2351	95.7%
Overall Average	97.09%

Figure 3. Course Completion Rates

- B. Make a case that the program curriculum is current.



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The Fire Science AAS –Fire Officer Certification and Certificate- Fire Officer programs follow the curriculum guidelines established by the Texas Commission on Fire Protection. Each course within the certificate program leading to a state certification is required to follow state curricula modeled after national professional qualifications standards. These standards are established by the National Fire Protection Association and are updated every 5 years. The state curricula follow the same review cycle to remain in compliance with national standards.

Collin College was the first to develop the FIRT 2351 Company Fire Officer course as part of the original Fire Officer Certificate program. While many other colleges in the state offer Fire Officer I and II courses, Collin College continues to be the only college offering four state certification courses within the certificate program. Houston Community College offers a Fire Officer I certificate, and Midland College offers a Company Fire Officer course, but neither compare to Collin’s offering.

The Fire Science program is in line with state guidelines. The Texas Commission on Fire Protection (TCFP) regulates training providers offering courses leading to state certifications. Each course offering for Fire Officer I, II, and Fire Instructor I, II require course approval from the TCFP.

- C. Make a case with the Advisory Minutes that the Advisory Committee has employers who are active members that are representative of Collin County employers.
1. How many employers does your Advisory Committee have? 9
 2. How many employers attended the last two meetings? 7
 3. Include any resources they contribute to the program (time, equipment, supplies, money, co-op spots) in the Partnership Table in section 8.
 4. Briefly summarize the curriculum recommendations made by the Advisory Committee over the last four years.

Over the last four years, the Fire Science Advisory Committee has approved changes to the Fire Science curriculum including the reduction of overall semester hours to 60 (state mandate), and removal of the FIRT 2351 Company Fire Officer course from the Fire Officer Certificate program. The recommended changes are developed by the Program Director and presented to the Fire Science Advisory Committee members. (See Appendix B) <E:\Program Review Fire Officer 43.0201\Fire Science Advisory Committee List 2015.pdf>

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D. For any required program courses with enrollment below 15, explain a plan to grow enrollment or revise the curriculum.

The FIRT 2351 Company Fire Officer course typically attracts no more than 9-12 students. As a result, the Fire Science Advisory Committee recommended the removal of the course from the Fire Officer Certificate program, but retain the course in the Fire Science AAS degree requirements. The lab component of the course was removed due to the lack of a live-fire training facility to accommodate the course.

E. Make the case with evidence that the required courses in the program are offered in sequencing or at intervals appropriate to enable students to complete “on time” if a student was enrolled full-time and followed the degree plan.

Students enrolled in the Fire Science program are able to complete “on time” by following the course sequencing established for the program. This is evident by a Retention Standard of 97.9%, and a Licensure /Certification Pass Rate of 99%.

F. Make a case with evidence that students are satisfied with the program.

Students are satisfied with the program. When asked to participate in a survey, 14 students responded. The majority of the questions had favorable results as “Agree” or “Strongly Agree”. Results of the survey questions can be found in Appendix C [SurveyMonkey Analyze - Fire Officer Program Survey.pdf](#)

G. Make a case with evidence that the program is well managed.

The Fire Science program is well managed. The average class size for all FIRT courses FY2011 through FY2015 is 17.7 students.

(See Appendix D) [Measure4-FireScience.pdf](#)

Grade distribution for FY2011 through FY2015 is appropriately balanced with 29% -A, 28% -B, 18.7% -C, 7.4% -D, and 10.3% - F.

(See Appendix E) [Measure6-FireScience.pdf](#)

7. HOW WELL DO WE COMMUNICATE AND WHO THINKS SO?

Make a case that the program literature and electronic sites are current, provide an accurate representation, and support the program’s recruitment plan, retention plan and completion plan.

A. Provide program website URL: www.collin.edu/firescience

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- B. Describe the process used to keep all program literature (course descriptions, degree plans, catalog entries, etc.) and electronic sites updated and aligned with district-wide college literature and sites.

The Director of Fire Science reviews program literature on an annual basis and submits revisions for implementation. Portions of the Fire Science program web site are updated a minimum of two times each year, with additional edits on an as-needed basis. Certification course announcements are created at the beginning of each semester and posted to the program web site, and e-mailed as a PDF to interested parties. (Appendix E)

- C. Provide the review date (after the close of the last full academic year) in the Program Literature Review Table below that shows the elements of information listed on the website and in brochures were checked and updated for accuracy and are available to the public. Elements include, but are not limited to, current academic calendars, grading policies, course syllabi, program handouts, program tuition costs and additional fees, description of articulation agreements, availability of courses and awards, and local job demand in related fields.

