

## Technical Drawing & Visualization

CGN 2328 Section EED1

**Class Periods:** Tues & Thurs periods 2-3

**Location:** Wert 370

**Academic Term:** Spring 2024

### **Instructor:**

Name Dr Sarah Jayasekaran

Email Address: [srajkumari@ufl.edu](mailto:srajkumari@ufl.edu)

Office Phone Number

Office Hours: TBA

### **Teaching Assistant/Peer Mentor/Supervised Teaching Student:**

Please contact through the Canvas website

- NA

### **Course Description**

Two- and three-dimensional graphical methods of visualizing and communicating features of projects for construction involving parcel boundaries, topography, drainage, site modeling, site development, structures, buildings and objects using both traditional and computer-aided drafting and design techniques.

### **Course Pre-Requisites / Co-Requisites**

Knowledge of construction and surveying would be a great benefit, but is not necessary. Building construction practices and processes will be explained as necessary. Working knowledge of arithmetic is strongly recommended.

### **Course Objectives**

By the end of this course, students will:

- Have a working knowledge of AutoCAD
- Have a working knowledge of basic plans reading
- Be able to use engineer's and architect's scales to interpret construction documents
- Be able to create and compile an entire set of construction documents
- Develop or improve spatial visualization skills

### **Materials and Supply Fees**

NA

### **Relation to Program Outcomes (ABET):**

The table below is an example. Please consult with your department's ABET coordinator when filling this out.

Outcome	Coverage*
1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	Medium
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	High
3. An ability to communicate effectively with a range of audiences	
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the	

impact of engineering solutions in global, economic, environmental, and societal contexts	
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies	Medium

### ***Required Textbooks and Software***

NA

### ***Recommended Materials***

- NA

### ***Course Schedule***

Refer to weekly schedule.

### ***Attendance Policy, Class Expectations, and Make-Up Policy***

Attendance for lecture is necessary. Attendance will not be recorded. PowerPoint lectures will be made available, however, these types of lectures only comprise approximately 30% of the course. The other material presented will be done in AutoCAD without substantial supplement.

If you are sick, you **MUST** go to see a doctor and get a doctor's note; otherwise the absence will not be excused. The office hours will be posted on canvas, if you cannot attend them, please contact the instructor and make an appointment to meet on zoom.

***How to send an excuse:*** Email Dr. J at [srajkumari@ufl.edu](mailto:srajkumari@ufl.edu)

Use the Following Subject line: CGN 2328: Absence Excuse

What constitutes a valid excuse?

Excused absences are consistent with university policies in the undergraduate catalog and require appropriate documentation. Absences will be excused under the following conditions:

- 24 hours ahead of time that you have a legitimate, unavoidable absence (such as an exam conflict for a higher-numbered academic course)
- A verifiable medical or family emergency
- Travel for a student conference—provided all excuse request prior to travel § Need to come to class late or leave early for a legitimate reason
- Email instructor at least 24 hours before missing class due to interview confirmation email; conference email; UF official sporting event

### ***Attendance guidelines:***

Excused absences must be consistent with university policies in the undergraduate catalog (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>) and require appropriate documentation.

### ***Basic Responsibilities Expected from You:***

Attending the class is critical. The material you will learn is invaluable. In case of absence, you can ask a classmate for lecture material, use your book, and access supporting slides on Canvas.

- Don't be afraid to ask for help during class or office hours.
- Be an active learner - ask yourself questions during lectures, as you read, and as you attempt assignments.
- Study in advance and go to office hours. Don't wait until the day before the exam, forms, or Lab to get clarification on the material.
- Check Canvas for class updates, assignments, announcements, lessons, calendar, and resources. If using a laptop and other devices in class, you shouldn't be on Facebook, Netflix, Hulu, etc. or do other things that are not class-related. When instructor asks you to put your device away, please do so.
- You need to notify your instructor if your need accommodation from the Disability Resource Center. I would love to help you out. Let me know within the first two weeks of the start of the semester.

