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ENGR 1204 Spring 2020

1. ENGR 1204 is an introduction to basic engineering graphics using the latest version of AutoCAD. Basic AutoCAD commands will be introduced and emphasized throughout this course. Development of technical drawing skills including: freehand sketching, text, orthographic projection, dimensioning, sectional views, and other viewing conventions. The course will proceed from the basics of sketching and CAD to their applications in preparing detail and working drawings.

Contact info:

Instructor: Dr. Gilbert Abel

Office #: 903-565-5890

Office #: RBS 1036

Office Hours: TBD

Email: gabel@uttyler.edu

Professional Procedure for turning in assignments:

1. All Assignment (that are submitted to the instructor) must be submitted with a professional cover sheet attached.

Cover sheet information:

ENGR 1204

Spring 2019

Assignment name & number

MO/DY/Year

First name/Last Name

2. If an assignment is emailed, the subject line must contain the course number, course name, and your name.

Email information [subject line]

ENGR 1204 – Auto Cadd – First name, last name

2. The following are course competencies:

a. **Computer-Based Skills**—the student will complete the drafting assignments with skill in formatting, command use, and data manipulation.

b. **Communication Skills**—the student will exhibit mastery in communicating in a graphic manner according to accepted standards.

c. **Interpersonal Skills**—the student will give and receive help when the need arises.

d. **Problem Solving (Critical Thinking)**—the student will use lecture and demonstration to foster conceptual thinking quantitative/statistical skills, in making drawings according to specifications.

e. **Ethical Issues in Decision Making and Behavior**—the student will understand and exhibit the ethical decision making in the use of software and in working with other students.

f. **Personal Accountability for Achievement**—the student will complete the assigned projects at the time designated by the instructor and will demonstrate on both exercises and exams that he has learned the material presented.

g. **Competence in Technology Principles**

1) Competence in major field and grounding in other technology major core areas—the student will be able to contrast the drafting principles learned to other manufacturing processes and practices.

2) Exposure to and appreciation for industrial experiences such as industrial tours, work-study options and cooperative education, senior seminars—the student will be exposed to actual industrial drawings that will reinforce the principles taught in this class

3. Students are expected to attend all class meetings. It is the student's responsibility to obtain any missed class notes, handouts, assignment due dates and any other information missed for any reason. Failure to attend class does not constitute withdrawal from class. All material covered in lecture, on homework, in the text or in any handout (including the syllabus) is considered to be testable material.

4. You are encouraged to seek additional instruction before/after class or by appointment.

5. Classroom Procedures:

a. Bring study notes, textbook, note-taking material, a **flash drive** and calculator to every class. Class preparation is your individual responsibility.

b. Class begins with a presentation on the topics of the day.

c. Students practice skills in class.

d. In class assignments for same day are given.

e. Textbook: Up and Running with AutoCAD 2013, *Elliot Gindis*, Goodheart-Willcox Publishing Company, 2008, ISBN 978-0-12-398416-6

f. **ACADEMIC DISHONESTY:** Representation of other's work as your own will not be tolerated. Cheating on examinations, quizzes, and homework and the false representation of work will be interpreted as academic dishonesty. Academic dishonesty will be subject to disciplinary action as outlined by the UT Tyler Student Guide on Conduct and Discipline.

Disability/Accessibility Services: In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University of Tyler at Texas offers accommodations to students with learning, physical and/or psychological disabilities. If you have a disability, including non-visible a diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or you have a history of modifications or accommodations in a previous educational environment, you are encouraged to visit <https://hood.accessiblelearning.com/UTTyler> and fill out the New Student application. The **Student Accessibility and Resources (SAR)** office will contact you when your application has been submitted and an appointment with an Accessibility Case Manager. For more information, including filling out an application for services, please visit the SAR webpage at <http://www.uttyler.edu/disabilityservices>, the SAR office located in the University Center, # 3150 or call 903.566.7079.

6. Exams and Grading:

Course Points Minimum Grade Scale

In Class Drawings/Tutorials	500 (25%)
Homework Assignments	200 (10%)
Exercises (1-6)	300 (15%)
PA Assignments (PA1-14)	500 (25%)
Team Projects/Final	300 (15%)
Professional Practice Grade	200 (10%)
Total	2000 (100%)

C+ 76.67%...1533

C 73.33%...1466

C- 70.00%...1400

D 65.00%...1300

F <65.00%<1300

If you do not actively participate in the design projects or get less than 65% on all individual events, you may fail the course, **regardless of your course grade**. Final grades are only A, B, C, D, F. Therefore, a C- is a C for a final grade. This distribution is to graphically remind you of how well you are doing.

