Course Syllabus – CNST 1315
Project Drawings and Graphics

Course Description:
The principles of construction graphics are applied to the visualization, communication, and graphical analysis of problems. Included is the utilization of sketching and computer-aided design to create and analyze computer generated geometric models. Manipulation of coordinate systems, methods of generating selected view, graphic and data base standards, and engineering drawing interpretation will be covered.

Course Pre-Requisites:
None

Text Book:
None Required
Recommended Reading:
- James D. Bethune. Engineering Graphics, Prentice Hall
- Frederick E. Giesecke, Alva Mitchell, Henry C. Spencer. Technical Drawing
- AutoCAD No Experience Required, Donnie Gledfelther
- AutoCAD Essentials, by Scott Onstott
- Mastering AutoCAD, by George Omura

Supplies Needed:

- Engineer's & Architect's Scale (Metric Scale is optional)
- Removable Storage Media (USB) or cloud-based storage access (UH Account)
- Pencil/Mechanical Pencil, Eraser, Paper…
- AutoCAD Student Version Software available at http://students.autodesk.com
- Sketch-Up Make (Free Version of Sketch-Up)
- Revit Software (Optional, but recommended)

Course Learning Outcomes:
Upon the completion of the course students will demonstrate the ability to:
1. Identify and utilize graphic strategies in typical construction communication environments.
2. Demonstrate the knowledge, technical skills and personal discipline required to be successful utilizing sketching abilities for creative problem solving in an engineering environment.
3. Relate construction graphics theories to real-world practices – Learn Problem Finding Solutions.
4. Produce graphic solutions to appropriate problems.
5. Produce graphics using correct geometric relationships and proportions.
6. Develop functional literacy in the Process and Industrial Construction environment.
7. Use computer graphics to solve construction problems.
8. Identify and utilize construction graphic standards and codes.
9. Develop 3D spatial visualization skills.
10. Develop and understanding and be able to use the common geometric construction techniques when creating 2D and 3D geometric forms for the solutions to engineering problems.
11. Develop skill a proficiency in the ability to present clearly identified solutions using graphical communication conventions and standards in an engineering environment.
12. Introductory knowledge of AutoCAD & REVIT

Student Learning Outcomes:
10. Apply electronic-based technology to manage the construction Process.

Course and Student Learning Outcome Mapping:

Student Learning Outcome	Course Learning Outcomes
10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Student Learning Assessment and Assessment Target:

Assessment	SLO#10	Assessment Target
Quiz	X	At least 70% of students receive a grade of 70 or better

Class Grading:

Quizzes and Homework: 30%
Midterm Exam: 20%
Final Exam: 30%
Final Project: 20%

Grading Scale:

Letter Grade	Score
A	93 – 100
A-	90 – 92
B+	87 – 89
B	83 – 86
B-	80 – 82
C+	77 – 79
C	73 – 76
C-	70 – 72
D+	67 – 69
D	60 – 66
F	0 – 59

Schedule of Topics

Subject to change as required to meet course needs* MAJOR MILESTONES SHOWN *For all other assignments, see Blackboard

Schedule	Assignment Due	Description of Content
Week 1	Intro to Course	Introduction to industrial terminology and drawings
Week 2		Typical views including plans, elevations, sections and details
Week 3		Civil drawings including contour maps, utility lines, and drainage plan
Week 4	Quiz#1	Structural drawings including foundations, conc. & steel
Week 5		Piping and Instrumentation Diagrams
Week 6		Piping Drawings/ Electrical Drawings
Week 7	Mid-Term Review	Orthographic Views, sketching including freehand, perspectives and projections
Week 8		Mid-Term Exam
Week 9		Section Views
Week 10		Course Project (Kick-Off and Lecture)/ 3D-AutoCAD Tips
Week 11		Auxiliary Views
Week 12		Dimensioning/AutoCAD Tricks
Week 13	Quiz#2	REVIT Lecture / Course Group Project Status Reviews
Week 14		Working Drawings. CAD files manipulations, marking, and creation of as-built drawings.

