

Instructor Information

Prof. Eric Busby
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Office Hours: By Appointment

Class Time and Location: Wednesday
1:00pm – 3:50pm
Industrial Technology Building RM 103

Required Textbook:
NO REQUIRED TEXTBOOK

Reference:
Architectural Graphic Standards
Author: American Institute of Architects

Building Construction Illustrated, *5th Edition*
Author: Francis D.K. Ching

Building Codes Illustrated: A Guide to Understanding the 2018 International Building Code,
6th Edition
Author: Francis D.K. Ching, Steven R. Winkel

There will also be additional reading material assigned in the form of handouts that contain industry related information. Students will be responsible for that information on tests and quizzes.

Course Description

This course is an advanced course in CAD drafting designed to provide students with the fundamentals and principles of producing construction documents. Emphasis is placed on developing a clear understanding of working drawings, specifications, and building codes while focusing on the skills necessary to produce high quality working drawings.

Course Goals and Objectives

The main objective of this course of study is to provide the student with an opportunity to advance their knowledge regarding the operation of Computer Aided Drafting (CAD) software to produce construction working drawings. Students will be given the opportunity to develop advanced operational skills in the use of CAD software. Through this course, students will gain an understanding of the skills that are necessary to produce quality drawings similar to those required in industry. The primary software of instruction is Autodesk AutoCad 18. Other software, professional, semi-professional, and free downloadable versions, may be introduced throughout the class.

Upon completion of this course the student will be able to:

- Create written communications appropriate to the construction discipline.
- Prepare a basic set of architectural construction documents for a project with emphasis on plans, elevations, and sections.
- Analyze construction documents for the planning and management of construction processes.
- Understand the important role of architectural construction documents and codes in transforming design concepts into real projects.
- Understand project delivery methods and methodologies.
- Understand construction contract document requirements.
- Understand the composition of construction documents (drawings, specifications and contracts) issued to the general contractor.
- Understand the importance of Specifications and the front-end documents.
- Understand building codes and their role in protecting public health, safety and general welfare as they relate to the construction and occupancy of buildings and structures.

Additionally, students will be exposed to the conditions that contractor must perform under to deliver successful projects and to gain a perspective on the types of projects that you might encounter in your career. This class is to be a learning experience, and one that you want to come to each week. As such the class structure, lesson topics, and overall learning environment will emphasize more than just knowledge comprehension.

Accessibility

Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is the student's responsibility to initiate a request for accessibility services. Students seeking accessibility services or accommodations because of physical, mental, or learning disabilities, must contact the Counseling and Accessibility Services Coordinator, Ferguson Hall, Room 112. The mailing address is P.O. Box C-171, Sul Ross State University, Alpine, Texas 79832. Telephone: 432-837-8203.

Attendance

Attendance is necessary! Attendance will be taken each scheduled class period in accordance with University and Departmental Policy and will count as part of the daily work grade. Everyone starts with 280 points at the beginning of the semester for class attendance - each unexcused absence will cost 10 of those points. In accordance with the Student Handbook, after 9 hours of absences the student will be dropped from the course with an 'F'. If a student is tardy and misses the roll call, they will be charged with one absence. It is up to your professors' discretion whether an absence is excused or unexcused.

THIS SYLLABUS MAY CHANGE AT ANYTIME

Class Structure

This course is designed to be a guided study and not just dissemination of information. It will be run on a lecture\discussion\activity format. Lectures will utilize overheads, power points, demonstrations, videos, and visits to the internet. Lectures will be given primarily to enhance and answer questions about the ***material that should have been studied prior to the class period.*** There may be some step-by-step guided practice, individual assistance, and demonstrations during the scheduled class time in areas where there seems to be a need. It is essential that everyone be in attendance for the scheduled meetings for sharing information, demonstrations, activities, and so questions are answered.

Time Commitment

Students should be prepared to spend at least 4-6 hours per week outside of class on assignments that will include: Homework, Reading Assignments, Lab work and studying for tests and quizzes.