#### Emails, Announcements, Feedback, and Communications

- Announcements will be shared periodically during class and on Canvas. Is your responsibility to attend to class and read the emails/announcements from Canvas.
- After each assignment is graded, you are responsible for reviewing your instructor's feedback.
- Emails, announcements, and feedback may occur outside business hours.
- Your instructor should respond within 24 hrs. during workdays (M-F). There is not guarantee of response during weekends. Plan accordingly.

#### ***Instructional Methods:***

The course is structured to teach students how to use AutoCAD software to prepare construction documents starting at the very beginning (setting up drawing units and drawing single lines) up through creating three-dimensional structures; including creating items that help convey information (dimensions, text, tables, etc.) Much like the process of constructing a building, creating a set of construction documents requires the student to understand the final goals of the project, along with every element along the way to make the goal successful. Working in AutoCAD is procedural; therefore, thinking procedurally (and thinking ahead) will help students succeed in this course. Do not be afraid to be wrong, being wrong is a requirement for learning.

#### ***Quiz/exam policy:***

There will be two 50-minute written examinations and one 2hr Computer Exam will be given in class throughout the semester. The exams will be a combination of AutoCAD and Visualization material taught in the lectures and labs. Computer exam will test your skills using the AutoCAD software.

Exam dates are set and will be during class hours. Make up exams are only provided for legitimate reasons and you need to get a letter from Dean of student office.

#### ***Make-up policy:***

Make-ups will not be provided unless an acceptable excuse is furnished with documentation.

Acceptable excuses include: illness (with doctor's note), jury duty (with documentation and prior notification), and military service (with documentation and prior notification).

If you cannot attend an exam, you must contact the instructor well in advance. Submitting an exam, forms, labs late will result in a zero. Arrangements will be made for students on a case by case basis for excused reasons. Failure to contact the instructor prior to the exams will result in a zero. It is the student's responsibility to honor and respect the given deadlines posted on Canvas

#### ***Late policy:***

Submitting an exam, lab, form, assignments will result in a zero. Arrangements will be made for students on a case by case basis for excused reasons. Failure to contact the instructor prior to the exam, Lab, or form will result in a

zero. **You are allowed to submit labs to 24 hours late with a penalty of 30 points.** This only applies to Labs and not the forms or any other assignments. It is the student's responsibility to honor and respect the given deadlines posted on Canvas. Do not leave uploads until the last minute, computer/internet issues are not a valid excuse for late assignments! Time stamp on your computer after missing an assignment does not count as submission on time.

**Please note the deadlines are strictly enforced and there are no dropped homework assignments.** For example if the deadline is 11:00 am, any assignment submitted after this time is considered late. It is also your responsibility to submit the correct file and ensure the submission was successful before the deadline (please double check your Canvas submissions). If you are unable to submit your homework through Canvas, send a copy of your assignment to your instructor before the stated deadline!

### ***Assignment policy:***

The course comprises two exams, one computer exam, nine lab assignments, and a series of hand-drawing assignments.

See: Attendance Policy for valid excuse

**No late submissions during exams will be accepted.** All assignments, forms, Exams, Computer exams etc... need to be turned in within the allocated time frame, anything after the due time will not be accepted.

### ***Course technology:***

AutoCAD (and AutoDesk software) is used to prepare 65% of the course assignments. Downloading the program to your personal computer is mandatory. This is a very resource-heavy program, and older/less powerful computers may struggle with this program. You should download AutoCAD 2023 (NOT AutoCAD LT; AutoCAD for Mac is available, but the instructor cannot guarantee that they will be able to help you with it).

To download the software, you will need to go to the student AutoCAD website

(<https://www.autodesk.com/education/free-software/autocad>) and create an account (do not download a free trial; that is a 30 day license whereas creating an account lets you use the software for a year). Then download AutoCAD 2023, on the course website, the instructor will upload several files that will help you customize/set up the program, and there will also be configuration files.