Program Literature Review

Title	Type	Date Last Reviewed and Updated
2015-2016 Collin College Catalog	On-line Catalog http://www.collin.edu/academics/catalog.aspx	11/10/2015 (reviewed Dec. 2015)
Degrees, Plans and Programs	Web Site http://www.collin.edu/academics/programs/gainfulemp/firesciencefireofficer/firesciencefireofficer.html	4/1/2015 2015 (reviewed

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		Dec. 2015)
Welcome	Web site http://www.collin.edu/campuses/centralpark/index.html	12/17/15 (reviewed Jan 2016)
Fire Science Department Main Information	Web Site http://www.collin.edu/firescience/	11/30/2015 (reviewed Dec. 2015)
Fire Science Exemption	Web Site http://www.collin.edu/gettingstarted/financialaid/firescienceexemption.html	8/21/15 (reviewed Dec. 2015)
Course Flyer	Fire Officer I Flyer.pdf	Dec. 2015

8. HOW WELL ARE WE LEVERAGING PARTNERSHIP RESOURCES AND BUILDING RELATIONSHIPS, AND HOW DO WE KNOW?

Make a case that the program enlists university/business and industry partnerships to advance the program outcomes; complete the Partnerships Resources Table below.

Partnership Resources

University/Business & Industry	Partnership Type	Estimated Market Value, if any
McKinney Fire Department	Equipment usage	Program utilizes McKinney FD aerial apparatus to meet state requirement.

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Lewisville Fire Department	Prop usage	Program utilizes “Flashover Chamber” to demonstrate actual flashover phenomena to students.
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9. DO WE SUPPORT THE PROGRAM WELL WITH FACILITIES, EQUIPMENT, AND THEIR MAINTENANCE AND REPLACEMENT, AND WHO THINKS SO?

Make a case with evidence that current program facilities, equipment, maintenance and replacement plans are adequate and will advance the program over the next five years. Complete the Resource Tables below *as support for* your narrative.

Program Facilities

Room/Office Location and Designation	Size	Type	Special Characteristics (i.e. permanent like ventilator hood)	Meets current needs: Y or N	Will meet needs for next five years: Y or N	Describe additional needs for any “N” answer in columns 5 or 6.
A208	912 sq. ft.	Class		Y	Y	
A202	440 sq. ft.	Comp Lab	Computers equipped with FlameSim software	Y	Y	
A206	924	Offices	Fire Science/Fire Academy Program Office	Y	Y	
A213	45 sq.	Faculty Office	Faculty Office for Vance McCauley	N	N	Office space is too small. No room for more than one visitor.

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Program Equipment, Maintenance/Repairs - List all equipment required by the program that you do not consider supplies

Current Equipment Item or Budget Amount	Meets current needs: Y or N	Will meet needs for next five years: Y or N	For any no in columns 2 or 3, justify needed equipment or budget change	Will meet needs for next five years: Y or N	Describe additional needs for any "N" answer in columns 5 or 6.
<i>Engine 1 E1 Typhoon</i>	Y	N	<i>Fire apparatus is 10 years old, no longer represents what students will see in the workplace.</i>	Y	
<i>Engine 2 E1 Freightliner</i>	Y	N	<i>Fire apparatus is 10 years old, no longer represents what students will see in the workplace.</i>	Y	
<i>Air Compressor Scott</i>	Y	N	<i>Breathing Air Compressor is 5 years old and will need replacement in 1-2 years.</i>	N	<i>Replacement needed in 3-4 years. Will have met expected life span.</i>
<i>TIC – Commander Thermal Imaging Camera</i>	Y	Y		N	<i>Replacement needed in 1-2 years. Parts no longer available.</i>
<i>TIC – T3 Max Thermal Imaging Camera</i>	Y	Y		Y	
<i>Forcible Entry Door Prop</i>	Y	N	<i>Unit will need replacement in 1-2 years</i>	Y	
<i>SCBA Units</i>	Y	Y		N	<i>Replacement plan will require some new units each year.</i>
<i>Handheld Radios</i>	Y	N	<i>Some units are 10 years old and will need replacement in 1-2 years.</i>	N	<i>Effective Jan. 2013 older units cannot be programmed to new frequency mandates.</i>

Ventilation Fans	Y	Y		N	Some replacements needed with 1-2 years.
Flame-Sim Software	Y	N	Software is 4 years old without updates.		

