

NEW PRODUCT DEVELOPMENT AND FABRICATION OPTION (CERT)

CERTIFICATE OF ACHIEVEMENT

Students in this option will focus their studies to the development of new or modified designs for the industries other than automotive. Students need to have a basic understanding of the electronic and robotic requirements of many new products and take classes to gain that familiarity. Students are also required to take an engineering technology project development class. Students then proceed to take classes to allow them to both finalize their product design and obtain quotations. Other classes in the certificate requirements are product development related.

The program goals are multiple. The first goal is to provide students with the academic preparation needed for a career in the automotive aftermarket industries or other industries using similar technology. Students can do that by learning the program objectives from the set of classes that will allow them to take a virtual new product idea to market. Another goal of the program is to enable current students to get a double competency (3D inspection/NPD, Machining/NPD, Auto/NPD, Welding/NPD, Plastics/NPD, and Engineering Design/NPD). Finally, the last goal of the program is to provide continuous learning opportunities for industry employees.

Program Student Learning Outcomes

- Students create a design presentation.
- Students develop machine tool technology based fabrication plans.
- Students evaluate the feasibility of the rapid prototyping various products.
- Students produce a cost-effective plan for an automation product.
- Students produce a portfolio of new design technology for the production of new products.
- Students select a plan for manufacturing and procurement.
- Students take a product through the stages of new product development.

Program Requirements

Code Number	Course Title	Units
Program Requirements		
NPD 100	Product Development in a Global Economy	3.0
NPD 101	Innovation Using Rapid Prototyping	3.0
NPD 103	Tooling and Materials for New Product Development	3.0
MTT 111	Programmable Logic Controllers In Automated Manufacturing	3.0
MTT 112	Variable Frequency Drives in Automated Manufacturing	3.0
ET 102	Electronics for Engineering Technologists	3.0
ENGT 131	Design Fundamentals Including 3D Modeling	3.0
Total Units		21

Recommended Electives

Code Number	Course Title	Units
MTT 278	Mastercam Advanced	3.5
WELD 130	Gas Tungsten Arc Welding Fundamentals	5.0
WMT 111L	Introduction to Woodworking Lab	1.0