CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

ACADEMIC SENATE

ACADEMIC PROGRAMS COMMITTEE

REPORT TO

THE ACADEMIC SENATE

AP-086-167

Mechanical Engineering, M.S. - Robotics Engineering Emphasis: 30 units

Academic Programs Committee	Date: 05/26/3017
Executive Committee Received and Forwarded	Date: 05/26/2017
Academic Senate	Date: 05/31/2016 First Reading

BACKGROUND: The Department of Mechanical Engineering has put forward a referral for a MSME degree with an emphasis in Robotics Engineering for semesters.

The current MSME curriculum does not offer the required classes in the robotic engineering areas. The field of robotics has grown tremendously in the last decade as new research has demonstrated its relevance and impact to diverse areas such as manufacturing, planetary exploration, medicine, healthcare, military, and consumer products. We have reached a turning point where this technology is moving from the purview of a handful of specialists (such as Mars rovers) to the general public (robotic car, household robots, elderly care, and unmanned search and rescue, etc.). Thus, adding the robotic engineering emphasis will strengthen the existing MSME curriculums and most importantly meet the needs of industry and general society. The robotic engineering emphasis is needed to complement the existing MSME programs in Mechanical Engineering. The multi-disciplinary nature of the proposed robotic engineering emphasis will provide an integrated graduate education that embraces courses in the Electrical and Computer Engineering, Engineering Management and Computer Science programs. The program will be directed towards advanced studies related to robotics and include core areas of concentration on actuation, locomotion, manipulation, dynamics, control (mechanical system), sensors, vision, artificial intelligence, and human-robot interactions.

RESOURCES CONSULTED:
Deans
Associate Deans
Department Chairs
All Faculty

DISCUSSION:
Before reaching the Academic Programs Committee, this program was reviewed by the College Curriculum Committee in the College of Engineering as well as the Dean of Engineering and the Office of Academic Programs. All concerns raised at those levels were addressed. The Academic Programs Committee then conducted campus-wide consultation, as well as its own review of the program. No concerns were raised.

RECOMMENDATION:

The Academic Programs Committee recommends approval of the semester program Robotic Engineering Emphasis in Master of Science, Mechanical Engineering.