Engineering Graphics and Design

CCE 201, Section 001, T/TH 8:00-11:50 am
Summer 2017, 3 credits

Instructor
Dr. Tracy Arras, Email: tracy.arras@oregonstate.edu
Office: Owen 246
Office Hours: T/TH 12:00-12:45 pm, by appointment and email.

Course Communication
Every student must have ONID email account. Course communications are through email.

Course Description
Fundamental concepts of engineering graphics and design are presented and an introduction to Autodesk’s AutoCAD and Civil 3D. The course presents reading civil and construction engineering plans, comprehending scale and operation of software as it applies to civil/construction engineers. CE/CEM applications include: transportation, structures, surveying, and water resources.

Course Learning Outcomes/Objective
By the end of the course, you should be able to demonstrate the ability to:
1. Communicate the fundamental concepts of engineering graphics.
2. Apply engineering and architecture scales.
3. Utilize AutoCAD and Civil 3D to develop 2D engineering drawings.

Reference Information
Students need to have both engineering and architect scales.

Students can create an account at Autodesk Student Community—Autodesk has many good articles, tutorials, and free software. The software is robust and needs a fairly new computer to operate.

Downloading AutoCAD or Civil3D 2016: http://students.autodesk.com/?nd=download_center
1. Sign up at the Autodesk Education Community—you will need to register—get software.
2. When you enter your email account it will only take
   Yourname@oregonstate.edu or Yourname@onid.orst.edu as a recognized mail address
3. Write down the registration code, registration ID, your user name and password.
4. Download, unzip/install.
5. Enter the activation code and your software is ready to operate for one year

Course Outline (tentative): 6/27/17 – 7/20/17
Week 1: AutoCAD I
Week 2: AutoCAD II
Week 3: Civil 3D Basics I
Week 4: Civil 3D Basics II
Tentative Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Tuesday</th>
<th>Thursday</th>
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<tbody>
<tr>
<td>1</td>
<td>6/27 Assigned: Lab1 – Surveying Parcels</td>
<td>6/29 Assigned: Lab 2 – Manhole (section views)</td>
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<tr>
<td></td>
<td>Due: Lab 1</td>
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<td>2</td>
<td>7/4 Independence Day (4th of July, holiday, no class)</td>
<td>7/6 Assigned: Lab3 – Plan and Profile</td>
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<tr>
<td></td>
<td>Due: Lab2</td>
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<tr>
<td>3</td>
<td>7/11 Assigned: Lab4 – C3D Surfaces &amp; survey basics</td>
<td>7/13 ACAD Exam</td>
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<td>Due: Lab3</td>
<td>Assigned: Lab5 – Alignments and profiles</td>
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<td>Due: Lab4</td>
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<td>4</td>
<td>7/18 Assigned: Lab6 – Gravity pipe networks</td>
<td>7/20 C3D Exam</td>
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<td>Due: Lab5</td>
<td>Due: Lab 6</td>
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**Homework**

Homework is instrumental in helping you grasp fundamental concepts and in exposing you to knowledge, techniques and skills for applying these principles to real-life situations. Homework should be done in several sittings; you cannot expect to be successful doing homework quickly the night before it is due. You may discuss homework problems with your classmates but try them on your own first and DO NOT COPY someone else’s SOLUTIONS. Additionally, solutions must be written up independently. You cannot work together and then both turn in the same work. If this occurs you will both earn zeros. Last, DO NOT email your solutions to anyone.

- Labs/HW are due at start of class, unless specified otherwise.
- Late assignments are not accepted.

**Computing Questions:** [http://it.engineering.oregonstate.edu/](http://it.engineering.oregonstate.edu/)

**Citrix XenApp:** [http://it.engineering.oregonstate.edu/citrix](http://it.engineering.oregonstate.edu/citrix)

**Class Data:** [http://classes.engr.oregonstate.edu/cce/summer2017/cce201/](http://classes.engr.oregonstate.edu/cce/summer2017/cce201/)

**TEACH:** [https://teach.engr.oregonstate.edu/teach.php?type=want_auth](https://teach.engr.oregonstate.edu/teach.php?type=want_auth)

**Course Grades**

Course grades will be based upon examination of course work.

