REGULAR COURSE SYLLABUS

School of: Professional Studies

Department: Engineering Technology

CIP Code: 15.0805

Prefix & Course Number: MET 1200

Course Title: Technical Drawing I

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

Required for Concentration: ____ Elective: ____ Service Course: ____

Credit Hours: 3 (1+4)

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

Lecture 15 Lab 60 Internship ____ Practicum ____ Other (please specify type and hours): ____

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): NONE

Corequisite(s): NONE

Prerequisite(s) or Corequisite(s): NONE

Banner Enforced:

Prerequisite(s): NONE

Corequisite(s): NONE

Prerequisite(s) or Corequisite(s): NONE

Catalog Course Description:

This is an introductory course in technical drawing. It covers the use of manual drawing instruments, lettering, various geometric constructions, and multi-view orthographic engineering drawings. It introduces 2-D technical drawing using computer-aided design software.

APPROVED:

Richard P. Rea 

Department Chair OR Program Director

Date 3/18/09

Kathy Rehl

Dean OR Associate Dean

Date 3/19/09

Robert Wippe

Associate VP, Academic Affairs

Date 4/30/09

*If crosslisted, attach completed Course Crosslisting Agreement Form
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 demonstrate:

1. Relate the completion of drawing problems through proper use of:
   - a. Mechanical drawing instruments and related equipment
   - b. Drawing theory and principles of geometric construction
   - c. Parallel projection principles
   - d. Dimensioning and tolerance techniques
   - e. Standard lettering styles and character
2. Recall the various types of standard engineering drawings and their importance to the respective disciplines.
3. Recall the principles learned in this course to develop 2D design drawings utilizing Computer-aided Design package.
4. Repeat the principles learned in this course in team and individual drawing/design projects.

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

I. Meaning and Importance of Graphic Language as a Means of Communication
   A. Manual drawing and sketching
   B. Manual drawing skills and precision in drawing
   C. Computer-Aided Design (CAD) skills
   D. CAD skills and drawing precision

II. Basic Mechanical Drafting Equipment and Techniques
   A. Selection and usage of drawing equipment
   B. Types and sizes of drawing materials and paper
   C. Proper use of drawing instruments
   D. Proper use of drawing scales
   E. Hierarchy and alphabet of lines

III. Geometric Construction and Orthographic Drawings
   A. Proper use of drawing instruments
      1. Tangents to lines and circles
      2. Bisecting lines and angles

IV. Geometric Construction and Orthographic Drawings using computer-aided design software.
   A. World Coordinate System
   B. Basic 2D drawing commands
   C. Absolute, Relative Rectangular and Relative Polar Coordinate entry
   D. Geometric Construction Problems
   E. Multi-view Projection Problems

Evaluation of Student Performance:

1. Homework
2. Test
3. Laboratory drawing problems
4. Projects with presentations