
CET-2030 Construction Graphics

- Co/Prerequisites:** CET-1210 Surveying
CET-1100 Architectural Graphics
- Credit:** 3 Credit Hours
- Instructor:** N.V. Kissoff, P.E., Ph.D. 530-3165 FAX: 530-3068
Office: NE 1615 E-mail: nkissof@utnet.utoledo.edu
Office Hours: M 3:30-4:30, WR 10-11, R 2:00-4:00
While you are always welcome to stop in when the office door is open, the degree to which it is open is the amount of welcome you will receive!
Website: <http://cset.sp.utoledo.edu/~nkissoff/>
- Class Times:** MW 1:00 to 1:50 PL-1030 - Lecture
MW 2:00 to 3:10 NE-1300 – CADD Lab
- Textbooks:** *Available On the Internet:*
Location & Design Manual Volume 1 (Ohio Dept. of Transportation) Portions of Chapters 2,3 & 6 Located at:
<http://www.dot.state.oh.us/Divisions/ProdMgt/Roadway/roadwaystandards/Pages/locationanddesignmanuals.aspx>
- Equipment:** Engineer's Scale (Triangular with 1"=10',20',30',40',50' & 60' Scales). Plastic, Wood, or Metal.
Flash Drive for file storage. (Not required but smart.)
- Course Description:** Fundamentals of civil engineering drafting techniques will be covered. The class will commence with basic site and grading plans and progress through utility plan drafting. Roadway design and drafting techniques will also be covered. The student will be introduced to all the skills required to make coherent presentations of designs for civil and site construction documents.
- Instructional Methods:** Lectures with transparencies, handouts and discussions. Design problem examples with homework designs to attempt by hand.
Note that most handouts will only be posted on the instructor website and that the student is responsible for their own copies.
Supervised CADD drafting lecture and lab work on files provided as well as unsupervised CADD file plan sheet drawing projects.
Note: Students should expect to have additional work to perform outside of scheduled lab times.

Course Objectives: At the end of the course the student will be able to:

- 1) Obtain the ability to read, understand and produce a neat, legible and coherent set of site and roadway plans.
- 2) Gain the ability to express site and roadway design information in a legible and coherent manner on a set of plans.
- 3) Gain an understanding of basic roadway design elements.
- 4) Gain the understanding of site layout and grading design.
- 5) Obtain the ability to produce roadway and site drawings on the Microstation V8 software platform including: plan & profile sheets, typical sections and cross sections
- 6) Obtain the ability to design and produce roadways and sites using Inroads third party three dimensional design software.
- 7) Obtain the ability to produce cut and fill quantities using the Inroads software.

Grade Breakdown:	Quizzes & Home Assignments	15%
	Class Notebook	5%
	Lab Project Progress Submittals	25%
	Site Plans Project	20%
	Roadway Project	10%
	Final Exam	<u>25%</u>
	Total	100%

No student can pass the class without taking the Final Exam.

Grading Scale:	A	100 – 93
	A-	92 - 90
	B+	89 – 87
	B	86 – 83
	B-	82 - 80
	C+	79 – 77
	C	76 – 73
	C-	72 - 70
	D+	69 – 67
	D	66 - 63
	D-	62 – 60
	F	Below 60

Class Notebook: Each student is to keep a standard three-ring notebook in which course material is to be organized with dividers under the following sections:

Class Information, Class Notes, Class Handouts, Lab Assignments (not the labs themselves), Project Information, Quizzes & Exams, Other Information.

Not only will this notebook be **reviewed during the final exam** by the instructor, it will be a valuable resource to which to refer later while you study and complete your projects. The binder will be evaluated for correctness, completeness and neatness. No late submittals will be accepted.

Projects: Projects will be progressive in-class works that will be produced throughout portions of the semester in conjunction with the material covered in class and the instruction given in the labs. Certain portions will be direct applications of instructor based directives, while other portions will require student design and drawing based upon criteria given in class. Project assignments will be evaluated for grading in accordance with the progress submittal criteria. Projects will be due one week after the final progress submittal is returned to you. **A 20% deduction in grade will be assessed for each lab period that a project is late. Projects that are more than one week late will not be accepted for credit.**

Project Progress Submittals:

In order to gauge your knowledge of the work at hand, provide you with corrective feedback as the projects progress and encourage lab attendance, progress submittals of your current under construction plan sets will be due on scheduled **Fridays** during the semester as shown in the class schedule. (Submittals can be turned in as early as after lab each Wednesday if you prefer to do so.) Instructions on what plots to submit are given in the Class Submittal Schedule. This will be your opportunity to gauge your own progress, as well as receive corrections that you can incorporate into your final project submittal.

Each progress submittal will be evaluated based upon the following criteria for its score:

Correctness and completeness of content:
Neatness & consistency of line work:
Neatness & Consistency of text placement
Overall file set-up & appearance:

Each progress submittal will be assigned one of the following scores based upon the aforementioned criteria:

- 10** Perfect work and expected progress toward project completion.
- 9.5** Near perfect (Simple Oversight mistakes).
- 9.0** Good work, a few minor & major mistakes needing attention. Some progress acceleration required.
- 8.0** Fair progress and work. Additional effort is required.
- 7.0** Moderate attempt, however much more effort is needed.
- 5.0** Half credit for poor execution or little progress toward final drawing completion.
- 0.0** No Credit, nothing submitted, no discernable attempt made.

