Portland Community College

FIRE PROTECTION TECHNOLOGY

Program Review 2015

Cascade Campus
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Fire Protection Program Mission Statement

Collaborate and partner with emergency response agencies, organizations, associations and educational institutions to provide high quality pre-employment training and education, and professional development opportunities for career and volunteer emergency response personnel to meet industry needs for a skilled and diverse professional workforce.

International Fire Service Accreditation Congress (IFSAC)

The PCC FPT program has been accredited by the IFSAC to certify fire service personnel to accepted national standards. Accreditation of the PCC FPT program certification process assures the Oregon fire service that standards used within the system adhere to the most current recognized NFPA Professional Qualification standards.

Oregon Department of Public Safety Standards & Training (DPSST)

The PCC FPT program has been accredited by DPSST to provide training to fire service personnel in the State of Oregon. Accreditation of the PCC FPT program certification process assures the Oregon fire service that standards used within the system adhere to the most currently recognized State of Oregon standards.

Fire & Emergency Service Higher Education Association (FESHE)

The PCC FPT program has adopted nationally recognized curriculum produced at the National Fire Academy in an effort to standardize Fire Science Degree program courses in two and four year Degrees. These courses were developed by committee with representation from both educational institutions and fire department training leaders.

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The Fire Protection Technology Program Mission Statement

Collaborate and partner with emergency response agencies, organizations, associations and educational institutions to provide high quality pre-employment training and education, and professional development opportunities for career and volunteer emergency response personnel to meet industry needs for a skilled and diverse professional workforce.

Fire Protection Technology AAS Degree Educational Objectives

1. Use an understanding of emergency services organizational structures at the local, state, and national level to develop, implement, and maintain programs that are designed to meet the needs of the organization and the community.

2. Enhance an organization's ability to thrive in a diverse and changing environment by carrying out supervisory and managerial responsibilities in a manner that reflects professional standards, ethics, and social responsibility during emergency and non-emergency operations and respond to current trends, technologies, and socioeconomic and political factors that impact the emergency services

3. Strengthen organizational effectiveness by using an understanding of the history, current practices, and legal aspects of human resources standards to make effective on-the-job supervisory and managerial decisions and facilitating effective work relationships and resolving conflicts in a diverse workplace with skillful application of a broad range of communication skills.

4. Respond to the needs of diverse customer base in times of emergencies, in prevention and preparation of emergencies and recovery from emergency events by applying problems solving skills with a variety of customer service strategies. Implement strategies and procedures and work safely in the emergency services environment by applying a proper understanding of procedures developed to ensure the reduction of line of duty injuries and deaths.

5. Implement strategies and procedures and work safely in the emergency services environment by applying a proper understanding of procedures developed to ensure the reduction of line of duty injuries and deaths.

6. Assess, examine, and reflect on personal professional competences and beliefs and how these impact and relate to the emergency services environment and actively build skills by identifying assessing, and taking advantage of learning opportunities that contribute to personal and professional growth in a supervisory or managerial role.

Fire Protection Certificate Educational Objectives

7. Students who complete this certificate should be able to: meet the fire related performance objectives in NFPA 1001, Standard for Fire Fighter Professional Qualifications, Fire Fighter I and II, which include: Perform duties safely and effectively in accordance with the fire department organizational structure, communicate effectively with the general public, crew members, supervisors, and other emergency responders. Operate safely and effectively on an emergency scene. Perform prevention, preparedness, and maintenance activities related to reducing the loss of life and property due to fire through hazard identification, inspection, and response readiness.

8. Students who complete this certificate should be able to meet all the requirements of NFPA 472, Standard for Competencies of responders to Hazardous Material/Weapons of Mass Destruction Incidents which include:

a. Recognize the presence of the hazardous materials/WMD, protect themselves, call for trained personnel, and secure the scene

b. Respond to hazardous materials/WMD incidents for the purpose of protecting nearby persons, the environment, and property from the effects of the release.

Professional Standards for Fire Protection Technology

Objectives (1-6) from "AAS Degree Educational Objectives" section above are based on the National Fire Protection Association (NFPA) 1021, Standard for Fire Officer Professional Qualifications and reworded to satisfy the criteria for Degree and Certificates. In addition, seven of the courses in the degree are in line with the National Fire Academy's Fire and Emergency Services High Education core courses for an Associates of Applied Science degree.

Objectives (7 & 8) from "Certificate Educational Objectives" of this document are for the newly created certificate are from NFPA 1001, Standard for Fire Fighter Professional Qualifications, Fire Fighter I and II and NFPA 472, Standard for Competencies of responders to Hazardous Material/Weapons of Mass Destruction Incidents. The DAC committee agreed that using the exact language would allow for revisions to be made to the standard at the national level that would automatically update the Fire Protection's objectives and outcomes. In addition, using the NFPA standards assisted in the FP program becoming International Fire Service Accreditation Congress approved. This will be discussed later.

The National Fire Academy has been pushing for fire protection courses consistency across the nation by establishing core courses utilizing common language which is based on the NFPA standards.

Fire Protection Technology program development and future

There has been much change in the program since 2010. Many of the recommendations made by the DOI have been implemented and are explained in the following section. Those recommendations that were not implemented have various road blocks that were either present at the time of recommendation or have surfaced over the ensuing 5 years. Two of the major road backs were the lack of adequate resources and the drastic down turn in enrollment.

Fire Protection Technology program improvements

Contract credit program was eliminated. Non-traditional credit is used to award credit for prior learning when the student is able to produce satisfactory documentation that verifies that they have meet or exceed course requirements as determined the subject area specialists.

The program applied and received accreditation from the International Fire Service Accreditation Congress (IFSAC) for Fire Fighter I, Fire Fighter II, Hazardous Material/Weapons of Mass Destruction Awareness level, and Hazardous Materials/Weapons of Mass Destruction Operations level. FPT staffs are in the process of adding two additional certification levels; IFSAC Instructor I and IFSAC Fire Officer I. These should be in place within two years.

Summer term class offerings have been greatly reduced there by reducing the discrepancy between credit taught by FT and PT faculty. The elimination of the summer term skills academy was largely responsible for the reduction of PT faculty. Due to the course offering reductions, it was no longer necessary to have FT faculty work staggered terms.

With the addition of IFSAC testing, there has been a shift from lecture to skills practice where the students work in teams to apply lessons learned and to solve problems associated with those skill sets. The critical thinking component is carried out most noticeably in the FP 280A Cooperative Education classes where students become functioning member of a fire engine crew with local fire departments. FP 280A students are required to document their activity every term in a journal that is counted toward fulfilling the course requirements. (FP 280A syllabus in appendix).

Under advisement from the Fire Advisory Committee, the degree was changed dramatically along with the outcomes to reflect the NFPA Fire Officer I and II standards and to align with the National Fire Academy and Fire & Emergency Service Higher Education (FESHE) recommendations. That process resulted in the creation of a pre-employment certificate that is designed for students who have little or no exposure to emergency services. The certificate is aligned with NFPA Fire Fighter I and II standards, Oregon Department of Safety and Standards Training, and FESHE recommended core courses.

The program has continued to upgrade the firefighter personal protective clothing and self-contained breathing apparatus equipment. Required annual hose testing is done utilizing a purchased hose testing apparatus. Ground ladders are tested annually by a contract vendor specializing in such testing. Firefighter personal protective equipment that is no longer serviceable is identified as non-combat and is used in training situations where non-hostile environments will be encountered. Ladders that fail annual tests are either destroyed or identified as non-climbing and use for specific training purposes. Expired or failed SCBA equipment is destroyed or identified for specific training use only.

A vehicle that was built with the intention of being utilized for wild land firefighter has been converted to a utility vehicle that supports the skills based courses by transporting equipment to off-campus training sites and to haul resources needed to support campus based activities.

One fire engine was removed from service because it's age was problematic for maintenance and repairs. Another engine was donated to the Liberty High School fire cadet program. A new fire engine was purchased to replace to 2 retired engines. The new engine will serve the program for decades to come.

Simulations for manipulative skills are constantly being developed to reduce the amount of exposure that students would normally receive for typical fire service training. The program is purchasing an interactive fire simulator. (Simulator in Appendix)

How the Fire Protection Program teaches and assesses

Learning outcomes for FPT are based on meeting the Industry Standard produced and published by NFPA. Outcomes can and do reach above the basic NFPA requirement when local needs dictate. For example: NFPA may require a two person crew to raise a 24 foot extension ladder but in the Portland Metro Area, a one person ladder raise is required by local industry standards.

Assessment follows IFSAC Accreditation guidelines requiring written examination and where applicable, practical skills assessment (appendix-skills list). For example; students learn about fire department ladders. Their knowledge is tested on the construction and the parts of a ladder but then they must also demonstrate how to raise a ladder to a variety of locations safely, efficiently and effectively (under a window, above a parapet wall and onto a roof top). They must also learn how to work off of a ladder and are assessed on their skills of using a hose line from a ladder, removing windows (usually breaking the glass) and cutting roof ventilation holes with a chainsaw while working from the ladder. Each fire fighter skill is assessed in this way. Another example of FPT assessment practices is less practical (hands on); students are assigned the role of company officer and must assess an emergency scene and assign crew members to tasks that will mitigate a variety of situations. This requires assessment of a student capacity to think critically under stressful conditions. Task books are used for both types of assessment. A task book lists the critical steps an individual must take to assess the situation, develop and action plan, assign crews and implement tactics to address the emergency safely, efficiently and effectively (appendix-sample of skill sheet).

Teaching methodologies incorporate lecture, demonstration, group work and coaching styles. The ladder can again be used as an example: First students are lectured on the types, parts and construction of ladders, chain saws and how they are used in the fire service. They also are lectured on fire behavior and the value of ventilating a building by cutting a hole in a roof top. These skills are demonstrated, raising a ladder, starting and using a chain saw, how to cut a hole through a roof and procedures to complete the ventilation process. Then students work in teams to apply the knowledge and skills during a practical skills drill. During the drill they are coached on their techniques in all of the things they have learned. As a result, students will be given a single order during final assessments that might simply be to ventilate the roof. This order would require the application of the knowledge and skills they have developed during lecture and practice to accomplish one task using a variety of skills and knowledge. They would need to don their protective clothing and breathing apparatus, select the appropriate ladder(s) for the task, select required tools to take to the roof, identify a safe location for the ladder raise, start the chainsaw, apply ladder climbing techniques carrying tools, select the correct site to cut a vent hole in the roof, notify command, work from a ladder to cut a minimum of a 4 foot by 4 foot ventilation hole, open the ceiling below the hole using a pike pole, notify command, prepare for next assignment.

This approach to teaching and learning provides for ample opportunity to assess students' knowledge and skill levels as well as the success of the delivery methods. Drills are repeated multiple times giving each student the opportunity to function in a variety of positions with different responsibilities. Corrections can be made to techniques and decisions being made on the simulated emergency scene and different approaches can be used by the instructor to improve learning and reinforce the correct actions. When students accomplish tasks as a team without errors in an expedient manner, you can see the feeling of success in their faces. Sometimes it takes a while to eliminate all of the errors and reach this level of success.

Course-Level Outcomes Assessment

Individual Course Review

The Fire Protection Program courses CCOG's are based on the NFPA standards. The publishers of the texts that we use, base their material on these standards. The test banks that are received from the publishers assess the course outcomes. Assessment of knowledge and skills has always been at the heart of the emergency services. Courses are reviewed on a three year cycle but often a course is revised but it is not part of the cycle. This provides opportunity for the SAC to review CCOG's and outcomes more often than the 3 year cycle may require. The SAC reviews five CCOG's and the course outcome for each at the SAC in service day provided by the College. There are 32 active courses in the certificate and degree programs combined. During each SAC review of course outcomes the appropriate level of accessibility is identified and procedures or techniques to assess the course are determined.

Changes made in instruction. Please refer to "How the Fire Protection program teaches and assesses."

Academic Instruction is modified to meet course outcomes when it is determined that outcomes are not being demonstrated by students. Shortfalls in the accomplishment of outcomes in a course are often identified during the instructor assessment process or during course evaluations. This can be seen in the Degree program more than the Certificate program. In the Degree program only one instructor is responsible for assessing the course outcomes of a particular class. Review of the instructors' practices and methods of assessment can be made and corrections can be made to the delivery methods used or the assessment techniques of the instructor.

In the Certificate program, multiple instructors assess students and are able to bring issues regarding outcomes to the SAC. These are discussed and the approach to teaching modified if needed. An example would be if students are not able to demonstrate a particular skill during drills. In this case the instructor that identifies the shortfall shares this information with other instructors that are responsible for assessing the course outcomes. The drill itself may be changed, the practice might be demonstrated a second time to emphasize the correct methods, the instructor that has been assigned to a particular outcome can be reassigned if another more experienced instructor is able to deliver the needed information and techniques and reach the required outcome.

Addressing College Core Outcomes

(See Appendix Core Outcome Mapping)

Communication

Communicate effectively by determining the purpose, audience and context of communication, and respond to feedback to improve clarity, coherence and effectiveness in workplace, community and academic pursuits.

Effective communication is a core ingredient for successful emergency service operations. Communications both verbal and written are taught, used, and stressed in the majority of the FPT courses. Verbal communications is used during all manipulative

skills training activities, once the student is in the 200 level courses, written communication is stressed in the development of incident action plans and reports of incidents and investigations.

Community and Environmental Responsibility

Apply scientific, cultural and political perspectives to natural and social systems and use an understanding of social change and social action to address the consequences of local and global human activity.

The central component of emergency service activity is managing people and their problems. Embedded in the FPT course is the strong sense of customer service which takes the emergency service provider with the ability to go beyond fixing the main reason that the customer called 911. This includes securing their home and property, addressing the needs of those who are close to the incident but not directly involved, and in some cases returning to the scene to ensure that hazards have been neutralized. The program is addressing this in FP 122, Introduction to Fire Prevention, by recommending students take a Management Supervisory course in customer service and embedding instruction in most of the courses.

FP 123 Haz Mat Awareness/Operations is a first year core course that addresses the responsibility that emergency service providers have when it comes mitigating spills, leaks, and releases substances that are harmful to life, the environment, and property either by accident or intentional actions. As a project for the course, students work with Stop Oregon Litter and Vandalism (SOLV) by cleaning up illegal dumpsites.

Critical Thinking and Problem Solving

Identify and investigate problems, evaluate information and its sources, and use appropriate methods of reasoning to develop creative and practical solutions to personal, professional and community issues.

The FPT curriculum is based on critical thinking and problem solving so all of the courses are designed to give students the base knowledge of what can be done to mitigate an incident and require the student to apply that knowledge in different situations.

Cultural Awareness

Use an understanding of the variations in human culture, perspectives and forms of expression to constructively address issues that arise out of cultural differences in the workplace and community.

