

Lassen Community College
Fire Technology
Instructional Program Review

October
2015

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Academic Senate Adoption – January 26, 2016
Presented to Consultation Council – February 4, 2016
Board of Trustees Action – February 9, 2016

Fire Technology Instructional Program Review

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SECTION ONE: ACADEMIC PLANNING

I. PROGRAM OVERVIEW, OBJECTIVES, AND STUDENT LEARNING OUTCOMES

Description:

Purpose and Specific Objectives of the Program

The Fire Technology Program is designed to prepare students for employment in the Fire Science industry. The Associate in Fire Technology degree and Certificate of Achievement in Fire Technology provide students and employers with certifiable standards of technical career proficiency. The curriculum provides for training skills and techniques as follows:

- a. Working knowledge and understanding of fire positions. ■ Firefighter, fire inspector, fire Investigator, supervisors and managers.
- b. Workplace safety and orientation
- c. “Work ethic” attitudes, principles, responsibility, discipline and initiative.
- d. Technical language, vocabulary, equipment, materials and modes of operation.
- e. Broad background in the mental and physical skills necessary to operate in the world of fighting fires.

Transfer:

Our program is currently transferable to state colleges and Universities with four-year degrees in Fire Science, such as Cal State Sacramento and UNR.

Occupation:

Successful students will find employment opportunities in the Fire Science industry in local areas with agencies such as United States Forest Service, California Department of Forestry and Fire Protection, United States Department of Interior, - Bureau of Land Management and many local fire departments. Many of these same opportunities are available nationwide.

All students completing the required courses necessary to obtain an Associate in Science degree or Certificate of Achievement in Fire Technology will have received the education to be competent at working as a member of a team or as an individual in the firefighting world. The student will be able to demonstrate a general knowledge of the safest use and operation of equipment and techniques. In addition, these students will also have a working knowledge of the incident command system and its function.

Description of the Program (Catalog Description):

The Associate in Science and Certificate of Achievement – Fire Technology are designed to provide students with updated skills and knowledge necessary to successfully compete for fire service positions. The curriculum serves as an in-service program as well as pre-employment program for students seeking employment or advancement in the profession of urban firefighting and wildland fire suppression. Opportunities to study emergency response fields such as: medical ,hazardous materials and rescue are included.

As a fire technology major, you will:

- Study a broad overview of fire technology including: fire behavior, fire prevention, fire protection equipment and systems

The Fire program for the last 2 years has provided the college with over a million dollar of positive cash flow (see chart below)

	Credit FTES 2013/14	Credit FTES 2012/13	Credit FTES 2011/12	Credit FTES 2010/11	Credit FTES 2009/10	Credit FTES 2008/09	Credit FTES 2007/08	Credit FTES 2006/07
Fire Technology	181.5	205.1	199.89	189.90	128.8	72.1	24.3	5.42
State Apportionment per	\$4,565.00	\$4,565.00	\$4,565.00	\$4,565.00	\$4,565.00	\$4,565.00	\$4,565.00	\$4,367.00
Total Program Revenue	\$828,547.50	\$936,281.50	\$923,295.40	\$901,651.76	\$588,885.00	\$328,680.00	\$123,711.50	\$24,412.84
Total Program Expenditure	\$335,980.70	\$386,114.76	\$373,525.03	\$352,745.26	\$175,169.00	\$87,373.00	\$75,439.95	\$40,661.00
Excess Revenue	\$492,566.80	\$550,166.74	\$549,768.44	\$548,906.50	\$413,716.00	\$241,307.00	\$48,271.55	-16,248.16

Evaluation

In 1996, Lassen Community College attempted to develop a Fire Technology program. For a variety of reasons, the program was never presented to the Chancellor's Office for approval. Over the next few years active community support was documented through surveys, advisory board meetings, and input from both public and private agencies. The new fire technology program provides for improvement in the following areas: goal oriented focus on providing training that enables the student to be more readily employable at entry levels, adjustments of courses that enable a student to complete the training and general education requirements, creation of courses that provide a basic and solid foundation in Fire Science studies.

The future of the Fire program at Lassen College will depend on being able to provide qualified instructors. There seems to be more than a sufficient amount of interest by local students and local agencies with employment and training needs to provide the program with modest growth for many years to come. The additional longer-term expansion of the program facilities could provide a means to increase enrollment simply by having a larger student capacity, as well as offering the ability to introduce new programs. The extent of the marketability of the program is unknown, although every effort of recruiting to date has yielded interest. The growth of the Fire Technology Program at Lassen College will be determined in a large part by the availability of a training center. Having this full-service Training Center will allow us to provide unique training opportunities that are not available from other community colleges in Northern California. Some of these programs could be developed for or by Homeland Security, FEMA, and the California Corrections Center.

As we grow there are many variables that change. It is obvious that we are growing and are producing revenue. It is also obvious that we have potential to grow at a very fast rate and are able to produce many more FTES than we are currently producing. As it is shown that we have the potential to increase our program in many ways over the next few years we believe that our growth will only be limited by the amount of financial support that the college has to give. We do believe we will bring in much more income to the college than we will spend, but we will need to find ways to develop a Public Safety Training Center.

Planning Agenda:

1. Increase operating budget for Fire Technology program including, Staffing, Supplies, Travel, and Staff development
2. Pursue government grants to fund the construction of a Fire Science Training Center.

II STUDENT OUTCOMES

A. Trends and Patterns in Student Outcomes

Description

Since the Fire program is only 6 years old we have only had 14 graduates; we are showing an increase each year. We have been able to place over 40 of our students into jobs working for local fire agencies. The reports that we received back from these agencies have been that the students were very well prepared for their new jobs and that they were very happy with their performances.