Week 15	Final Review Q&A / Project Presentations	Course Reflection
Week 16	Final Project Due	Final Exam (Comprehensive)

Safety or Value Creations are DUE EVERY WEEK as Class Starts

Lecture Structure / Lab Attendance / Late Policy

- For lecture, students will have content available starting at 4pm on the Tuesday of that week's content. It is the student's responsibility to review this information and read the assigned chapter from the book prior to attending and completing the lab.
- The instructor will host a Weekly Microsoft Teams meeting to instruct the Lecture portion and immediately shift to a Lab format once Lecture completes for the duration of the 3 hours course. Students may discuss other lab time with the instructors at their convenience and agreement.
- Lecture attendance is REQUIRED as this course.
- The instructor will visit the Teams conferences several times during the semester to monitor learning and comprehension of the content.
- Late work will have a penalty of 10% per day late, after a week, the work is not longer accepted as grades will be given back.

Student Work:

- Students will be required to prepare written reports on assigned topics in this course. This is to be submitted as a PDF of their works.
- Some assignments might consider Hand written assignments (Lettering and Scales) in which the student must use their Phone or Scanner to publish the copy as a PDF. You can use Adobe Professional to convert to this format as required.
- Quizzes must be submitted in Blackboard before the due date.
- The quizzes will open the Friday before the due date. No late quizzes are accepted.
- Work must be completed in a professional, business-like manner; be sure your name and course numbers are written on the top right of the page; written work should be done in a word processor in readable font size or legible handwriting. The quality of the assignments will be established by the student and not set by the instructor. When you feel your work meets your quality criteria, submit it to Blackboard.

Questions:

Each student should review the syllabus and e-mail the Instructor questions that need to be clarified. It is essential that the student has a clear understanding of the course requirements. Adjustments may be made during the semester.

Academic Honesty:

Each student is responsible for maintaining high standards of academic honesty and ethical behavior. Students are expected to write their exams, quizzes and reports on their own, based on their individual level of progress with the material. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the University.

Exam Policy:

- Exams will be given via Blackboard. The instructor may require Lockdown Browser software for examinations before students complete exams. The questions format of the exams will involve typical Multiple Choice, True / False, Matching, Fill in the Blank, Essay, etc. Tests will be subject to being proctored and timed in compliance with UH policies.
- A drawing portion of the exam will be required to be completed within a specific timeframe. This will typically be 50% of the examination grade. Due dates are in Blackboard.

- Quizzes will be on Blackboard for the course and must be complete before the deadline. These are notes, but they are timed.
- The last day of class (12/05/20) is the deadline for students to verify their grades and the accuracy of their score.
- After this deadline, there will be no consideration for any changes.

University Counseling and Psychological Services

Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (UH main campus www.uh.edu/caps, or UH Sugar Land campus http://www.uh.edu/dsaes/uhsugarland/) by calling 713-743-5454 during and after business hours for routine appointments or if you or someone you know is in crisis. No appointment is necessary for the "Let's Talk" program, a drop-in consultation service at convenient locations and hours around campus.
UH main campus: http://www.uh.edu/caps/outreach/lets_talk.html UH
Sugar Land campus: http://www.uh.edu/dsaes/uhsugarland/

Classroom Behavior

High level of professionalism in the classroom is expected. The instructor has the right to set the rules in his/her classroom. A student does not have the right to make changes to the instructor's way of managing the classroom. Disruptive behaviors, such as excessive talking, arriving late to class, and using unauthorized electronic devices during class is not permitted. Repetitive and seriously disruptive behavior may result in removal from class in accordance with policies and procedures set by the Dean of Students Office.

Course / Instructor Evaluation:

A Start-Stop-Continue survey and a course / instructor evaluation will be conducted at the middle and the end of this semester. Any suggestions you have on improving the course, however, are welcome through the semester.

Students with Disabilities:

University of Houston provides, upon request, appropriate academic adjustments for qualified students with disabilities. Any student with a documented disability (physical or cognitive) who requires academic accommodations should contact the Center for Students with Disability (713/743- 5400) for more assistance.
For detailed information about Disabilities, Religious Holy Days, the Academic Calendar, and Academic Honesty, and other information, please visit the following website:
http://www.uh.edu/provost/policies/student/resources/