7. How You Should Prepare for Lessons:

a. Study: Engineering Graphics is a powerful tool for future engineering classes at The University of Texas at Tyler. President's policy states that you are expected to spend **120-180 minutes on average** outside of class for each hour that you spend in class. Make sure that you completely and thoroughly understand the lesson that was just covered in class before moving on to the next lesson. Familiarize yourself with the upcoming lesson so that you get the most learning possible out of the time that you spend in class. A "rule of thumb" for time allocation is 85% on the lesson just covered, 15% on the upcoming lesson. When studying you should focus on accomplishment of the individual learning objectives listed for each lesson. This will normally include development of an understanding of the definitions of new commands for each lesson as well as they are problems.

b. Use the Text: Our text was carefully selected from many available texts because the author does such a fine job explaining concepts. You will find the illustrations in the text to be very informative and the numerous examples very practical and straight forward. Read and study the assignment in the text, paying particularly close attention to principles, assumptions, and examples.

c. Solve Problems: This is the absolute key to success in this course! The more problems you work yourself, the better you will understand the principles involved. Problem sets are assigned throughout the course and must be completed and turned in for grade.

d. Prepare Your Notebook: The record shows that the best students keep the best notebooks. You should organize your notebook so that all material for each lesson can be easily referenced.

8. Graded Events: All Graded Events are mandatory and become part of your grade, failure to submit any required work will **result in an incomplete**. As an engineer your goal is to make a clear, logical, and professional presentation of your work, which is both accurate and correct. As such both your presentation and the accuracy of your work are important, and both will be graded.

a. **IN CLASS DRAWINGS:** Lab work should be submitted individually but you can collaborate on it.

c. **HOMEWORK ASSIGNMENTS:** These exercises allow you to demonstrate and verify the topics that you have studied. You will be assigned in-class drawing problems. These problems will present you with relevant problems requiring application of the topics and principles learned in the classroom, and computing skills.

d. **DESIGN PROJECTS:** Design is an important part of your study of Engineering Graphics. The design process is a systematic, analysis of a problem that converges on a range of acceptable solutions. They will familiarize you with methods of making engineering drawings and will show you how these methods can be used in the solution of real problems. In order for you to gain the maximum benefit and experience from the exercises, you will work in small groups. A group effort requires team work and the cooperation of all team members.

9. Late Submissions. It is a basic principle of professionalism that "**Professionals are not late.**" A "COORDINATED LATE" submission occurs when you will miss the suspense for a graded homework

assignment and you contact me in advance. Notification immediately before the submission will not suffice. Point cuts up to the amounts below **may** be assessed for a "COORDINATED LATE" submission:

1. 0-24 hours late a deduction of 25% of the earned grade

2. 24-48 hours late a deduction of 50% of the earned grade

3. More than 48 hours late No credit. **Assignments must still be submitted.**

10. Students Rights and Responsibilities. To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link:

<http://www.uttyler.edu/wellness/StudentRightsandResponsibilities.html>

11. Grade Replacement/Forgiveness. If you are repeating this course for a grade replacement, you must file an intent to receive grade forgiveness with the registrar by the 12th day of class. Failure to do so will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates will receive grade forgiveness (grade replacement) for only three course repeats; graduates, for two course repeats during his/her career at UT Tyler.

12. State-Mandated Course Drop Policy. Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the 12th day of class (see schedule of classes for the specific date). Exceptions to the 6-drop rule include, but are not limited to, the following: totally withdrawing from the university; being administratively dropped from a course; dropping a course for a personal emergency; dropping a course for documented change of work schedule; or dropping a course for active duty service with the U.S. armed forces or Texas National Guard.

Petitions for exemptions must be submitted to the Registrar's Office and must be accompanied by documentation of the extenuating circumstance. Please contact the Registrar's Office if you have any questions.