Fire Technology Program

Fire Technology Program KPIs 2010-11 through 2014-15					
Indicator	Term	Trend	First Year	Final Year	Trend
FTES	Summer		45.1	35.3	-22%
	Fall		63.5	61.9	-3%
	Spring		80.8	84.3	4%
	Annual		189.4	181.5	-4%
Sections	Summer		15	12	-20%
	Fall		25	24	-4%
	Spring		35	47	34%
	Annual		75	83	11%
FTES per Section	Summer		3.0	2.9	-2%
	Fall		2.5	2.6	2%
	Spring		2.3	1.8	-22%
	Annual		2.5	2.2	-13%
FTEF	Summer		1.6	0.1	-91%
	Fall		2.3	0.8	-66%
	Spring		2.9	2.9	-1%
	Annual		6.8	3.8	-44%
FTES per FTEF	Summer		28.0	236.8	745%
	Fall		27.7	80.0	189%
	Spring		27.6	29.2	6%
	Annual		27.7	47.6	72%
Enrollment	Summer		508	386	-24%
	Fall		718	694	-3%
	Spring		1,342	1,340	0%
	Annual		2,568	2,420	-6%
Enrollment per Section	Summer		33.9	32.2	-5%
	Fall		28.7	28.9	1%
	Spring		38.3	28.5	-26%
	Annual		34.2	29.2	-15%
Course Completion	Summer		99%	74%	-26%
	Fall		87%	82%	-6%
	Spring		94%	90%	-3%
	Annual		93%	85%	-8%
Success	Summer		90%	73%	-18%
	Fall		82%	80%	-2%
	Spring		89%	88%	-2%
	Annual		87%	83%	-5%

Evaluation

Job placement data is only available when students receive assistance in acquiring a job from a fire program member, or when the student informs a program member of their employment status after leaving the program. We have created our own tracking system for the program but it relies on the students providing us with their success. Therefore this data potentially represents only a portion of the overall statistics, and for that reason no further evaluation is offered. As indicated by the table above retention and success in fire science courses has been consistently high. This chart shows that our annual enrollment is down slightly per year as is the completion and success rates. We are seeing that the program seems to go through small cycles from year to year. The enrollment total for our program is very much affected by the amount of inmates that cycle through the prison.

Recommendations/ Plan

Work with the Office of Institutional Research to develop sufficient tracking mechanisms to provide sufficient data for evaluation.

B. Student Learning Outcome Assessment

As a result of our assessments we have found that the students and instructors are confident that our methods of instruction are currently performing the way we expect them to and students are leaving with the skills necessary for success in the workplace. We have been working with the local agencies that hire our student to be sure that our assessments are effective.

Recommendations/Plan

Submit SLO assessment results to the Office of Instruction within the necessary timeline established by the Office of Instruction.

C Student Evaluation Summary

Description

The overall response to the Student evaluation shows a positive attitude towards the program. The responses offered by the students suggest that they like the quality and experience of our instructors. Most of the students liked the Fire Technology Program but hoped that we would be offering more classes in the future and that we needed a modern training facility. The summary of the Student Evaluation provided by Academic Services is attached. (Appendix D)

Evaluation

The Student Evaluation summary shows that the students in the Fire Technology Program are generally satisfied with the scheduling of courses. The data does reflect that most students felt we needed more modern training facilities to go with the up to date training we provided. The results show the students like the new technology like the new smart boards we had in our current facility.

Planning Agenda:

We need to continue work on building a new Public Safety Training center. The classroom furniture in 2 of the rooms is very antiquated and desperately needs to be up *graded*.

III. CURRICULUM

A. Degrees and/or Certificates

Description

The program offers an Associate in Science degree in Fire Technology and a Certificate of Achievement in Fire Technology. We have recently offered a Certificate of Accomplishment in Wildland Organized Crew Academy. (Appendix A)

Evaluation

Evaluations of the core courses in the degrees and certificates performed by the advisory committee and members of local fire agencies has resulted in the affirmation that the courses currently offered satisfy the current employer and industry skill requirements of the Fire Science field. The curriculum of our core courses has been evaluated by national fire agencies and the National Fire Protection Agency (NFPA). They currently meet the National standards. We will continue to update our fire curriculum to meet the needs of the industry and at the request of the advisory committee.

With advice from the advisory committee we would like to introduce two more degree programs (Homeland Security and an EMS Emergency Medical Services) and two new certifications (Fire Prevention, Fire Investigation). We have developed a Certificate of Accomplishment in Wildland Organized Crew Academy. We have successfully negotiated with the United States Forest Service to complete a contract to offer many of their trainings through the college. As additional degrees and certificates are developed, expansion of staff will be necessary. We will be required to provide at least a half time instructor to help with the new degrees and certificates. We were scheduled to hire a full time instructor in 2011 but due to current financial strains it is not appropriate at this time.

Recommendations/Plan

1. Continue to add courses as needed and create new degrees and certificates.
2. Pursue facilities, equipment and staffing as expansion develops.
3. Develop and fund an Advertising/Recruiting plan with input from the Advisory Committee.

B. Courses

Description

Since the Fire Technology program was started in 2007, many classes have been added or deleted from the program (see appendix A) The Curriculum/Academic Standards committees have approved all changes. As this is the Fourth instructional program review, all active Fire Science courses have been reviewed for currency and have been submitted to the Curriculum Committee. We are required to review our classes yearly as there are many changes to state and federal classes each year.

Evaluation

As a result of course review,

- Degree applicable courses meet the core requirements for the A.S. Degrees, Certificates of Achievement, and elective requirements for the A.S. Degrees.
- Certain stand-alone courses meet the requirements for vocational training.
- Student Learning Outcome have been prepared for each course and approved by the Curriculum Committee.

An *Existing Course Form* was completed for each course and submitted to the Curriculum Committee.

Planning Agenda

None

C. Scheduling and Enrollment Patterns

Description

The Fire Technology program for both the AS degree and the certification is currently being offered in a two-year cycle. The classes are offered starting in mid-October and run until mid-April. There are currently very few classes offered during the summer months. The late start early out program has seemed to work very well for students who are trying to work for local fire agencies. The specifics of the two-year scheduling plan are found in Appendix B.

As indicated by the FTE chart below, enrollments have been increasing particularly over the last two years.