Financial Resources

Source of Funds (i.e. college budget, grant, etc.)	Meets current needs: Y or N	Will meet needs for next five years: Y or N	For any no in columns 2 or 3, explain why	For any no in columns 2 or 3, identify expected source of additional funds
College Budget	Y	N	Some of the equipment used in the program will require replacements due to normal wear and tear.	Additional funding provided through the annual budget process with supporting justifications.

10. WHAT DIFFERENCE WILL IT MAKE IF WE DON'T CONTINUE TO DO THE THINGS WE'VE BEEN DOING?

Discuss and analyze the intellectual and scholarly value of the program, its activities and functions, and the extent to which those activities are still appropriate.

Effective education and training of Fire Officers working the fire service is essential to safe and effective response to emergency situations. With the reduction in the number of structure fires – thanks to improved code regulations and public fire safety education – the modern day Fire Officer misses the opportunity to learn from experience. For years the “on-the-job” learning experience was the common method of teaching Fire Officers decision making skills. The Fire Science program incorporates activities requiring students to think in a logical way, and provide solutions that are safe and effective. For example, Fire Officer students develop critical thinking skills through the use of Flame-Sim software. This simulation software incorporates gaming technology in an educational format challenging students to respond to situations at structure fire scenarios. With multiple participants in different scenarios, students play the lead role as Incident Commander and are required to make decisions and give immediate instructions to fellow students via radio for effective fire ground tactics and strategies. Later in the program, students participate in live-fire training scenarios utilizing actual firefighting apparatus and equipment in a real-time setting. Without the educational experience provide by the Fire Science program, Fire Officers are at a significant disadvantage when responding to emergency incidents and struggle making safe and effective decisions to mitigate an emergency situation.

11. GIVEN OUR PRESENT STATUS, HOW DO WE INTEND TO CHANGE IN WAYS THAT HELP US ADVANCE?

A. Strengths: What strengths can this program build on in the near future?

The strength of the Fire Science program is illustrated by the success of our students. With an overall 94% pass rate on state certification exams, Collin College students are attaining their goals and are well prepared for the workforce. Students benefit from quality instruction provided by associate faculty and part-time skill instructors representing a wide variety of fire departments in the area. Their current on the job experiences highlight the importance of learning safe and effective methods for challenging situations faced by Fire Officers each day. Lessons presented in class are reinforced with real life experiences of the instructional staff.

B. Weaknesses: What program weaknesses must be addressed in the near future?

The weakness in the Fire Science program is the low number of completers for the Fire Officer Certificate program. Students are not taking the required capstone course because they have attained their primary goal of state certification in the prescribed courses leading to the capstone course. In addition, the demolition of the Live-Fire Training Facility prohibited offering the course during the last two Spring semesters.

C. What are the perceived consequences if the weakness(es) is(are) not addressed?

If the low number of completers for the Fire Officer Certificate program is not addressed, then the program will not meet the requirement of 25 completers over a five year period. Steps have been taken to remedy the problem. Changes to the certificate program requirements will become effective for the Fall 2016 semester.

D. Threats and Opportunities: Describe any forecasted trends or changes in the following areas that may impact the way this program functions five to ten years from now:

- Legal
- Educational
- Environmental
- Political
- Technological
- Social
- Demographic
- Economic
- Cultural

Technology in the fire service is always changing. New equipment is developed to aid firefighters in accomplishing their tasks with increased safety. If the program budget becomes constrained, it will be difficult to implement the latest equipment into the program. The Fire Science Advisory Committee is an excellent source for identifying trends in the fire service.

It is likely that the Texas Commission on Fire Protection will continue to develop new certifications for firefighters and Fire Officers. The program must evaluate the benefit of adjusting curricula to include any of the new certifications, vs. offering the certifications as continuing education.

12. HOW WILL WE EVALUATE OUR SUCCESS?

Date: 2012-13 **Name of Administrative or Educational Unit:** Fire Science

Contact name: Pat McAuliff **Contact email:** PMcAuliff@collin.edu **Contact phone:** x 6837 **Office Location:** CPC A-206

Mission:

The firefighter with a well-balanced educational background will be better prepared to serve and protect the community. Collin's Fire Science program is designed to give current and future Fire Officers the certifications and experience necessary for effective decision-making and leadership skills in the fire department. Students acquire the technical knowledge needed to combat the fire problems created by modern living and develop leadership skills required of the fire Officer. The program meets the requirements of the Texas Commission on Fire Protection (TCFP). Students certified in Texas as a Basic Firefighter are eligible to take the State Certification Exams for Fire Instructor I, II and Fire Officer I, II after successfully completing selected courses in the Fire Officer Certificate program

