



Welcome to Engineering Design Graphics DT-23

Course Name: Engineering Design Graphics

Section #: E0182

Instructor: Joan Carpenter

Contact Information: Joan-Carpenter@redwoods.edu

Information from your instructor: This course is delivered and taught 100% online; there are no classroom meetings. However, like a class on campus, it will require students to log in and submit/interact on Canvas 2 times minimum every week with discussions, quizzes, drawing assignments, and hand drawn worksheets due weekly on Tuesdays and Thursdays. Zoom Drafting Lab will occur during the regular time of face to face class however, students may watch recorded Zoom Drafting Lab sessions in place of attending them live without loss of graded points. Students may always complete assignments earlier than the due date during the week, but there is no option to log in once per week to submit all work, nor is there an option to work at one's own pace/submit all work at the end of the semester.

Course Description: A study of engineering design graphics for engineers and drafters with an emphasis on technical drawings and an introduction to computer-aided design (CAD). Topics include the development of visualization skills; orthographic projections; dimensioning and tolerancing practices; and the engineering design process. Assignments develop sketching and 2-D and 3-D CAD skills. The use of CAD software is an integral part of the course

Student Readiness: Are you ready for online classes? Please take about 15 minutes to review what it means to take an online class by watching the [Introduction to Online Learning](#) presentation.

Student Commitment: Online courses require at least as much time as you dedicate to a traditional class on campus. In order to be successful in this class, students will need to:

- Watch and take notes on weekly video lectures.
- Actively read and annotate (take notes) readings from the textbook and other assigned readings uploaded onto canvas.
- Participate in online discussion and offer feedback to class colleagues on their drafts.
- Complete quizzes and activities connected to the readings and learning content presented in videos.
- Complete approximately 20 drawing assignments using AutoCAD
- Complete approximately 15 hand drawn worksheets related to 2D and 3D objects.
- Present a portfolio of the completed course drafting assignments.

Behaviors leading to Success in Drafting Technology 23 online: Because the online environment places more responsibility on the student to engage with course material, success in an online class

significantly depends upon the student’s approach to learning and mindset. Consistently demonstrating the following actions and behaviors is the *best* way to feel connected and to be successful in this course:

- **Frequent Engagement:** Engage online at least 2 times per week to meet weekly deadlines.
- **Flexibility:** We’re going to learn in new ways. Bring a “can-do” attitude to our online classroom.
- **Initiative:** Take ownership of your success. Success in this course is a reachable goal if you choose to actively engage with the class and be accountable for meeting deadlines and learning expectations.
- **Conscientiousness, attention to details, and a tolerance for the occasional confusion or frustration that almost always happens when learning from a distance:** When we are not in the same room together; it can be tricky to immediately eliminate confusion or concern. This does not mean class will be confusing. It simply means students must be patient and understanding that online courses feel and operate a little differently than face to face courses.

Computer Skills: Online courses require adequate computer skills. You must be able to:

- navigate the course Learning Management System (Canvas)
- receive and respond to your CANVAS email (this is our official communication for class)
- download and upload files to the Canvas, and
- Use AutoCAD drafting program (with provided training). AutoCAD student version is available free of charge.

Computer Requirements: The student should have high-speed internet (such as broadband) service from cable, DSL, or satellite providers as there are videos that require this speed. The student needs to have reliable access to the internet for the duration of the course. Anticipate problems with your computer and internet access (including power outages) by not waiting until the last minute to submit assignments and saving material in an additional place than your computer memory. It is your responsibility to meet the class deadlines.

Remote AutoCAD requires an adequately powerful desktop computer. Listed below are needed performance specifications for a desktop computer for AutoCAD use.

