



Syllabus for Engineering Design Graphics ENGR-23 On-Line

Course Information

Semester & Year: Fall 2021

Course ID & Section #: ENGR-23 (V2553)

Instructor's name: Joan Carpenter

Course units: 3

Instructor Contact Information

Online: Weekly Zoom meetings or by appointment

Office hours: Weekly Zoom session is 6-7 PM Thursdays or by appointment

Email address: joan-carpenter@redwoods.edu or through Canvas Mailbox. I will see your message sooner if you send it through the Canvas Mailbox.

Catalog 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

Course Student Learning Outcomes *(from course outline of record)*

1. Develop orthographic projections, isometrics, obliques, and perspective pictorial representations of designs using CAD and sketching.
2. Present engineering drawings using current industry standard documentation and annotation techniques.
3. Define terminology related to engineering graphics.
4. Prepare a professional portfolio.

Prerequisites/co-requisites/ recommended preparation

Recommended Preparation: CIS100

Prerequisite: None for DT23, MATH25 for ENGR23

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.

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. Zoom Drafting Lab will occur once a week, tentatively at 6-7PM on Wednesday or Thursday. 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.

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	• 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: 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.

System requirements for AutoCAD for DT-23

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.

Course Availability:

Course Availability The syllabus and course information module will be available on CR's Canvas system beginning 08/17/2020. On or after that date, you must login to Canvas at <https://redwoods.instructure.com> to enter our "classroom." Classes begin 08/23/21. 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 08/27/2020 to remain enrolled: Log in to the Canvas website and post to the "Check-In discussion" forum no later than 9:00pm on 08/27/2020 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

Accessibility

College of the Redwoods is committed to making reasonable accommodations for qualified students with disabilities. If you have a disability or believe you might benefit from disability-related services and accommodations, please contact your instructor or [Disability Services and Programs for Students](#) (DSPS). Students may make requests for alternative media by contacting DSPS based on their campus location:

- Eureka: 707-476-4280, student services building, 1st floor
- Del Norte: 707-465-2324, main building near library
- Klamath-Trinity: 530-625-4821 Ext 103

If you are taking online classes DSPS will email approved accommodations for distance education classes to your instructor. In the case of face-to-face instruction, please present your written accommodation request to your instructor at least one week before the needed accommodation so that necessary arrangements can be made. Last minute arrangements or post-test adjustments usually cannot be accommodated.

Student Support

In response to COVID-19, College of the Redwoods moved the majority of its courses online to protect health and safety. As the faculty and students adjust to this change, clear communication about student needs will help everyone be successful. Please let me know about any specific challenges or technology limitations that might affect your participation in class. I want every student to thrive.

Evaluation & Grading Policy

Methods of Evaluation: The final grade you receive will be based on the following criteria:

60% Projects & Quizzes	Grade Scale: 100% - 90% A
10% Participation	89% - 80% B
10% Portfolio	79% - 70% C
10% Midterm	69% - 60% D
10% Final	59% - 0% F

*Late work, for any reason, is penalized 20% and will not be accepted for credit more than 2 class meetings after it is due. *Per CR policy, students with 4 absences prior to the end of the 10th week will be dropped from the course.

Grading Methods: Each assignment is graded separately for each student, meaning there is no curve. For each incorrect portion of the drawing, $\frac{1}{2}$ a point will be deducted from the drawing's grade. This can be changed depending on the severity of the mistake by the instructor.

Participation is based on taking a quiz and participating in the Weekly Discussion Topic on Canvas twice a week. Students will get 2 points on each participation quiz regardless of answering questions correctly or not. Students get 1 point for an initial post in the weekly discussion and 1 point for making two reply later in the week. Missed participation Discussions may be made up by attending Zoom Computer Lab with the Instructor. At the end of the semester, the instructor may add or subtract points depending on class participation and attitude.

Other Information:

- The information in this document is subject to change, with notice, in the event of extenuating circumstances.
- The following items may be found on the Canvas site for this class: Calendar, Assignments, Announcements, Grade book and Resources such as reading assignments, handouts, and PowerPoints
- It is your responsibility to check Canvas frequently.
- It is expected that students attend class via Canvas a minimum of twice a week.
- Make use of the instructor's office hours for questions and answers.
- The software used in this class (AutoCAD 2021) is available for free download to students registered in the class.
- Instructor does not provide technical support for your personal software or computers.

