**Sinclair Community College**

**Program/Department Annual Update**

**2009-10**

**Program:** FST

**Chairperson:** Frank Clay

**Dean:** Dr. Sue Merrell

**Date:** December 18th, 2009

**Program outcome(s) for which data were collected during 08-09:**

**(**Note: Outcome(s) listed on Program Outcomes Assessment Plan document located at Provost website: http://www.sinclair.edu/administrative/vpi/pdreview/index.cfm)

Apply/interpret the National Fire Codes in reviewing engineering plans of fire detection and suppression systems

Design an early detection, warning and suppression system for various types of building occupancies.

**Program outcome(s) for which data are being collected this year (09-10):**

**(**Note: Outcome(s) listed on Program Outcomes Assessment Plan document located at Provost website: <http://www.sinclair.edu/administrative/vpi/pdreview/index.cfm>)

Develop an understanding of the principles of managing fire protection risk and loss control as it pertains to fire hazard/risk assessment

**Directions:**

This annual update has been designed so that a one-page program review update is provided by each department on an annual basis, in conjunction with the Departmental Program Review process.

The program outcome(s) were identified by department chairs as being those under study each year. Please note the following schedule:

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| --- | --- | --- | --- | --- | --- |
| **Program Outcomes** | **06-07** | **07-08** | **08-09** | **09-10** | **10-11** |
| **PO #1** | **Direct measure data are *collected*** | **Direct measure data are *analyzed*** | **Document *improvements***  |  |  |
| **PO #2** |  | **Direct measure data are *collected*** | **Direct measure data are *analyzed*** | **Document *improvements***  |  |
| **PO #3** |  |  | **Direct measure data are *collected*** | **Direct measure data are *analyzed*** | **Document *improvements***  |
| **PO #4** |  |  |  | **Direct measure data are *collected*** | **Direct measure data are *analyzed*** |
| **PO #5** |  |  |  |  | **Direct measure data are *collected*** |

**Please e-mail this completed form to** **angie.didier@sinclair.edu** **by December 18, 2009. Thank you.**

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| **Please list noteworthy changes in the data set from last year:****Student Profile:**Slightly over half of the Students in the FAO program are outside Montgomery County (52%)One half of the students in the fire academy class are out of county (48%), with Greene being the largest group (13%)The FST (Tech based) saw 47% of the students outside Montgomery County, with Greene being the largest (13%) group.Currently Warren County is only 8% of the total FST (FST, FAO, PFC, FCO, etc) student population.Only 9 percent of the FAO students are femaleOnly 7% of the students in the FST program are female12.5 percent of the students in the fire academy class were femaleOnly 6 percent of the fire academy classes were African AmericanOnly 4% of the FST program was African American, (But 11% were unknown)Unfortunately 95% of the FAO program (FAO, FCO, EFO) is white males.In the FST 190, Pre-Fire Academy (the high school prep class) African American percentage was 45%. Note: Two African American students from this group registered for the 181 class in fall 2009In the Firefighter I classes 38% were 20-24 years old with 37% between 17-18 yearsIn the Firefighter II classes 46% were between 20-24 years of age and 19% between 17-18In the FST 250 series (Fire Officer I to IV), 25 to 29 was the largest age group with 35% followed by 30-39 (30%) In the NICET core (101, 116, 201, 204, 220) the average age group was 20-24 (44%).These courses also have the highest number of students in the 30 plus age group.Observations: The county distribution has remained fairly consistent with last year. The program last year was 10 percent female. Now the percentage is 12.5. A significant increase. However the number of students who are defined as non-white. The only exception is the Pre-Fire Academy classes we run for the Mound Street Academy. This group traditionally is usually a half and half population. This past year it as 45%. The NICET core which is populated with an older student base (a large number of students over 30) and therefore traditionally more career focused. The FAO program has the oldest population and that is to be expected. The prerequisite for entry into the 250 series is at least 3 years experience in the fire service. **Certifications and Degrees**Short Term Certificates Short Term Certificates increased 85% (67 to 124) Associate Degrees Decreased 40% (10 to 6)State of Ohio Certificates July 1, 2008 to June 30, 2009 Volunteer Firefighter 31 awarded 76% pass rate Firefighter I 228 awarded 89% pass rate Firefighter II 110 awarded 96% pass rate  Fire Safety Inspector 46 awarded 96% pass rate Fire Safety Instructor 33 awarded 97% pass rate Total 406 certifications 90.3% overall pass rate In addition we conducted 47 other tests. This include: Firefighter Knowledge Pre-test (perquisite for FST 209), various Firefighter Reinstatement tests for individual who have let their certifications expire. Pro-Board CertificationsIn the Winter, Spring and Summer 2009 terms we awarded 212 (Firefighter I and/or II) Pro-Board Certifications. We are processing about 75-100 from the fall quarter. The Pro-Board certification is option and not all students choose to participate. Observations:There seems to still be some sort of disconnect between completing courses and awarding degrees and certificates. For example the EFO Short Term Certificate is awarded after the students complete FST 253 and 254 classes. After the end of the fall quarter, 10 students have reached that benchmark, but the system is only showing 3 certificates. In the PFC 128 students completed the 181 and 193 classes for the short term certificate, but the system is only showing 104. The same hold true for the associate degree programs, but is a little harder to track due to the wide range of courses, electives and related factors. A better job of getting students to checking “their majors” needs to be done. We believe what is happening is a student comes into the system to take a fire or EMS certification class and gets identified as “personnel interest” and does not change after they decide to go on and complete other opportunities. We need to do a better job of “mother hening” this crowd. **Instructors**The FST program has over 90 Part-timers/Adjuncts on the payroll. To keep course content (especially in the academy classes) update to date and relative/current to the local fire protection organizations, we keep including more and more different agencies representatives in the instructor pool. The following organizations are now represented:A-1 SprinklersAnsoniaBeavercreek TownshipBellbrookBethel TownshipButler TownshipClaytonDaytonFairbornGermantownGreenvilleHuber HeightsJefferson TownshipKetteringMasonMiamisburgMoraineRiversideSharonvilleSpringfieldSpringfield TownshipSugarcreek TownshipTrotwoodUnion CityWashington TownshipWest MiltonWright Patterson AFDXeniaXenia TownshipOakwood (We put them last. Come on, they are cops after all)**Please list the actions and/or improvement priorities underway from the most recent program review recommendations:**The Fall 2009 FST Advisory Committee meeting focused on revisiting the Program Outcomes. It was felt with the move to semesters, the examination of the FEHE push and the need for NICET elements in the program, the old outcomes were grossly outdated. After a lengthy brain storming session by the committee, the FST outcomes were restructured. The new outcomes are: Learning Outcomes FAO1. Administration and management of the fire service employee base. This includes rules and regulations and ordinances and documents, personnel issues and other related leadership and organizational concerns.
2. Planning, developing, and managing a Fire Protection and EMS delivery system.
3. Public fire safety risk assessment and evaluation and related hazards as well as the management of Emergency Management and Planning functions.
4. The understanding and utilization of the Incident Management System (IMS)
5. Understand chemistry and physics of fire, fire behavior and prediction of fire spread, with particular emphasis on building construction and the role the building plays in fire development.
6. Apply and interpret national and local fire and building codes.
7. Investigate the results of a fire to determine the point of origin and cause of fire.
8. Understand the operation, design, and application of various fire suppression, (water and non-water) detection, notification and communication systems.
9. Understand the issues involving firefighter occupational safety and health and the role the fire service professional has in it.

