Instructional Program Review Update 2012/13
(fields will expand as you type)

Section 1 - Program Information

1.0 Name of Program: Fire Technology

1.1 Program Review Authors: Ron Waters, Eric Smith, Chris Jelinek, Kim Price

1.2 Dean’s Signature: Date: 1-18-2013

1.3 Individual Program Information

<table>
<thead>
<tr>
<th># of Degrees</th>
<th># of Certificates</th>
<th># of Courses</th>
<th># of GE Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N/A</td>
<td>28</td>
<td>0</td>
</tr>
</tbody>
</table>

The shaded cells below are to be populated by the Program Review Committee as needed.

<table>
<thead>
<tr>
<th># of Full Time Faculty</th>
<th># of Part Time Faculty</th>
<th># of Staff FTE</th>
<th>Personnel Budget</th>
<th>Discretionary Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-2011</td>
<td>2011-12</td>
<td>2010-2011</td>
<td>2010-2011</td>
<td>2010-2011</td>
</tr>
</tbody>
</table>

1.3.1 State briefly how the program functions support the college mission:
The Fire Technology Program provides career technical training to students interested in a career in Fire Technology. Students can attain an AS degree or courses are also offered to those currently serving in the Fire Technology as Advanced Officer training courses. People getting careers in the Fire Technology field can find well-paying jobs with good benefits. In this manner, the program contributes to the economic vitality and lifelong learning needs of the area.

1.3.2 Program highlights/accomplishments:
We have now completed one complete cycle of courses for the Fire Tech core courses. So far, no students have completed all degree requirements.

Section 2 - Data Analysis

2.1 Enrollment & Fill Rate Review and interpret data by clicking here or going to: http://www.redwoods.edu/District/IR/Program_Select.asp
Comment if checked:

Under Dr. Marsee, the Fire Technology program was resurrected after being inactive for several years. He wanted not only a Fire Technology degree program but also a Fire I Academy. Staff was hired and equipment purchased to be able to go in that direction. Then, Dr. Marsee left and budget problems started, causing delays in the Fire I Academy. At this point, the people who had been brought on to start the degree program and Fire I Academy have left due to budget cuts. The program is being taught completely by associate faculty. Students are still interested in the Fire I Academy, but there is no funding to get it started. As a result, some interest has waned in students. Enrollment dropped by half – from 132 in 2010-2011 to 66 in 2011-2012. The decrease came because six of the eight sections offered in 2010-2011 included six Advanced Officer courses. The program was just getting started at that point. Once students see the Fire Technology program is a viable career field, enrollment should either remain stable or increase.

Comment if checked:

Fill rates went from 65% in 2010-2011 to 49% in 2011-2012. No advanced officer training courses were offered in 2011-2012. This contributed to the lower fill rates.

Comment if checked: Success in 2011-2012 fell slightly below the District levels with 61% successful (compared with District average of 69%).

As a new Career/Technical program, many of the initial students identified that they were taking the class out of general interest rather than focusing on the desire of obtaining a degree in Fire Technology. And in such, many were unprepared for the academic requirements and/or standards that were set for the program. The academic standards set for the program came out of the Instructional cadre and were supported by the advisory committee as well as applicable fire service standards for learning. With an improved commitment from the college towards program’s longevity, as well as a focused marketing plan identifying the academic standards and participation level, student success levels will increase.

At least two instructors believe the biggest reason for the lack of success is the students coming into the courses with an attitude that it will be an easy “A”, and when they are confronted with the realization of the work that they are being asked to do, they soon find out that they are not as dedicated as they thought they would be. Most of the concepts in the FT courses are new to them and they must complete the assignments, perform well on the quizzes / exams and not just show up to class. Those who are not focusing on getting an AA in Fire Technology may not have the same motivation as students within the program. A clear roadmap, which students can follow to achieve the AA within a two-year period would be highly desirable. Several of the classes have a writing requirement (essays, term papers, etc.). The performance of students in this
area has been was notably weak. One instructor plans to focus some class time on basic writing principles this semester in an effort to raise the caliber (and hopefully grades) of students within his class. He would like to see continuity through the 6 classes with some type of writing requirement - e.g. a requirement of an essay in each class with the same grading rubric throughout.

