

PROGRAM REVIEW REPORT

Name of Program: Engineering

Division/Operational Area: Natural Sciences and Mathematics

Contact Person: Jane Engineer

Submission Date: February 2, 2008

[Note: The information in this area will repeat on all pages.]

Porterville College Mission Statement:

With students as our focus, Porterville College provides our local and diverse communities an excellent educational experience that fosters intellectual curiosity and growth, lifelong learning, and prepares our students for personal and academic success.

In support of our values and philosophy, Porterville College will:

- Provide quality academic programs to all students who are capable of benefiting from community college instruction.
- Provide comprehensive support services to help students achieve their personal, vocational and academic potential.
- Prepare students for transfer and success at four-year institutions.
- Provide courses and training to prepare students for employment or to enhance skills within their current careers.
- Provide developmental education to students who need to enhance their knowledge and understanding of basic skills.
- Recognize student achievement through awarding degrees, certificates, grants, and scholarships.

Program Mission Statement:

The Engineering Department supports the mission of Porterville College by providing transfer-level instruction in the areas of mechanical and civil engineering. We are committed to providing high quality instruction and program-related advising that give our students the best possible opportunity for success.

Analysis of Current Performance:

The engineering program has grown during the past three years, now with two full-time and three part-time instructors offering 26 sections during the 2004-05 academic year with a duplicated student enrollment total of 724 students. A record number of students (fifteen) graduated with an engineering major in the 2004-05 academic year. The student/faculty ratio was 14.2 FTES per FTEF, somewhat below the campus average, but reasonable for a transfer-level program with several small classes. The course retention rate was above the campus average at 88.3%, but the course success rate has dropped over the past two years to a low of 63.9%. Demographics show that the ethnic breakdown of engineering students is near those of the campus and the community we draw from, but we imbalanced in the area of gender. Of the 178 unduplicated students who took engineering classes in the 2004-05 academic year, 61.2% were male and 38.8%. This compares to 41.6 males and 58.4% females in the campus general population.

PROGRAM REVIEW REPORT

Name of Program: Engineering

Division/Operational Area: Natural Sciences and Mathematics

Contact Person: Jane Engineer

Submission Date: February 2, 2008

[Note: The information in this area will repeat on all pages.]

Program Strengths and Areas for Improvement:

The engineering program is in a strong position in many areas. Having hired a second full-time faculty member two years ago, we now offer a broad range of mechanical and civil engineering classes that prepare our students well for transfers to four year colleges.

That stated, there are some areas of improvement. The drop in course success rates is disturbing. A detailed analysis of engineering classes determined that our newer courses tend to have lower success rates than those we have been offering for several years. Thus, we will focus on those courses in our goals below.

We also note that our department, like many in the natural sciences, has a gender disparity. We would like to attract more women to the engineering program, so we will attempt to do so through outreach at the local high schools and flyers around campus.

PROGRAM REVIEW REPORT

Name of Program: Engineering

Division/Operational Area: Natural Sciences and Mathematics

Contact Person: Jane Engineer

Submission Date: February 2, 2008

[Note: The information in this area will repeat on all pages.]

Goal(s)	Timetable for Completion	Needed resources	Obstacles to completion (if any)
1. Hire one additional full-time faculty member to make program more well-rounded.	To be on board by Fall 2004.	Funding and prioritization by CLC	None known.

Progress on Goal:

Completed (Date: Fall 2004)

Revised (Date)

Comments: We hired a new professor for our department (Joe Engineer) who began work as of the fall 2004 term. We do not anticipate needing any additional faculty hires for at least 5 years.

Goal(s)	Timetable for Completion	Needed resources	Obstacles to completion (if any)
2. Bring in guest speakers to campus from prominent engineering programs at 4-year colleges.	To start during the 2003-04 academic year.	Funding, staff time	Funding

Progress on Goal:

Completed (Date)

Revised (Date February 2006)

Comments: This goal has been postponed due to lack of funding. Now that the department is fully staffed, we hope to revive the idea for the 2007-08 academic year.

PROGRAM REVIEW REPORT

Name of Program: Engineering

Division/Operational Area: Natural Sciences and Mathematics

Contact Person: Jane Engineer

Submission Date: February 2, 2008

[Note: The information in this area will repeat on all pages.]

Goal(s)	Timetable for Completion	Needed resources	Obstacles to completion (if any)
3. Improve course success rates in newer Engineering courses	Hope to increase the success rates by at least 2 percentage points by 2007-08 and 3 percentage points by 2009-10	Faculty time (faculty will discuss pedagogy and make minor curricula changes)	Students are increasingly underprepared. We may need to review course prerequisites if our efforts are unsuccessful within 2 years.

Progress on Goal:

___ Completed (Date)

___ Revised (Date)

Comments:

Goal(s)	Timetable for Completion	Needed resources	Obstacles to completion (if any)
4. Increase the number and percentage of women taking engineering courses	By the 2007-08 academic year, at least 45% of unduplicated students taking engineering courses will be women	Data from Office of Institutional Research on gender breakdown of engineering students Student help for outreach to high schools	Need to change perceptions of engineering as a 'male' field.

Progress on Goal:

___ Completed (Date)

___ Revised (Date)

Comments:

PROGRAM REVIEW REPORT

Name of Program: Engineering

Division/Operational Area: Natural Sciences and Mathematics

Contact Person: Jane Engineer

Submission Date: February 2, 2008

[Note: The information in this area will repeat on all pages.]

STAFFING REQUEST

Staff Resources:				
<u>Current Staffing Levels</u>				
<u>Full-time Staff (FTE)</u>		<u>Part-time Staff (FTE)</u>		
Faculty	4.3	Faculty	2.2	
Temporary	0	Temporary	0	
Classified	0	Classified	0	
Management	0	Management	0	
<p><u>Request for New/Replacement Staff</u> Use one line for each position requested. Justify each position in the space below.</p>				
	Title of Position	Classification <small>(Faculty, Classified, or Management)</small>	Full or Part Time	New or Replacement
Position 1				
Position 2				
Position 3				
<p>Justification: (Address each position requested)</p> <p>None requested at this time, except student help (see below).</p>				

PROGRAM REVIEW REPORT

Name of Program: Engineering

Division/Operational Area: Natural Sciences and Mathematics

Contact Person: Jane Engineer

Submission Date: February 2, 2008

[Note: The information in this area will repeat on all pages.]

BUDGET REQUEST

	Current Budget	Amount of Change	Revised Total
2000 (Student)	0	200	200
4000	750	300	1050
5000			
Other			

Justification:

(Include justification for each amount of increase requested.)

There are two areas where we are requesting a budget change. The first is a small amount of time of one student worker. This will allow for someone to take notes as we make our outreach efforts to the local high schools. We feel that high school students will connect better with one of our students (preferably one majoring in engineering) near their own age.

Secondly, we ask for a modest increase (\$300) in our supply budget. About \$50 is needed to cover inflation that has eroded the amount of supplies we can purchase each year. The remaining \$250 is to cover the cost of upgraded software needed for the mechanical engineering classroom. The latter is a one time expense.