**Fire Technology Program
FTE Comparison Fall 2004- Spring 2015**

TOP Code	Title	Credit FTES 2011/2012	Credit FTES 2010/2011	Credit FTES 2009/2010	Credit FTES 2008/2009	Credit FTES 2007/2008	Credit FTES 2006/07	Credit FTES 2005/06	Credit FTES 2004/05
2133	Fire Technology	199.89	189.90	128.8	72.1	24.3	5.42	4.17	1.98

Top Code	Title	Credit FTES	Credit FTES	Credit FTES	Credit FTES 2014 /2015	Credit FTES 2013/ 2014	Credit FTES 2012/ 2013
2133	Fire Technology				181.5	189.4	205.1

Evaluation

Enrollment patterns show the fire technology program has leveled out during the last two years. Enrollments are expected to stabilize over the next couple of years. A large part of our enrollment is from our contract with CDF and the CCC prison. When the number of inmates change, it is reflected in our numbers.

Recommendations/Plan

None

D. Articulation/Integration of Curriculum

Description/ Evaluation:

Our program is currently transferable to state colleges and Universities with four-year degrees in Fire Science, such as Cal State Sacramento and UNR.

Planning Agenda

None

E. Equipment

Description/ Evaluation:

The fire program currently has over \$500,000 worth of equipment. Much of the equipment has been donated by local fire agencies. The fire engine that we currently own was acquired from CA OES. We have 4 large pumps, 8 chain saws, 1 rescue saw, 6 rescue ladders, 4 different types of extrication equipment, 2 extrication pumps, 1 set extrication air bags, 60 sets of wildland PPE and 25 sets structure PPE (personal protective equipment). Most of the PPE equipment has a shelf life of from 3 to 5 yrs. set by OSHA. All of the mechanical equipment has to be inspected and serviced on a yearly basis. The ladders have to be inspected by a qualified inspector.

The PPE must be cleaned and inspected at least once a year. Most of the equipment is new and does not need to be replaced for the next 2 to 5 years. We currently do not have the budget to replace this equipment and rely on the VETA grant for new equipment. We have acquired a washer and dryer to use for the cleaning of the PPE. It has saved us many dollars but takes a lot of time to perform this task. We have asked for an ISS position on a half time basis but we were turned down by the chairs of Lassen college. Other colleges with much less equipment than us have this as a full time position. Just the volume and financial investment of this amount of equipment justifies the position plus the burden of the **safety** issues of students using unsafe equipment.

Planning Agenda:

It is very clear that for the college to maintain the current amount and **safe** condition of our fire equipment we will need to increase the current budget and will need to fill the ISS position.

Prioritized Recommendations for Implementation by Program Staff
Fill ISS position

Due date: Program (2017 Fire Technology Instructional Program Review)
Prioritized Recommendations Requiring Institutional Action for Inclusion in Educational Master Plan

IV: OUTSIDE COMPLIANCE ISSUES (if appropriate for program)

Description:

The Fire technology program is unique in that not only does it have to meet standards set by the chancellor’s office but must also conform with NWCG (national wildfire coordination group), Ca. State Fire Training and OSHA .

Evaluation:

Assess changes in compliance or identification of compliance-related needs and the impact on the Special Program.

Planning Agenda:

Need to fill ISS position to maintain compliance with all regulations.

V. Prioritized Recommendations for Implementation by Program Staff
Fill ISS position as soon as possible

Due date: Program (2015 Fire Technology Program Review)
Prioritized Recommendations Requiring Institutional Action for Inclusion in Education Master Plan

Strategic Goal	Planning Agenda Item	Implementation Time Frame	Estimated Cost	Expected Outcome
3,4	Electronic overhead sand table	Immediate	25000	Support student job training, job placement opportunities, and safety
3,4	Fire door prop	Immediate	8000	“
3,4	Type three wildland fire engine	Immediate	12200	”
3,4	Misc. Cal fire PPE	Immediate	5280	“
3,4	4 hand held radios	Immediate	5000	“

3,4	Misc fire hose brass	Immediate	4250	“
3,4	500 IRPGs	Immediate	800	“
3,4	1 Unit Misc. Lumber	Immediate	1500	“
3,4	2 Chainsaws	Immediate	1000	“
3,4	20 Misc. Hand tools	Immediate	1000	“
3,4	2 Fire Buggies	Immediate	12000	“

SECTION TWO: HUMAN RESOURCE PLANNING

A. Program Staffing

Description

The level of staffing for the 2015/2016 academic year is as follows:

Full time Director position	Part Time Faculty	Classified Employees Instructional Site Administrative Coordinator 50%/50%
David Trussell	Steve Hitchcock	Teresa Mossinger/Darlene Walsh
	Chad Lawson	
	Dan Weaver	
	Mike Rivas	
	Allen Schultz	
	Damon Godden	
	Mike Klimek	
	Dana Higgins	
	Adam Butler	
	Lois Charlton	
	Fredrick Cuthill	

Evaluation

We have not been able to offer some of our classes because we could not find a qualified instructor. Living in a remote area is a handicap for acquiring qualified instructors. Since the number of FTES the fire program creates has gone from less than 2 to almost 200 per year, having a Full time instructor would help with our shortage of part time instructors. This instructor would have to be able to meet all State Fire Marshall and NWCG instructor qualification. There is a need for an ISS assistant and a tool manager. These positions could be combined into one position

Recommendations/Plan

- Employ part-time equipment manager/ISS position
- Employ full -time Fire Technology Instructor
- Employ Administrative Assistant ISAC (Instructional Site Administrative Coordinator) position with 2 part time positions

B. Professional Development

Description

Three of the part time faculty members were able to attend state fire marshal required training and two were able to attend another offered by state fire training. We have not had the funds to attend as many of the trainings as are needed but as the program develops we hope to attend more.

Evaluation

The part time fire Program faculty members have shown a desire to seek any and all training that would be available to them. One of the part time faculty as made an offer to college to pursue becoming a master instructor for State Fire Training if the College will help with the financial costs.

Recommendations/Plan

Identify and attend additional professional development activities as they become available and are needed, provided there are available funds.

C. Student Outcomes

Description/ Evaluation:

None recommended human resource improvements

D. Prioritized Recommendations for Implementation by Program Staff

Identify and attend additional professional development activities as they become available and are needed, provided there are available funds.