<table>
<thead>
<tr>
<th>Retention</th>
<th>Comment if checked: Retention at 86% was only slightly below the 89% District average of 89%.</th>
</tr>
</thead>
</table>

2.3 Persistence

Review and interpret data by clicking here or going to: http://www.redwoods.edu/District/IR/Program_Select.asp
Select your program and click on: Persistence

- Comment:
This is a new program and many of the students in the program have not declared Fire Technology was a degree major. Many of the students are serving as volunteers in various local agencies and are taking courses to increase their job knowledge, but not necessarily to get a degree. It is difficult to comment more due to the low number of students in the sample (1 persisted out of seven students).

2.4 Completions

Review and interpret data by clicking here or going to: http://www.redwoods.edu/District/IR/Program_Select.asp
Select your program and click on: Completions & Transfers

- Comment:
N/A – Program is too new to have completions.

Student Equity Group Data

2.5 Enrollments by group

Review and interpret data by clicking here or going to: http://www.redwoods.edu/District/IR/Program_Select.asp
Select your program and click on ~ by Student Equity Group next to Enrollments & fill rates

- Comment:
It is interesting to note that 29% of the students involved in the program were female. This is a relatively high number for a traditionally male-dominated field. 94% of students in the program are under age 34 (73% under age 24).

2.6 Success & Retention by group

Review and interpret data by clicking here or going to: http://www.redwoods.edu/District/IR/Program_Select.asp
Select your program and click on ~ by Student Equity Group next to success & retention

- Comment:
Student sample sizes for gender and ethnicity have too few students to evaluate. Success by age groups follows the District averages. DSPS and BSI information is not being commented on due to low sample size. Looking at individual courses, only 40% of students enrolled in FT 3 were successful.
The instructor’s thoughts on writing assignment are included in Section 2.2. To address this, he has modified his syllabus
slightly to require submission of a rough draft of each student's essay. My purpose/ focus is building an awareness of requirements for a successful essay, so a working rough draft will get the student full points for that assignment.

His second observation is that many students dropped (or stopped showing up) midway through the semester without going through the official drop procedure.

2.7 Persistence by group
Review and interpret data by clicking here or going to: http://www.redwoods.edu/District/IR/Program_Select.asp
Select your program and click on ~ by Student Equity Group next to persistence

Comment:
N/A – New program

Additional Indicators

2.8 Faculty Information
Review and interpret data by clicking here or going to: http://www.redwoods.edu/District/IR/Program_Select.asp
Select your program and click on: Faculty (FT/PT) & FTES/FTEF

Comment:
No full-time faculty. All instructors are associate faculty with all but one teaching just one of each of the six core courses.

2.9 Labor Market Data (CTE/Occupational programs only)
Refer to the California Employment Development Division:
http://www.edd.ca.gov/
www.labormarketinfo.edd.ca.gov
Provide a narrative that addresses the following:
  a. Documentation of labor market demand
  b. Non-duplication of other training programs in the region
  c. Effectiveness as measured by student employment and program completions.

Narrative:
Statewide, there is an estimated increase of 7% for jobs as fire fighters from 2010-2020. The hourly mean salary is $34.51/hour. In the North Coast Region, jobs are estimated to rise from 510-520 from 2008-2018 with an hourly mean salary of $23.20/hour. The number of job openings is somewhat misleading since the only paid agencies are US Forest Service, CalFire, Humboldt Bay Fire Department and Arcata Fire Protection District. These numbers include part-time seasonal workers. Also, there are about 37 volunteer fire districts in the county. The closest Fire Technology training locations are at College of the Siskiyous, Shasta, Butte, Napa and Santa Rosa junior colleges. Humboldt Regional Occupational Programs (HROP) conducts a volunteer fire academy, but it is not fully accredited. Effectiveness cannot be adequately measured at this point due to the program just being in its infancy. The other Fire Technology training centers report a surplus of students and approved College of the Redwoods having a Fire I Academy at North Far North in approximately 2009-2010.
**Overall, what has been the impact of the change in indicators on student achievement and learning:**

None

**Provide narrative on the factors that may have contributed to the improvement or decline in the identified population:**

State/local budget issues have affected the number of personnel being hired both locally and statewide.

