Engineering Faculty Document No. 103-26
November 26. 2025

TO: The Faculty of the College of Engineering

FROM: The Faculty of the School of Mechanical Engineering

RE: MSPE 35000 Computer Aided Design and Manufacturing Title and Course Description Change

The Faculty of the School of Mechanical Engineering has approved the following change. This action is now submitted to the Engineering Faculty with a recommendation for approval.

From:
Title:
Computer Aided Design and Manufacturing

To:
Title:
Advanced Computer Aided Design for Motorsports

From:
Course Description: This course provides the basis for the computer-aided engineering and analysis skills needed in the Motorsports Industry. The ability to visualize and conceptualize a real part in the physical world and produce graphical representations of it in 2D and 3D in SolidWorks or an equivalent is a primary objective. Further skills to be developed include the ability to produce large assemblies of such parts with appropriate tolerancing, free form surfacing, casting shapes and casting machining, 2D drawings for use in 3D sheet metal fabrication including shrink and stretch, use of 3D models to facilitate Finite Element Analysis, Conversation of CAD model to programming of CAM machining. Credits 3.0

To:
Course Description: This course provides state of the art computer-aided mechanical design & analysis skills needed for students to successfully compete in the Motorsports Industry. The ability to create, modify and interrogate complex racing components and assemblies from the physical world are a primary objective. Further skills to be developed include mastering parametric modeling, creating configurations using Design Tables, and analyzing assemblies for interference detection and mass property evaluations. The course provides SolidWorks Professional (CSWP) exams as part of the class, which certifications allow students to be recognized for their CAD proficiency throughout the industry. Credits 3.0

Reason: The change of the title and the course description provides future students with a better understanding of course content and the knowledge they will gain through the course.

Christopher E Finch, Professor of Practice and Director Motorsports Engineering
School of Mechanical Engineering

Curriculog link: https://purdue.curriculog.com/proposal:35112/form