System requirements for AutoCAD for DT-23	
Operating System	<ul style="list-style-type: none"> • Microsoft® Windows® 7 SP1 (32-bit & 64-bit) • Microsoft Windows 8.1 with Update KB2919355 (32-bit & 64-bit) • Microsoft Windows 10 (64-bit only) (version 1607 and up recommended)
CPU Type	32-bit: 1 gigahertz (GHz) or faster 32-bit (x86) processor 64-bit: 1 gigahertz (GHz) or faster 64-bit (x64) processor
Memory	32-bit: 2 GB (4 GB recommended) 64-bit: 4 GB (8 GB recommended)
Display Resolution	Conventional Displays: 1360 x 768 (1920 x 1080 recommended) with True Color High Resolution & 4K Displays:

System requirements for AutoCAD for DT-23	
	Resolutions up to 3840 x 2160 supported on Windows 10, 64 bit systems (with capable display card)
Display Card	Windows display adapter capable of 1360 x 768 with True Color capabilities and DirectX® 9 ¹ . DirectX 11 compliant card recommended. ¹ <i>DirectX 9 recommended by supported OS</i>
Disk Space	Installation 4.0 GB
Browser	Windows Internet Explorer® 11 or later
Network	Deployment via Deployment Wizard. The license server and all workstations that will run applications dependent on network licensing must run TCP/IP protocol. Either Microsoft® or Novell TCP/IP protocol stacks are acceptable. Primary login on workstations may be Netware or Windows. In addition to operating systems supported for the application, the license server will run on the Windows Server® 2012, Windows Server 2012 R2, and Windows 2008 R2 Server editions. Citrix® XenApp™ 7.6, Citrix® XenDesktop™ 7.6.

If you do not have access to a computer that meets the system requirements you can access the CR Computer Lab and use the Lab in a virtual mode. You could then run AutoCAD with a less powerful laptop. After the start of the semester I will provide instructions for Virtual Computer Lab use.

If you are going to use the Virtual Computer Lab on a laptop you will need a keyboard, three button mouse, and if possible an 18 inch wide screen.

If you are going to be working in a distracting environment you may want to get noise canceling headphones and create a study nook around your computer.

A web camera and micro phone will be needed if the student wants to be interactive in Zoom Drafting Lab Sessions.

Portable Devices (phone/tablet) vs. Computers: Although students can use portable devices (such as Android or iOS phones & tablets) for some things, **the phone or tablet app will not work to fully see or fully interact with the class.** Students often email with questions, remarking that they are confused or disoriented by the module, just to learn that the reason is because they are trying to do all of their classwork on their phone. Plan on doing the majority of your work (especially exams and assignments) from a reasonably recent (newer) notebook or desktop computer (Mac or PC). **Please do not plan to participate in this class solely from a portable device.** If you do decide to use your

portable device for **some** of your class work, use the free Canvas app (called “Canvas by Instructure”) available in iTunes (for iOS) and the Google Play Store (for Android).

Proctored Exams: There are no proctored exams for this class.

Textbook: Engineering Drawing and Design with David Madsen as one of the authors. A free PDF copy of the Fifth Edition is available on the Canvas course page.

It's been around a long time and you can really get any edition up to and including the 6th. I recommend getting a hard copy so you can use it as a desk reference while working on line. We will only be using a portion of this text. Feel free to use the PDF copy provided in place of purchasing a book.

Other Materials: Mechanical Drafting Pencils in 0.5mm and 0.9mm sizes. HB drafting lead for mechanical pencils. Clear plastic scale or triangle straight edge, vinyl eraser, and (optional) thin metal erasing shield.

Course Availability:

Course Availability The syllabus and course information module will be available on CR’s Canvas system beginning 08/07/2020. On or after that date, you must login to Canvas at <https://redwoods.instructure.com> to enter our “classroom.” Classes begin 01/22/20. At that time, the first course content module will open, class will start, and assignments will be visible.

Login instructions for Canvas:

1. Open your web browser and go to <https://redwoods.instructure.com>
2. Your Username is the same as your Webadvisor User ID (e.g., flast123 - first initial + lastname + last 3 digits of your student ID number.) Your initial password is your 8-digit birthdate (mmddyyyy).
3. Once logged in, on top left-hand side of the screen you should see a drop down menu of your Courses.