2015 Fire Technology Instructional Program Review

Prioritized Recommendations Requiring Institutional Action for Inclusion in Human Resource Master Plan

Strategic Goal	Planning Agenda Item	Implementation Time Frame	Estimated Cost	Expected Outcome
3	Administrative Assistant-ISS	Immediate	\$60,000	Increase course and section availability
4	Full-Time Instructor	Immediate	\$90,000	Increase support of program and enhance student success

SECTION THREE: FACILITIES PLANNING

Description

We are currently using the old Lassen High Creedence High School. But due to local political issues we are being moved back to the College campus. We also use the Ted Overton training facility at the BLM training center. We have been looking into what it would take to convert the old Co- Gen plant into a Fire Training Center. There is a great potential there but it is cost prohibitive. We would like to be able to acquire the credence building permanently to use as a Public Safety Training Center. That facility would incorporate Fire, POST, EMS and Nursing.

Evaluation

Evaluation of the facilities available to the Fire Technology Department has yielded several truths:

- The current facility has improved space for live scenarios and fire training
- The current facility is not limited in space for student activity and storage of student materials
- Availability of classroom space is not limited due to the fact that we have grown from less than 2 FTES to a high of 200 FTES per year and are expecting even more growth.

Planning Agenda:

Acquire a full service, and modern Fire Technology Training Center.

Prioritized Recommendations for Implementation by Program Staff
None

2013 Fire Technology Instructional Program Review

Prioritized Recommendations Requiring Institutional Action for Inclusion in Facilities Master Plan

Strategic Goal	Planning Agenda Item	Implementation Time Frame	Estimated Cost	Expected Outcome
3, 4	Additional class Space	Immediate	unknown	Provide space for additional sections and generate additional FTES
3, 4	Acquire Public Safety Training Facility (i.e. Creedence High School Complex)	Immediate	Unknown Cheaper than moving back to College campus	Provide all-inclusive space for Fire technology program including storage, offices, classroom, outdoor training

SECTION FOUR: TECHNOLOGY PLANNING

Description/ Evaluation:

1. Describe and evaluate technology and technology support provided for instruction and instructional support.
2. Describe any technology and technology support needs identified by assessment of student learning outcomes.

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation. Complete Academic Planning, Facilities Planning, Technology Planning and Human Resource Planning Forms as appropriate for any recommendations requiring institutional action.

Prioritized Recommendations for Implementation by Program Staff/Advisory Committee

Prioritized Recommendations Requiring Institutional Action for Inclusion in Technology Master Plan

Strategic Goal	Planning Agenda Item	Implementation Time Frame	Estimated Cost	Expected Outcome
1	Need 2 classrooms that will hold at least 35 students	2016	\$50,000.00 each	When move from credence is completed
2	Need office and storage space	2016	\$40,000.00	When move from credence is completed

Appendix A

Fire Technology 2014/2015

A.S. Degree _____

Certificate of Achievement _____

I. A.S. Degree requires **60** Units _____

Certificate of Achievement requires **42** Units _____

II A minimum GPA of **2.00**/and a grade of 'C' or better in each core course.

III **Required Core Courses: 18 Units**

_____	FS 3	Fundamentals of Fire Prevention	3 units	
_____	FS 4	Fire Protection Equipment and Systems	3 units	
_____	FS 5	Fire Organization and Management	3 units	
_____	FS 6	Building Construction for Fire Protection	3 units	
_____	FS 13	Fire Behavior and Combustion	3 units	
_____	FS 14	Principles of Fire Safety and Survival	3 units	

IV **Required Electives: 12 Units (Select from the following)**

_____	EMT 60	Emergency Medical Technician	5 units	
_____	EMT 61	Emergency Medical Technician	1 units	
_____	FS 8	Wildland Fire Suppression	2 units	New class
_____	FS 20	First Aid-CPR for public employees	.5 units	
_____	FS 21	First Responder – Medical	2 units	
_____	FS 23	Ignitions Operations	1.5 units	
_____	FS 26	Basic Air Operations (S270)	1 units	
_____	FS 49	Fire Technology Work Experience	1-4 units	
_____	FS 52	Incident Command System (I-200/300)	2 units	
_____	FS 55	Fire Investigation	3 units	
_____	FS 56	Helicopter Crewman (S271)	2 units	
_____	FS 57	Auto Extraction	.5 unit	
_____	FS 60	Wildland Firefighter (CDF Basic 67)	3 units	New class
_____	FS 60A	Basic Firefighter (CDF Hand Crew)	3 units	
_____	FS 61	Basic Firefighter Training (Basic 32)	2 units	
_____	FS 62	Training Instructor 1-B	2.5 unit	Will be dropped
_____	FS 62A	Training Instructor 1-C	2.5 unit	will be dropped

_____	FS 63	Training Instructor 1-A	2.5 unit	Will be changed to Instructor 1
_____	FS 66	Fire Prevention 1-A	2 units	
_____	FS 67	Fire Prevention 1-B	2 units	
_____	FS 69	Fire Management 1	2 units	
_____	FS 70	Dozer Boss (S-232)	1 unit	
_____	FS 70A	Single Resource Boss Academy	1 unit	
_____	FS 70B	Engine Boss (S-231)	1 unit	
_____	FS 72	First Responder – Hazardous Materials	2 units	
_____	FS 73A	Incident Business Management (S-260/261)	2 units	
_____	FS 73B	Incident Business Management (S-260/261)	2 units	
_____	FS 74	Fire in the Interface (S-215)	1 unit	
_____	FS 75	Fire Behavior (S-290)	2 units	
_____	FS 76	Firefighter Type 1 (Squad Boss) (S-131)	.5 unit	
_____	FS 77	Human Factors on the Fire line (L-180)	.5 unit	
_____	FS 78	Leadership (L-280)	1 unit	
_____	FS 79	Ground Support Unit Leader (I-355)	1.5 units	New class
_____	FS 82	Fire Command 1-A	2 units	
_____	FS 83	Fire Command 1-B	2 units	
_____	FS 84	Lessons Learned	1 unit	
_____	FS 85	Understanding Maps, Compass & GPS	1 unit	
_____	FS 86	Emergency Vehicle Operations	.5 unit	
_____	FS 87	Expanded Dispatch Recorder (D-110)	1 unit	New class
_____	FS 88	Initial Attack Incident Commander (S-200)	1 unit	
_____	FS 89	Wildland Chainsaws (S-200)	1 unit	
_____	FS 90	Portable Pumps and water Use (S-211)	1 unit	
_____	FS 98.18	Annual Fire Refresher Training	0.5 unit	
_____	FS 98.20	Annual Hired Equipment Refresher Training	0.5 unit	
_____	FS 98.21	Volunteer Firefighter Academy	2.5 unit	

