



Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title - Engineering Graphics I

Course Prefix and Number - ENGR1304

Department - Engineering Design

Division - Technology and Business

Course Type: (check one)

- Academic General Education Course (from ACGM – but not in WCJC Core)
- Academic WCJC Core Course
- WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

Semester Credit Hours # : Lecture hours# : Lab/other hours #
3:3:3

Equated Pay hours for course - $3 + (3 \times .5) = 4.5$

Course Catalog Description - Introduction to spatial relationships, multi-view projection and sectioning, dimensioning, graphical presentation of data, and fundamentals of computer graphics.

Prerequisites/Co requisites - None

List Lab/ Other Hours
Lab Hours 3
Clinical Hours
Practicum Hours
Other (list)

Approvals – *the contents of this document have been reviewed and are found to be accurate.*

Prepared by Jo Ann Lurker	Signature JALurker	Date 10-24-11
Department Head Jo Ann Lurker	Signature JALurker	Date 10-24-11
Division Chair Stephanie Dees	Signature SDees	Date 10-24-11
Vice President of Instruction or Dean of Vocational Instruction Leigh Ann Collins	Signature Lac	Date 11-9-12



I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non-lecture instruction):

- Industry terminology and standards
- Sketching - freehand, perspectives, projections
- Fundamentals of Computer Graphics - AutoCAD
 - Introduction to spatial relationships
 - Graphical presentation of data
 - Geometric construction
 - Multi-view projection and sectioning
 - Dimensioning
- Blueprint reading including -
 - Architectural Plans - elevations, sections and details
 - Civil plans - contour maps, underground utilities and drainage plans
 - Structural plans - foundations, concrete, steel, and wood structures
 - Mechanical plans - plumbing, HVAC, fire systems, isometrics and P&ID's
 - Electrical plans - one-line diagrams, conduits and cables
 - Manipulating CAD files - opening, marking, as-built drawings

II. Course Learning Outcomes

Course Learning Outcome	Method of Assessment
Upon the completion of the course students will demonstrate the ability to: Understand graphic terminology and conventions Manipulate CAD files Communicate using graphics tools Read Blue prints	A portfolio containing student work projects will be assessed using the rubric attached to this document. Eighty percent of the students will earn a minimum of 70% of the points available.

III. Required Text(s), Optional Text(s) and/or Materials to be supplied by Student.

Technical Graphics Communication, by Bertoline; McGraw-Hill

IV. Suggested Course Maximum - 20

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

Computer work station to include printers/plotters, projection system and appropriate software.

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course
Written exams, projects, and daily lab work.

- A = 100 -90
- B = 89-80
- C = 79-70
- D = 69-60
- F = 59 or below

"C" or above in all degree specific classes

VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
No additional documentation needed
- **Academic WCJC Core Course**
Attach the Core Curriculum Checklist, including the following:
 - Basic Intellectual Competencies
 - Perspectives
 - Exemplary Educational Objectives
- **WECM Courses**
If needed, revise the Program SCANS Matrix & Competencies Checklist.