Canvas Help:

There are instructions on the basics of Canvas and additional help with preparation for taking an online course at College of the Redwoods on the CR-Online web page

Confirm your presence in the online classroom 08/25/2020 to remain enrolled: Log in to the Canvas website and post to the “Check-In discussion” forum no later than 9:00pm on 08/25/2020 to confirm your presence in the online classroom. Doing so will confirm your enrollment in the course and avoid being dropped as a “no show.” No exceptions will be made. A student from the waiting list may then be added in your place.

Additional Information from the Instructor: Hello and welcome to class! I am excited you are here. Taking an online class is a different type of commitment than taking a class in a classroom on campus. Because of this, you will need additional skills to be successful. Most importantly, what you will need is a combination of internal drive and dedication to remain connected to class, manage your time, and be

a self-starter. The following overview of time commitments is a great tool to help you assess what this course will ask of you against your current life schedule and requirements.

An overview of time commitments for Drafting Technology 23:

Although the actual time needed to complete a class will vary some from student to student, I can offer some fairly reliable time estimates to help you better understand what it means to be signing up for this course. DT-23/ENGR-23 is a 3 unit course. A standard estimate in college is that every 1 unit or hour of class time = 2 hours of homework. In an online class, the time estimate breaks down into two pieces:

- 3 hours online interaction work time per week (watching course lecture videos, contributing to discussion forums, responding to your class colleagues online, taking online quizzes. This is the replacement for on campus class meeting)
- 5-6 hours homework weekly (out of class work focused on completing the reading, AutoCAD Drawings, and hand drawn Work Sheets that make up the points for class)

Assumptions that lead students to struggle:

Three common but very harmful assumptions students make when entering DT-23/ENGR-23 have to do with attempting to reduce the time commitments of this course. They are the following:

1. I don't really need to do the reading/do the reading thoroughly. I can skim and be fine.
2. I work best under pressure. I certainly don't need all that time to complete drawing and worksheets, why would I need it for this class?
3. This is an online course; that means the 6 hours I no longer spend in class can be redistributed to complete the reading and homework.

Any one of these assumptions can result in not passing the course.

1. Using the minimum effort to learn new AutoCAD commands. Expect to try multiple ways to complete commands, repeated practice, and challenge yourself to become fast and accurate when using AutoCAD.
2. Power drafting the day of a due date. Without time to self-check, or get the instructor to check, or get a class mate to check drawings the student is likely to have less than satisfactory work.
3. An online course is no less of a time commitment than a face to face course. The distribution of time is simply organized differently. In order for you to earn 3 units just like your fellow CR students in a traditional face to face class, the time commitments online need to equal the time commitments in a traditional class. Therefore, a student in a traditional class with 3 hours class time + 5-6 hours homework time per week will be equally working alongside your 3 hours online + 5-6 hours of homework.

Whoa...this sounds really hard. Is it?

Before you decide to run screaming in the other direction, notice that none of the explanations above have said the work is the hardest thing you'll ever do. In fact, most students comment that once they got the hang of class after about two weeks, they realized that **this class is built to walk students step by step, at a reasonable pace, to reach the end goal.**

DT-23 does not require you to be a “good” drafter. It requires you to be dedicated.

Many of my students who entered class terrified of AutoCAD drafting end up earning A’s and B’s. The work isn’t hard; it is just thorough. If you can commit to the time each week and be disciplined, you’ll reach the goals of the assignments, understand the material, and be successful. **It is the students who do not contribute online and cut corners on reading homework or time commitments that struggle.** They are confused in class, behind on assignments, and out of the loop on class discussions. This is a very tough sand pit to climb out of, so I encourage you to realistically review your commitments this coming semester outside of this class and review your time use habits.

My goal in this explanation is not to scare you, but to cut straight with you. I want you to be well informed and empowered so can to make the best decision for you. Of course, when you have questions, email me. I am always happy to help, clarify, or offer suggestions. I was once where you are and I empathize with what it means to be progressing toward your goals.

All the best,
Professor Joan Carpenter