MINUTES OF THE GRADUATE COMMITTEE

CALIFORNIA STATE UNIVERSITY, FRESNO

5241 N. Maple, M/S TA43

Fresno, California 93740-8027

Office of the Academic Senate Ext. 8-2743

March 12, 2019

Members Present: M. Wilson (Chair), J. Marshall (ex officio), K. Capehart, N. Mahalik, N. Wang, S. Church, S. Tracz

Members Excused: D. Walker, M. Lopez

Guests: Dr. Ram Nunna (Dean), Dr. Nagy Bengiamin, Reza Raeisi, Sankha Banerjee

Chair Wilson called the meeting to order at 2:00 p.m. in TA 117

1. Minutes: MSC to approve the Minutes of March 5, 2019 with minor corrections.
2. Agenda: MSC to approve the agenda
3. Communications and Announcements

Dean Marshall announced that Annual Graduate student-faculty Mixer will be celebrated on May 7th, 4-7 pm at Smittcamp Alumni House this year. The Mixer is intended to celebrate the work of graduate students and the faculty. The focus of the event is to recognize the outstanding graduate students who the programs believe are ambassadors. Also, starting this year, 3-MT will be celebrated - three top graduates (out of 18) will be selected for three-minute Thesis presentation. Thesis/Project awards along with certificates will be given to the candidates who are nominated by the College.

1. Program Review of M.S. in Engineering - meeting with the team from the ME and EE Department

Chair Wilson requested the committee members and the guests introduce themselves. Members asked visitors questions that the Committee had discussed and prepared in the previous two UGC meetings. The questions (italic, below) were around curriculum, faculty, student enrollment/admissions, Lab space/facility, SOAP, and community involvement (advisory board).

*The program has developed a strong curriculum, but it is unclear whether they offer enough required courses within their own program, rather than depending in cross-disciplinary offerings by other programs. Regarding electives, this is particularly concerning considering the program’s plan to separate ECE into a stand-alone program independent from Mechanical Engineering.*

Most of the students are international. Recent years have shown low enrollments. We offer 3-4 courses per semester. Sometimes, because of enrollment, some courses do not fill up to minimum, and thus we must cancel. We encourage students to take some courses from ECE and IT programs to count towards their electives. Also, some of the courses are common to each option (e.g., ENGR 205). We do not encounter any challenge in managing the course offerings and schedule. Graduation is not impacted in the way the courses are offered and scheduled.

Some of the courses are inactive but still there. MSE program is very old; the program was begun over 30 years ago. Some of the old courses, for example. Aerospace Engineering, are still available in the Department. There has been a plan to teach this course again. It can be an opportunity for a new faculty to develop this course and maintain currency in future.

We do have a plan to improve the curriculum. Faculty are discussing the development and modification of required and a few new elective courses. Our initiative for option elevation will include modification of existing courses and development of few new courses, if needed.

*ECE has 6 tenured and 7 new, and ME has also 9 new faculty. It seems you have heavy teaching loads; for example, 3-4 preparations per semester, but still are publishing, writing grants, etc. along with some collaboration with college of Ag, and lots of research activities are going on. Are more faculty needed?*

Yes. All engineering courses by their nature always require preparations. Faculty have already discussed for content areas for possible new hires. The EE Department needs more faculty especially in Machine Learning and AI areas.

*There is a notably low enrollment from students admitted (23% of a usual 150 applications). Why this low rate? As close to 80% of those students are international, how do you plan to remain sustainable, in view of decreasing numbers of international students at Fresno State? A very high rate of failure (32% of students flunk out compared to less than 18% university-wide). This is very concerning.*

Although the Program receives lots of applications, most of them do not meet the requirements. Over the years, we admit about 24-25 new students per AY. Some of the admitted international students struggle once they are here, and later few of them discontinue from the Program.

Recently, we have implemented full tuition waiver program to 13 students subject to the condition that those awardees need to graduate in 2 years. Some of them work as TAs and have been doing good jobs. We hope to increase the numbers. The tuition waiver program is possible because of grants, projects and gifts, and is effective in regard to graduation rate. This has increased the number of local, domestic student in the graduate program. In past two years we have admitted 6 and 7 undergraduate students to our MS programs, respectively.

The 4+1 program exists in Civil Engineering Department. We would like to extend this to other programs in future.

*What plans, and activities do you have for Engineering East and Jordan Agricultural Center? Please update the facility and labs and their need.*

We have excellent lab facility due to donations, gifts, and grants. In the past there was a call to upgrade the labs listing them under the category priority, medium, and low. Concerns for all the labs listed under priority category as well as most of the labs under medium category were addressed, and later upgraded. The Microwave lab is the recent upgrade. We have equipment/instruments like RADAR and SEM which are one-of-their-kind in the region. Our Materials lab is at par with UC Merced. Students are pursuing research using the labs. The MRI proposal is underway. Almost a million dollars were spent for upgrades.

Several of our faculty members have space in the Jordan Research Center. Students are also using JRC space and facility to conduct research. For example, using JRC facility, more than 20 students have completed their project works under the supervision of Dr. Banerjee alone. Students pursue both early-level and high-end research. We are effectively using JRC.

*Commendation on a strong SOAP, but some minor discrepancies noted - different benchmarks for different SLOs. Please clarify. SLO benchmark noted at 75%, but narrative mentions that “D’ is a passing grade, and that a 58% is a “D”. Please clarify.*

We will review the benchmark and will try to maintain consistency. Regarding “D” grade, we will have to take a look and clarify. (Note: Later, via e-mail on 3/13 at 10:33 am, it was clarified by Dr. Bengiamin that a “D” grade is a passing grade according to university policy, whether it is accepted by the graduate program or not. D-grade course will not count as part of the graduate program for the student before a "C" grade or better is attained.)

*Do you have internships programs and what are the job prospects for the students considering research projects with industry? How do you facilitate student involvement with professional organizations and career advising?*

The Valley Internship Program (VIP) is working well. Many students take advantage of VIP opportunity. Students from other departments such as Computer Science and Industrial Technology also participate in VIP.

Students are getting jobs. The ranges are $85K to $127K. Because of good employment opportunity for undergraduate students, we do have limitation for attracting undergraduate students to our MS programs. Nevertheless, MS students gain high-end skills, and also are 100% employed.

 We have Advisory Boards.

1. MSC to adjourn at 3:02 p.m.

The next scheduled meeting of the University Graduate Committee is Tuesday, March 19, 2019 at 2:00 p.m. in TA 117.

Agenda for next meeting:

1. Approval of Minutes from March 12, 2019, meeting
2. Approval of Agenda

3. Communications and Announcements

4. Recommendation for MS in Mechanical Engineering Degree (Options)

5. Development of questions for Civil Engineering