PART I: Might not change from year to year

A. Outcomes(s) Results expected in this department/program	B. Measure(s) The instrument or process used to measure results	C. Target(s) The level of success expected
1. Grade student oral, written, or performance tests, given class answer sheets or skills checklists and appropriate answer keys, so the examinations are accurately graded and properly secured.	Texas Commission on Fire Protection Basic Firefighter Certification Exam – Fire Instructor I level	92 % of class successfully pass exam with a minimum overall 70% score
2. Supervise other instructors and students during training, given a training scenario with increased hazard exposure, so that applicable safety standards and practices are followed, and instructional goals are met.	Texas Commission on Fire Protection Basic Firefighter Certification Exam – Fire Instructor II	92 % of class successfully pass exam with a minimum overall 70% score
3. The Fire Officer I candidate shall develop a pre-incident plan, given an assigned facility and preplanning policies, procedures, and forms, so that all required elements are identified and the approved forms are completed and processed in accordance with policies and procedures.	Texas Commission on Fire Protection Basic Firefighter Certification Exam – Fire Officer I level	92 % of class successfully pass exam with a minimum overall 70% score
4. The Fire Officer II candidate shall develop and conduct a post-incident analysis, given multi-unit incident and post-incident analysis policies, procedures, and forms, so that all required critical elements are identified and communicated and the approved forms are completed and processed	Texas Commission on Fire Protection Basic Firefighter Certification Exam – Fire Officer II level	92 % of class successfully pass exam with a minimum overall 70% score

Date: 2014-15 Name of Administrative or Educational Unit: Fire Science

Contact name: Pat McAuliff Contact email: PMcAuliff@collin.edu Contact phone: X 6837 Office Location: CPC A-206

Mission:

The firefighter with a well-balanced educational background will be better prepared to serve and protect the community. Collin's Fire Science program is designed to give current and future Fire Officers the certifications and experience necessary for effective decision-making and leadership skills in the fire department. Students acquire the technical knowledge needed to combat the fire problems created by modern living and develop leadership skills required of the fire Officer. The program meets the requirements of the Texas Commission on Fire Protection (TCFP). Students certified in Texas as a Basic Firefighter are eligible to take the State Certification Exams for Fire Instructor I, II and Fire Officer I, II after successfully completing selected courses in the Fire Officer Certificate program

PART I: Might not change from year to year

A. Outcomes(s) Results expected in this department/program	B. Measure(s) The instrument or process used to measure results	C. Target(s) The level of success expected
1. Review instructional materials, given the materials for a specific topic, target audience, and learning environment, so that elements of the lesson plan,	Texas Commission on Fire Protection Basic Firefighter Certification Exam – Fire Instructor I level	92 % of class successfully pass exam with a minimum overall 70% score

A. Outcomes(s) Results expected in this department/program	B. Measure(s) The instrument or process used to measure results	C. Target(s) The level of success expected
learning environment, and resources that need adaptation are identified.		
2. Supervise other instructors and students during training, given a training scenario with increased hazard exposure, so that applicable safety standards and practices are followed, and instructional goals are met.	Texas Commission on Fire Protection Basic Firefighter Certification Exam – Fire Instructor II	92 % of class successfully pass exam with a minimum overall 70% score
3. The Fire Officer I candidate shall develop a pre-incident plan, given an assigned facility and preplanning policies, procedures, and forms, so that all required elements are identified and the approved forms are completed and processed in accordance with policies and procedures.	Texas Commission on Fire Protection Basic Firefighter Certification Exam – Fire Officer I level	92 % of class successfully pass exam with a minimum overall 70% score
4. The Fire Officer II candidate shall develop and conduct a post-incident analysis, given multi-unit incident and post-incident analysis policies, procedures, and forms, so that all required critical elements are identified and communicated and the approved forms are completed and processed	Texas Commission on Fire Protection Basic Firefighter Certification Exam – Fire Officer II level	92 % of class successfully pass exam with a minimum overall 70% score

