

College

ANNUAL PROGRAM REPORT

2. Offering more electives

3. Have started advertising the program to local student population.

C. Program Changes and Needs

Overview: The Engineering Management program started in the year 2003 and was steadily growing until 2016. Since then the international student enrollment has been declining. From 2004 onwards, we have not hired any faculty for this program. The faculty of Industrial Engineering also serve the Engineering Management program.

Curriculum: Courses have been transformed into a successful an online format. Faculty are putting significant effort in delivering the curriculum online.

Students: Demand for domestic Engineering Management graduates is relatively strong.

Faculty: Since 2004, we have had three faculty dedicated to the Engineering Management and the Industrial Engineering programs. The faculty include Drs. Helen Zong, David Bowen and Farnaz Ganjeizadeh.

Staff: We have two full time staff for the School of Engineering, a Student Services Professional Advisor Lisa Holmstrom and a support tech, Linh Nguyen.

Resources: The laboratory resources are sufficient for the offering of this program.

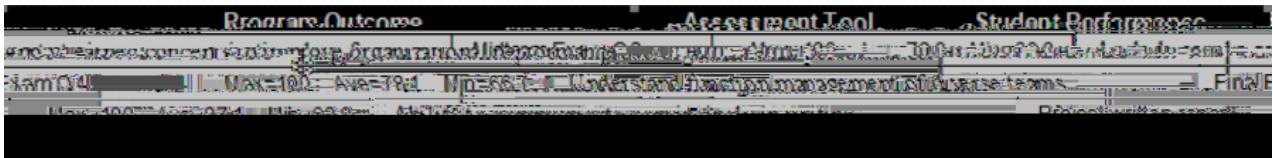
Assessment: An extensive assessment process is in place for the Engineering Management program. Sample results are provided in the following section.

settings. Topics include worker motivation and incentive systems, leadership, worker autonomy, work groups and participatory organizational structures including quality control circles, total productive maintenance teams, and socio-technical systems. There is a midterm, in-class exercises, course project and final examination.

Associated Program Outcomes: Ability to apply learned concepts and tools to improve organizational performance in novel situations. Understand the function and management of professionally and culturally diverse teams. Ability to communicate convincingly in writing and orally regarding the efficacy of a particular course of action, supported by description and application of relevant theory.

Summary of Student course performance: Students performed well overall in this graduate course, with the overall class average grade of 3.37 on a 4 point scale. Participation in class discussions was good with students nearly always volunteering their ideas and opinions. Many of these were thoughtful and incorporated cross cultural/international perspectives as a majority of the students were international, originating from India, Iran and other Middle-Eastern countries. With many international students whose first language is not English, performance on the Communication Outcomes was wide spread. Lecture and discussion topics included the use of work teams in organizations and system integration via sociotechnical systems design approach. Students worked in two person teams for the course projects.

Program outcomes were addressed as follows:



Program Outcome	Assessment Tool	Student Performance
Understand function management of diverse teams	Final Exam	

Summary of student comments and course evaluations: Student evaluations and comments were favorable overall. One student expressed a desire for more reference materials. Many students commented on the impact of the shelter-in-place orders and the cessation of in-person class meetings. The student ratings for the course ranged from 3.0 to 3.6 on a scale from 4 (Agree) to 1 (Disagree).

Summary of Faculty experience & observations: This course depends significantly on in-class discussions. For this reason, it is important to set the right tone and develop an online class environment that is conducive to promoting participation. This was successful overall for this class, with expression of many points of view and ideas founded on relevant personal experience. A few

international students participated less due to language proficiencies. Use of contemporary current issues from business news sources and from instructor international experiences improved discussions and relevancy of test questions.

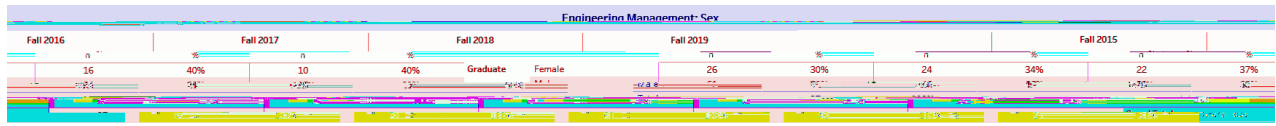
Recommended Changes:

Identify suitable reference materials for students desiring such materials

Continued and increased use of current events for discussions and exams.

D. Assessment Plans for Next Year

Year 3: 2020-2021	
1. Which PLO(s) to assess	PLO c - Understand the impact of engineering and management decisions in a global, economic, environmental, and societal context (ILO 5)
2. Is it aligned to an ILO?	Yes, ILO 5
3. Course name and number	ENGR 660 Sustainable Product and Process Design
4. SLO from Course	Student Learning Outcomes: Convincingly argue the merits and strategic importance of new product design and development for attaining competitive advantage. Apply Function-means analysis techniques and Functional mapping techniques. Understand and apply Life manufacture, operation and disposition after primary intended use. Utilize taught techniques and tools in a team environment to design sustainable products and processes, and to communicate design results orally and in writing.
5. Assessment activity	Midterm performance on related question
6. Assessment instrument	Department rubric
7. Responsible person(s)	Prof. Bowen
8. Strategies on reporting (how, to who)	The results (quantitative and qualitative) will be reported by



The combined enrollment in the two programs have fluctuated between a high of 200 and a low of 110 in the recent academic years.

Notable Trends:

1. Lower enrollment
2. Industry demand for the graduates
3. Active Advisory Board Council

Reflections on Trends and Program Statistics:

We believe the enrollment in the program will increase to about 60 students within the next three years.

Request for Resources

1. Request for Tenure-Track Hires:

We have not hired any faculty in Industrial Engineering or Engineering Management since 2004. All faculty are full time professors. These programs require the addition of a new tenure-track faculty to stay current.

2. Request for Other Resources

N/A