

Los Angeles City College
Comprehensive Program Review 2008

Physics/Engineering Department

XII. EPC Validation Review

I. Department Mission

Does the department's mission statement reflect the goals and activities of the department? Is it aligned with the college mission? Explain.

The Physics/Engineering department's mission statement reflects the goals and activities of the department and is aligned with the college mission. The department fosters a culture of continuous assessment of course offerings so as to align with the student population's needs for; transfer, associate degrees and prerequisites for other disciplines.

II. Department Overview

Does the department's analysis of trends in enrollment and achievement accurately reflect the data? Have any issues been identified? Explain.

A concise course by course analysis is included and reflects the trends in enrollment for the past 5 years. Early cancellation of feeder course, Physics 101, in 2006 did impact enrollment in; upper level Physics courses, life science courses and engineering courses. Enrollment trends in physics, astronomy and engineering were for the most constant (exception; enrollment drop in Astronomy 1 and Engineering 1) in spite of the college overall drop in enrollment and department's full time faculty reduction. Summer enrollments are noticeably higher than in winter. An analysis of course offerings has shown that due to the degree of subject difficulty, the short winter term has an inhibiting effect on enrollment and student success rate. The Physics/Engineering department has established a student-instructor support program with the scope to improve students success rate and student interest in physics, astronomy and engineering disciplines. The department fosters an active marketing campaign throughout the campus and through outreach programs.

III. Vocational Programs

Does the department's analysis of labor market demand, advisory board activities and accreditation status (if applicable) reflect the data? Have any issues been identified and are they adequately addressed with appropriate action plans? Explain.

This Department is NOT a Vocational department.

IV. Curriculum

Does the department's analysis of enrollment trends accurately reflect the data? Has adequate progress been made in developing and assessing student learning outcomes at the course and program level? Are Title 5 course outline updates current? Has adequate analysis of course scheduling been provided? Explain.

The department's analysis of enrollment trends reflect for the most part the data. Two of the courses with decreased enrollment have not been addressed.

Most courses are Title 5 up to date with a few exceptions:

Engineering 101, 151, 211, 212, 241, 131

Physics 101, 103

Engineering 211 is a CAD class offered also by Architecture department. The department's decision was to drop Eng 211. However a decision must be made to either archive the course or update if keeping.

V. Departmental Engagement

Has the department provided a full description of departmental engagement? Explain.

The Physics/Engineering department does show active participation in several campus wide committees however with no specific assigned responsibilities.

Rich interdepartmental collaborations with chemistry, life science, math departments

Outreach programs with feeder high schools

Close collaboration with JPL (Jet Propulsion Laboratories)

VI. Professional Development

Has the department provided a full description of professional development? Explain.

All faculty members, full time and part time have completed the professional development section.

Physics/Engineering faculty are active participants in professional activities.

VII. Support and Activities

Has the department provided a full description of support needs of the department? Explain.

It seems that the department's most pressing present need is finding a qualified lab technician. The absence of lab technician and faculty shortage is strenuously impacting the department.

The media, library and custodial support are adequate.

VIII. Resources: Personnel, Equipment and Facilities

Has the department provided a full description of resource needs of the department? Explain.

Physics/Engineering department did provide a concise description of resource needs.

Personnel needs: Laboratory technician, full time faculty

Equipment needs: Portable lab equipment for high school outreach program, Astronomy equipment for NE Campus

Multimedia development software for online courses

Lab development for future sustainable courses and programs. As stated, this is not a specific resource need, is attached to goal #4 -ongoing analysis of course offerings and assuring their sustainability.

IX. Planning and Budget

Do the planning goals and action plans reflect the issues raised in the self study? Are they aligned with the Educational Master Plan and the College Strategic Plan? Explain.

All four new planning goals are aligned with Educational Master Plan and Strategic Master Plan and reflect the issues raised in the self study.

However goal #4 -"Incorporating Sustainability" incorporates more of a general action plans by reviewing courses to determine which areas can benefit by being linked to sustainability. There are no specific action plans tailored to Physics, Astronomy and Engineering courses sustainability.

Also major concern areas such as low numbers in degrees and certificates, and low enrolment in some of the courses has not directly been addressed or reflected in the action plans.

The Engineering program marked as "needs to improve" has not been fully addressed or marked with concrete action plans to support the stated needs.

X. Final Summary by Discipline

Are all items identified as a Major Concern addressed with a goal and action plan? Explain.

Marked major concern areas such as low numbers in degrees and certificates, and low enrolment in some of the courses has not directly been addressed or reflected in the action plans.

Engineering program marked as "needs to improve" has not been fully addressed or marked with concrete action plans to support the stated needs.

"There will be increasing demand for programs that will equip students with skills needed to make our society sustainable. The physics department has much to contribute in this regard, however the ground work and curriculum must be created before the real demand materializes. Such a program requires broader participation among other departments in addition to physics." As stated the department is aware of the future need for skills certificates, however it seems that no specific plans have been formulated at this time and no mention of an active advisory board for this discipline.

XI. Department Strengths and Weaknesses

Has the department provided an adequate analysis of departmental strengths and weaknesses? Explain.

The department did provide for the most part an adequate analysis of its strength and weaknesses with a couple of exceptions, such as low numbers of certificates and degrees and low enrollment in some of the courses.

XII. Recommendations/Commendations

What recommendations based on your comments do you have for this department? What commendations do you have for this department? Explain.

Commendations:

We commend the faculty in Physics/Engineering department for their great efforts and dedication in promoting student retention, success and quality of class offerings specially when the department has been reduced from 5 full time faculty to three.

We commend the department for the successful collaborations with other departments on campus and great opportunities offered to students through the JPL link. It is clear that the faculty works well together as a team and is very active in a variety of programs.

We commend the department for the impressive number of Scholarships offered to students.

Recommendations:

1. The low numbers of certificates and degrees should be addressed by formulating a comprehensive plan tailored to student and industry needs.
2. We recommend that an active advisory committee should be established and maintained as to use them as a source of information and guidance in planning future course offerings or certificates in engineering.
3. It was not clear from this review whether the relationship that had been established with CSULA and UCLA are still active. Prior partnerships should be updated and new ones noted.
4. We recommend that all Title 5 courses be brought up to date or archived as planned.
5. We recommend that replacement faculty request should be added as an action plan to the appropriate goal.