As stated before, customer service is an integral part of the emergency service and is a trait expressed by the advisory committee that is being addressed in FP 122 and MSD 117, as well as other FPT courses. Team work and getting along with individuals is addresses and part of the grading structure of the FP 111 and FP 112, Firefighter I & II Skills Academy classes. For safe and efficient emergency scene operations, teamwork and getting along and understanding other people isn't desired, it is a must.

Professional Competence

Demonstrate and apply the knowledge, skills and attitudes necessary to enter and succeed in a defined profession or advanced academic program.

Many of the FPT courses correspond to professional competences as set by the NFPA and DPSST. Students must demonstrate the skills needed to obtain certain certifications, such as Firefighter I, Firefighter II, Haz Mat Awareness/Operation, Fire Officer I, Emergency Service Instructor I, and Driver/Pumper Operator.

Self-Reflection

Assess, examine and reflect on one's own academic skill, professional competence and personal beliefs and how these impact others.

Students that are enrolled in FPT Cooperative Education courses are required to keep a journal that covers the activities that they participated in and were a part of during their time with an emergency response agency. In these classes, the student will apply the knowledge and skills that they received in the 100 level classes to address and solve real world problems. The individual journals reflect those activities

Degree and Certificate Outcomes

Obtaining Degree and Certificate outcomes Evidence

The Degree outcomes are assessed through a series of new courses that are designed to meet the NFPA Fire Officer I and Fire Officer II requirements. There are specific requirements for each level of certifications that allow us to assess if a student is meeting the Degree outcomes. The following is an example of NFPA standards that are part of FP 274 course outcomes and part of the FPT Degree outcomes:

FPT Degree Outcome #1

Use an understanding of emergency services organizational structures at the local, state, and national level to develop, implement, and maintain programs that are designed to meet the needs of the organization and the community.

FP 274 Outcome # 2

Communicate in oral and written forms to share information, manage, and effect change in a fire/emergency services department.

NFPA 1021, 5.4. Fire Officer 2

This duty involves preparing a project or divisional budget, news releases, and policy changes.

NFPA 1021, 4.4. Fire Officer 1

This duty involves general administrative functions and the implementation of departmental policies and procedures at the unit level.

The program is in the process of applying for IFSAC certification for Fire Officer I and Fire Service instructor I. In the future, these will the vehicles used to assess how FPT students are meeting the degree outcomes.

FPT Certificate Outcomes

Currently, after completion of FP 111 and FP 112 and FP 123, students have the ability to choose to take the IFSAC certification test for each of the levels. This certification test is independent testing that the PCC FPT program is responsible for conducting in the state of Oregon. Not all students choose to take the IFSAC certification for various reasons; however the numbers will be a good reflection of the students obtaining the certificate outcomes.

Assessment Projects Summary, to improve students' attainment of Degree and Certificate outcomes.

Using the IFSAC Fire fighter I and II and the Hazardous Materials/Weapons of Mass Destruction Awareness and Operations tests for assessment purposes has provided the program insight as to where we should focus our instruction. Eight additional hours have been added to the FP 123 class to provide lab time for skill development. Also, a hybrid D2L component was added to the FP 111 and FP 112 classes to increase lab time to improve skill development. This was achieved by utilizing D2L for course quiz delivery as well as pre-class assignments providing an additional 30 hours of drill time for firefighting skill development. Written exam test scores have remained strong.

Effectiveness of Changes Made

Evidence of changes that were made can be seen at the end of each term with the Fire Academy testing process which was changed to mimic IFSAC testing so students would be prepared when completing the IFSAC Testing process. Prior to becoming accredited by IFSAC, the testing process was far less consistent so identifying improvements was hard. Now students can be consistently tested on a series of over 60 different practical tasks and by a random selection of written exam material. Student success in the Academy is better documented and although every does not succeed, the process is fair and impartial and students that are having difficulty are able to work on skills once weaknesses are identified early in the term.

What we have learned to improve your assessment practices and strategies?

Refer to the Section "Evidence of Degree and Certificate Outcome Attainment" on page 11

PCC's Core Outcomes Issues

There is some difficulty to align and assess cultural awareness in a program that is less culturally diverse than others. The FPT program does require an FP class that has been specifically designed to improve student's cultural awareness which is FP 210 Multi-cultural Strategies for Diversity. It is based on a text book written by a PCC Criminal Justice Instructor. The class explores a wide variety of cultures and cultural norms and provides a forum for open discussion.

Students are constantly advised to get a second language as that will make them a more desirable employee and they will be better equipped to communicate it the very diverse population that exist in the area. The benefit of learning a second language is being exposed to a certain extent, to the culture and its idiosyncrasies. We must adapt to our customers' needs and ways while we attend to their emergency.

Program diversity has improved and is currently 18% minority, 20% Female and 62% non-minority white males. Due to our proximity to the urban core of Portland, we expect to continue to increase the diversity of the program.

Other Curricular Issues

Distance Learning modality Offerings

Certificate Courses using D2L as hybrid: FP 101, FP 111, FP112, FP 123. Twenty three of fourty two credits are offered using hybrid modality. Certificate courses not using D2L as a hybrid are FP 133 (3 credits), FP 280A (6credits) and EMS 105/106 (10 credits).

AAS degree courses using D2L for Distance Learning: FP 121, FP 122, FP 137, FP 166, FP 170, FP 210, FP 212, FP 214, FP 273, FP 274, FP 291, COMM 111, PHL 202, PSY 101, COMM 214, WR 227, two additional Gen Ed classes. Sixty one of the required seventy FPT Core and Gen Ed credits are offered at one point or another throughout the academic year as an online course. The benefit is that students, who are employed full time with family, can receive an education that fits their professional needs and accommodate their life schedules. Of the remaining FP credits, two courses are offered as a hybrid and four courses are under development or proposed to be developed in the next year. The FPT Program is currently offering classes online at a 2:1 ratio, 2 classes online for every one time delivered in the classroom. This was in response to student enrollment trends and to serve Degree seeking student which tend to be working fire fighters now that the Degree has been changed to meet the NFPA Fire Officer I & II requirements. Certificate classes targeting pre-fire service students are delivered in the classroom but do have hybrid components in most cases. Other classes not required for the AAS Degree in FPT but approved as an elective are usually offered in the classroom. Example: Apparatus Operator and Rescue Practices.

Course	Classroom		WEB		
	Count	% of Course Total	Count	% of Course Total	**Course Total**
FP 101: Prin. of Emerg. Services	5	83.33	.	.	6
FP 111: Fire Academy Part 1	2	100	.	.	2
FP 112: Fire Academy Part 2	2	100	.	.	2
FP 121: Fire Behavior and Combustion	.	.	2	100	2
FP 122: Funds of Fire Prevention	.	.	2	100	2
FP 123: Haz Mat Awareness/Operations	4	100	.	.	4
FP 133: Wildland Firefighter	4	100	.	.	4
FP 137: Fire Protection Systems	1	50	1	50	2
FP 166: Bldg. Const. for Fire Protection	.	.	2	100	2
FP 170: Intro to Tactics & Strategy	.	.	2	100	2
FP 200: Fire App Driver/Operator I	.	.	.	.	1
FP 201: Intro to Emergency Service Rescue	2	100	.	.	2
FP 210: Multicultural Strat for FF	1	50	1	50	2
FP 212: Fire Invest (Cause Determination)	.	.	1	100	1
FP 214: Occ. Safety & Health for Fire	1	50	1	50	2
FP 232: Fire App Driver/Operator II	1	100	.	.	1
FP 273: Fire Serv Human Resource Mgt.	.	.	1	100	1
FP 274: Intro to Fire & Emergency	.	.	1	100	1

Administration					
FP 275: Community & Govern. Relations	1	100	.	.	1
FP 280A: CE: Fire Protection	4	100	.	.	4
FP 280A: CE: Fire Science	3	100	.	.	3
FP 289: Emergency Service Lifetime Fit & Cond.	2	100	.	.	2
FP 291: Fire Codes & Related Ordinances	.	.	1	100	1
Modality Total and %	33	66	15	30	**50**

A slightly lower success rate in distance learning classes compared to traditional classroom deliveries of FPT courses can be seen in some classes. In the chart below, online classes were offered twice and in-class delivery was offered once so twice as many students were able to access DL classes. Successful completion fell by 3% in several classes and by 13% in one class. In one course, DL delivery improved success by 7% and another by 2%.

Cascade	FP	122	15	87%	39	74.4%
Cascade	FP	137	14	93%	25	100.0%
Cascade	FP	166		NA	40	65.0%
Cascade	FP	170	34	91%	25	88.0%
Cascade	FP	210	24	88%	53	90.6%
Cascade	FP	212	22	91%	52	88.5%
Cascade	FP	214	31	84%	50	86.0%
Cascade	FP	291		NA	14	92.9%

DL delivery revelations, concerns, or questions

The most significant concern voiced by FPT faculty is the lack of student to student and instructor to student face to face interaction. The SAC reviews this information and strives to improve success rates that are not related to student performance. In other words if we can identify a problem associated with the way a course is set up in DL that leads to a decrease in student success we attempt to address that issue. The numbers in the chart above will be shared with faculty at the October 2015 SAC meeting and individually addressed by the faculty member responsible for a specific class. FPT is lucky to have only one instructor routinely assigned to a class. This gives the instructor opportunities to improve their specific class based on course evaluations and student success rates.

Community-Based Learning, Internationalization of the Curriculum, Honors,

FPT curricular changes made over the last five years have been in preparation for and a result of FSAC Accreditation guidelines and recommendations, and to further develop D2L accessibility of the FPT Degree. Community based learning has always been an important aspect of FPT classes but this has not changed. The FPT program SAC is currently considering a CTE Honors class as a cap stone course for the AAS Degree.

Are there any courses in the program offered as Dual Credit at area High Schools?

Liberty High School and Banks High School offers FP 101, FP 133 and FP 201.
Sabin-Schellenberg Center offers FP 101 and FP 280B.

Liberty High School was the recipient of a functional fire engine from Portland Community College Fire Protection Program at the beginning of the 2015 school year.

Fire Protection (FP) 4 Faculty members, 58 unduplicated students, 300 total credits enrolled for 2014-15 year. For the Spring 2015 Term, Liberty enrolled 78 duplicated students, Sabin-Schellenberg Center had 20 unduplicated students.

High School faculty Connection

HS faculty and PCC faculty meet on an annual basis and as needed throughout the academic year. Since these programs have been set up with current faculty from both PCC and the High schools, instructors are very aware of what is being taught and how. Faculty teaching at the HS level have graduated from PCC or another Community College's Fire Protection Program. The HS faculty are required to use the same CCOG's and Syllabus as the PCC program and an FPT Department approved text book.

Course Evaluations

No SAC specific questions have been developed for the online student course evaluation. It is not known if individual instructors have added course specific questions.

Course Evaluation Usefulness

Information has been useful for individual instructor feedback. Faculty review course evaluations and make suggested improvements that are meaningful and applicable. Comments from students that would improve a class are considered and changes are made if possible. Changes to the program have not been made based on course evaluations.

Significant curricular changes

These changes have been significant and noted in other areas of the Program Review document.

Needs of Students and the Community

Student population Effects on instruction

The student population has not had any notable changes in the FPT curriculum or instruction.
The student demographic has shown an increase in the percentage of female students from 13.5% to 18% from 2012 to 2015 and an increase in the percentage of minority students from 15.6% to 20.9 over the same period.
Due to the standards and expectations of fire departments, the requirements of an FPT course or program does not change with the population.
(Appendix FPT Institutional Effectiveness Report 2010-2015)

Strategies for Students with Disabilities to Succeed

Faculty make needed accommodations as documented by the students with disabilities office. It is not uncommon for faculty to make accommodations regarding learning disabilities. It is less common to make accommodations for physical disability due to the nature of the career although there have been some accommodations of this nature over the years.

What does the SAC see as particularly challenging in serving these students?

The fire service has physical standards set and tested in a court of law that may limit a student with disabilities to be in the work force. FPT Faculty at PCC strives to serve all students. Faculty understands that the chance of finding employment for the student may be limited by fire department hiring restrictions. This is discussed in the FP 101 class so students know how those restrictions might affect them and provide an early opportunity for students to reach their career potential. Below are two examples of physical restrictions recommended by the National Fire Protection Association.

NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments, 2013 Edition

6.4 Eyes and Vision.

6.4.1 Category A medical conditions shall include the following:

(1)* Far visual acuity less than 20/40 binocular, corrected with contact lenses or spectacles, or far visual acuity less than 20/100 binocular for wearers of hard contacts or spectacles, uncorrected

(2)* Color perception — monochromatic vision resulting in inability to use imaging devices such as thermal imaging cameras

(3)* Monocular vision

(4) Any eye condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.5* Ears and Hearing.

6.5.1 Category A medical conditions shall include the following:

(1)Chronic vertigo or impaired balance as demonstrated by the inability to tandem gait walk

(2)On audiometric testing, average hearing loss in the unaided better ear greater than 40 decibels (dB) at 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz when the audiometric device is calibrated to ANSI Z24.5, Audiometric Device Testing

(3)Any ear condition (or hearing impairment) that results in the candidate not being able to safely perform one or more of the essential job tasks

(4)* Hearing aid or cochlear implant

Curriculum and Instructional Changes

Under advisement from the Fire Advisory Committee, the degree was changed along with the outcomes to reflect the NFPA Fire Officer I and II standards and to align with the National Fire Academy and Fire & Emergency Service Higher Education (FESHE) recommendations. That process resulted in the creation of a pre-employment certificate that is designed for students who have little or no exposure to emergency services. The certificate is aligned with NFPA Fire Fighter I and II standards, Oregon Department of Safety and Standards Training, and FESHE recommended core courses. PCC FPT staff share an office with Eastern Oregon University advisor and work closely with the advisor to assist students transition from one institution to another. The EOU advisor is a member of the PCC FPT Advisory Committee and he has been an active participant in the Degree change and Certificate development process.

Faculty composition, qualifications and development

The FP faculty consists of primarily part time faculties who are currently working in the Fire Service field and are instructing classes in which they hold special knowledge. The program believes that to keep it up-to-date and relevant, we need to utilize instructors who currently work in the field and deal with the subject matter of which they have firsthand knowledge.

In addition, the FPT program, currently, includes two full-time faculty, one full-time academic professional, and 24 part-time faculty.

