

SLO Presentation

NPD

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TECHNOLOGY
NPD
Automotive Aftermarket Product Development--Cert <ul style="list-style-type: none">• Students take a product through the stages of new products development.• Students create a design presentation.• Students design products for OEM and aftermarket automotive or autobody products.• Students evaluate the feasibility of the rapid prototyping products of their choice.• Students produce a cost-effective plan for an automation product of choice.• Students produce portfolio for a new design.• Students select a plan for manufacturing and procurement.
Automotive Aftermarket Product Development--Degree <ul style="list-style-type: none">• Students take a product through the stages of new products development.• Students create a design presentation.• Students design products for OEM and aftermarket automotive or autobody products.• Students evaluate the feasibility of the rapid prototyping products of their choice.• Students produce a cost-effective plan for an automation product of choice.• Students produce portfolio for a new design.• Students select a plan for manufacturing and procurement.
New Product Development and Fabrication--Cert <ul style="list-style-type: none">• 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.
New Product Development and Fabrication--Degree <ul style="list-style-type: none">• 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.
CSLO
NPD100 - Product Development in a Global Economy <ul style="list-style-type: none">• Student take a product of their choice through the stages of new product development by documenting it in a journal• Produce a portfolio of new design

- Justify their strategies for product plan, customer needs/evaluation, product specification, concept generation, concept selection, product design and for manufacturability and procurement for a product of their choice
- Recognize the best product development process for the product of their choice
- List patent processing steps for the product of their choice
- Produce product specifications for a product of their choice.

NPD101 - Innovation Using Rapid Prototyping

- Student evaluate the feasibility of a rapid prototyped product of their choice
- Student identify the steps required to retrieve a previously created solid model of moderate complexity using rapid prototyping software, apply the appropriate settings, and comprehend the rapid prototyping process.
- Student understand the different processes to finish and decorate a product of their choice
- Student list advantages and drawbacks of various rapid prototyping fabrication processes
- Student evaluate scaling methods for final product fabrication
- Student can cite benefits of plastic, composite, and metallic materials for scaled up production

NPD102 - Quality Systems for New Product Development

- Student produce a document describing a sample procedure for a product or tooling of their choice
- Student produce a data collection strategy for their product or tooling.
- Student present a graphical representation of their data with appropriate quality improvement strategies
- Student demonstrates how overall product development costs can be reduced when quality is infused early into the design process
- Student recognizes the advantages of team dynamics in new product development
- Student contrast different types of quality costs in new product development

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NPD103 - Tooling and Materials for New Product Development

- Student produce a viable tooling design for a product of his choice
- Student prepare a document that includes a tooling plan, product needs evaluation, product specification and materials to be used
- Student select a plan for manufacturability and or procurement

NPD105 - Mechatronics Integration in New Product Development

- Student produce a portfolio for a new design
- Student produce a plan indicating how their new design will be connected to the control box or a panel
- Student learn how to obtain commercial quotations for hte selected solution
- Student creates bill of materias for their new design
- Student is capable to distinguish between analog and digital component of their design
- Student creates a presentation of their design to their peers for review.