FS 150 National Incident Management System (NIMS700) is available and is recommended for employees of Emergency Response Agencies. **Lassen College**

Wildland Organized Crew Academy

Certificate of Accomplishment

List of Courses

1. FS 21 First Responder Medical 2 units
2. FS 49 Work Experience 1 unit
3. FS 61 Basic 32 2 units
4. FS 74 Fire in the Interface 1 unit
5. FS 84 Lessons Learned 1 unit
6. FS 8 2 unit

Justification for Certificate of Accomplishment

In response to inquiries from the U.S. Forest Service, we have identified the need to develop a certificate program that will assist Lassen College students in gaining the necessary training to potentially participate on an organized fire crew. We have selected a list of classes that will provide the knowledge and skills essential to the entry level fire fighter. Students that enroll and/or complete these classes may be offered an opportunity to serve on an organized crew upon request of the U.S. Forest Service.

Appendix B	Fall	Spring	Summer	Fall	Spring
Two Year course scheduling					
course Title	2015	2016	2016	2016	2017
ndamentals of Fire Prevention		X			
re Protection Equipment and ystems	X				
re Organization and Management	X				
uilding Construction for Fire rotection				X	
re Behavior and Combustion				X	
inciples of Fire Safety and Survival					X
rst Aid/CPR for Public Employees		X			X
rst Responder -Medical	X	X		X	X
asic Air Operations		X			X
initions operations		X			
re Technology Cooperative Work perience	X	X	X	X	X
ident Command System (I- 00/300)	X				
re Investigation	X				
elicopter Crewman (S-271)					X
uto Extraction		X			X
ildland Firefighter (CDF Basic 67)		X			X
asic Firefighter Training (Basic 32)		X	X		X
aining Instructor 1-B		X		X	
aining Instructor 1-A		X			X
aining Instructor 1-C					X
re Prevention 1-A				X	
re Prevention 1-B					X
re Management 1				X	
ozer Boss (S-232)					X
ngle resource Boss Academy		X			
ngine Boss (S-231)					X

First Responder - Hazardous Materials					
First Responder - Hazardous Materials Refresher	X			X	
Incident Business Management (S-50)				X	
Applied Interagency Incident Business Management				X	
Interface in the Interface (S-215)				X	
Incident Behavior (S-290)		X			
Incident Squad Boss	X				
180 Human Factors		X			
280 Leadership					X
Incident Ground Support Unit Leader (I-355)		X			
Incident Command 1A		X			
Incident Command 1B				X	
Lessons Learned		X			
Understanding Maps Compass & GPS	X				
Emergency Vehicle Operation			X		
Expanded Dispatch Recorder (D-10)		X			
Initial Attack Incident Commander (S-200)				X	
Wildland Fire Chainsaws (S-212)		X			
Portable Pumps and Water Use		X			
Volunteer Firefighter Academy		X			X
Emergency Medical Technician				X	
Annual Fire Refresher Training		X			X
Annual Hired Equipment Refresher Training		X			X
IMS S-700					
Volunteer Firefighter Academy		X			X

APPENDIX C APPENDIX C

Fire Technology Instructional Program Review:
 Status of Curriculum Review December 1, 2015

Course	Curriculum Committee Review Completed	Curriculum Committee Review Not Completed
FS 3 Fundamentals of Fire Prevention	11/03/2015	
FS 4 Fire Protection Equipment and Systems	12/03/2013	
FS 5 Fire Organization and Management	12/03/2013	
FS 6 Building Construction for Fire Protection	12/03/2013	
FS 8 Wildland fire Suppression	12/03/2013	
FS 9 Wildland Firefighter 1	08/18/2015 (Inactive)	
FS 13 Fire Behavior and Combustion	12/03/2013	
FS 14 Principles of Fire Safety and Survival	12/03/2013	
FS 20 First Aid-CPR or Public Safety	12/03/2013	
FS 21 First Responder Medical	01/21/2014	
FS 23 Ignitions Operations	01/21/2014	
FS 26 Basic Air Operations (S-270)	12/03/2013	
FS 51 Introduction to Fire Technology Careers	12/03/2013	
FS 52 Incident Command I System (1-200/300)	12/03/2013	
FS 55 Fire Investigation	12/03/2013	
FS 56 Helicopter Crew Member	12/03/2013 (new 01/15/2013)	
FS 57 Auto Extrication	12/03/2013	
FS 60 Wild land Firefighter (Cal Fire Basic Training)	03/04/2014	
FS 60A Basic Fire Crew Firefighter	12/03/2013	
FS 61 Basic Firefighter Training (Basic 32)	12/03/2013	
FS 62 Fire Instructor 1 B	11/17/2015 (inactivated)	
FS 62A Fire Training 1C	11/17/2015 (inactivated)	

