



Course Name: ENR- 291 Special Topics in Engineering

Date Updated: 2/2022

Credit Hours/week: Lec. 3 hrs./wk. – 3 cr.

BEGINNING: SPRING 2022

Catalog Description: This course is an examination of selected topics or issues in engineering. Topics may differ each time the course is offered. Students should consult the department chair for further information.

Prerequisite: Permission of Department Chair

Text: None

Supplementary Material: Specialized equipment, supplies, facilities, for classes limited by enrollment or restricted by accreditation and/or equipment limitations: (Information will be used to determine differential funding category.)

Syllabus:

Topics (Based on Course Offering)

Formats for Offering this Class: Traditional

As a minimum this course satisfies Engineering Technology Program Level Outcome number 8

Students are expected to adhere to the policies of the County College of Morris. These can be accessed at: (insert link here)

Statement of Expected Course LEARNING OUTCOMES

- Discuss an Area of Emerging Technology and its Impact on Their Career Field
- Demonstrate the Use or its Application of a Subject Matter, Tool, or Technique that is Finding Increasing Interest in Their Career Field
- Make an Informed Decision About the Utilization of Emerging Topics in Their Field of Study
- Demonstrate an Understanding of the Need to State Current in Their Career Field Through a Commitment to Life Longing Learning
- Discuss steps required in the parametric part modeling process
- Create rough two-dimensional sketches correlating to a part's geometric features
- Dimension and modify sketches by applying geometric and dimensional constraints as well as relational parametric equations
- Transform a two-dimensional sketch into a solid feature using a number of commands such as Extrude, Revolve, and Sweep
- Develop two-dimensional part drawings utilizing drawing views from the solid model using default borders and title blocks in layout mode
- Create dimensions on part drawing and demonstrate design changes using associative functionality
- Create parts within the Assembly Modeler mode and assemble parts using the Assembly Modeling Methodology
- Convert the default model file into an .STL file for export into other programs
- Create a rapid prototype of solid models using a 3D printer
- Develop an exploded view of the assembly and make a presentation of the design project to the class

Statement of Relation to Curriculum(s):

May be offered as a technical elective