Learning Outcomes FST1. Apply chemistry, mathematics, physics and engineering principals to solve fire protection engineering technology problems.
2. Apply and interpret the National Fire Codes and other related local fire and building codes and standards in the mitigation of fire protection hazards and problems.
3. Develop an understanding of the principles of fire protection risk and risk assessment as it pertains to the fire protection environment
4. Understand the principles of Occupational Safety and Health and the role it plays in the commercial and industrial fire protection profession.
5. Understand pyrotechnics of materials, interior finishes and the fire retardant properties of materials when used as structural components.
6. Design detection, notification, communication and suppression systems for various types of building occupancies.
7. Understand the various auxiliary building support systems and the role they play in fire protection.

**Program outcome(s)--data collected in 07-08****What actions/improvements are underway as a result of your data analysis?**We continued to make adjustments to several courses in order to meet the NICET (National Institute for Certification in Engineering Technology) in order so our students can sit for the NICET Level I Exam in systems design. These courses areFST 101FST 116FST 201FST 204FST 220The following courses were updated to reflect the State of Ohio made some modifications.FST 120 Fire Safety InspectorFST 209 Fire Safety Instructor**Program outcome(s)--data collected in 08-09****How have you analyzed the data collected? What did you find? Describe the results obtained.**Several members of the advisory committee along with some “key” lead instructors looked at both the FESHE curriculum and the NICET elements and assisted in the adjustments of the courses in question (see other responses)**Program outcome(s)—data collected for 09-10****For the outcome(s) currently under study (for 09-10 outcomes), what evidence and process do you plan to use to determine the extent to which this/these program outcome(s) have been met?**Next year we will be analysis the course content of the entire FST program. When the Q2S jump is made, the FST program will reflect the FESHE (Fire and Emergency service Higher Education) standards that were develop at the National Fire Academy in Emmittsburg, MD. The BOR and the Ohio State Fire Marshall Office has set as a goal to try, under the USO umbrella, to move the 2 year programs in the state towards the FESHA. After a long examination of course materials for the program we feel that our courses are about 80 plus percent there. Plus we will be trying to incorporate the NICET elements into the classes so that the students who wish can sit for the NICET Level I certification.Note: Next year, you will be asked to describe the analysis (09-10 outcomes), and actions/improvements underway (08-09 outcomes).**General Education****Describe any general education changes/improvements in your program/department during this past academic year (08-09).**We are currently examining the math requirements in the program so that, again, we can give the student the ability to test for the NICET examination. The decision on this was placed on hold to see what direction the Math department will be taking in the Q2S process. |