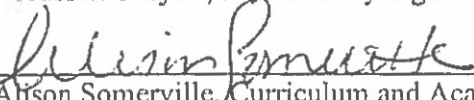
FS 63 Fire Instructor 1 A	11/17/2015 (inactivated)	
FS 66 Fire Prevention 1	11/18/2014	
FS 67 Fire Prevention 1 B	12/16/2014 (inactivated)	
FS 69 Fire Management I	12/03/2013	
FS 70 Dozer Boss (S232)	12/03/2013	
FS 70A Single Resource Boss Academy	12/03/2013	
FS 708 Engine Boss (Single Recourse)	12/03/2013	
FS 72 First Responder Hazardous Materials	12/03/2013	
FS 72A First Responder Hazardous Materials Refresher	05/21/2013	
FS 73A Incident Business Management (S-260)	05/06/2014	
FS 738 Applied Incident Business Management (S261)	05/06/2014	
FS 74 Fire in the Interface (S-215)	12/03/2013	
FS 75 Fire Behavior (S290)	08/18/2015	
FS 76 Firefighter Type I (Squad Boss) S-131	08/18/2015	
FS 77 Human Factors on the Fire line L-180	12/03/2013	
FS 78 Fellowship to Leadership L-280	08/18/2015	
FS 79A Ground Support Unit Leader (S-355)	11/18/2014	
FS 82 Fire Command 1 A	12/03/2013	
FS 83 Fire Command 1 B	12/03/2013	
FS 84 Lessons Learned (Fatality Fire Case Studies)	12/03/2013	
FS 85 Understanding Maps, Compass & GPS	12/03/2013	
FS 86 Emergency Vehicle Operation	12/03/2013	
FS 87 Expanded Dispatch Recorder	12/03/2013	
FS 88 Initial Attach Incident Commander	01/21/2014	
FS 89 Wildfire Chainsaws (S212)	08/18/2015	

FS 90 Potlable Pumps and Water Use (S211}	12/03/2013 (new 01/15/2013}	
FS 98.18 Annual Fire line Safety Refresher Training	08/18/2015	
FS 98.20 Annual Hired Equipment Refresher	08118/2015	
FS 98.21 Volunteer tire Academy	05/05/2015	
FS 156 Pump Operation	08/18/2015	
Degree/Certificate	Curriculum Committee Review Completed	Curriculum Committee Review Not Completed
AS Fire Technology	11/17/2015	
COA Basic Firefighter	07/08/2014 (new)	
CA Fire Technology	11/17/2015	
COA Wildland Organized Crew Academy_	07/08/2014 (inactivated)	



 Dave Trussell Subject, Area Faculty Signature

12/7/15
 Date



 Ms. Alison Somerville, Curriculum and Academic Standards Committee Chair Signature

12/2/15



12/7/2015
 Date

APPENDIX D

Fire Technology Program KPIs 2010-11 through 2014-15					
Indicator	Term	Trend	First Year	Final Year	Trend
FTES	Summer		45.1	35.3	-22%
	Fall		63.5	61.9	-3%
	Spring		80.8	84.3	4%
	Annual		189.4	181.5	-4%
Sections	Summer		15	12	-20%
	Fall		25	24	-4%
	Spring		35	47	34%
	Annual		75	83	11%
FTES per Section	Summer		3.0	2.9	-2%
	Fall		2.5	2.6	2%
	Spring		2.3	1.8	-22%
	Annual		2.5	2.2	-13%
FTEF	Summer		1.6	0.1	-91%
	Fall		2.3	0.8	-66%
	Spring		2.9	2.9	-1%
	Annual		6.8	3.8	-44%
FTES per FTEF	Summer		28.0	236.8	745%
	Fall		27.7	80.0	189%
	Spring		27.6	29.2	6%
	Annual		27.7	47.6	72%
Enrollment	Summer		508	386	-24%
	Fall		718	694	-3%
	Spring		1,342	1,340	0%

	Annual		2,568	2,420	-6%
Enrollment per Section	Summer		33.9	32.2	-5%
	Fall		28.7	28.9	1%
	Spring		38.3	28.5	-26%
	Annual		34.2	29.2	-15%
Course Completion	Summer		99%	74%	-26%
	Fall		87%	82%	-6%
	Spring		94%	90%	-3%
	Annual		93%	85%	-8%
Success	Summer		90%	73%	-18%
	Fall		82%	80%	-2%
	Spring		89%	88%	-2%
	Annual		87%	83%	-5%
Awards	Annual		3	3	0%

Q1 which course in this program are you

Reviewing?

Answered: 23 Skipped: 7

Other (please

Specify)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

2 / 18

Fire Technology Instructional Program Review 2015

0.00% 0

0.00% 0

0.00% 0

0.00% 0

0.00% 0

0.00% 0

0.00% 0

Answer Choices Responses

FS 3

FS 4

FS 5

FS 6

FS13

FS 14

3 / 18

Fire Technology Instructional Program Review 2015

0.00% 0

0.00% 0

0.00% 0

0.00% 0

100.00% 23

Total 23

other (please specify) Date

1 Fire Science 8/13/2015 11:24 AM

2 FS 8 Wildland Fire Suppression 8/13/2015 11:22 AM

3 FS 8 Wildland Fire Suppression 8/13/2015 11:20 AM

4 FS 8 Wildland Fire Suppression 8/13/2015 11:15 AM

5 FS 8 Wildland Fire Suppression 8/13/2015 11:11 AM

6 FS 8 Wildland Fire Suppression 8/13/2015 11:09 AM

7 FS 8 Wildland Fire Suppression 8/13/2015 11:00 AM

8 FS 8 Wildland Fire Suppression 8/13/2015 10:55 AM

9 FS 8 Woodline Fire Suppression 8/13/2015 10:53 AM

10 Fire Technology 8/13/2015 10:41 AM

11 FS 90 Portable Pumps 8/13/2015 10:34 AM

12 FS 90 Portable Pumps 8/13/2015 10:31 AM

13 Instructor 1C 8/13/2015 10:28 AM

14 Instructor 1C 8/13/2015 10:26 AM

15 Instructor 1C 8/13/2015 10:23 AM

16 Instructor 1C 8/13/2015 10:19 AM

17 FS 90 Portable Pumps 8/13/2015 10:08 AM

18 FS 90 Portable Pumps 8/13/2015 10:07 AM

19 FS 90 Portable Pumps 8/13/2015 10:03 AM

20 FS 90 Portable Pumps 8/13/2015 10:01 AM

21 FS 90 Portable Pumps 8/13/2015 9:58 AM

22 FS 90 Portable Pumps 8/13/2015 9:56 AM

23 FS 90 Portable Pumps 8/13/2015 9:54 AM

Q2 Educational Goal: What is your

Educational objective at Lassen Community

College. (Check all that apply).