**Section 3 – Critical Reflection of Assessment Activities**

<table>
<thead>
<tr>
<th><strong>Curriculum &amp; Assessment Data</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Are all courses on track for complete assessment of all outcomes in two years? Y/N</td>
<td>Y</td>
</tr>
<tr>
<td>What courses, if any, are not on track with regard to assessment? Explain.</td>
<td></td>
</tr>
<tr>
<td># of PLOs Assessed and Reported during the 2011-2012 academic year.</td>
<td>8</td>
</tr>
<tr>
<td>% of Course Outlines of Record updated</td>
<td></td>
</tr>
<tr>
<td>If there is no plan for updating outdated curriculum, when will you inactivate?</td>
<td></td>
</tr>
<tr>
<td>View curriculum status: <a href="http://www.redwoods.edu/District/IR/Program_Select.asp">click here</a> or go to: <a href="http://www.redwoods.edu/District/IR/Program_Select.asp">http://www.redwoods.edu/District/IR/Program_Select.asp</a></td>
<td></td>
</tr>
<tr>
<td>Select your program and click on: Curriculum Status</td>
<td></td>
</tr>
<tr>
<td>Assessment Reporting completed? Y/N</td>
<td>N</td>
</tr>
<tr>
<td>Program Advisory Committee Met? Y/N</td>
<td>Y</td>
</tr>
</tbody>
</table>

**3.0 How has assessment of course level SLO’s led to improvement in student learning (top three):**

As a new program, the course level SLO assessment not only validates the individual SLO’s appropriateness within the subject matter, it also applies a focus of standardization amongst the various instructors. Additionally, it provides, as it is intended, a consistent and standardized means in which to validate student learning across the various courses within the program, while at the same time, providing a means and method to consistently judge the relevance of material as related to the course of study and the specific learning objectives supporting the body of knowledge.

**3.1 How has assessment of program level outcomes led to degree/certificate improvement (top three):**

Much as in the course level SLO assessment, program level assessment provides the program the opportunity to consistently review how all the pieces or courses of study dovetail together to provide the quality of learning desired. As in any area of study, the total body of knowledge consists of many different elements, thus a review of the individual pieces and how they interact and build upon each other along with the
opportunity to add new or remove redundancy is extremely beneficial to the continued growth and relevancy of our program. Of great benefit and as a result of the program review process is the interaction and synergism created when multiple disciplines of studying, (such as in our case, Fire, Health Occupations, and Physical Education) are able to plan and work together on the big picture and identify improvements to programs that interact and/or depend upon elements or contributions of the others.

3.2 (Optional) Describe unusual assessment findings/observations that may require further research or institutional support:

Section – 4 Evaluation of Previous Plans

4.1 Describe plans/actions identified in the last program review and their current status. What measurable outcomes were achieved due to actions completed?

