



## IEC STATUS UPDATE

**Academic Year**                      **Name of Program:**                      **Natural Science - Engineering**  
**2014-2015**                              **Date of last review:**                      **AY2012-2013**

### **Recommendation 1:**

Since the submitted report was almost entirely focused on the Engineering program, increase involvement of other physical science disciplines in the development of future program plans and reviews.

### **Progress:**

An AS-T in Physics has been prepared and submitted to the Curriculum Committee for consideration.

### **Recommendation 2:**

Coordinate with STEM, MESA, and Career center to identify appropriate internship opportunities.

### **Progress:**

Several conversations recently with the Transfer Center have identified great opportunities for students with both mentorship and internship opportunities. STEM has provided internship opportunities at SJSU that have been described by students as hit and miss. MESA has not provided any internship opportunities for students. Engineering faculty have helped students with applications to REU opportunities.

### **Recommendation 3:**

Regularly assess all course and program SLOs.

### **Progress:**

Course SLO assessments are up-to-date with the exception of courses that are due for assessment this semester. Assessments will be completed at the end of the semester.

### **Recommendation 4:**

Continue efforts to educate campus on the engineering program and the rigors of the corresponding pipeline.

### **Progress:**

Education of students about the rigors of the coursework and the importance of mastering courses in the prerequisite pathway was highly effective. Enrollments in 2013/2014 were approximately 12-15 in the second year lower division core Engineering (ENG) classes (ENG 2, 3, 4). Unfortunately, these students had poor preparation in Physics (instructor issues that were resolved) and were not adequately advised of the importance of mastering their prerequisite classes the prior year. Attrition in both Physics and Engineering was fairly high. After the education program was begun, students in the 2014/2015 cohort learned from the previous group and began the year much better prepared in the prerequisite Physics classes. Eight to ten students

were enrolled in Fall 2014 and it is believed that all of these students would have been successful in completing the core Engineering courses with passing grades and achieving transfer acceptance to various four-year schools of Engineering. Unfortunately, the 2014/2105 cohort will not achieve this success at Gavilan because of the cancellation of two essential core Engineering classes. We were on a great trajectory of program growth (65 students in Physics 2A in Fall 2015, a cohort of excellent, hard-working students in second-year engineering classes to mentor and act as role models for the next cohort, and tremendous student interest in Engineering. Faculty are convinced that steady growth would have been observed. Currently, Gavilan's Engineering program is "on-hold" while different scenarios are considered that will best serve all of the students in our service area and be supported by the District as a program that is viable within the financial constraints of the District. Education of the campus community has been slower than education of students. Essential support programs have been slow to master the subtleties of the Engineering transfer curriculum and advising problems are frequent. General counseling has been open to suggestions and faculty have spoken at Counseling meetings to help ensure that all counselors are "on the same page" when it comes to understanding the subtleties of the Engineering transfer curriculum. Faculty have also spoken to all levels of the Administration to ensure they, too, understand the subtleties of the Engineering transfer curriculum.

**Recommendation 5:**

Develop an outreach plan and materials, utilizing the newly formed Engineering Club.

**Progress:**

All outreach plans, materials, and their distribution were limited to those produced and delivered by the Engineering faculty. Recent conversations with the Transfer Center were encouraging. Broader based support, and inclusion of the community, will hopefully make the reconfiguration of the program for future activation a booming success in serving our community. Recent published studies continue to show that the Engineering fields surpass all other fields for job opportunities and high pay. We owe it to our community to provide them with the opportunity to be competitive for these jobs.