FULL-TIME – Faculty and Academic Professional:

Edward Lindsey, *Faculty, Department Chair*
MPA Public Administration, BS Speech Communication,
AAS Fire Protection Technology
35 years fire and rescue service experience
26 years community college instructional experience
NFPA Fire Service Instructor III
Numerous National, State and Regional Certifications

Doug Smith, *Faculty, SAC Chair*
BT Automotive Technology, AAS Fire Science
35 years fire service experience
27 years community college instructional experience
NFPA Fire Service Instructor III certificate
Numerous National Fire Academy, State of Oregon, and State of Washington fire service related certificates

William Benjamin, *Academic Professional*
MS Industrial Safety, BS Fire Science
45 years career, part-time, and volunteer fire service experience
37 years community college instructional experience
NFPA Fire Service Instructor IV certified
Numerous National Fire Academy and State of Missouri fire service related certificates

Diversity and cultural competency of the FP Faculty

The program has been attempting to diversify the instructor population however our recruiting efforts are thwarted by the lack of diversity in the industry. Changes in the program opened the door for recruitment at the instructor level, lab tech level, and the newly defined skilled professional level. Five women were added to the FPT roster. As of this document date, two of those have chosen to take other paths for various personal reasons. The FP 210, Multicultural Strategies for Diversity course was briefly taught by an African-American man, however his retirement necessitated the need for a replacement. The original female instructor for the Fire Department Customer Service course opted out which gives us an opportunity to recruit a new instructor from a more diverse pool of candidates.

Another strategy that the program has taken to diversify faculty has been to include non-fire protection courses that content most closely aligns to the recommendations of the advisory committee and NFPA standard. This also has the benefit of exposing fire protection students

to a more diverse student population outside of FPT classes. The FPT program does not embed General Education requirements into FPT classes and several FPT core courses are from LDC areas such as Writing, Communications and Math. There are 28 credit hours of course work required outside of the FPT program in comparison to the PCC required minimum of 16 credits.

The program is taught primarily by part time instructors who are experts in the course that they are instructing. The issue that has persisted has been bringing in new instructors through the human resources gamut. We have seen instructors that have to apply multiple times. Another issue that has been a problem with part timers is that their course maybe taught once per academic year or less depending on enrollment. We have found that instructors have been terminated due to inactivity for less than a year which then requires the instructor to go through the complete application process again. Two Instructors recently retired from teaching once they were terminated simply stating it was not worth it to them to reapply every time they teach. Two other instructors were not paid for half a term before they brought it to the Departments attention and we found out they had been terminated.

Current Instructor Qualifications

Since the last program review, the SAC has made several attempts to improve instructor qualifications to align with the college's desires. It has been discovered that wording of the official instructor qualifications is extremely important because human resources may interpret the qualifications differently from the intention of the SAC. Significant changes have been proposed by the SAC. The SAC approved revised instructor qualifications at the October 27th, 2015 in-service meeting.

(See appendix for current and proposed Instructor Qualifications)

Faculty professional development effect on the program

In 2015, the Dean of Instruction at Cascade Campus supported multiple classes for FPT Faculty for the purpose of professional development. Faculty that attended these industry courses have incorporated different aspects of the course work into their own teaching practices. FPT courses that include aspects of leadership utilize tools received in the training they attended and Skill based courses provided new opportunities for improving drill activities. Exposure of faculty in industry based professional development creates a positive reflection of the Program to industry leaders.

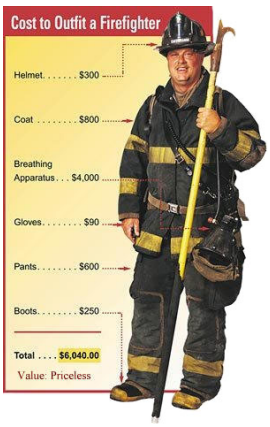
Activities learned in leadership classes have been added to FPT leadership courses and new or different skills have been incorporated into practical drills.

Facilities and Academic Support

Student success and classroom space and technology, laboratory space, and equipment

Emergency services work requires people in the field to have a wide spectrum of knowledge. This is necessary so they can tap into that knowledge base rapidly when presented with the unique situations that cause citizens to call 911.

Over the last five years the lab space has become increasingly crowded with new equipment and materials needed for instruction. Offering proper learning spaces for students in the program is unique because many of the outcomes are associated with demonstrated manipulative skills therefore it becomes critical to have a learning space for the didactic portion which is where students get the needed pre-requisite knowledge before manipulative skills can be learned. Convenient access to a lab space where the demonstrated skills can be learned and practiced is a must. Most of the program's courses are presented in room 106 of the PSEB that has direct access to the apparatus bay and equipment storage area. This allows the instructors the ability to move between didactic and manipulative skills with ease.



The FPT program offers on a yearly average 32% of our classes on Fridays, Saturdays, an d Sundays. Along with the weekend offering the yearly average on line offered classes has increased from 25% to 33%. This methodology allows the program to present more course offerings during the term so that students may move through the curriculum more efficiently. Due to the nature of our training activity, using fire engines to support our courses, facility space occupation is large. Well-equipped fire engines are the pillars of our program to ensure students are exposed to the equipment that is used in the field. The program was able to decrease the number of fire academy classes offered each year saving approximately $45,000 a year. This was in support of utilizing the savings for the lease of a new fire engine. $30,000 of this funding has been committed each year to a 10 year lease/purchase agreement for the new engine. For the students to take what is presented seriously, we must have available respectable resources. For our students to succeed they must be more than exposed to the latest equipment, they must be familiar with it.

The program occupies approximately 3300 square feet of the PSEB not including faculty office space. Regularly the fire engine storage space is used by other emergency programs for lab skills activities. This space is also used for physical agility testing and to support students with additional lab time. The space is currently at its maximum capacity and does limit what the program is able to offer. For example, Certified Candidate Physical Ability Testing (CPAT) is not possible due to the current indoor facility size.

Student use of the library and information resources.

The library at Cascade has been building a current and relevant inventory of books, periodicals, and web information locations for our student to access. A pilot program has been started to acquire instructor desk copies of the text books used in their classes so that those books can be held on reserve at the library for student use.

The Cascade Library staff regularly asks the program to identify learning resources that would be of value to our students and faculty. One such resource is the subscription to the NFPA's Codes and Standards on-line. This resource is used regularly by faculty to revise and develop classes and keep our program current with the industry. Students are also able to access the NFPA Codes and Standards on-line for research and reference.

Advising, Counseling, Disability Services, Veterans Services,

Full-time Faculty (Doug Smith & Ed Lindsey): Full-time faculty members carry a significant role in advising students. This is because, approximately, 50% of the 310 students enrolled in the FPT program are career or volunteer fire fighters and come to the college with work experience and fire service provided training and education. As a result, full-time faculty play a significant role in reviewing this previous work experience and fire service provided training and education. In addition, most students seeking the AAS degree will meet with full-time faculty about once a year and prior to graduation, when modifications and substitutions are requested. Although there are no data to support this, it is thought that the majority of stud ents enrolled in the FPT program take a minimum of three years to complete the program. Because of this, advising not only will take place with an individual student for more than three years, it is likely to be needed over a range of 5 to 15 years.

Michelle Butler, Learning Skills Specialist / Perkins Advisor: Michelle Butler is a Learning Skills Specialist for Perkins Advising for the ESD. She is the primary non-faculty advisor for the FPT program. New Students and transfer students are strongly urged to make an appointment with her to get an academic plan together and projected out for two years. In addition, the FPT program uses FP 101 as the gateway class for the FPT program. Michelle meets during one portion of the class to provide an explanation of PCC's advising services. Student success is greatly increased when they are advised by professionals who are extremely familiar with the particular program.

DeAnne Hardy, Student Employment & Cooperative Education Specialist: DeAnne is a key part of FP 280A, cooperative education for Fire Protection course. She handles and maintains the documents required by the state for cooperative education. Her assistance in resume' writing have enabled many FP students to be successful in their career. The interview skill and strategies that she is able to present also aid students in their betterment. Students from the start of the program to the time of graduation are encouraged to seek DeAnne's assistance.

Cliff Morgan, ES Advisor and Program Support: Cliff provides basic advising for FPT program. Cliff focuses primarily on the EMS program. However, because all FPT students are required to take EMT-Basic classes for completion of the AAS degree, Cliff does provide advice.

Student Training, Advising, Registration, and Troubleshooting (START) Lab: The START lab is a one-stop service that allows students to take care of all of their needs in one location, including advising. Orientation, initial advising, applying for financial aid, and registering for classes are all provided under the auspices of the START Lab.

Advisory Committee impact on the Fire Protection program

(appendix- FPAC minutes)

In 2010, the Fire Protection Advisory Committee (FPAC) was formally activated where the future profiles of the fire protection program was devised. The vision was to create an AAS degree that was fire officer oriented and specific courses were identified. This reorganization also coincided with the need to make the programs courses consistent with the national model as developed by FESHE.

Consequently, 7 new courses equaling 21 credits were created. To address the needs of students who are seeking a career in the emergency services but did not have the skills, the technical manipulative courses were moved to the newly create certificate. To entice in-service firefighters and to accommodate student who want an AAS degree, the new degree contains 18 electives that can be certificate courses. The 18 credits of electives are currently being considered by the SAC and the FPAC for reduction to lower the required FPT AAS Degree credit from 100 credits to a total of 90 credits.

At the same time, the program was moving towards becoming International Fire Service Accreditation Congress certified for FP 111 , FP 112, and FP 123 and the degree. Degrees and Certificates and the Curriculum office was also encouraging the program to revamp the language of our CCOG's for individual courses and the degree and to clean up our catalog offering of courses that were on the books.

These multiple influences resulted in extensive house cleaning and remodeling of pretty much everything FPT related.

Current and projected demand and enrollment patterns

Since the last program review, there has been a major change in the AAS degree and an addition of the certificate at the same time, enrollment across the community college family, resulted in a drastic decrease in enrollment. In an effort to increase the quality of students coming out of the FP 111 and 112 skill academy's, the offerings were reduced from one Academy per Term to twice yearly which reduced our numbers of Academy completers by approximately 33%. This course reduction was a recommendation of the Fire Advisory Committee and it also provided funds to purchase a new fire engine which also improves the quality of the Academy completers.. Fire Department hiring in the NW has been on the increase while the number of students from PCC has been reduced. Since there are far fewer fire fighter positions than there are graduates of fire protection programs, the success of a PCC graduate should improve due to the increase in quality of the education and reduction in numbers Certificate completers.

The Fire Protection Program was the 5th top major at Cascade Campus with 108 students.
An enrollment headcount college wide trend for CTE programs is down 34.8% over the last 5 years, and down 5.2% over 1 year. Cascade Campus CTE programs were down 21.5% over 5 years and 9.9% for 1 year. FTE college wide for CTE programs for 5 years is 21.1% and 5.6% for 1 year. Cascade CTE programs experienced a 24.6% decrease and 9.1% decrease respectfully.

Students selection and prepared for program entry.

The Fire Protection program has been trying to remove barriers to enrollment into the program by keeping it open enrollment with FP 101 as the gateway class. Embedded in this class are the physical abilities assessment, medical respiratory survey and an assessment for claustrophobia and acrophobia. As part of the certificate, students are required to take EMS 105 which requires a background check. College general education minimal

requirements must be met also.
A mechanical aptitude course is being considered as either a prerequisite or added to the certificate. This course would instruct students on the basic operation of tool use and care similar to what other CTE's are using.

Job placement data

Our data that has been collected through Career Services and antidotal information shows that of the 258 graduates in the last 5 years, 66 are employed in the industry equally a 26% employment rate in the field. This can be argued because there isn't a higher education requirement to be employed in the fire service. Couple that with the fact that students will get hired will stop out and not notify the program of their employment. We know that over the last 5 years that at least 88 of our graduates are employed in the field. Approximately 60% were hired after graduation and 40% of the graduates were already employed. There are around 44 different fire agencies that are employing our graduates.

Forecast future employment opportunities for students, including national or state forecasts if appropriate.

State of Oregon Employment Department

Firefighter Job Postings

Job Title	Date Posted	Location	Wage Offered
Forestry Technician Senior Firefighter	08/27/2015	Glide	$28,269/yr to $41,122/yr DOE
Forestry Technician - Fire (Job Fair)	08/24/2015	Springfield	$43,389/yr to $47,923/yr DOE
Lead Forestry Tech - AFEO	08/24/2015	Tiller	$35,256/yr to $45,828/yr DOE
Wildland Fire Fighter (Seasonal)	08/10/2015	Oregon & USA	N/A DOE
Firefighter	08/10/2015	Roseburg	$4,432/mo
Crew Boss/Engine Boss	08/03/2015	Pilot Rock/Pendleton	$17.00/hr DOE
Wildland Firefighter 1/ Firefighter 2	08/03/2015	Pilot Rock/Pendleton	DOE
Fireperson I	07/13/2015	Hillsboro	$12.80/hr to $16.00/hr
Wildland Fire Fighters Engine Crew	06/30/2015	Merrill	DOE
Firefighter	02/20/2015	Grants Pass	$14.12/hr

Job Title	Date Posted	Location	Wage Offered
Firefighter / EMT	08/25/2015	Portland	
Firefighter	08/11/2015	Roseburg	
Wildland Fire Fighters Engine Crew	06/30/2015	Merrill	

Wage Range

Area	Average Hourly	Average Annual
Oregon	$27.88	$57,991
Clackamas	36.17	75,230
East Cascades	25.89	53,857
Eastern Oregon	13.09	27,227
Lane	26.78	55,703
Mid-Valley	26.64	55,415
Northwest Oregon	26.87	55,885
Portland-Metro	32.30	67,181
Rogue Valley	30.17	62,751

Employment Outlook **Statewide Employment Analysis**

Employment in this occupation in 2012 was somewhat larger than the statewide average for all occupations. The total number of job openings is projected to be somewhat higher than the statewide average number of job openings for all occupations through 2022. This occupation is expected to grow at a somewhat slower rate than the statewide average growth rate for all occupations through 2022.

Area Employment Projections

Replacement openings are caused by existing workers permanently leaving their occupation. Many additional job openings occur due to job changes within occupations.

Area	2012 Employment	2022 Employment	Change	Percent Change	Annual Growth Openings	Annual Replacement Openings	Total Annual Openings
Oregon	3,715	4,076	361	9.7%	36	101	137
Clackamas	185	205	20	10.8%	2	5	7
East Cascades	495	550	55	11.1%	6	14	20
Eastern Oregon	315	346	31	9.8%	3	9	12
Lane	212	235	23	10.8%	2	6	8
Mid-Valley	767	835	68	8.9%	7	21	28
Northwest Oregon	240	260	20	8.3%	2	6	8
Portland-Metro	708	786	78	11.0%	8	19	27
Rogue Valley	361	395	34	9.4%	3	10	13
Southwestern Oregon	214	238	24	11.2%	2	6	8

Occupations with Similar Skills

The scores listed below indicates how closely the skills for Firefighters matches the occupation in the list. A score of 100% means the occupations have identical skill sets. A maximum of 10 occupations are displayed below.

