# COURSE SYLLABUS

<table>
<thead>
<tr>
<th>Course Title:</th>
<th>SolidWorks</th>
<th>Date submitted:</th>
<th>4/30/2018 (18-24)</th>
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<tbody>
<tr>
<td>Department:</td>
<td>Advanced Manufacturing Technology</td>
<td></td>
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<tr>
<td>Curriculum:</td>
<td>Technology Studies</td>
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## Course Code: (eg. ACC 101)

- **MFG*110**

## Course Type:

- A: Clinical
- B: Lab
- D: Distance Learning
- I: Individual/Independent
- L: Lecture
- N: Internship
- M: Seminar
- P: Practicum
- U: Studio
- X: Combined Lecture/Lab
- Y: Combined Lecture/Clinical/Lab
- Z: Combined Lecture/Studio

## Elective Type:

- G

## Credit Hours:

- 3

## Developmental: (yes/no)

- No

## Lecture:

- 2

## Clinical:

- 0

## Lab:

- 1

## Studio:

- 0

## Other:

- 0

## TOTAL:

- 3

## Class Maximum:

- 24

## Semesters Offered:

- Fall, Spring

## Prerequisites:

- None

## Corequisites:

- None

## Other Requirements:

- None

### Catalog Course Description:

SolidWorks design focuses on parametric modeling while introducing the student to the paperless computer-based design process utilizing the modern parametric 3-D design software SolidWorks. The course reviews the following topics: design process, design engineering, assembly modeling, mechanism analysis, rapid prototyping, team design, geometric dimensioning and tolerancing, and the analysis of tolerance stackups. Students will participate in individual & team design projects.

### Topical Outline:

1. Fundamentals of Part Modeling
2. Extrude and Revolve Feature
3. Fundamentals of Drawing
4. Sweep, Loft, Wrap & Additional Features
5. Fundamentals of Assembly Modeling
### Upon successful completion of this course, the student will be able to do the following:

#### COURSE:
1. Demonstrate a basic understanding of the fundamentals of Part Modeling.
2. Demonstrate an understanding of the extrude and revolve features.
3. Demonstrate an understanding of the fundamentals of drawing.
4. Demonstrate an understanding of Sweep, Loft, Wrap & Additional Features.
5. Demonstrate an understanding of the fundamentals of Assembly Modeling.
6. Demonstrate an understanding of top-down assembly modeling
7. Demonstrate an understanding Rapid Prototyping

#### PROGRAM: *(Numbering reflects General Education Outcomes as they appear in the college catalog)*

1. demonstrate an understanding of Shop Safety
2. demonstrate an understanding the theory of electrical structure, voltage, current, resistance, and electrical circuit and their measurement
3. demonstrate an understanding of the basic laws of arithmetic
4. demonstrate an understanding of several number systems and codes that are the foundation of digital theory and digital applications
5. make comparisons with personal computers; as well as, develop an understanding of its origin and growth since conception
6. demonstrate an understanding of the fundamentals of Automated Manufacturing systems

#### GENERAL EDUCATION: *(Numbering reflects General Education Outcomes as they appear in the college catalog)*

No General Education outcomes.

### Evaluation:
Assessment will be based on the following criteria:
- quizzes
- exams
- laboratory projects

### Instructional Resources:
<table>
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<tr>
<th>Required</th>
<th>Desired</th>
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<tr>
<td>Computer lab with SolidWorks software.</td>
<td>None</td>
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<tr>
<td>Textbook(s)</td>
<td>Engineering Design with SolidWorks by David &amp; Marie Planchard, latest edition.</td>
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