PART II: For academic year 2014-15



A. Outcomes(s) Results expected in this department/program	D. Action Plan Years 5 & 2 Based on analysis of previous assessment, create an action plan and include it here in the row of the outcomes(s) it addresses.	E. Implement Action Plan Years 1 & 3 Implement the action plan and collect data	F. Data Results Summary Years 2 & 4 Summarize the data collected	G. Findings Years 2 & 4 What does data say about outcome?
1. Review instructional materials, given the materials for a specific topic, target audience, and learning environment, so that elements of the lesson plan, learning environment, and resources that need adaptation are identified.	See action plan in #2.	Implement the action plan and collect data	2012-13: results averaged 96.5% for SL03 2014-15 results averaged 100% for SL03	2012-13: Standard met 2014-15: Standard met
2. Supervise other instructors and students during training, given a training scenario with increased hazard exposure, so that applicable safety standards and practices are followed, and instructional goals are met.	2a Increase the number of questions on the course quizzes and final exam specific to this student learning outcome. 2b Take photos of a staged training scenario involving an increased hazard. Ask students to identify potential hazards and submit corrective safety plan	Implement the action plan and collect data	2012-13: results averaged 74.6% for SL02 (up 24.6%), 2014-15: results averaged 100% for SL02	2012-13: Standard met for SL02. 2014-15: Standard met for SL02.
3. Apply safety regulations at the unit level, given safety policies and procedures, so that required reports are completed, in-service training is conducted, and member responsibilities are conveyed.	3. Increase the number of questions on the course quizzes and final exam specific to this student learning outcome.	Implement the action plan and collect data	2012-13: results averaged 80.5% for SL021 2014-15: results averaged 64.8% for SL021	2012-13: Standard met 2014-15: Standard not met
4. The Fire Officer II candidate shall develop and conduct a post-incident analysis, given multi-unit incident and post-incident analysis policies, procedures, and forms, so that all required critical elements are identified and communicated and the approved forms are completed and processed	See action plan in #2.	Implement the action plan and collect data	2012-13: results averaged 88.1% for SL04. 2014-15: results averaged 85.4%	2012-13: Standard met 2014-15: Standard met

13. HOW DO OUR IMPROVEMENT PLANS IMPACT THE PROGRAM BUDGET?

A. Within the program's base budget, what are the plans to do one or more of the following within the next five years? Check all that apply.

- | | |
|---|---|
| <input type="checkbox"/> Increase and retain enrollment | <input type="checkbox"/> Increase transfers to related baccalaureate institutions |
| <input checked="" type="checkbox"/> Increase completers | <input type="checkbox"/> Increase effectiveness and/or efficiency |
| <input type="checkbox"/> Develop resources | <input type="checkbox"/> Improve student performance levels |
| <input type="checkbox"/> Update facilities | <input type="checkbox"/> Expand services |
| <input type="checkbox"/> Expand curricular opportunities | <input type="checkbox"/> Transform services |
| <input type="checkbox"/> Partner to increase post-graduation employment opportunities | <input type="checkbox"/> Anything else? Briefly describe
Enter response here. |

Improvement plans for the Fire Science program are intended to increase the number of completers for the Fire Officer Certificate program. The plan includes removing the FIRT 2351 Company Fire Officer course from the Fire Officer Certificate curriculum, but retaining the course with adjusted Lec/Lab hrs. in the AAS-Fire Officer degree program. This will not have an impact the overall program budget.

B. What additional resources beyond the program's base budget are needed to implement your Continuous Improvement Plan? Briefly describe what resources you will develop to secure these funds.

There are no additional resources beyond the program's base budget necessary to implement the Continuous Improvement Plan.

WHAT HAPPENS NEXT? THE PROGRAM REVIEW REPORT PATHWAY

Completed Program Review Reports should be submitted for evaluation by the appropriate deans and Program Review Steering Committees. Following approval by the Steering Committee, Program Review Reports will be evaluated by the Leadership Team who will approve the reports for posting on the intranet. At any point prior to Intranet posting, reports may be sent back for additional development. Program responses to the Program Review Steering Committee recommendations received within 30 days will be posted with the Program Review Report at the request of the deans. Leadership Team members will work with program supervisors to incorporate Program Review findings into program planning and program activity changes during the next five years.

APPENDIX

Appendix A – AAS-Fire Officer

[AAS - Fire Officer Certification - Effective Fall 2013.pdf](#)

Appendix B – Fire Science Advisory Committee

[Fire Science Advisory Committee List 2015.pdf](#)

Appendix C – Fire Officer Student Survey

[SurveyMonkey Analyze - Fire Officer Program Survey.pdf](#)

Appendix D – Average Class Size by Term

[Measure4-FireScience.pdf](#)

Appendix E – Grade Distribution

[Measure6-FireScience.pdf](#)

Appendix F – Course Announcement Sample

[Fire Officer I Flyer.pdf](#)