Occupation	Skill Overlap
Fire Inspectors and Investigators	38%
First-Line Supervisors of Fire Fighting and Prevention Workers	38%
Forest Fire Inspectors and Prevention Specialists	31%

Fire fighter Job Outlook Percent change in employment, projected 2012-22

Total, all occupations	**11%**
Protective service occupations	**8%**
Firefighters	**7 %**

Note: All Occupations includes all occupations in the U.S. Economy. Source: U.S. Bureau of Labor Statistics, Employment Projections program

Employment of firefighters is projected to grow 7 percent from 2012 to 2022, slower than the average for all occupations.

The aging of the population will lead to an increased demand for emergency responders as the elderly tend to use more emergency medical services. Currently, about 2 of out 3 situations that firefighters respond to are medical—rather than fire—emergencies.

In addition, jobs will be created as volunteer firefighters are converted to paid positions in areas where population growth creates the need for a full-time workforce. An increase in urban populations, where full-time firefighters are more common, also is expected to increase the demand for firefighters.

National Firefighter Job Prospects

Prospective firefighters will likely face strong competition for jobs. Many people are attracted to the job's challenge, opportunity for public service, and relatively low formal education requirements. As a result, a department may receive hundreds of applicants for a single position.

Physically-fit applicants with high test scores, some post-secondary firefighter education, and paramedic training should have the best job prospects.

Employment projections data for firefighters, 2012-22

Occupational Title	SOC Code	Employment, 2012	Projected Employment, 2022	Change, 2012-22		Employment by Industry
				Percent	Numeric	
SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program						
Firefighters	33-2011	307,000	327,300	7	20,300	[XLS]

Degree and Certificate completion data. B arriers and non-completion issues.

Averages of 40 students graduate each year with an AAS in Fire Protection Technology.
The number of graduates has ranged from 34 in 2009 to 53 in 2013 and 39 in 2014. Recently some students have left due to the changes in the Degree which have had a heavy impact on students that have gone a year without taking classes. The spike in Graduates in 2013 was likely a result of students trying to finish before the new requirements would take effect although there are students completing the pre-2013 degree requirements. We expect the number of students graduating from the AAS Degree program to decline due to the smaller number of in-service fire fighters in the program as compared to the lager number of pre-fire service students that will be starting and completing the Certificate.

The Certificate program is new and the numbers so far are 2 completers in 2013 and 9 completers in 2014. With between 36 and 48 new students in the Fire Academy each year we expect there to be an increase in certificate completers. All students in the one year Certificate program will not finish in one year but those that do finish can transition to the Degree program or may come back in several years after they have been an in-service fire fighter for a couple years.

Opportunities in development for graduates

Online courses have seen a steady increase in student enrollment. The FPT Program is accessible online to many career fire service personnel. Efforts to complete FPT required course development to fill gaps in the new degree program are underway. When students have completed the AAS Degree at PCC they have completed all of the requirements to meet the NFPA Fire Officer 2 requirements. These students will transition to the Bachelor Degree level of course work in Fire Service Administration provided by Eastern Oregon University online.

Recommendations

Assessment of course outcomes; of Program Outcomes; of PCC Core Outcomes.

A new course is being considered that would be a capstone course. In the new capstone course, we hope that students will be able to demonstrate a variety of the intended outcomes for the AAS in FPT. The goal would be to design the course to require demonstration of outcomes from all three levels of outcomes. For example, a student might demonstrate an outcome from several FPT classes that are related to the overall program outcomes and PCC Core outcomes. The course would likely require the creation of a portfolio, involvement with a community project or comprehensive exam that would assess knowledge retained from a variety of FPT classes.

Support needed

In the future, a larger indoor lab would alleviate overcrowding of the lab space and provide opportunities for developing the Candidate Physical Agility Test (CPAT) testing process, which is now recognized by a majority of fire departments. The overloaded use of the lab area will increase the potential for accidents. Working in a confined area with equipment and the storage of equipment in the lab in the way of drill activities needs to be addressed. The ability of offering certified CPAT testing would bring in additional revenue from non-PCC students and improve the physical level of students successfully completing the AAS Degree at PCC. Expanding the footprint of the Emergency Services lab would be a benefit to the Fire Program as well as other emergency services programs at PCC. The CPAT test would also showcase the facility to potential students that come to Campus to take the test.

A commitment of the administration to continue with an engine replacement program that would help the program maintains quality fire apparatus. Fire engines have a life span of approximately 20 years. Previously we operated using 3 fire engines that were 30 years old. Using 3 engines of that age supported the operation of 2 engines while the third was in a shop for repairs. There was low confidence that all 3 engines would be operating at the same time. The program gave up the third engine when a new engine was placed in service. The dependability of the new engine is critical to the success of the program and students. The second engine is currently 20 years old. Maintenance cost will increase over the next few years. Replacing the 2nd engine with a new engine at the end of the lease on the first new engine would give us one engine that is 10 years old and another that is new. If we can replace one engine every 10 years, we will be operating with the newest technology and have confidence in the functionality of our lab equipment.

Appendix

FP 280A, Cooperative Education Course Outcomes:

Communicate effectively with employers, coworkers, and customers, adapting to feedback as it pertains to processes and skills of emergency services and professional workplace behavior.
Apply the principles of fire fighter safety as established by NFPA 1500.
Identify and implement strategies and processes to solve workplace issues and problems during emergency events.
Use an understanding of the variations in cultures and human interactions to working within the team environment and in a diverse community.
Apply skills and attitudes necessary to work within the ethical and professional parameters of the emergency services profession.

Major assignments & due dates:

Training Agreement and Learning Objectives

Journal: As a co-operative education student, you are required to keep a daily journal which will include the following minimum information. This is to be done every day of your internship.

- daily entries of date, times of duty, total hours, supervisor and crew for that day.
- a paragraph of assigned duties, accomplishments, calls, training, public education, etc.
- Include information that you learned, as well, as your feelings and impressions of the activities.

Self Reflection: This is a two to three page document that will cover what you learned from the Cooperative Education experience. The depth of your learning can be enhanced by taking the time to think about what you want to gain from the experience and a way to deepen your learning by thinking analytically and to reflecting upon an experience that was significant to you. Refer to the Self-Reflection guide.

Resume´- At the end of each term, the student will submit a professional resume' to the instructor.

All course material submitted will be of professional quality, typewritten utilizing APA formatting, in Times New Roman, 12 pt. font, double spaced. Spelling, punctuation, and grammar must be correct.

Simulations - Attack Digital Fire System

This new technology allows firefighters to train in countless locations and situations to diversify your training and ensure your trainees are prepared to handle any real fire situation. Create a seat of fire where live-fire isn't an option, and create realistic fire conditions where the presence of fire is an important element, but fire suppression isn't the primary objective.

The Attack allows you to train in any location, even those areas where live fire is not possible. This can include a burn tower, acquired structure, or even your engine bay. The Attack allows you to place the seat of the fire in a new location each day you train, and even after every evolution. This continually challenges trainees and helps them be better prepared for live burn training and real fire situations.
The Attack simulates accurate fire growth and behavior. Thermal sensors detect where water from a hose line hits the panel and varies the flames in response. Dynamic smoke generation is tied to the size of the fire and time since ignition. Recreate fire extension with the use of multiple panels.

Realistic Fire Growth Fire growth and Smoke Conditions are based on fire research data provided by nationally recognized labs. Smoke output is tied to the size of the fire and the time since ignition. Once the fire is started it will grow and extend to additional panels while producing realistic volumes of smoke. The system can also be controlled manually throughout the evolution with the Industrial Remote.
Hose Line Detection The system includes a waterproof panel that features thermal sensors. These sensors detect the application of water or other extinguishing agents and vary the digital flames in response. The system also features sound effects and available smoke generation that react dynamically to the trainee's actions for a true-to-life experience. Steam Conversion Technology™ recreates the low visibility conditions present when water is first applied to an actual fire.

The Attack Digital Fire Training System can be used in hands-on training when fire suppression is the objective, and also to add realism in fire training situations where fire suppression is not the main objective.

- Create basic or intense fire scenarios with extension where live fire isn't possible.
- Use the ATTACK to train on fundamentals so you can make the most of live-fire burns.
- Introduce new firefighters to fire and smoke conditions in a safe environment.
- Change the location and characteristics of the fire between evolutions and prevent training from becoming too predictable.
- Simulate fire conditions where getting water on the fire isn't the primary objective but the size and location of the fire is still an important element.
- Add more realism to drills such as Vent Enter Search, RIT Operations, Search and Rescue. Challenge trainees to maintain situational awareness, identify the location of the fire and if not extinguish, confine the fire while other critical operations take place.

Appendix IFSAC Assessed Skills

Firefighter I – Skills

Skill #1: *Ability to don and doff personal protective clothing*

Skill #2: *Hoist tools and equipment using ropes*

Skill #3: *Initiate the response to a reported emergency*

Skill #4: *Receive a non-emergency telephone call*

Skill #5: *Transmit and receive messages via fire department radio*

Skill #6: *Use self-contained breathing apparatus (SCBA)*

Skill #7: *Respond on apparatus*

Skill #8: *Establish and operate in work areas*

Skill #9: *Force entry*

Skill #10: *Exit a hazardous area given vision-obscured conditions*

Skill #11: *Set up ground ladders*

Skill #12: *Attack a passenger vehicle fire*

Skill #13: *Extinguish fires in exterior Class A materials*

Skill #14: *Conduct a search and rescue in a structure*

Skill #15: *Attack an interior structure fire*

Skill #16: *Perform horizontal ventilation*

Skill #17: *Perform vertical ventilation*

Skill #18: *Overhaul a fire scene*

Skill #19: *Conserve property*

Skill #20: *Connect a fire department pumper to a water supply*

Skill #21: *Extinguish incipient Class A, Class B, and Class C fires with portable fire extinguishers*

Skill #22: *Illuminate the emergency scene*

Skill #23: *Turn off building utilities*

Skill #24: *Combat a ground cover fire*

Skill #25: *Clean and check ladders*

Skill #26: *Clean and check ventilation equipment*

Skill #27: *Clean and check SCBA*

Skill #28: *Clean and check ropes*

Skill #29: *Clean and check salvage equipment*

Skill #30: *Clean and check hand tools*

Skill #31: *Clean, inspect, and return fire hose to service*

Firefighter II – Skills

Skill #1: *Utilize an incident management system*

Skill #2: *Complete a basic incident report*

Skill #3: *Communicate the need for team assistance*

Skill #4: *Extinguish an ignitable liquid fire*

Skill #5: *Coordinate an interior attack*

Skill #6: *Control a flammable gas cylinder fire*

Skill #7: *Protect evidence of fire cause and origin*

Skill #8: *Extricate a victim entrapped in a motor vehicle*

Skill #9: *Assist rescue operation teams*

Skill #10: *Perform a fire safety survey in a private dwelling*

Skill #11: *Present fire safety information to station visitors or small groups*

Skill #12: *Prepare a preincident survey*

Skill #13: *Maintain power plants, power tools, and lighting equipment*

Skill #14: *Perform an annual service test on fire hose*

Haz Mat Awareness/Operations Skills

Skill #1: *Implement the Planned Response*

Skill #2: *Emergency Decontamination*

Skill #3: *Ability to don, work in, and doff personal protective clothing*

Skill #4: *Complete Reporting and Documentation Requirements*

Skill #5: *Product Control: Application of Foam*

Skill #6: *Product Control: Spill Control/Confinement*

Skill #7: *Technical Decontamination*

Firefighter I Skills Assessment Skill Sheet #11

Portland Community College
FP 111 – Firefighter I Skills Academy
Skill Event #11

PERFORMANCE STEPS
Set Up Ground Ladders

Prerequisite/Requisite Competency: NFPA 1001-2008, Section 5.3.6.
Required Candidate Equipment: Full Personal Protective Clothing.
Required Instructor Equipment: Roof ladder; 24 foot extension ladder; and 35 foot extension ladder.

CARRIES:
One-Firefighter Carry:
Step 1: Confirm order with officer to ladder building.
Step 2: Determine correct ladder for assignment.
Step 3: Position yourself at lifting point near center of ladder.
Step 4: Kneel beside ladder facing the tip.
Step 5: Grasp ladder by your knee and stand it on its beam.
Step 6: Begin to stand and lift ladder; as you lift ladder pivot toward the ladder and put your arm through the ladder between the rungs.
Step 7: Rest ladder on your shoulder and grasp the rung in front of your body.

Step 8: Tilt ladder slightly downward.
Step 9: Check for obstacle in front and behind the ladder.
Step 10: Announce: "ladder coming through" before proceeding.
Step 11: Carry ladder to desired location; periodically announce: "ladder coming through" while carrying the ladder.

Two Firefighter Carry:
Step 1: Confirm order with officer to ladder building.
Step 2: Determine correct ladder for assignment.
Step 3: Firefighter (FF) #1 positions near the butt FF #2 positions near the tip.
Step 4: Both FFs kneel on the same side of the ladder; both FFs face the tip.
Step 5: Both FFs grasp the ladder and stand it on its beam.
Step 6: FF #1 (located at butt) gives command to "shoulder ladder."
Step 7: Both FFs lift ladder simultaneously; as ladder is lifted both FFs pivot their arm through the ladder.
Step 8: Both FFs rest ladder on their shoulder and grasp the rung in front of them. Both FFs should be facing the butt.
Step 9: Check for obstacle in front and behind the ladder.
Step 10: FF #2 announces: "ladder coming through" before proceeding.
Step 11: Carry ladder to desired location; FF #2 periodically announces: "ladder coming through" as the ladder is carried.

Three Firefighter Carry:
Step 1: Confirm order with officer to ladder building.
Step 2: Determine correct ladder for assignment.
Step 3: FF #1 position's between beams at tip of ladder; FF #2 & FF #3 (FF #3 is the ladder team leader) position on opposite sides at the butt of the ladder.
Step 4: Facing the butt of the ladder, all FFs kneel and grasp the beams of the ladder.
Step 5: FF #3 gives command to lift the ladder.
Step 6: All FFs simultaneously stand and lift the ladder.
Step 7: Check for obstacles in front and around the ladder prior to moving forward with it.
Step 8: Prior to moving forward with the ladder, FF #3 announces: "ladder coming through."
Step 9: Carry ladder to desired location; FF #3 periodically announces: "ladder coming through" as the ladder is carried.

RAISES:

One-Firefighter Raise:
Step 1: As you approach the area where the ladder will be raised, visually inspect the work area.
Step 2: Place the butt of the ladder at a location out from the building that is approximately 25% of the height where it will contact the building.
Step 3: Prior to raising the ladder, check the area above for wires, limbs, and other impediments. If it is clear, announce: "clear above."
Step 4: Walk the beam to raise the ladder until it is vertical.
Step 5: Pivot the ladder until it is parallel to the building and the fly is positioned on the building side.
Step 6: Standing on the side of the ladder away from the building, balance the ladder in a vertical position with one foot at the butt of one beam and the ladder steadied with the instep, knee, and leg.
Step 7: Extend the ladder by pulling straight down to maintain ladder balance.
Step 8: Engage the ladder locks at the desired location.
Step 9: Lower the ladder against the building.
Step 10: Pivot the ladder so the fly is out (flip the ladder over).
Step 11: Tie off the halyard.
Step 12: Check the climbing angle and adjust if necessary.