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<tbody>
<tr>
<td>ACAD Exam</td>
<td>25%</td>
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<tr>
<td>Civil 3D Exam</td>
<td>25%</td>
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<tr>
<td>HW and Labs</td>
<td>40%</td>
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<tr>
<td>Class Participation</td>
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<tr>
<td>(In-class work,</td>
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<tr>
<td>attendance,</td>
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<td>participation)</td>
<td>10%</td>
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**Grades:**

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<thead>
<tr>
<th>Grades:</th>
<th>97-100 A</th>
<th>87-90 B+</th>
<th>77-80 C+</th>
<th>67-70 D+</th>
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<tbody>
<tr>
<td>94-97 A</td>
<td>84-87 B</td>
<td>74-77 C</td>
<td>64-67 D</td>
<td></td>
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<tr>
<td>90-94 A-</td>
<td>80-84 B-</td>
<td>70-74 C-</td>
<td>60-64 D-</td>
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**Class Attendance and In-Class Assignments**
You should attend every class and participate in discussion. If you do miss class, it is your responsibility to find out the material covered by contacting a classmate in the class and/or by checking Canvas. Occasionally, there will be in-class assignments due at the end of class, which if you miss class, cannot be made-up.

**Disruptive Behavior**
While the University is a place where the free exchange of ideas and concepts allows for debate and disagreement, all classroom behavior and discourse should reflect the values of respect and civility. Behaviors which are disruptive to the learning environment will not be tolerated. As your instructors, we are dedicated to establishing a learning environment that promotes diversity of race, culture, gender, sexual orientation, and physical disability. Anyone noticing discriminatory behavior in this class, or feeling discriminated against should bring it to the attention of the instructors or other University personnel as appropriate.

The following specific behaviors are not allowed:
- If your phone rings, please take it outside. No texting during class.
- Use of Laptops or other electronic devices for inappropriate activity.
- Only appropriate computer desktop screen background (wallpaper) or screen savers.
- No eating during class and only closed, non-spill containers.

**Cheating and Student Conduct**
The instructor of this class takes the issue of academic honesty very seriously. You are expected to be honest and ethical in all of your academic work. There is a “zero tolerance” policy in effect for cheating in this class. Academic dishonesty can result in failure of this course and/or “F” on an assignment. Any instance in which a student is caught cheating will be handled in strict accordance with the policies outlined at [http://studentlife.oregonstate.edu/studentconduct/academic-misconduct-reporting-forms](http://studentlife.oregonstate.edu/studentconduct/academic-misconduct-reporting-forms). In order to provide students with a positive learning environment, OSU has adopted a pledge of civility, which can be found at [http://studentlife.oregonstate.edu/sites/studentlife.oregonstate.edu/files/student_conduct_code_1.pdf](http://studentlife.oregonstate.edu/sites/studentlife.oregonstate.edu/files/student_conduct_code_1.pdf) and CCE has an Honor Code, which all CCE students are expected to read and understand. CCE Honor code can be found at [http://cce.oregonstate.edu/code-student-conduct](http://cce.oregonstate.edu/code-student-conduct). Eventually, you will likely want to seek professional licensure and ethical behavior is an important qualification for licensure.

Academic dishonesty is defined as an intentional act of deception in one of the areas:
- **Cheating**: use or attempted use of unauthorized materials or study aids
- **Fabrication**: falsification or invention of any information
- **Tampering**: altering or interfering with evaluation instruments and documents
- **Plagiarism**: representing the words or ideas of another person as one's own
- **Assisting**: helping another commit an act of academic dishonesty. Helping another commit an act of academic dishonesty, such as emailing your solution to a friend (even to just look at) or bribing someone to acquire a test or assignment, changing someone's grades or academic records, or taking a test/doing an assignment for someone else (or allowing someone to do these things for you). It is a violation of Oregon state law to create and offer to sell part or all of an education assignment.

**Disability**
Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at [http://ds.oregonstate.edu](http://ds.oregonstate.edu). DAS notifies students
and faculty members of approved academic accommodations and coordinates implementation of those
accommodations. While not required, students and faculty members are encouraged to discuss details of
the implementation of individual accommodations.