Answered: 29 Skipped: 1

FS 86

FS 87

FS 88

FS 156

Other (please specify)

4 / 18

Fire Technology Instructional Program Review 2015

13.79% 4

0.00% 0

0.00% 0

0.00% 0

62.07% 18

17.24% 5

34.48% 10

17.24% 5

10.34% 3

24.14% 7

34.48% 10

Transfer to a

4-year...

IGETC

CSU

Certification

UNR

Certification

AA/AS

Certificate of

Achievement

Certificate of

Completion

Certificate of

Accomplishment

Job Requirement

Continuing

Education

Personal

Development

Transfer to

another...

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Transfer to a 4-year Institution

IGETC

CSU Certification

UNR Certification

AA/AS

Certificate of Achievement

Certificate of Completion

Certificate of Accomplishment

Job Requirement

Continuing Education

Personal Development

5 / 18

Fire Technology Instructional Program Review 2015

3.45% 1

Total Respondents: 29

Title of degree or certificate: Date

1 Fire Science 8/13/2015 11:24 AM

2 Fire Science 8/13/2015 11:22 AM

3 Fire Science 8/13/2015 11:20 AM

4 AS Fire Technology 8/13/2015 11:09 AM

5 AS Fire Science 8/13/2015 11:00 AM

- 6 AS Fire Technology 8/13/2015 10:41 AM
- 7 Fire Science 8/13/2015 10:34 AM
- 8 Fire Science 8/13/2015 10:31 AM
- 9 Instructor 1C 8/13/2015 10:28 AM
- 10 Fire Science 8/13/2015 10:21 AM
- 11 SFM Cert for Instructor 1 8/13/2015 10:19 AM
- 12 Fire Science 8/13/2015 10:08 AM
- 13 Fire Science 8/13/2015 10:07 AM
- 14 AS- Fire Science 8/13/2015 10:03 AM
- 15 AS Fire Technology 8/13/2015 10:01 AM
- 16 Fire Science 8/13/2015 9:56 AM

Q3 Why are you taking this course?

Answered: 29 Skipped: 1

Transfer to another community college

Core

requirement ...

Elective for

degree or...

General

Education...

Job requirement

Continuing

Education

Personal

Development

Other (please

specify)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

6 / 18

Fire Technology Instructional Program Review 2015

34.48% 10

17.24% 5

0.00% 0

24.14% 7

20.69% 6

58.62% 17

10.34% 3

100.00% 28

0.00% 0

Total Respondents: 29

Other (please specify) Date

1 Continuing education 8/13/2015 11:24 AM

2 Stay in shape and learn more about fire 8/13/2015 11:18 AM

3 Heard it was the best class to get some one ready to fight fires 8/13/2015 10:41 AM

Q4 Does the course content reasonably

compare with the catalog/schedule

description?

Answered: 28 Skipped: 2

Total 28

Q5 Did the catalog clearly explain the order

in which the courses in this program should

be taken?

Answered: 29 Skipped: 1

Answer Choices Responses

Core requirement for degree or certificate

Elective for degree or certificate

General Education course for degree or transfer

Job requirement

Continuing Education

Personal Development

Other (please specify)

Yes

No

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Yes

No

7 / 18

Fire Technology Instructional Program Review 2015

96.55% 28

3.45% 1

79.31% 23

20.69% 6

Total 29

Q6 Was any cost for this course/program,

beyond registration and books clearly

identified in the catalog?

Answered: 29 Skipped: 1

Total 29

Q7 Did instructors use the required

textbooks in the course?

Answered: 29 Skipped: 1

Yes

No

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Yes

No

Yes

No

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Yes

No

8 / 18

Fire Technology Instructional Program Review 2015

65.52% 19

0.00% 0

34.48% 10

60.00% 18

0.00% 0

40.00% 12

Total 29

Q8 Are the textbooks purchased for this

course useful to you?

Answered: 30 Skipped: 0

Total 30

Yes

No

N/A

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Yes

No

N/A

Yes

No

N/A

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Yes

No

N/A

9 / 18

Fire Technology Instructional Program Review 2015

100.00% 29

0.00% 0

0.00% 0

0.00% 0

0.00% 0

0.00% 0

0.00% 0

0.00% 0

3.45% 1

Q9 Did the scheduling for this course meet your needs?

Answered: 29 Skipped: 1

Total Respondents: 29

Other (please specify) Date

1 Perfect Class Scheduling 8/13/2015 10:41 AM

Q10 I was provided with reasonable access to the facilities

Current

schedule met...

Needed morning

offering

Needed

afternoon...

Needed evening

offering

Needed one day

a week offering

Needed summer

offering

Needed

week-end...

Needed

short-term...

Other (please specify)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Current schedule met my needs

Needed morning offering

Needed afternoon offering

Needed evening offering

Needed one day a week offering

Needed summer offering

Needed week-end offering

Needed short-term (less than semester) offering

Other (please specify)

10 / 18

Fire Technology Instructional Program Review 2015

100.00% 30

0.00% 0

100.00% 30

0.00% 0

0.00% 0

Answered: 30 Skipped: 0

Total 30

Q11 When weather is hot outside, the

facilities are:

Answered: 30 Skipped: 0

Total 30

Q12 When the weather is cold outside, the

Yes

No

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Yes

No

Comfortable

Often too hot

Often too cold

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Comfortable

Often too hot

Often too cold

11 / 18

Fire Technology Instructional Program Review 2015

100.00% 30

0.00% 0

0.00% 0

facilities are:

Answered: 30 Skipped: 0

Total 30

Q13 The lighting of the facilities is

Answered: 29 Skipped: 1

Comfortable

Often too hot

Often too cold

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Comfortable

Often too hot

Often too cold

Too bright

Adequate

Too dark

N/A

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

12 / 18

Fire Technology Instructional Program Review 2015

3.45% 1

96.55% 28

0.00% 0

0.00% 0

96.67% 29

3.33% 1

0.00% 0

Total 29

Q14 The chairs/tables/desks are

Answered: 30 Skipped: 0

Total 30

Q15 Is there enough space for you to do

your work in class?