Admissions deadlines & enrollment policies

Fall 2021 Dates

- *Classes begin: 8/21/21*
- *Last day to add a class: 8/27/21*
- *Last day to drop without a W and receive a refund: 9/03/21*
- *Labor Day Holiday (all campuses closed): 09/06/21*
- *Census date: 9/07/21 or 20% into class duration*

- *Last day to petition to graduate or apply for certificate: 10/28/21*
- *Last day for student-initiated W (no refund): 10/29/21*
- *Last day for faculty-initiated W (no refund): 10/29/21*
- *Veteran's Day (all campuses closed): 11/11/21*
- *Fall Break (no classes): 11/22/21 – 11/26/21*
- *Thanksgiving Holiday (all campuses closed): 11/24/21 – 11/26/21*
- *Final examinations: 12/11/21 – 12/17/21*
- *Last day to petition to file P/NP option: 12/17/21*
- *Semester ends: 12/17/21*
- *Grades available for transcript release: approximately 01/07/22*

Academic dishonesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct ([AP 5500](#)) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the [College Catalog](#) and on the [College of the Redwoods website](#).

Disruptive behavior

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process, a disruptive student may be temporarily removed from class. In addition, the student may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct ([AP 5500](#)) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the [College Catalog](#) and on the [College of the Redwoods website](#).

Inclusive Language in the Classroom

College of the Redwoods aspires to create a learning environment in which all people feel comfortable in contributing their perspectives to classroom discussions. It therefore encourages instructors and students to use language that is inclusive and respectful.

Setting Your Preferred Name in Canvas

Students have the ability to have an alternate first name and pronouns to appear in Canvas. Contact [Admissions & Records](#) to request a change to your preferred first name and pronoun. Your Preferred Name will only be listed in Canvas. This does not change your legal name in our records. See the [Student Information Update form](#).

Canvas Information

If using Canvas, include navigation instructions, tech support information, what Canvas is used for, and your expectation for how regularly students should check Canvas for your class.

Log into Canvas at <https://redwoods.instructure.com>

Password is your 8 digit birth date

For tech help, email its@redwoods.edu or call 707-476-4160

Canvas Help for students: <https://webapps.redwoods.edu/tutorial/>

Canvas online orientation workshop: [Canvas Student Orientation Course \(instructure.com\)](#)

Community College Student Health and Wellness

Resources, tools, and trainings regarding health, mental health, wellness, basic needs and more designed for California community college students, faculty and staff are available on the California Community Colleges [Health & Wellness website](#).

[Wellness Central](#) is a free online health and wellness resource that is available 24/7 in your space at your pace.

Students seeking to request a counseling appointment for academic advising or general counseling can email counseling@redwoods.edu.

Emergency procedures / Everbridge

College of the Redwoods has implemented an emergency alert system called Everbridge. In the event of an emergency on campus you will receive an alert through your personal email and/or phones.

Registration is not necessary in order to receive emergency alerts. Check to make sure your contact information is up-to-date by logging into WebAdvisor <https://webadvisor.redwoods.edu> and selecting 'Students' then 'Academic Profile' then 'Current Information Update.'

Please contact Public Safety at 707-476-4112 or security@redwoods.edu if you have any questions. For more information see the [Redwoods Public Safety Page](#).

In an emergency that requires an evacuation of the building anywhere in the District:

- Be aware of all marked exits from your area and building
- Once outside, move to the nearest evacuation point outside your building
- Keep streets and walkways clear for emergency vehicles and personnel

Do not leave campus, unless it has been deemed safe by the campus authorities.

Student Support Services

The following online resources are available to support your success as a student:

- [CR-Online](#) (Comprehensive information for online students)
- [Library Articles & Databases](#)
- [Canvas help and tutorials](#)
- [Online Student Handbook](#)

[Counseling](#) offers assistance to students in need of professional counseling services such as crisis counseling.

Learning Resource Center includes the following resources for students

- [Academic Support Center](#) for instructional support, tutoring, learning resources, and proctored exams. Includes the Math Lab & Drop-in Writing Center
- [Library Services](#) to promote information literacy and provide organized information resources.
- [Multicultural & Diversity Center](#)

Special programs are also available for eligible students include

- [Extended Opportunity Programs & Services \(EOPS\)](#) provides services to eligible income disadvantaged students including: textbook award, career academic and personal counseling, school supplies, transportation assistance, tutoring, laptop, calculator and textbook loans, priority registration, graduation cap and gown, workshops, and more!
- The TRiO Student Success Program provides eligible students with a variety of services including trips to 4-year universities, career assessments, and peer mentoring. Students can apply for the program in [Eureka](#) or in [Del Norte](#)
- The [Veteran's Resource Center](#) supports and facilitates academic success for Active Duty Military, Veterans and Dependents attending CR through relational advising, mentorship, transitional assistance, and coordination of military and Veteran-specific resources.
- Klamath-Trinity students can contact the CR KT Office for specific information about student support services at 530-625-4821