

**Course Evaluation Measures Menu**

**Course number:** CET 225

**Course title:** Civil CAD Applications

**Campus location(s):** Georgetown, Stanton

**Effective Semester:** 2022-51

**Core Course Performance Objectives**

1. Create civil CADD files with appropriate software and appropriate values for all settings. (CCC 2, 4, 6; PGC: CET 1, 4, 5; SET 1, 4, 5, 6)
2. Develop data-driven CADD drawings using various forms of survey and design data. (CCC 1, 2, 4, 5, 6; PGC: CET 1, 4, 5; SET 1, 4, 5, 6)
3. Design and develop a residential subdivision plan.

(CCC 1, 2, 4, 5, 6; PGC: CET 1, 4, 5; SET 1, 4, 5, 6)

1. Design and analyze the vertical elements of a road.

(CCC 1, 2, 4, 5, 6; PGC: CET 1, 4, 5; SET 1, 4, 6)

1. Develop surface models from survey data and 3D linework, objects, road profile, and sections.

(CCC 1, 2, 4, 5, 6; PGC: CET 1, 4, 5; SET 1, 4, 5, 6)

1. Calculate critical design elevations for proposed drainage and utilities such as storm sewer, sanitary sewer, and water service.

(CCC 1, 2, 4, 5, 6; PGC: CET 1, 4, 5; SET 1, 4, 6)

1. Produce structural steel framing and connection detail drawings.

(CCC 1, 2, 4, 5, 6; PGC: CET 1, 4, 5; SET 1, 4, 6)

1. Demonstrate professional and ethical conduct as expected in industry.

(CCC 1, 2, 3, 4, 5, 6; PGC: CET 1, 4, 5; SET 1, 4, 6)

**Summative Evaluations**

*Please note: All courses must have a* ***minimum******of four*** *summative evaluation measures, and those measures should include a variety evaluation methods (e.g., test, oral presentation, group project).* ***Please list all summative evaluation measures.*** *In addition to these summative measures, a variety of formative exercises/quizzes/other assignments should be used to guide instruction and learning* *but do not need to be included on this template.*

*For each measure, please include a scope of the assignment: for example, if requiring a research paper, include the range of required number of words and numbers and types of sources; for a test, include the types and numbers of questions; for a presentation, include the minimum and maximum time, and so on.*

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| **Evaluation Measures:** Include each agreed upon measure and scope of that measure (see above). | **Which CCPO(s) does this evaluation measure?** |
| **Project 1 – Site Layout and Record Plan**   * Size D drawing * Create plan with title block, north arrow, and scale * Plot overall parcel from legal description * Create and label a road centerline alignment * Create and label a road right-of-way with cul-de-sac * Create and label subdivision parcels * Label bearings and distances * Insert parcel curve table showing curve radius, delta, chord length and chord bearing * Create a sheet layout following industry standards | **1, 2, 3, 8** |
| **Project 2 - Road Plan and Profile**   * Size D drawing * Set up data shortcuts * Create and label an existing ground profile * Create and label a finished ground profile * Create a proposed road cross section * Create a proposed road corridor * Create a proposed road surface * Create a proposed road intersection * Create proposed cul-de-sac grading * Create a sheet layout following industry standards | **1, 4, 5, 8** |
| **Project 3 - Existing Conditions Plan**   * Size D drawing * Import survey point file * Create point groups * Create surface from survey points * Implement breaklines and surface editing * Add contours and labels * Create a sheet layout following industry standards | **1, 2, 5, 8** |

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| **Project 4 - Grading Plan**   * Size D drawing * Create a proposed ground surface * Add contours and labels * Implement breaklines and surface editing * Create a sheet layout following industry standards | **1, 5, 6, 8** |
| **Project 5 - Structural Steel Framing Plan w/Connection Detail**   * Size D drawing * Create framing plan with building grid * Identify structural steel members * Create connection detail * Dimension and label connection detail * Create a sheet layout following industry standards | **1, 7, 8** |
| **Assignments**   * Minimum of ten classroom assignments * Selection of: homework, activities, practice problems, quizzes, and participation | **1,2,4,5,6,7,8** |

**FINAL COURSE GRADE**

(Calculated using the following weighted average)

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| **Evaluation Measure** | **Grade Break-out** |
| Formative: Assessments (participation, homework, discussion boards, etc.) | 25% |
| Summative: Site Layout and Record Plan, Road Plan and Profile, Existing Conditions Plan, Grading Plan, Structural Steel Framing Plan w/Connection Detail (equally weighted) | 75% |
| **Final Course Grade** | **100%** |

(Electronic Signature Permitted)

**Submitted by (Collegewide Lead):** \_Diane M. Calloway\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_05/28/2020\_\_\_\_\_\_

**Approved by counterparts**  Date \_\_\_\_\_05/28/2020

**Reviewed by Curriculum Committee**  Date \_\_6/16/20\_\_\_\_\_\_\_\_\_\_\_