Two-Firefighter – Flat Raise:
Step 1: As you approach the area where the ladder will be raised, visually inspect the work area.
Step 2: Place the butt of the ladder at a location out from the building that is approximately 25% of the height where it will contact the building. The ladder is perpendicular to the building.
Step 3: Prior to raising the ladder, check the area above for wires, limbs, and other impediments. If it is clear, announce: "clear above."
Step 4: FF #1 butts the ladder by standing on the bottom rung.
Step 5: FF #2 lifts the ladder until it is above his or her head.

Step 6: FF #2 advances hand-over-hand down the rungs toward the butt until the ladder is in a vertical position. NOTE: FF #1 grasps successively higher rungs as the ladder is raised by FF #2 until the ladder is in the vertical position and then steps off the rung.
Step 7: If necessary, pivot ladder so the fly is out.
Step 8: With both FFs facing each other, they heel the ladder in a vertical position by placing one foot at the butt of one beam and steadying it with the instep, knee, and leg. NOTE: one FF heels one beam and the other FF heals the other beam.
Step 9: FF #1 (the FF nearest the building) grasps the halyard and extends the ladder to the desired height. **NOTE:** All ladder locks must be properly engaged.
Step 10: Both FFs lower the ladder onto the building.
Step 11: FF #1 ties-off the halyard.
Step 12: FF #2 checks the climbing angle and adjusts if necessary.

Two-Firefighter – Beam Raise:
Step 1: As you approach the area where the ladder will be raised, visually inspect the work area.
Step 2: Place the butt of the ladder at a location out from the building that is approximately 25% of the height where it will contact the building. The ladder is parallel to the building.
Step 3: Prior to raising the ladder, check the area above for wires, limbs, and other impediments. If it is clear, announce: "clear above."
Step 4: FF #1 butts the ladder by placing his/her toe on the butt of the beam touching the ground.
Step 5: FF #2 lifts the ladder until the bottom beam rests on his/her shoulder.
Step 6: FF #2 advances hand-over-hand down the beam toward the butt until the ladder is in a vertical position, parallel to the building.
Step 7: If necessary, pivot ladder so the fly is out.
Step 8: With both FFs facing each other, they heel the ladder in a vertical position by placing one foot at the butt of one beam and steadying it with the instep, knee, and leg. NOTE: one FF heels one beam and the other FF heals the other beam.

Step 9: FF #1 (the FF nearest the building) grasps the halyard and extends the ladder to the desired height. **NOTE:** All ladder locks must be properly engaged.
Step 10: Both FFs lower the ladder onto the building.
Step 11: FF #1 ties-off the halyard.
Step 12: FF #2 checks the climbing angle and adjusts if necessary.

Three-Firefighter – Flat Raise:
Step 1: As you approach the area where the ladder will be raised, visually inspect the work area.
Step 2: Place the butt of the ladder at a location out from the building that is approximately 25% of the height where it will contact the building. The ladder is perpendicular to the building.
Step 3: Prior to raising the ladder, check the area above for wires, limbs, and other impediments. If it is clear, announce: "clear above."
Step 4: FF #3 butts the ladder by standing on the bottom rung.
Step 5: FF #1 and FF #2 lift the ladder until it is above their heads.
Step 6: FF #1 and FF #2 advance hand-over-hand down the beams toward the butt until the ladder is in a vertical position. NOTE: FF #3 grasps successively higher rungs as the ladder is raised by FF #1 and FF #2 until the ladder is in the vertical position and then steps off the rung.
Step 7: If necessary, pivot ladder so the fly is out.
Step 8: With both FFs facing each other, they heel the ladder in a vertical position by placing one foot at the butt of one beam and steadying it with the instep, knee, and leg. NOTE: one FF heels one beam and the other FF heals the other beam.
Step 9: FF #3 (the FF nearest the building) grasps the halyard and extends the ladder to the desired height. **NOTE:** All ladder locks must be properly engaged.
Step 10: All FFs lower the ladder onto the building.
Step 11: FF #3 ties-off the halyard.
Step 12: FF #1 checks the climbing angle and adjusts if necessary.

Three-Firefighter – Beam Raise:
Step 1: As you approach the area where the ladder will be raised, visually inspect the work area.
Step 2: Place the butt of the ladder at a location out from the building that is approximately 25% of the height where it will contact the building. The ladder is perpendicular to the building.

Step 3: Prior to raising the ladder, check the area above for wires, limbs, and other impediments. If it is clear, announce: “clear above.”

Step 4: FF #3 butts the ladder by placing his/her toe on the butt of the beam touching the ground.

Step 5: FF #1 and FF #2 lift the ladder until the bottom beam rests on the shoulder of the FF nearest the butt.

Step 6: FF #1 and FF #2 advance hand-over-hand down the beam toward the butt until the ladder is in a vertical position, parallel to the building.

Step 7: If necessary, pivot ladder so the fly is out.

Step 8: FF #1 and FF #2 heel the ladder in a vertical position by placing one foot at the butt of one beam and steadying it with the instep, knee, and leg. NOTE: one FF heels one beam and the other FF heals the other beam.

Step 9: FF #3 (the FF nearest the building) grasps the halyard and extends the ladder to the desired height. **NOTE:** All ladder locks must be properly engaged.

Step 10: Both FFs lower the ladder onto the building.

Step 11: FF #1 ties-off the halyard.

Step 12: FF #2 checks the climbing angle and adjusts if necessary.

Portland Community College
Firefighter I Skills Assessment
Skill Sheet #11
SET UP GROUND LADDERS

JPR: NFPA 1001-2008, Section 5.3.6.
Reference: IFSTA, *Essentials of Fire Fighting*©, 5th edition, 2008.
Skill SHEETS: 10-I-2 (p. 511), 10-I-3 (p. 512), 10-I-4 (p. 513), 10-I-5 (p. 514), 10-I-6 (pp. 515 – 518), 10-I-7 (pp. 519 – 520), 10-I-8 (pp. 521 – 522), 10-I-9 (pp. 523 – 524), 10-I-11 (p. 527), 10-I-12 (pp. 528 – 529), 10-I-13 (p. 530)
Candidate Equipment Required: Full Personal Protective Clothing
Evaluator Equipment Required: Roof ladder; 24' extension ladder; and 35 foot extension ladder
Read To Candidate:
For this skill event, you will operate individually OR as a member of a team, demonstrating the ability to carry; place, and raise ladders; judge correct angle for climbing; and judge extension ladder height requirements. There **are two parts** for this skill event. You will be required to assess overhead hazards, strength of structural support components, and any other existing hazards. You must verbalize conscious decisions you are making so I know your actions are not coincidental. I will assign you the ladder operation to be performed, e.g., a rescue from a window or fire stream operations. The skill event assessment will begin after I give you the assignment.

You will carry the ladders from the start point to a location appropriate for the assignment. You are required to observe all safety precautions when moving ladders. You must use an approved ladder carry technique. You must use an approved method of raising the ladder that is appropriate for the given assignment. You must use proper climbing technique and be properly secured to the ladder when required. This skill event will be concluded when the ladder has been returned to its original start point.

This is not a timed event; however, you should complete this event within a reasonable fireground time. To pass this station, you must successfully complete 100% of the critical steps (steps in **BOLD**) and a majority of the non-critical steps (steps in *ITALICS*) in both ***Part A*** and the assigned **Option** in ***Part B***.

P-Pass / F-Fail:

1st Attempt	2nd attempt	
		Skill Demonstration: Part A
		Carry, Raise, and Placement
____	____	*1. Confirmed order to ladder structure.*
____	____	**2. Select appropriate length ladder for assignment.**
____	____	*3. Carried the ladder correctly.*
____	____	**4. Checked for hazards & overhead wires.**
____	____	**5. Confirmed that wall/roof will support the ladder.**
____	____	**6. Raised ladder to vertical position safely.**
____	____	7. Extension ladders only – **Extended ladder to proper height for assigned scenario.**
____	____	8. Extension ladders only – **Confirmed all ladder fly locks were locked & tied off halyard.**
____	____	**9. Ladder set up safely to avoid obvious hazards, stable, at correct climbing angle, tip location appropriate for scenario.**
		Skill Demonstration: Part B
		Operations: <u>Option A</u> – Rescue Operations
____	____	**10. Ensured ladder properly positioned for rescue operation.**
____	____	**11. Ensured ladder properly heeled/butted before climbing.**
____	____	*12. Properly climbed ladder.*
____	____	**13. Properly secured self to ladder.**
____	____	**14. Properly performed ladder rescue.**
____	____	*15. Notified Command upon completing assignment.*
____	____	*16. Lowered ladder safely and returned to service.*
		Operations: <u>Option B</u> – Fire Stream Operations
____	____	**17. Ensured ladder properly positioned for fire stream operation.**
____	____	**18. Ensured ladder properly heeled/butted before climbing.**

____ ____ *19. Properly climbed ladder.*
____ ____ **20. Properly secured self to ladder.**
____ ____ *21. Properly secured hose to ladder for fire stream operation.*
____ ____ **22. .Operated nozzle from ladder.**
____ ____ *23. Notified Command upon completing assignment.*
____ ____ *24. Lowered ladder safely and returned to service.*

Candidate's Name: _____ Station: P ____ F ____ P ____ F ____
1st Attempt 2nd attempt

Evaluator's Signature: _____

Core Outcomes Mapping

Mapping Level Indicators	Core Outcomes
0: Not Applicable.	1. Communication.
1: Limited demonstration or application of knowledge and skills.	2. Community and Environmental Responsibility.
2: Basic demonstration and application of knowledge and skills.	3. Critical Thinking and Problem Solving.
3. Demonstrated comprehension and is able apply essential knowledge and skills	4. Cultural Awareness.
4: Demonstrates thorough, effective and/or sophisticated application of knowledge and skills.	5. Professional Competence.
	6. Self-Reflection.

Course	Course Name	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6
FP 101	Principles of Emergency Services	2	2	1	1	2	2
FP 111	Fire Academy Part 1	2	2	2	2	3	2
FP 112	Fire Academy Part 2	2	2	2	2	3	2
FP 121	Fire Behavior and Combustion	1	1	2	0	0	0
FP 122	Fundamentals of Fire Prevention	2	2	2	1	1	1
FP 123	Hazardous Materials Awareness and Operations	2	1	1	1	2	0
FP 130	Fire Protection Hydraulics and Water Supply	2	2	2	2	2	2
FP 133	Wildland Firefighter	1	2	3	0	3	0
FP 137	Fire Protection Systems	2	2	1	0	1	0
FP 161	Vehicle Extrication Basics	2	2	2	2	2	2
FP 166	Building Construction for Fire Protection	1	2	3	0	2	0
FP 170	Introduction to Firefighting Tactics and Strategies	3	2	4	1	2	3
FP 200	Fire Apparatus Driver/Operator I	2	2	2	2	2	2
FP 201	Introduction to Emergency Service Rescue	1	0	3	0	3	1
FP 207	Fire Service Based Emergency Medical Service	3	3	3	3	3	3
FP 210	Multicultural Strategies for Firefighters	2	2	2	2	3	2
FP 212	Fire Investigation (Cause Determination)	2	2	3	2	2	3
FP 214	Occupational Safety and Health for the Fire Service	3	3	3	3	3	3
FP 215	Urban Interface Firefighting	2	3	3	1	3	0
FP 225	Fire Department Customer Service	3	2	3	3	3	3
FP 232	Pump Construction and Hydraulics II	2	2	2	2	2	2
FP 240	Emergency Services Instructor I	2	1	2	3	3	3
FP 242	Hazardous Materials Chemistry	2	3	3	0	2	0
FP 243	Laws Affecting Fire Fighting	2	3	3	3	3	3

FP 273	Fire Service Human Resource Management	3	3	3	3	3	3
FP 274	Introduction to Fire and Emergency Administration	3	0	3	3	3	4
FP 275	Community and Government Relations	4	4	4	4	4	4
FP 280A	Cooperative Education: Fire	3	3	3	3	3	3
FP 280B	Cooperative Education: Seminar	3	1	2	3	3	3
FP 289	Emergency Service Lifetime Fitness and Conditioning	4	3	4	2	2	4
FP 291	Fire Codes and Related Ordinances	3	3	3	3	3	2
FP 295	Major Emergency Tactics/Strategies	3	3	4	0	3	0

Fire Science

COLLEGEWIDE TABLES (Excl Campus 6): Full Time Equivalent (Student FTE) Enrollment and % Change	2009-10	Percent Change: 08-09 to 09-10	2010-11	Percent Change: 09-10 to 10-11	2011-12	Percent Change: 10-11 to 11-12	2012-13	Percent Change: 11-12 to 12-13	2013-14
	Total	%	Total	%	Total	%	Total	%	Total
Collegewide, Excl Campus 6	**319.4**	*11.4*	**337.7**	*5.7*	**177.4**	*-47.5*	**152.0**	*-14.3*	**121.3**

COLLEGEWIDE TABLES (Excl Campus 6): Unduplicated Headcount Enrollment and % Change	2009-10	Percent Change: 08-09 to 09-10	2010-11	Percent Change: 09-10 to 10-11	2011-12	Percent Change: 10-11 to 11-12	2012-13	Percent Change: 11-12 to 12-13	2013-14
	Total	%	Total	%	Total	%	Total	%	Total
Collegewide, Excl Campus 6	**784**	*24.2*	**831**	*6.0*	**533**	*-35.9*	**456**	*-14.4*	**390**

COLLEGEWIDE TABLES (Excl Campus 6): Gender Distribution			Female	Male
		N	%	%
Collegewide, Excl Campus 6				
	2011-2012	**529**	11.2	88.8
	2012-2013	**453**	13.5	86.5
	2013-2014	**387**	11.4	88.6

COLLEGEWIDE TABLES (Excl Campus 6): Race/Ethnicity Distribution		Total	Foreign National	Multi-Racial	African American	Pacific Islander	Asian	American Indian/Alaska Native	Hispanic	White Non-His
		N	%	%	%	%	%	%	%	%
Collegewide, Excl Campus 6										
	2011-2012	**482**	0.4	3.1	2.5	0.4	3.1	1.5	5.6	
	2012-2013	**417**	0.7	4.8	2.4	0.2	3.4	0.5	3.6	
	2013-2014	**360**	0.3	4.7	4.2	0.3	3.3	0.8	4.7	