<table>
<thead>
<tr>
<th>Actions</th>
<th>Current Status</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accreditation as Regional Training Program</td>
<td>On hold</td>
<td></td>
</tr>
<tr>
<td>Development of course outlines for core courses</td>
<td>Completed</td>
<td>Seven courses approved by Curriculum Committee</td>
</tr>
<tr>
<td>Development of Fire Technology Certificate</td>
<td>Pending</td>
<td></td>
</tr>
<tr>
<td>Development of Wildland Firefighting Technology Degree</td>
<td>No action – lack of staff</td>
<td></td>
</tr>
<tr>
<td>Development of a Workforce “Professional Development” curriculum</td>
<td>No action – lack of staff</td>
<td></td>
</tr>
<tr>
<td>Fire Academy Resource Acquisition and Support</td>
<td>On hold – CTEA funds withdrawn due to no current academy program</td>
<td></td>
</tr>
</tbody>
</table>

4.2 (If applicable) Describe how funds provided in support of the plan(s) contributed to program improvement:

N/A

Section – 5 Planning
5.0 Program Plans

Based on data analysis, student learning outcomes and program indicators, assessment and review, and your critical reflections, describe the program’s Action Plan for the 2012/13 academic year. If more than one plan, add rows. Include necessary resources. (Only a list of resources is needed here. Provide detailed line item budgets, supporting data or other justifications in the Resource Request).

### 5.1 Program Plans

<table>
<thead>
<tr>
<th>Action to be taken:</th>
<th>Relationship to Institutional Plans</th>
<th>Relationship to Assessment</th>
<th>Expected Impact on Program/Student Learning</th>
<th>Resources Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete FT.CA.Fire Technology Certificate of Achievement</td>
<td>Increase number of course completions</td>
<td>Students receiving a CA will meet all program learning objectives</td>
<td>Allow students to earn Certificate of Achievement for completion of six courses</td>
<td>None</td>
</tr>
<tr>
<td>Become Accredited Fire Training Center through State Fire Marshall</td>
<td>To be determined – CR must decide if becoming an accredited Fire Training Center is desired</td>
<td>N/A</td>
<td>Ability to offer more advanced training &amp; and accredited Fire I Academy</td>
<td>See Section 6</td>
</tr>
</tbody>
</table>

### 5.2 Provide any additional information, brief definitions, descriptions, comments, or explanations, if necessary.

Becoming an accredited Fire Training Center allows the College to present Advanced Officer courses that local agencies currently must leave the area to attend.

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Section 6 - Resource Requests

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6.0 Planning Related, Operational, and Personnel Resource Requests. Requests must be submitted with rationale, plan linkage and estimated costs. If requesting full-time staff, or tenure-track faculty, submit the appropriate form available at inside.redwoods.edu/ProgramReview
Requests will follow the appropriate processes.

<table>
<thead>
<tr>
<th>Request</th>
<th>Check One</th>
<th>Amount $</th>
<th>Recurring Cost Y/N</th>
<th>Rationale Linkage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accreditation through State Fire Marshall</td>
<td>X</td>
<td>2500</td>
<td>N</td>
<td>Complete program accreditation process</td>
</tr>
</tbody>
</table>

Section 7- Program Review Committee Response
Do not type in this section. To be completed by the Program Review Committee following evaluation.

7.0 The response will be forwarded to the author and the supervising Director and Vice President:

S.1. Program Information:    Satisfactory.

S.2. Data Analysis:    Most data is below the district average. Much of the narrative is anecdotal because data in unavailable. There is no full-time faculty. This program is obviously struggling.

S.3. Critical Reflection of Assessment Activities:    Courses have assessment plans in place. FT 5 needs to be assessed this spring. Some findings are not based on assessment and focus needs to be on linking results to analysis. SLO assessment discussion: they thought students in FT 1 would “do much better in the traditional class setting rather than online;” and, no changes are needed in FT3. Otherwise satisfactory.

S.4. Evaluation of Previous Plans:    Previous planning addressed. Determination that much is on hold due to lack of staff and funding. Seven courses were approved by curriculum.

S.5. Planning:    Program has no full-time faculty, and has a non-faculty director. Outcomes are limited to tying to plans and linkage is limited-incomplete.

S.6. Resource Requests:    Not good connections linking rational to assessment or institutional plans. Is it reasonable to include in resource request for additional TLUs to oversee program as support?

Program review committee recommends submitting this program to the AP 4120 Revitalization and Discontinuance process.