Answered: 29 Skipped: 1

Too bright

Adequate

Too dark

N/A

Adequate

Inadequate

N/A

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Adequate

Inadequate

N/A

13 / 18

Fire Technology Instructional Program Review 2015

100.00% 29

0.00% 0

0.00% 0

Total 29

Q16 Please elaborate on your responses

and include any additional facilities-related

comments:

Answered: 12 Skipped: 18

Responses Date

1 Facility is fine needs to stay here not move back to the main campus 8/13/2015 11:22 AM

2 nice, amazing, comfy, relaxed 8/13/2015 11:18 AM

3 outdoor instruction is necessary for this program 8/13/2015 11:15 AM

4 This class helped me out a lot by exercising and learning about weather, maps and GPS 8/13/2015 11:11 AM

5 I enjoyed this course, the instructors were very helpful in the learning process. 8/13/2015 11:09 AM

6 The course was great. It got me well on my way for my future and I am looking forward to taking more courses to further myself next year.

8/13/2015 11:06 AM

7 Facilities are adequate 8/13/2015 11:00 AM

8 Learned more than I could have asked for I will take this class again and recommend it to everyone that is interested

in fire science

8/13/2015 10:41 AM

9 Great facilities 8/13/2015 10:28 AM

10 I thought they were great. I think that the school should provide the Fire Science instructors with what ever funds they require to better train new fire fighters

8/13/2015 10:12 AM

11 Class was good, field day did not have the right Brass to do all hose lays. 8/13/2015 10:01 AM

12 Was good, good power point 8/13/2015 9:54 AM

Q17 Did the course/program provide the

Yes

No

N/A

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Yes

No

N/A

14 / 18

Fire Technology Instructional Program Review 2015

89.29% 25

10.71% 3

0.00% 0

89.66% 26

3.45% 1

Necessary equipment?

Answered: 28 Skipped: 2

Total 28

Q18 Is enough time on equipment allowed

for each student?

Answered: 29 Skipped: 1

Yes

No

N/A

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Yes

No

N/A

Yes

No

N/A

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Yes

No

15 / 18

Fire Technology Instructional Program Review 2015

6.90% 2

93.10% 27

3.45% 1

3.45% 1

Total 29

Q19 Is equipment current?

Answered: 29 Skipped: 1

Total 29

Q20 Is equipment generally in good

Operating condition?

Answered: 30 Skipped: 0

N/A

Yes

No

N/A

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Answer Choices Responses

Yes

No

N/A

Yes

No

N/A

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

16 / 18

Fire Technology Instructional Program Review 2015

96.67% 29

0.00% 0

3.33% 1

Total 30

**Q21 Describe how this course/program
could be improved to better meet the needs
of the student at Lassen Community
College.**

Answered: 18 Skipped: 12

Responses Date

1 Maybe a little later in the day. Possible snacks 8/13/2015 11:18 AM

2 This program is managed efficiently and professionally any improvement is up to the individual.
8/13/2015 11:15 AM.

3 Its good how it is 8/13/2015 11:11 AM

4 The only thing I think would help is to advertise the program and how beneficial it is. 8/13/2015 11:09
AM

5 I think firefighting is important. I think that LCC should provide us/the instructors with what ever
funds they ask for to

further help train students.

8/13/2015 11:06 AM

6 Good as is. 8/13/2015 10:57 AM

7 I don't really see any need for improvement. 8/13/2015 10:55 AM

8 I believe the program is fine and getting better each year. 8/13/2015 10:53 AM

9 N/A Course was great 8/13/2015 10:41 AM

10 It went will 8/13/2015 10:31 AM

11 Keep this facility 8/13/2015 10:28 AM

12 Meets the needs of student, nice that this facility is away from the main campus 8/13/2015 10:26 AM

13 More power outlets for computers 8/13/2015 10:21 AM

14 Nothing great instructors great program 8/13/2015 10:14 AM

15 I think there should be more hands on training 8/13/2015 10:12 AM

16 N/A 8/13/2015 10:07 AM

17 Need proper Brass for field day 8/13/2015 10:01 AM

18 Was good just needed more brass 8/13/2015 9:54 AM

Q22 Provide any additional comments on

The course or program:

Answered: 13 Skipped: 17

Responses Date

1 Was good and helpful 8/13/2015 11:22 AM

2 Thank you all for helping me 8/13/2015 11:18 AM

Answer Choices Responses

Yes

No

N/A

17 / 18

Fire Technology Instructional Program Review 2015

**3 An excellent class, hands on experience knowledgeable instructors a must for every fire student.
8/13/2015 11:15 AM.**

**4 Good class, pushes students to succeed and provides them with a fundamental understanding of
wildland fire**

Prevention

8/13/2015 11:00 AM.

**5 Well executed. Instructors know what they are teaching and have a tremendous amount of experience
and passion to share. They care for the students and help them inside and outside of the classroom. They
prepare you for as well as give you the tools you need to do the job at hand.**

8/13/2015 10:53 AM

6 Instructors were extremely helpful and generally cared about students succeeding 8/13/2015 10:41 AM

7 There was a hard chapter, the instructor took the time to elaborate until each student was grasping the concept. 8/13/2015 10:31 AM

8 Thanks for providing critical training 8/13/2015 10:28 AM

9 Interested in new course that combines Ins 1A, 1B, & 1C 8/13/2015 10:26 AM

10 Very good instructor 8/13/2015 10:23 AM

11 N/A 8/13/2015 10:07 AM

12 Great class learned a lot 8/13/2015 10:01 AM

13 Was a good class. Chad was a great teacher. Just needed more brass 8/13/2015 9:54 AM

18 / 18

Fire Technology Instructional Program Review 2015

Dave Trussell Subject, Area Faculty Signature

Date

Ms. Alison Somerville, Curriculum and Academic Standards Committee Chair Signature

Date

Dr. Terri Armstrong, Vice President of Academic Services/AD Signature

Date