COLLEGEWIDE TABLES (Excl Campus 6): Age Distribution			14-17	18-20	21-25	26-30	31-40	41-50	51-60	61+
		N	%	%	%	%	%	%	%	%
Collegewide, Excl Campus 6										
	2011-2012	532	1.3	26.1	29.7	21.1	14.8	5.3	1.3	0.4
	2012-2013	456	0.4	23.0	32.2	19.1	16.4	6.8	1.5	0.4
	2013-2014	390	0.3	22.8	34.9	17.7	16.2	5.9	1.8	0.5

COLLEGEWIDE TABLES (Excl Campus 6): Percent Distribution of Students who Indicate they are Degree-Seeking or Non-Degree-Seeking		All	Degree Seeking	Non-Degree Seeking
		N	%	%
Collegewide, Excl Campus 6				
	2011-2012	533	93.6	6.4
	2012-2013	456	96.5	3.5
	2013-2014	390	97.7	2.3

COLLEGEWIDE TABLES (Excl Campus 6): Percent Distribution of Students in the Subject Area who are Enrolled Full-, Half-, or Part-Time at PCC in Credit Courses (in this or other subject areas): Fall Term Only			Full Time Credit Courseload	Half Time Credit Courseload	Part Time Credit Courseload
			%	%	%
Collegewide, Excl Campus 6					
	Fall	2011-2012	45.0	41.2	13.7
		2012-2013	47.1	38.9	13.9
		2013-2014	46.1	34.2	19.6

COLLEGEWIDE TABLES (Excl Campus 6): Grades (Credit Courses Only) for 2013-14, by Course	Total	A	B	C	D	P	F/NP	W	Other/Incomp/Audit
	N	%	%	%	%	%	%	%	%
FP 101	**124**	31.5	21.0	8.1	4.0	.	19.4	11.3	4.8
FP 111	**37**	13.5	64.9	13.5	.	.	.	8.1	.
FP 112	**34**	17.6	61.8	17.6	2.9	.	.	.	.
FP 121	**113**	62.8	10.6	7.1	.	.	8.8	2.7	8.0
FP 122	**78**	47.4	24.4	5.1	.	1.3	20.5	1.3	.
FP 123	**83**	19.3	41.0	13.3	6.0	.	14.5	6.0	.
FP 133	**76**	39.5	38.2	9.2	.	.	10.5	2.6	.
FP 137	**39**	69.2	20.5	7.7	.	.	.	2.6	.
FP 161	**10**	70.0	.	.	.	.	30.0	.	.
FP 166	**40**	42.5	15.0	5.0	10.0	2.5	22.5	.	2.5
FP 170	**59**	40.7	37.3	11.9	.	.	3.4	.	6.8
FP 200	**37**	51.4	37.8	.	.	.	5.4	5.4	.
FP 201	**35**	54.3	40.0	2.9	.	.	.	2.9	.
FP 202	**26**	61.5	19.2	7.7	3.8	.	3.8	3.8	.
FP 210	**77**	64.9	18.2	6.5	.	.	6.5	3.9	.
FP 211	**26**	46.2	15.4	11.5	11.5	.	3.8	7.7	3.8
FP 212	**74**	60.8	20.3	8.1	2.7	.	5.4	2.7	.
FP 214	**81**	39.5	28.4	17.3	3.7	.	8.6	1.2	1.2
FP 232	**36**	75.0	13.9	.	.	.	5.6	5.6	.
FP 274	**7**	85.7	.	.	.	.	14.3	.	.
FP 280A	**110**	.	.	.	.	85.5	11.8	0.9	1.8
FP 289	**28**	64.3	17.9	3.6	.	.	7.1	7.1	.
FP 291	**14**	57.1	35.7	.	.	.	.	7.1	.
FP 295	**26**	88.5	.	.	.	.	7.7	3.8	.

CAMPUS TABLES: Full Time Equivalent (Student FTE) Enrollment and % Change	2009-10	Percent Change: 08-09 to 09-10	2010-11	Percent Change: 09-10 to 10-11	2011-12	Percent Change: 10-11 to 11-12	2012-13	Percent Change: 11-12 to 12-13	2013-14	Percen Change 12-13 t 13-14
	Total	%	Total	%	Total	%	Total	%	Total	%
Cascade	319.4	11.4	337.7	5.7	177.4	-47.5	152.0	-14.3	121.3	-20.2

CAMPUS TABLES: Full-Time Equivalent (Student FTE) Enrollment, by Course		2011-12	10-11 to 11-12	Percent Change: 10-11 to 11-12	2012-13	11-12 to 12-13	Percent Change: 11-12 to 12-13	2013-14	12-13 to 13-14	Percent Change: 12-13 to 13-14
		Total	Change	%	Total	Change	%	Total	Change	%
FP 101	Cascade	15.6	-5.7	-26.8	11.9	-3.6	-23.4	8.3	-3.6	-30.4
FP 111	Cascade	21.8	-57.8	-72.6	25.4	3.6	16.4	13.5	-12.0	-47.0
FP 112	Cascade	24.9	-16.7	-40.1	14.3	-10.6	-42.6	9.5	-4.9	-33.9
FP 113	Cascade	.	.	.	.	.	.	.	.	.
FP 121	Cascade	7.6	-1.9	-20.3	7.7	0.1	1.2	7.5	-0.2	-2.6
FP 122	Cascade	8.3	2.1	34.1	7.0	-1.3	-15.3	5.1	-1.9	-27.0
FP 123	Cascade	6.8	-8.0	-54.1	6.5	-0.2	-3.3	7.3	0.8	12.4
FP 131	Cascade	.	.	.	.	.	.	.	.	.
FP 132	Cascade	.	.	.	.	.	.	.	.	.
FP 133	Cascade	6.5	-5.9	-47.4	5.5	-1.0	-15.5	5.2	-0.3	-5.1
FP 137	Cascade	.	.	.	.	.	.	2.6	.	.
FP 141	Cascade	.	.	.	.	.	.	.	.	.
FP 161	Cascade	0.2	-0.0	-7.3	.	.	.	0.2	.	.
FP 166	Cascade	.	.	.	.	.	.	2.7	.	.
FP 170	Cascade	.	.	.	.	.	.	4.0	.	.
FP 200	Cascade	4.0	0.7	23.0	3.7	-0.3	-7.1	2.5	-1.2	-33.6
FP 201	Cascade	8.8	-4.4	-33.2	6.4	-2.4	-27.6	4.7	-1.7	-27.1
FP 202	Cascade	5.0	0.2	3.4	3.6	-1.4	-28.6	1.7	-1.9	-52.8
FP 203A	Cascade	5.2	0.6	12.8	3.0	-2.1	-41.4	.	.	.
FP 208	Cascade	.	.	.	.	.	.	.	.	.
FP 210	Cascade	6.0	5.0	506.7	5.2	-0.8	-13.1	5.3	0.1	1.1
FP 211	Cascade	4.8	-1.2	-19.6	6.4	1.5	31.9	1.7	-4.7	-73.5
FP 212	Cascade	4.3	-1.3	-23.7	2.1	-2.2	-50.2	5.0	2.8	132.0

FP 213	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 214	**Cascade**	**4.6**	0.1	*1.2*	**4.6**	0.0	*0.0*	**5.4**	0.8	*18.0*
FP 215	**Cascade**	**1.0**	-0.3	*-22.5*	**.**	.	.	**.**	.	.
FP 231	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 232	**Cascade**	**3.9**	-5.8	*-59.9*	**3.7**	-0.2	*-4.0*	**2.4**	-1.3	*-35.5*
FP 233	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 240	**Cascade**	**1.0**	-2.2	*-68.2*	**0.7**	-0.3	*-31.8*	**.**	.	.
FP 242	**Cascade**	**1.6**	-0.7	*-28.9*	**1.2**	-0.5	*-28.3*	**.**	.	.
FP 243	**Cascade**	**0.4**	-1.4	*-76.5*	**0.2**	-0.2	*-50.0*	**.**	.	.
FP 245	**Cascade**	**.**	.	.	**0.2**	.	.	**.**	.	.
FP 248	**Cascade**	**0.3**	.	.	**0.2**	-0.2	*-53.3*	**.**	.	.
FP 250	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 252	**Cascade**	**0.9**	0.4	*92.9*	**.**	.	.	**.**	.	.
FP 260	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 262	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 274	**Cascade**	**.**	.	.	**.**	.	.	**0.5**	.	.
FP 280A	**Cascade**	**31.9**	-11.9	*-27.1*	**30.4**	-1.5	*-4.8*	**21.9**	-8.5	*-28.0*
FP 280B	**Cascade**	**.**	.	.	**0.0**	.	.	**.**	.	.
FP 289	**Cascade**	**.**	.	.	**.**	.	.	**1.9**	.	.
FP 291	**Cascade**	**.**	.	.	**.**	.	.	**0.9**	.	.
FP 293	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 295	**Cascade**	**0.8**	.	.	**0.8**	0.1	*9.1*	**1.8**	1.0	*116.7*
FP 299	**Cascade**	**.**	.	.	**1.3**	.	.	**.**	.	.
FP 9020	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9050	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9060	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9070	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9080	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9090	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9110	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9120	**Cascade**	**1.2**	1.1	*1549.6*	**.**	.	.	**.**	.	.
FP 9140	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9150	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9520	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.

CAMPUS TABLES: Unduplicated Headcount Enrollment and % Change	2009-10	Percent Change: 08-09 to 09-10	2010-11	Percent Change: 09-10 to 10-11	2011-12	Percent Change: 10-11 to 11-12	2012-13	Percent Change: 11-12 to 12-13	2013-14	Percen Change 12-13 t 13-14
	Total	%	Total	%	Total	%	Total	%	Total	%
Cascade	784	*24.2*	831	*6.0*	533	*-35.9*	456	*-14.4*	390	*-14.5*

CAMPUS TABLES: Enrollment (Seats Taken), by Course		2011-12	10-11 to 11-12	Percent Change: 10-11 to 11-12	2012-13	11-12 to 12-13	Percent Change: 11-12 to 12-13	2013-14	12-13 to 13-14	Percent Change: 12-13 to 13-14
		Total	Change	%	Total	Change	%	Total	Change	%
FP 101	Cascade	232	-85	*-26.8*	179	-53	*-22.8*	124	-55	*-30.7*
FP 111	Cascade	58	-164	*-73.9*	69	11	*19.0*	37	-32	*-46.4*
FP 112	Cascade	95	-65	*-40.6*	66	-29	*-30.5*	34	-32	*-48.5*
FP 113	Cascade	.	.	.	.	.	.	.	.	.
FP 121	Cascade	112	-31	*-21.7*	113	1	*0.9*	113	0	*0.0*
FP 122	Cascade	123	29	*30.9*	104	-19	*-15.4*	78	-26	*-25.0*
FP 123	Cascade	102	-117	*-53.4*	98	-4	*-3.9*	83	-15	*-15.3*
FP 131	Cascade	.	.	.	.	.	.	.	.	.
FP 132	Cascade	.	.	.	.	.	.	.	.	.
FP 133	Cascade	96	-93	*-49.2*	81	-15	*-15.6*	76	-5	*-6.2*
FP 137	Cascade	.	.	.	.	.	.	39	.	.
FP 141	Cascade	.	.	.	.	.	.	.	.	.
FP 161	Cascade	17	1	*6.3*	.	.	.	10	.	.
FP 166	Cascade	.	.	.	.	.	.	40	.	.
FP 170	Cascade	.	.	.	.	.	.	59	.	.
FP 200	Cascade	60	12	*25.0*	59	-1	*-1.7*	37	-22	*-37.3*
FP 201	Cascade	66	-46	*-41.1*	48	-18	*-27.3*	35	-13	*-27.1*
FP 202	Cascade	78	1	*1.3*	56	-22	*-28.2*	26	-30	*-53.6*
FP 203A	Cascade	76	7	*10.1*	43	-33	*-43.4*	.	.	.
FP 208	Cascade	.	.	.	.	.	.	.	.	.
FP 210	Cascade	91	77	*550.0*	78	-13	*-14.3*	77	-1	*-1.3*
FP 211	Cascade	75	-18	*-19.4*	92	17	*22.7*	26	-66	*-71.7*
FP 212	Cascade	67	-21	*-23.9*	34	-33	*-49.3*	74	40	*117.6*
FP 213	Cascade	.	.	.	.	.	.	.	.	.

FP 214	**Cascade**	**68**	0	*0.0*	**68**	0	*0.0*	**81**	13	*19.1*
FP 215	**Cascade**	**16**	-3	*-15.8*	**.**	.	.	**.**	.	.
FP 231	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 232	**Cascade**	**58**	-86	*-59.7*	**59**	1	*1.7*	**36**	-23	*-39.0*
FP 233	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 240	**Cascade**	**11**	-26	*-70.3*	**10**	-1	*-9.1*	**.**	.	.
FP 242	**Cascade**	**23**	-11	*-32.4*	**18**	-5	*-21.7*	**.**	.	.
FP 243	**Cascade**	**20**	-60	*-75.0*	**10**	-10	*-50.0*	**.**	.	.
FP 245	**Cascade**	**.**	.	.	**9**	.	.	**.**	.	.
FP 248	**Cascade**	**15**	.	.	**7**	-8	*-53.3*	**.**	.	.
FP 250	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 252	**Cascade**	**11**	6	*120.0*	**.**	.	.	**.**	.	.
FP 260	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 262	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 274	**Cascade**	**.**	.	.	**.**	.	.	**7**	.	.
FP 280A	**Cascade**	**160**	-60	*-27.3*	**153**	-7	*-4.4*	**110**	-43	*-28.1*
FP 280B	**Cascade**	**.**	.	.	**1**	.	.	**.**	.	.
FP 289	**Cascade**	**.**	.	.	**.**	.	.	**28**	.	.
FP 291	**Cascade**	**.**	.	.	**.**	.	.	**14**	.	.
FP 293	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 295	**Cascade**	**11**	.	.	**12**	1	*9.1*	**26**	14	*116.7*
FP 299	**Cascade**	**.**	.	.	**9**	.	.	**.**	.	.
FP 9020	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9050	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9060	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9070	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9080	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9090	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9110	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9120	**Cascade**	**18**	17	*1700.0*	**.**	.	.	**.**	.	.
FP 9140	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9150	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.
FP 9520	**Cascade**	**.**	.	.	**.**	.	.	**.**	.	.