### ***Technical Issues:***

No late submissions during exams will be accepted. All assignments, forms, Exams, Computer Exam etc... need to be turned in within the allocated time frame, anything after the due time will not be accepted.

For labs & Assignments give yourself ample time to submit the files.

For example, if the lab or exam or assignment is due at 11:59pm, give yourself at least 30 minutes to start the submitting process. So start the submission at 11:29 pm at the latest. If the submission is not going through within the time frame of the exam, email the professor (within the time frame).

In-case of Technical issues (Internet issues/ computer crashing issues) during the examination, contact the professor within 5 minutes of the issue.

### ***Course supplies:***

This course requires the use of a few tools; the following are required for the hand-drawing assignments:

- Engineer's Scale (6-sided ruler)
- Architect's Scale (6-sided ruler)
- 30-60-90 triangle
- 45-45-90 triangle

For working at home on AutoCAD assignments, it would be in your best interest to get a mouse with scroll wheel. The scroll wheel provides a very large amount of flexibility in the program and using a trackpad is very cumbersome.

### ***Evaluation of Grades***

Assignment	Total Points	Percentage of Final Grade
Form (5)	10 each	10%
Labs (3)	100 each	40%
Midterm Exam	100	12.5%
Final Exam	100	12.5%
Computer Exam	100	20%
Participation	5	5%
Project	100	3%
		103%

### ***Grading Policy***

The following is given as an example only.

Percent	Grade	Grade Points
93.4 - 100	A	4.00
90.0 - 93.3	A-	3.67
86.7 - 89.9	B+	3.33
83.4 - 86.6	B	3.00
80.0 - 83.3	B-	2.67
76.7 - 79.9	C+	2.33
73.4 - 76.6	C	2.00
70.0 - 73.3	C-	1.67
66.7 - 69.9	D+	1.33
63.4 - 66.6	D	1.00
60.0 - 63.3	D-	0.67
0 - 59.9	E	0.00

More information on UF grading policy may be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

### ***Students Requiring Accommodations***

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

### ***Course Evaluation***

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluer.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

### **In-Class Recording**

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

### **University Honesty Policy**

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

### **Commitment to a Safe and Inclusive Learning Environment**

The Herbert Wertheim College of Engineering values varied perspectives and lived experiences within our community and is committed to supporting the University’s core values, including the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information, and veteran status.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- HWCoe Human Resources, 352-392-0904, [student-support-hr@eng.ufl.edu](mailto:student-support-hr@eng.ufl.edu)
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, [taylor@eng.ufl.edu](mailto:taylor@eng.ufl.edu)
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, [nishida@eng.ufl.edu](mailto:nishida@eng.ufl.edu)

### **Software Use**

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual



violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

### ***Student Privacy***

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <https://registrar.ufl.edu/ferpa.html>

### ***Campus Resources:***

#### ***Health and Wellness***

##### **U Matter, We Care:**

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

**Counseling and Wellness Center:** <https://counseling.ufl.edu>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

##### **Sexual Discrimination, Harassment, Assault, or Violence**

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, [title-ix@ufl.edu](mailto:title-ix@ufl.edu)

##### **Sexual Assault Recovery Services (SARS)**

Student Health Care Center, 392-1161.

**University Police Department** at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

#### ***Academic Resources***

**E-learning technical support**, 352-392-4357 (select option 2) or e-mail to [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu).  
<https://lss.at.ufl.edu/help.shtml>.

**Career Connections Center**, Reitz Union, 392-1601. Career assistance and counseling; <https://career.ufl.edu>.

**Library Support**, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

**Teaching Center**, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.  
<https://teachingcenter.ufl.edu/>.

**Writing Studio, 302 Tigert Hall**, 846-1138. Help brainstorming, formatting, and writing papers.  
<https://writing.ufl.edu/writing-studio/>.

**Student Complaints Campus:** <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>; <https://care.dso.ufl.edu>.

**On-Line Students Complaints:** <https://distance.ufl.edu/getting-help/>; <https://distance.ufl.edu/state-authorization-status/#student-complaint>.