**Course Title:** Special Topics in Civil Drafting and Civil Engineering CAD/CADD  
**Course Prefix and Number:** DFTG 1493  
**Department:** Engineering Design  
**Division:** Technology/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 #: 4:3:3  
**Equated Pay hours for course:** 4.5  
**Course Catalog Description:** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.  
**Prerequisites/Co-requisites:** DFTG1405 and DFTG1409, or ENGR1304 for Construction Management Majors.

<table>
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<tr>
<th>List Lab/Other Hours</th>
<th>Lab Hours</th>
<th>3</th>
<th>Clinical Hours</th>
<th>Practicum Hours</th>
<th>Other (list)</th>
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**Prepared by:** Jo Ann Shimek  
**Date:** 06/11/15  
**Reviewed by Department Head:** Jo Ann Shimek  
**Date:** 06/11/15  
**Accuracy verified by Division Chair:** David Kucera  
**Date:** 07/15/15  
**Approved by Dean or Vice President of Instruction:** Leigh Ann Collins  
**Date:** 12-18-15
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):

- Map Symbols
- Contours
- Plats
- Azimuths and Bearings
- Curve Data
- Survey Basics/Easements
- Map Scales
- Plan and Profile
- Drainage
- Range and Townships
- Land Development
- Civil Terminology

II. Course Learning Outcomes

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>Methods of Assessment</th>
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<tbody>
<tr>
<td>Identify Map Scales; convert R/F scales and graphic scales;</td>
<td>Daily Drawings/Lab Work/Daily Quizzes</td>
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<tr>
<td>Identify map symbols</td>
<td>Three to Four Major Exams or Drawings</td>
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<tr>
<td>Identify terms used in civil work;</td>
<td>Civil Project</td>
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<td>Layout traverses using bearings, deflection angles, distances and coordinates;</td>
<td>(All drawings evaluated in terms of accuracy of drawing views, use of line types,</td>
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<tr>
<td>Layout existing and gradeline contours;</td>
<td>line quality, dimensioning accuracy and placement and drawing organization.)</td>
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<td>Layout contours, create plan and profile drawings;</td>
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<tr>
<td>Calculate curve data;</td>
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<td>Identify and use legal land descriptions; use property deed (written description)</td>
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<td>to draw a plat using CAD techniques;</td>
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<tr>
<td>Compute land area by using the CAD system;</td>
<td></td>
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<tr>
<td>Use 3d Civil design program to generate drawings;</td>
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</tbody>
</table>

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

Required: A text covering the technical material covered in this course. An example would be Civil Drafting Technology by Madsen, Shumaker, Madsen

A flash drive is required for archiving data files

Note book to store notes and drawings.

IV. Suggested Course Maximum - 20

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.
Computer work stations, plotters/printers, data 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

Daily Drawings/Lab Work/Daily Quizzes to assure comprehension of drafting skills 40%
Three to Four Major Exams or Drawings covering individual topics 30%
Civil Project 30%

Based on the above breakdown, grades will be awarded as prescribed by Wharton County Junior College Standards.

- 90% to 100% = A
- 80% to 89% = B
- 70% to 79% = C
- 60% to 69% = D
- Below 60% = F

**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.