13. Disability Services. In accordance with federal law, a student requesting accommodation must provide documentation of his/her disability to the Disability Support Services counselor. If you have a disability, including a learning disability, for which you request an accommodation, please contact Ida MacDonald in the Disability Support Services office in UC 282, or call (903) 566-7079.

14. Student Absence due to Religious Observance. Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

15. Student Absence for University-Sponsored Events and Activities. If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

16. Social Security and FERPA Statement. It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so

that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

17. Emergency Exits and Evacuation. Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

Dr. Gilbert Abel

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12. 1204 Team Exercise:

Project Goals: The team project is designed to allow you to use your skills learned from this course for .

1. You will be able to describe and execute a design using the engineering design process.
2. You will be able to use AutoCAD for 2 and 3 dimensional drawings.
3. You will understand engineering communications process using various graphical depictions.
4. You will be able to explain spatial relationships, multi-view projections/sectioning, dimensioning, graphical presentation of data, and computer graphics.
5. You will be able to produce a 3D prototype of your design.

Project Details:

1. Select a team mate for the project – submit this team name to me.
2. Develop a concept for a 2 part device that you plan on selling on the internet that offers a new way of doing something, improving on a known device, or taking a known device and re-purposing it for a new use.
3. Each part will be designed and printed by a team member – each does their own work.
4. Be ready to present your proposed concept solution to the class per schedule.
5. Once you have a sketch with dimensions, present to the class for approval per schedule.
6. Present your design drawing to the class as per schedule to be developed.
7. Print your device and test as per plan.

8. Present your final project finding with complete device (working) as per project presentation schedule to be developed.

Note: your device MUST be an improvement to a known process or must be a new novel way of solving a known problem – and must be economically viable – ie people will want to buy it (to be tested by vote of your classmates).

13. Professional Grade: 200 points

Attendance 100% - 200 points

Attend all 15-class meetings and you will receive 100% for this criterion

ENGR 1204 – INITIAL COURSE SCHEDULE (subject to change as needed throughout the semester)

Date Mon or Wed	Lesson	Material Covered	Reading	Assignment	Semester project
1/13 or 1/15	1	Syllabus & Class into Review Team Project		Introductions of students. Meet each other	PA1 Introduction Pick
Mon- no class 1/22	2	Engineering Process Model	PPT Lesson 2		PA2 Research
1/27 or 1/29	3	Sketching / Geometric modeling/ Sections / Views/ Dimensioning	PPT Lesson 3	Teams due HW 1 / nut & bolt sketch	PA3 One drive
Feb 3 or Feb 5	4	Rev HW1 / Lesson 1-3 tutorial 2D drawing/Office layout Exercise#1 handout	N/A	HW 2 – due Ortho Sketch	PA4 upload a converted file
Feb 10 or Feb 12	5	Drop Box files Lesson 4-5 tutorial Exercise#2	N/A	Exercise #1 – hand draw dimension due	PA5 plan 1 / cover sheet
Feb 17 or Feb 19	6	Basic entry commands and 2D tools Lesson 6	N/A	Exercise #2 – Reproduce the drawings with dimensions in AutoCadd	PA6 plan 2

Feb 24 or Feb 26	7	Drawing & AutoCadd Tools Lesson 7 tutorial Office layout/library	N/A	Exercise #3 - due Family Dollar Project Design Due	PA7 plan 3
Mar 2 or Mar 4	8	Listing Properties Lesson 8 tutorial	N/A	Exercise #4 – due Add furniture/Tool pallet	PA8 Plan 4
Mar 9-14	-	Spring Break			
Mar 16 or Mar 18	9	Types of printers Lesson 9-10 tutorial	N/A	Project Final Drawing and Approval Exercise #5 – due 3D tools	PA 9 Plan 5
Mar 23 or Mar 25	10			Exercise #6 - tire exercise	PA 10 Plan 6
Mar 30 or Apr 1	11	Team Project Time 3/30 – 4/1			PA 11 Plan 7
Apr 6 or Apr 8	12	Team Project Time 4/6 – 4/8			PA 12 Plan 8
Apr 13 or Apr 15	13	Team Project Time 4/13 – 4/15			PA 13 Plan 9
Apr 20 or Apr 22	14	Project Turn In and In Class Presentation (For Team project)		Project Grade and Course Eval. Forms	PA 14 - Semester Project Due (Turn in hard copy 11x17)
		No Final Exam		No Final Exam	