The instructor's decision on submittal grades is a subjective grading based upon the overall work and presentation of the submittal in comparison with the submittals from the entire class.

After initial grading, a 20% deduction in grade will be assessed for each lab period that a project is late. Submittals more than one week late will not be accepted for credit.

Quizzes & Home Assignments:

Quizzes will be short unannounced questions and problems given during class periods on a random basis through the semester. Some will take the form of homework assignments that will help you to practice and understand the subject matter in a more in depth manner. Approximately 5 quiz/assignments will be given over the duration of the class. They may be open or closed book dependent upon the subject of the question and may include calculations. Thus, **it is imperative that you bring a calculator and your design material to every class.** There will be no sharing of materials allowed during a quiz. The quizzes are a test of your grasp of the techniques and methods learned in class, and as such, instructor hints, when solicited will result in a deduction of points due to your lack of preparation. **The lowest single assignment grade will be dropped from your final quiz tabulation total.** Absolutely, no make-up quizzes will be given for those missed due to absence from the class.

Exams:

There will be no make-up tests given. It is the student's responsibility to contact the instructor **prior to the scheduled exam** if an absence cannot be avoided in order to make alternate arrangements.

Lab Rules & Attendance:

Due to the intricate, complex and progressive nature of the class, lab sessions are very important times. You need to make every effort to attend every single lab and to give complete attention to the tasks at hand during each lab. In order to make the situation as fair as possible for the instructor and other students in class the following rules will be enforced:

Attendance: Your being in the every lab affects your submittals in each lab that follows. While attendance will not be taken, the

instructor will have the discretion to withdrawal a student from the class on the basis of the student's number of missed and incomplete progress submittals. The instructor **will not** be responsible for re-teaching you the material that you missed. Exceptions will be made for a valid doctor's excuse, funeral announcement, tow truck receipt or accident report.

Progressive Knowledge: The labs consist of a travel through more and more difficult concepts and commands as we progress through the semester. Nevertheless, you are expected to remember the routine, easy tasks that have been repeated in classes leading up to the end of the semester. Please make every effort to remember how previous commands work in order to expedite the labs and allow for questions on new material. Consistent abusers of this request will be penalized accordingly.

Chat Software: Any student found utilizing chat and instant message software during the class time will be asked to leave that day's lab and a 10% (one letter grade) penalty will be assessed to that student's final grade. No exceptions.

File Duplication & Academic Dishonesty:

Any attempt to duplicate or otherwise pass off another current or former classmate's lab assignment as your own through means such as (but not limited to) unauthorized copying of CADD files, replotting of another's work with your name attached or copying of hard copy files or other assignments as though they are your own, **will result 1) on a first offense as a zero on the assignment, 2) on successive offenses in the failure of the class.** Either offense will result in a letter of academic dishonesty being placed in your student file. Keep your password and your account secure. Do not place files on the terminal you have just used in order to keep them secure. The penalty for allowing your work to be copied is the same as if you did the copying. Please do your own work in order to learn the subject matter.

Class Etiquette:

While cell phones are sometimes necessary for contact in emergency situations, please put your phone on silent/page or turn it off for class. Constant interruptions are disturbing to the class and if not pre-approved by the instructor will be cause for a reduction in your grade.

Students are expected to conduct themselves in a manner which is conducive to learning for themselves and others. Disruptive behavior is not acceptable and may affect a student's final grade, or in severe cases result in a student being removed from class.

Computer Software: Microstation V8 and Inroads is loaded only on computers within the labs on the Engineering Campus. The software manufacturer, through the educational license, will allow students to load the software at home if it is used only for educational purposes and

not for outside commercial tasks. See the instructor for a copy to load at home.

You are also responsible for the saving and storage of your own CADD files. Saving files to your student drive is preferred but you should backup-up your own files occasionally for safe keeping. Computer terminals are supplied with USB ports for your use in copying files. Please supply your own device for this procedure.

Academic

Accommodations: “Consistent with the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, if a student feels that he/she has a disability and requires special accommodations of any nature. The instructor will work with the student and The University of Toledo Office of Accessibility (Rocket Hall Room 1820, 530-4981) to provide reasonable accommodations to ensure a fair opportunity to perform in this class. Please advise the instructor of such disability and the desired accommodations within the first week of class.”

Escort Service: If any student desires an escort to their vehicle after class, they are directed to call 530-3024 for this service.

No Classes: Monday, September 7, 2009 – Labor Day
Monday, October 5, 2009 – Fall Break
Wednesday, November 11, 2009 – Veteran’s Day
Wednesday, November 25, 2009 – Thanksgiving Break

Other Important

Dates: August 28, 2009 – Last day to Add/Drop (Full Refund)
September 8, 2009 – Last day to Drop (60% Refund)
October 30, 2009 – Last day to Withdraw
If you don’t drop on your own by October 30, you will be graded in the class (and most likely with an F if you haven’t been attending).

Final Exam: Thursday, December 17, 2009, 12:30-2:30 pm

A Final Word: It is the student’s responsibility to attend every lecture and lab. I will attempt to help everyone who may have problems with the software or the material covered in the class. Nevertheless, I can’t be expected to:

Help you catch up after not coming to class for a week or more.

Re-explain items you missed because you skipped the lecture portion of the class.

Give you the quiz that you missed by skipping the lecture portion of the class.

Copy my notes for the class you missed.