CAMPUS TABLES: Gender Distribution			Female	Male
		N	%	%
Collegewide, Excl Campus 6				
	2011-2012	529	11.2	88.8
	2012-2013	453	13.5	86.5
	2013-2014	387	11.4	88.6
Cascade	2011-2012	529	11.2	88.8
	2012-2013	453	13.5	86.5
	2013-2014	387	11.4	88.6

CAMPUS TABLES: Race/Ethnicity Distribution		Total	Foreign National	Multi-Racial	African American	Pacific Islander	Asian	American Indian/Alaska Native	Hispanic	W No
		N	%	%	%	%	%	%	%	
Collegewide, Excl Campus 6										
	2011-2012	482	0.4	3.1	2.5	0.4	3.1	1.5	5.6	
	2012-2013	417	0.7	4.8	2.4	0.2	3.4	0.5	3.6	
	2013-2014	360	0.3	4.7	4.2	0.3	3.3	0.8	4.7	
Cascade	2011-2012	482	0.4	3.1	2.5	0.4	3.1	1.5	5.6	
	2012-2013	417	0.7	4.8	2.4	0.2	3.4	0.5	3.6	
	2013-2014	360	0.3	4.7	4.2	0.3	3.3	0.8	4.7	

Fire Science

CAMPUS TABLES: Age Distribution			14-17	18-20	21-25	26-30	31-40	41-50	51-60	61+
		N	%	%	%	%	%	%	%	%
Collegewide, Excl Campus 6										
	2011-2012	532	1.3	26.1	29.7	21.1	14.8	5.3	1.3	0.4
	2012-2013	456	0.4	23.0	32.2	19.1	16.4	6.8	1.5	0.4
	2013-2014	390	0.3	22.8	34.9	17.7	16.2	5.9	1.8	0.5
Cascade	2011-2012	532	1.3	26.1	29.7	21.1	14.8	5.3	1.3	0.4
	2012-2013	456	0.4	23.0	32.2	19.1	16.4	6.8	1.5	0.4

	2013-2014	390	0.3	22.8	34.9	17.7	16.2	5.9	1.8	0.5

CAMPUS TABLES: Percent Distribution of Students who Indicate they are Degree-Seeking or Non-Degree-Seeking		All	Degree Seeking	Non-Degree Seeking
		N	%	%
Collegewide, Excl Campus 6				
	2011-2012	533	93.6	6.4
	2012-2013	456	96.5	3.5
	2013-2014	390	97.7	2.3
Cascade	2011-2012	533	93.6	6.4
	2012-2013	456	96.5	3.5
	2013-2014	390	97.7	2.3

CAMPUS TABLES: Percent Distribution of Students in the Subject Area who are Enrolled Full-, Half-, or Part-Time at PCC in Credit Courses (in this or other subject areas): Fall Term Only			Full Time Credit Courseload	Half Time Credit Courseload	Part Time Credit Courseload
			%	%	%
Cascade					
	Fall	2011-2012	45.0	41.2	13.7
		2012-2013	47.1	38.9	13.9
		2013-2014	46.1	34.2	19.6

CAMPUS TABLES: Percent Distribution of Students by the Area in which they Reside	Academic Year	
	2012-2013	2013-2014
	Campus Cascade	Campus Cascade
	%	%
Upper North/Northeast Portland	5.0	5.4
Inner City/Holladay Park	4.4	2.8

Central East County	5.3	2.3
Southeast Portland	6.6	7.9
Lake Oswego/SW Portland	5.7	4.6
Downtown/Inner NW/Inner SW Portland	2.0	2.6
Outer SW Portland/Beaverton	3.9	2.8
Aloha/Farmington	6.6	7.4
Tigard/Tualatin/King City	5.0	5.4
Hillsboro/Forest Grove	5.5	8.2
Yamhill County/Sherwood	2.0	1.8
Rock Creek/West District	1.1	1.0
Columbia County/Hwy 30 Corridor	2.4	2.8
Outer Northwest/St. Johns	2.2	1.5
Other Oregon	20.8	24.6
Washington State	19.7	17.9
Other/Unknown	1.8	0.8
All	**100.0**	**100.0**

CAMPUS TABLES: Grades (Credit Courses Only), History		**Total**	**A**	**B**	**C**	**D**	**P**	**F/NP**	**W**	**Other/Incomp/Audit**
		N	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Collegewide, Excl Campus 6	**2011-2012**	**1,758**								
	2012-2013	**1,474**	48.1	20.4	7.3	1.1	9.1	8.3	3.0	2.7
	2013-2014	**1,270**	43.6	24.0	7.5	1.9	7.6	9.8	3.8	1.9
Cascade	**2011-2012**	**1,758**	44.2	22.7	8.1	1.9	7.5	8.6	4.3	2.8
	2012-2013	**1,474**	48.1	20.4	7.3	1.1	9.1	8.3	3.0	2.7
	2013-2014	**1,270**	43.6	24.0	7.5	1.9	7.6	9.8	3.8	1.9

CAMPUS TABLES: Grades (Credit Courses Only) for 2013-14, by Course		**Total**	**A**	**B**	**C**	**D**	**P**	**F/NP**	**W**	**Other/Incomp/Audit**
		N	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
FP 101	**Cascade**	**124**	31.5	21.0	8.1	4.0	.	19.4	11.3	4.8

FP 111	**Cascade**	**37**	13.5	64.9	13.5	.	.	.	8.1	.
FP 112	**Cascade**	**34**	17.6	61.8	17.6	2.9	.	.	.	.
FP 121	**Cascade**	**113**	62.8	10.6	7.1	.	.	8.8	2.7	8.0
FP 122	**Cascade**	**78**	47.4	24.4	5.1	.	1.3	20.5	1.3	.
FP 123	**Cascade**	**83**	19.3	41.0	13.3	6.0	.	14.5	6.0	.
FP 133	**Cascade**	**76**	39.5	38.2	9.2	.	.	10.5	2.6	.
FP 137	**Cascade**	**39**	69.2	20.5	7.7	.	.	.	2.6	.
FP 161	**Cascade**	**10**	70.0	.	.	.	.	30.0	.	.
FP 166	**Cascade**	**40**	42.5	15.0	5.0	10.0	2.5	22.5	.	2.5
FP 170	**Cascade**	**59**	40.7	37.3	11.9	.	.	3.4	.	6.8
FP 200	**Cascade**	**37**	51.4	37.8	.	.	.	5.4	5.4	.
FP 201	**Cascade**	**35**	54.3	40.0	2.9	.	.	.	2.9	.
FP 202	**Cascade**	**26**	61.5	19.2	7.7	3.8	.	3.8	3.8	.
FP 210	**Cascade**	**77**	64.9	18.2	6.5	.	.	6.5	3.9	.
FP 211	**Cascade**	**26**	46.2	15.4	11.5	11.5	.	3.8	7.7	3.8
FP 212	**Cascade**	**74**	60.8	20.3	8.1	2.7	.	5.4	2.7	.
FP 214	**Cascade**	**81**	39.5	28.4	17.3	3.7	.	8.6	1.2	1.2
FP 232	**Cascade**	**36**	75.0	13.9	.	.	.	5.6	5.6	.
FP 274	**Cascade**	**7**	85.7	.	.	.	.	14.3	.	.
FP 280A	**Cascade**	**110**	.	.	.	.	85.5	11.8	0.9	1.8
FP 289	**Cascade**	**28**	64.3	17.9	3.6	.	.	7.1	7.1	.
FP 291	**Cascade**	**14**	57.1	35.7	.	.	.	.	7.1	.
FP 295	**Cascade**	**26**	88.5	.	.	.	.	7.7	3.8	.

Instructor Qualifications

On file for Fire Protection Instructors

AAS Degree in Fire Protection Technology and

- NFPA 1001 Fire Fighter II certification or equivalent and
- NFPA 1041 Fire Instructor I or equivalent and
- 3 years recent experience as a career fire fighter with emergency response experience or 6 years recent experience as a volunteer fire fighter with emergency response experience. Instructors must be current in their field, either through employment, volunteer work or professional organizations.

Approved: May 2011

Draft proposed Instructor Qualifications from October 2012

Course(s)	Qualifications
FP 121, FP 122, FP 130, FP 137, FP 166, FP 170,	• Bachelor's Degree, Fire Service Administration or related subject area preferred; • NFPA 1041, Instructor I level certification; • NFPA 1021, Fire Officer I certification or equivalent certification; • 5 years recent experience as a career fire fighter with emergency response experience or 10 years recent experience as a volunteer fire fighter with emergency response experience; • 2 years instructional experience. ***Instructors must be current in their field, either through employment, volunteer work or professional organizations.***
FP 210, FP 214, FP 225, FP 240, FP 270, FP 271, FP 273, FP 274, FP 275, FP 280A, FP 295 FP 9060	• Bachelor's Degree, Fire Service Administration or related subject area preferred; • NFPA 1041, Instructor II certification or equivalent certification; • NFPA 1021, Fire Officer II certification or equivalent certification; • 5 years recent experience as a career fire fighter with emergency response experience or 10 years recent experience as a volunteer fire fighter with emergency response experience; • 2 years instructional experience. ***Instructors must be current in their field, either through employment, volunteer work or professional organizations.***
FP 212	• Bachelor's Degree, Fire Service Administration or related subject area preferred; • NFPA 1041, Instructor II certification or equivalent certification; • NFPA 1033, Fire Investigator certification or equivalent certification; • 5 years recent experience as a career fire fighter with emergency response experience or 10 years recent experience as a volunteer fire fighter with emergency response experience; • 2 years instructional experience. ***Instructors must be current in their field, either through employment, volunteer work or professional organizations.***
FP 250, FP 260	• Bachelor's Degree, Fire Service Administration or related subject area preferred; • NFPA 1041, Instructor III certification or equivalent certification; • 5 years recent experience as a career fire fighter with emergency response experience or 10 years recent experience as a volunteer fire fighter with emergency response experience; • 2 years instructional experience. ***Instructors must be current in their field, either through employment, volunteer work or professional organizations.***

FP 289	• Bachelor's Degree, Exercise Physiology or related subject area preferred; • 2 years instructional experience.

Instructor Qualifications Certificate in Fire Protection Technology

FP 101, FP 111, FP 112, FP 161	• AAS Degree, Fire Protection Technology or related subject area preferred; • NFPA 1001 Fire Fighter II certification or equivalent; • NFPA 1041 Fire Instructor I or equivalent; • 5 years recent experience as a career fire fighter with emergency response experience or 10 years recent experience as a volunteer fire fighter with emergency response experience; • 2 years instructional experience. ***Instructors must be current in their field, either through employment, volunteer work or professional organizations.***
FP 123	• AAS Degree, Fire Protection Technology or related subject area preferred; • NFPA 1041, Instructor I certification or equivalent certification. • NFPA 472, Hazardous Materials: Awareness certification or equivalent certification. • NFPA 472, Hazardous Materials: Operations certification or equivalent certification. • NFPA 472, Hazardous Materials: Technician certification or equivalent certification. • 5 years recent experience as a career fire fighter with emergency response experience or 10 years recent experience as a volunteer fire fighter with emergency response experience. • 2 years instructional experience. ***Instructors must be current in their field, either through employment, volunteer work or professional organizations.***
FP 133, FP 215	• AAS Degree, Fire Protection Technology or related subject area preferred; • NFPA 1041, Instructor I certification or equivalent certification; • NWCG, Firefighter I certification or equivalent certification; • 5 years recent experience as a career fire fighter with emergency response experience or 10 years recent experience as a volunteer fire fighter with emergency response experience; • 2 years instructional experience. • ***Instructors must be current in their field, either through employment, volunteer work or professional organizations.***

FP 201	• AAS Degree in Fire Protection Technology or related subject area;
	• NFPA 1041, Instructor I certification or equivalent certification;
	• NFPA 1006, certifications in the following areas or equivalent certifications:
	  • Rope Technical Rescuer Level I;
	  • Surface Water Technical Rescuer Level I;
	  • Swift Water Technical Rescuer Level I;
	  • Vehicle and Machinery Technical Rescuer Level I;
	  • Confined Space Technical Rescuer Level I;
	  • Structural Collapse Technical Rescuer Level I;
	  • Trench Technical Rescuer Level I;
	• 5 years recent experience as a career fire fighter with emergency response experience or 10 years recent experience as a volunteer fire fighter with emergency response experience;
	• 2 years instructional experience.
	Instructors must be current in their field, either through employment, volunteer work or professional organizations.

FP 200, FP 232	• AAS Degree, Fire Protection Technology or in related subject area preferred; • NFPA 1041, Instructor I certification or equivalent certification; • NFPA 1002, Fire Apparatus Driver/Operator - Pumper certification or equivalent certification; • 5 years recent experience as a career fire fighter with emergency response experience or 10 years recent experience as a volunteer fire fighter with emergency response experience; • 2 years instructional experience. ***Instructors must be current in their field, either through employment, volunteer work or professional organizations.***

APS Handbook 1301-Instructor Qualification, Policy

Minimum qualifications for all new instructional faculty employed by or contracting with the college, are set forth below. Instructor qualifications specified here do not apply to Community Education or Continuing Education instructors.

Instructor qualifications are recommended by the Subject Area Committees (SACs) and approved by the administration. Instructor Qualifications should generally align with the criteria listed below however, SACs may recommend specific, alternative, or additional, qualifications (such as identification of degrees within the subject and related areas, professional registration, government certification, familiarity with special equipment or software).

Career and Technical Education (CTE) instructors shall meet one of the following sets of criteria as recommended by the appropriate SAC:

a. hold a master's degree in the subject area and have a minimum of three years of relevant full-time non-teaching experience or

b. hold a master's degree in a related area and have completed at least 30 quarter hours of upper division credit in the subject area) and have a minimum of three years of relevant full-time non-teaching experience, or

c. hold a bachelor's degree in the subject area and have a minimum of four years of relevant full-time non-teaching experience or

d. hold a bachelor's degree in a related area and have completed at least 30 quarter hours of upper division credit in the subject area) and have a minimum of four years of relevant full-time non-teaching experience, or

e. hold an associates' degree in a career or technical field or in the subject area, whichever is more appropriate, and have a minimum of five years of relevant full-time non-teaching experience, or

f. have a high level of demonstrable competency and have a minimum of five years of relevant full-time experience. (Competency can be gained through a combination of study, teaching experience, professional performance in the subject area, or qualifications set by the licensing or accrediting organization for the subject area.)

Fire Protection Advisory Committee Meeting Minutes

October 16, 2015

Attendees: Ed Lindsey, John Saito, Doug Smith, Bill Benjamin, DeAnne Hardy, Mark Hornshuh, Levi Eckhardt, Michelle Butler, Julie Olsen, Jim Pender, Daryl Rosendahl, Fred Charlton, Dan O'Grady, Dennis Katz, Jason McKenna. Kurt Simonds, Pres. Karin Edwards.

Minutes approved for previous meeting, with amendments.

Program Overview

Changes with program: Certificate new as of last year, 2014, In Fire Protection. Includes Firefighter I, II, Hazmat, Wildland. It is a one year certificate. At last meeting it was agreed to move the Health Fitness Class FP289 out of degree and on to the certificate.
45 credits of certificate can be used as electives for degree.

Degree – minor changes
The Psychology 101 course was moved out of the FP course requirements and put in as a required General Education course. This allows for the FP291 Codes and Ordinances to be put back into the FP core course requirements for the degree. Needed to add for the Fire Officer I, II.

