

New Curriculum or Curricular Change EFD Template



College of Engineering

Engineering Faculty Document

No.: 25-26

October 24, 2025

TO: The Engineering Faculty

FROM: The Faculty of the Elmore Family School of Electrical and Computer Engineering

RE: New Engineering Concentration – MSSWE, Embedded Software, Robotics, Controls

The Faculty of the Elmore Family School of Electrical and Computer Engineering has approved the following new concentration from the College of Engineering. This action is now submitted to the Engineering Faculty with a recommendation for approval.

TITLE:

MSSWE, Concentration Embedded Software, Robotics, Controls

DESCRIPTION:

MSSWE students who complete the specified coursework can earn a concentration in embedded software, robotics, and controls. See following page for course list.

Relevant programs: SWE-MSSWE, SWE-MSSWE-HY, SWE-MSSWE-OL

RATIONALE:

This concentration allows the MSSWE student to earn a more specialized credential. Embedded Software, Robotics, and Controls is one of the focus areas of the MSSWE. We anticipate that about 30% of our MSSWE students will be interested in this concentration.

A handwritten signature in black ink, appearing to read 'Milind Kulkarni', positioned above a horizontal line.

Milind Kulkarni, Head/Director of the Elmore Family School of Electrical and Computer Engineering

Link to Curriculog entry:

<https://purdue.curriculog.com/proposal:30353/form>

PWL MSSWE - New Concentration > Embedded Software, Robotics, and Controls

MSSWE students can earn the Embedded Software, Robotics, and Controls concentration by completing 9 credit hours from this list:

Course	Title	Credit Hours
ECE 56800	Embedded Systems	3
ECE 56900	Intro to Robotic Systems	3
ECE 58000	Optimization Methods for Systems and Control	3
ECE 60872	Fault-Tolerant Computer System Design	3
ECE 66100	Computer Vision	3
ECE 69500	Advanced Internet of Things Design and Applications	3
CS 53400	Motion Planning	3