REGULAR COURSE SYLLABUS

School of: Professional Studies

Department: Engineering Technology

CIP Code: 15.0805

Prefix & Course Number: MET 1210

Crosslisted With*: ______

Course Title: 3-D Modeling

Check All That Apply: Required for Major: X Required for Minor: _____ Specified Elective: _____

Required for Concentration: _____ Elective: _____ Service Course: _____

Credit Hours: 3 (2+2)

Total Contact Hours per semester (assuming 15-16 week semester):

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Lab</th>
<th>Internship</th>
<th>Practicum</th>
<th>Other (please specify type and hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>30</td>
<td>___</td>
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Schedule Type(s): B Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**):

** NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): NONE

Prerequisite(s): MET 1200 with a grade “C” or better, or permission of instructor

Corequisite(s): NONE

Prerequisite(s) or Corequisite(s): NONE

Banner Enforced:

<table>
<thead>
<tr>
<th>Prerequisite(s):</th>
<th>Corequisite(s):</th>
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<tr>
<td>MET 1200 with a grade “C” or better</td>
<td>NONE</td>
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Catalog Course Description:

This course is designed to familiarize students with functional 3-D modeling using an appropriate software package. The course covers the basic functions needed to create part models, assemblies, and drawings. Emphasis is on the design philosophy, used in creating parts and assemblies.

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APPROVED: Richard P. Rozzi

Department Chair OR Program Director: Kathy Stige

Dean OR Associate Dean: Richard Wagner

Associate VP, Academic Affairs: 

*If crosslisted, attach completed Course Crosslisting Agreement Form
Prefix and Course Number: MET 1210

**Required Reading and Other Materials will be equivalent to:**


**Specific, Measurable Student Behavioral Learning Objectives:**
Upon completion of this course the student should be able to:

1. Relate design concepts using 3-D modeling software package.
2. Define basic parts using 3-D modeling software package.
3. Define assemblies using 3-D modeling software package.
4. Define basic drawings required to document designs and use proper dimensioning and tolerancing using the software package.

**Detailed Outline of Course Content** (Major Topics and Subtopics) or **Outline of Field Experience/Internship (experience, responsibilities and supervision):**

I. **Introduction to System Fundamentals**
   A. Introduction to 3D modeling
   B. Modes and File Management
   C. Interface
   D. Utilities
   E. Model tree

II. **Design Cycle using Modeling Software**
   A. Software Fundamentals
   B. Construct Feature Fundamentals

III. **Basic Part Creation**
   A. Sketcher
   B. Datums
   C. Protrusions and Cuts
   D. Holes and Rounds

IV. **Additional Modeling Techniques in Part Design**
   A. Pattern and Group
   B. Drafts, Suppress, and Text Protrusions
   C. Sweeps

V. **Assembly Fundamentals**
   A. Assembly Design
   B. Assembly Creation from Parts
   C. Exploded Assemblies

VI. **Drawing Fundamentals**
   A. Formats, Title Blocks, and View
   B. Section and Auxiliary Views
   C. Assembly Drawing and BOM

**Evaluation of Student Performance:**

1. Homework
2. Quizzes
3. Examinations
4. Final Examination