Discussed whether the degree becomes 97 credits or stay 100 credits with 21 credits electives. Need to determine when the degree change is made.
John's response – Reduce credits – just need what is needed to be able to do the job in the real world. Fed's concerned in the amount of financial aid. Colleges are being asked to look at programs and decided what is really needed to accomplish a degree. This will also help with completion.
Bill Benjamin – Accreditation should not be a hindrance to complete their bachelor's degree.

Degree is designed for Fire Fighters to promote within their department. With this in mind what electives are really needed when they get out into the administrative world. The list of electives includes all of the certificate courses, and a few more. This is because fire fighters come in with Fire Fighter I, II and don't need to get the Certificate, they can use some other program courses as electives, such as prereqs. for Paramedic or for EOU bachelor's degree such as math, communications, etc. this way they don't need to take the certificate courses to fill the electives.

Not including certificate credits as electives for the degree was a concern. This may make a difference for the certificate students returning to get their Assoc. Degree. How do we get them back to finish?
Katz – asked how many and what credits will transfer to EOU. Up to 120 credits can be transferred. EOU suggests do the 97 credits, with 21 electives in order to carry over to a 4 year college.

Other suggestions: create electives that can feed into a Bachelor's degree, since it is becoming the trend to get a bachelor's degree beyond the Assoc. Many in service fire fighters may not see time or need to complete an Assoc. degree and may go straight to bachelors if nothing transfers. Culture now is to get done now also what I will get out of it. Wants a degree that is useful.

The Assoc. degree shouldn't be a dead end degree. Students coming out of high school use certificate to get a job, and will use it to get Assoc. degree.

John is asking the committee to review the core course and electives to evaluate which are really needed to do the job and to ensure that courses can be used at a 4 year college.
It was suggested that the core should consist of only what is required for Fire Officer I & II. Then remaining should be what can transfer to 4 year.
Most college only transfer general Ed courses. Many of the FP classes are repetitive, don't transfer, and or need to be retaken at some colleges with fire related degrees.

FP 225 Fire Department Customer Service (John Saito)

Need to make degrees more relevant and give a broad base education. A suggested instead of individual classes, such as Customer Service, possible imbedding it into other courses, to reduce amount of courses needed in degree.

Julie Olsen – DPPST is still trying to figure out There are trends, previously courses were designed for Fire Officer I & II, to have a well-rounded education, to enable students to be a better candidate for jobs. There is a change in the standards between certifications and education. DPSST is now looking at education, is it a canned education? Is it like a coupon to get certification? Paradigm is shifting towards do the students have to work to get these certifications. They need to be articulate, in their applications. DPPST looking at doing what needs to be taught verses the ideal courses to have everything possible.

Ed Lindsey – NFPA standards requirements are how the fire program sets their courses, with more than the minimum. For example, NFPA Fire Officer I, II, III certificates can be achieved in one day course, and there is only one chapter on customer service. The customer services course provides 30 classes on the subject.

Levi – Can some of the courses such as FP166 or 121 be lowered to 2 credits?

FP 225 Fire Department Customer Service (John Saito)

John Saito – course loads for students at PCC are being designed so for the student loan repayment debt and completion of degrees. Not necessarily for the "ideal" job knowledge but the basics for them to get the jobs. There is a benefit for our fire students in the regular business "Customer Service" course in that they learn how it is applied in other businesses and can apply this knowledge to their professions, since they will be dealing with people from other disciplines, and can learn from others. Asked this committee that they consider this Customer Service course MSD 117, eliminate the fire service based course. Vote when John is not present since he does not want to influence. Gave example of the Medical Professions Medical Termination to replace the EMS Med. Term. Course, because it would be more recognizable for transferring to other schools. It has benefited the EMS students by interacting with other health professional students.

Ed – Most CTE programs have 16 credits of General Education, some embed their writing and math in their courses. Problem there is that you don't see that writing or the math on their transcripts, plus our instructors are fire fighters and not writing or math teachers. It is in the best interest for the student that they get this education from instructors qualified specifically for these courses. It took 2 years to change the FP degree to what we have now, so need to take this into consideration. Need to decide whether or not the Customer service is important, and then consider not make constant changes.

Mark – MSD 117 is offered more often than FP 225 so it may be the better option. The MDS Instructors were excited to bring the Fire component to their curriculum and have read up on the uniqueness to the Fire service.

Ed – Handed out online course handout. 4 FP courses are not yet online. As new courses in classroom such as Hydraulics are started they will be developed for online. Certificate courses are hybrid and must be taught here.

2015 Program Review Update

Invitation to Program Review on November 13, 2:30 – 4:30 in PSEB 100. Will send email. Advisory committee members attending is a benefit. Will cover history of the past 5 years, changing degree with improvements, and where we would like to go. How are the courses been assessed will cover the majority and what future holds and what will be faced with.

Instructor qualifications has been revised to a 2 year degree to teach the Certificate courses and a 4 year degree to teach the degree courses.

Dennis – What makes PCC better than Chemeketa? Why would students want to come here? The high school students that Katz taught would go to Chemeketa.
Ed – diverse population, working students is the difference. Chemeketa is not flexible for the working students with families. It is a set structured program. Have a brand new engine. TVF&R is more familiar with our program. We offer the college course other than Fire Service such as Writing.
We need to reopen the doors to Tualatin training center.
Live fire training reduction by all agencies, and may go down with PCC. Just purchased a fire simulator to reduce travel to other agencies for training.

Dennis – how many credits does EOU FSA take?
Dan – 120 credits. Outcome based finding. Should the elective be more value for the FSA Program?

(International Fire Service Accreditation Congress) IFSAC Update
Bill - Has been working on a contract with the Oregon Air and Army National Guard to provide them with Haz Mat. Training and certification. They are required by DOD for Haz Mat certification, and have a lot of turn over, and this will be on going. These are 3 day CEU courses. It has been efficient, intense and successful option for them.
Have been in contact with other entities, such as on Fire Dept operates under DOD, and will be sending 5 students. The certification must be self-funded not government funded. Our program is self-funded.
Working with UCC and regions training association to reduce costs.
The nuances of the IFSAC testing. Working with the four training associations.
Accreditation Site visit will in Spring 17. Accreditation requires there to be 5 documents Fire advisory meetings.
Fire Instructor I is almost complete. IFSAC has no Prereqs.
Fire Officer I is being worked on intermittently. Waiting for test bank.

Kurt Simonds – thanks for your participation on this committee.

Bill – MTH 98/58? Is it equivalent to MTH 95? Will MTH 98 be acceptable for Hydraulics class?
Michelle – It is new.
Kurt - MTH 98 is not a pre-re for MTH 111, they will need to take MTH97. It is design for non-algebra. It is a working math.

December 18, 2014

Attending: Jim Pinder, Mark Webster, Dan O'Grady, Deanne Hardy, Michelle Butler, Julie Olsen-Fink, Neal Dietz, Mark Hornshu, Bill Benjamin, Daryl Rozendal,

Review and Approval June 20, 2014 Minutes

Program Overview:
The certificate and degree programs where reviewed for familiarity. The idea of removing FP 289 Health Fitness for FF's from the AAS Degree was discussed along with the idea of moving FP 289 to the Certificate.

Dan stated that the Service would not want a 25 year problem - individuals needed to understand health and fitness early on in their career to maintain wellness over the length of a career.
Daryl – Set fitness standard early, in the Certificate program.
Julie – The Service is losing people due to health issues.
Michelle – Epidemic.
Bill recommended that the certificate go from 42 to 45 credits by including FP 289 and the Degree remain at 100 credits by increasing the elective credits from 18 to 21 credits of electives. There was a consensus of the committee to move in that direction.
Bill - Recommended FP 289 be a prereq. for the Fire Academy so students would get health and fitness prior to being hired.
Daryl asked Mark about the EMS standard for health and fitness – Mark said students can substitute FP 289 for the EMS required HPE 295.
Bill – Should FP 289 be required for FP 133 Wildland FF?
Julie – Wildland health and fitness standard significantly different than structural standard. Pack Test has caused several deaths and would not be related to the structural job.
Since FP 289 is directly related to passing an agility/abilities physical test, it was agreed that it should be part of the certificate rather than the Degree. It was a consensus of the committee members for the program to move forward with both the certificate and degree changes.

2015 Program Review
Doug explained that a 5 year Program Review would be completed in 2015 and that advisory committee member input would be needed. The Program Review presentation is scheduled for November 2015.

Instructor Qualifications were discussed along with certification levels of instructors for specific classes. Current requirements were handed out. Bill recommended that for FP 201, the Rescue Class, instructors be certified at the NFPA 1006 Level I for 3 areas of expertise (not all specialties).

Dan asked about the elimination of FP 250 Instructor II and if PCC instructors should have it?
Julie – Instructor II can be obtained by FF's but not used. Instructor I is what is needed. Having Instructor II does not help them teach.
Daryl – Instructor I is a low bar.

(International Fire Service Accreditation Congress) Accreditation IFSAC Update
Bill briefed all attending on the current status of IFSAC testing and on the upcoming IFSAC site visit scheduled for Spring of 2016.
Neal asked how an individual from another College can get IFSAC certified? Bill explained the process and used Steve Best as an example. Steve had to fly to Kansas City to take IFSAC tests prior to PCC being accredited. He also had to take FF I, FF II and Haz Mat prior to taking Airport FF. Individuals in living and working in Oregon can take IFSAC test now through PCC but they would have to take all tests that lead to advanced certification. They cannot take Fire Officer I for example without taking FF I & II and Haz Mat first.

Program Marketing
Dan- pointed out that we could advertise in the Gated Wye & Daily Dispatch and we need to update our web site. Dan felt that the 911 microphone did not represent FPT.
Neal brought up that the industry is advising young people to pursue their EMTP to get hired as a FF.

Dan thought that 52% of TVFR FF's were EMTP's, also that skills maintenance is required and hard to get if you are not employed and that there are a limited number of seats for EMTP available.
PCC should state in our marketing material that – We will teach you what you need to know- Stress what a student will learn at PCC and the value of coming here. Use link to on the fire bulletin and Trade Journals to market Professional Development, NW Fire Expo and IAFF Magazine.

Meeting adjourned for lunch at 12:00PM

The next meeting scheduled for June 17, 2015 was cancelled so the October 16, 2015 meeting was called to make up for the Spring 2015 meeting.

Ed Lindsey

June 20, 2014

Meeting called to order by Ed Lindsey at 1000 hrs.

Members in attendance:
Dennis Katz retired TVF&R,PCC Fire Protection program instructor
John Saito, Dean of Allied Heath PCC
Bill Benjamin, Academic Professional PCC Fire Protection Program
Ed Lindsey, Faculty Department Chair PCC Fire Protection program,
Darrel Rozendal, TVF&R and PCC Fire Protection program instructor,
Daniel Gates, Port of Portland Airport Fire Department,
Doug Smith, full time faculty PCC Protection program.
Julie Olsen-Fink, Oregon Department of Public Safety Standards and Training

Minutes of 12-20-2013 meeting were looked over individually followed by discussion.

Bill Benjamin expressed concern with the PCC catalog discrepancies' with the Fire Protection courses with respect to DPSST Fire Officer I and II task force. Doug Smith will work with the curriculum office to correct things.

Ed and Bill explained the changes in the degree and the certificate. An issue regarding the Fire Officer I and II which is fire departments want to meet the minimum standards only verses taking the college degree route. A lengthy discussion was held on formal education verses fire service certification. Discussion was also held on convincing fire departments to raise or require higher academic standards such as AAS degree for both entry level and/or promotion.

Discussion was held about access to the Fire Protection course and the need to be more user- friendly. Doug Smith will look into the matter over summer term.

The 12-20-013 minutes were approved.

New Business
New Fire Protection Courses: Ed briefly talked about the new fire protection courses.

New fire engine: HME-Arens Fox engine was on display prior to meeting commencement. Ed explained the bidding process at PCC. Discussion was held on conventional cab verses cab forward design.

IFSAC: Site visit was conducted and PCC fire protection program has been approved. We join Chemeketa and Central Oregon Community College. It was asked if IFSAC position on FESHE and FO I&II level obtainment, should it and will it include academic standards similar to DPSST's suggested list of recommended requirements. Bill talked about the future NFPA standards for Fire Officer I and II. Where should PCC go with IFSAC testing? The focus will be more on Fire Officer I and II courses. Driver/Pumper\Operator probably isn't needed. Emergency Services Instructor I, Fire Officer I and Fire Officer II to be possible future focus. Discussion was held on the NFPA 472 standard for haz mat.

Julie talked about the DPSST Wildland Task Force: Julie talked about how the task force will probably adopt the NWCG 310-1 standard in the Operations section. There is a basic wildland refresher course, R-130. S-130, S-131, S-190, I-100 and L-180 are the standards for wildland firefighter.

Five year plan: was mentioned but is put on hold until the college strategic plan is adopted.

Program Marketing: TVF&R and Clackamas Co. Fire Dist. 1 visited PCC on separate occasions to inform students of their hiring requirements and processes. Both departments were able to see the student population and the diversity. It would be a good thing if Portland Fire and Rescue and Vancouver Fire would do the same.
The program's brochure needs updating as does the web site. This will be done over the summer. It would be nice if the web site could be more easily accessed especially by non PCC people.

Ed explained the connection between fire department's intern program to PCC's Fire Protection program in connection with the certificate program.

Discussion was held on the possibilities of doing face to face meetings at fire departments either during training, recruit academies, or Union meetings. It was pointed out that these types of meeting would be problematic due to the time constraints of those activities. A better way to out-reach might be through a video within the fire departments or a separate flyer of" what's in it for me?" PCC might also request time on the "Chief's Corner" segment on the in-house video.

In the process of updating the web site, a flashy video about Fire Offer I and II should be developed in conjunction with a flyer. There is the possibility of attempting to capture recruits after they get off of probation to interview them on how they connected with PCC.

DPSST: Classes that are coming up are on the Fire Training web site everyone is encouraged to visit the site. Classes range from leadership to FEMA classes. DPSST has received a grant for props for extrication that will be mobile in an attempt to lower the cost of putting on a vehicle extrication class. 2 retirements with the department will open up positions for Regional Fire Training in the Eugene area and the emergency driving position. Several task forces coming up: Fire Officer I and II and Rescue Technician along with 4 other standards about investigation and inspections. The Oregon Fallen Fire Fighters Memorial will be held at DPSST Sept. 18 at 1:00 P.M. Fire Department personnel are encouraged to attend to pay tribute to our fallen members.
Next meeting: Dec 19, 2014 which is a Friday, this has been amended to Thursday, Dec. 18, 2014. Notices will be sent out.
Meeting adjourned at 2:07
Minutes compiled by:
Doug Smith, Fire Protection
Subject Area Committee Chair