Phones & Electronic Devices

No electronic devices other than calculators are allowed in the class or lab.

Assignments

All assignments are to be submitted via Blackboard. No late work will be accepted without proper documentation or prior approval by the instructor. Daily work will consist of reading, worksheet pages, and budgeting exercises. The laboratory exercises and projects will be completed together during the scheduled class time. It essential that everyone be in attendance for the scheduled class meetings.

Course Communication: The official e-mail communications channel for this course is the Sul Ross State University e-mail account (yourname@sulross.edu) of each student and professor. For the purposes of this course, no other e-mail account is acceptable.

Due dates: All assignments and projects will be given due dates which must be met. All assignments will be due by 11:59 pm on the assigned day. Assignments and projects will not be accepted if they are turned in late without approval. Late assignments will lose ten points per calendar day. Students are responsible for meeting the deadlines even if classes are missed.

Grading: All work will be graded on specific criteria using the following guidelines. Any worksheets will be graded on a points-per-answer basis. Any sketches and drawings assigned will be graded on a 100point (percentage) scale. Criteria for grading will include accuracy of content, appropriateness of content for assignment, presentation, and clarity. Projects in the lab will be graded on accuracy, neatness, content, adherence to standards, adherence to assignment, and workmanship. Graded items will be broken into specific categories and presented on grade sheets given at the time the assignments are given.

Grading Policy

Final grades will be determined by totals in these areas:

- 5% quizzes
- 15% final exam (comprehensive)
- 30% daily work assignments: lab work, site visit, and attendance
- 50% final project (group or individual project)

In the event one of the above categories is not completed during the course that percentage will automatically be divided between the other categories at the same level. All assignment points will be converted to percentages for individual assignment letter grades.

A=100-90;

B=89-80;

C=79-70;

D=69-60;

F=59-0

Grades will be earned on the basis that “C” is average work, “B” is above average work, and “A” is well above average work. Barring unusual circumstances, there will be **NO INCOMPLETES** given at the end of this semester.

Group Project – a group project will be required.

Team Assignments: All team members will receive the same grade on team assignments. Please note that the most successful team projects are developed by teams that take the time to get to know each other outside of class. By investing in these relationships, the work is completed more efficiently and effectively. Invariably, the reports and presentations reflect the strength of the team relationships.

Team Member Firing Procedure: Should the team decide that a team member is not contributing to the team in an acceptable manner, the team may "fire" the team member. A firing typically results in a zero (0) for the project for the fired team member. This option should NOT be taken lightly.

In the business world, when a person is fired from a team or job, that firing should never come as a surprise. The person is generally notified in writing at least twice before formal firing procedures are started. In addition, help is usually provided to assist that person in his/her performance. People are often times not aware of how their work style, attitude, or performance is affecting the team and it is only fair to discuss these issues with the person before launching a formal procedure.

To fire a team member the following must take place and be documented:

1. The team must address their concerns/dissatisfactions with the team member by talking with him/her and putting in writing the behaviors and actions that are detrimental to the team progress and indicate what must be done within a realistic and specified time frame. A copy of this documentation must be emailed to the professor.
2. In addition to presenting the written document, the team members must hold a meeting to allow the member in question to ask for clarification, to respond to the notification, and to give him/her a chance to rectify the situation. The minutes from this meeting must be forwarded to the professor. The team member in question must make a written response and submit a copy to the professor.
3. If the situation is not rectified within the specified time frame, and the team members want to pursue the firing, a meeting with the professor must be scheduled.

Academic Honesty

All students are expected to complete their own work at all times. Any dishonest conduct will be promptly rewarded with an immediate “F”.

Plagiarism

A student guilty of plagiarism and/or cheating will receive a grade of “F” in the course involved and the grade will be so recorded on the transcript. Students giving and receiving assistance in any unauthorized manner during an examination will subject themselves to this cheating policy. A pattern of cheating will result in suspension.

Lab Time

As with all the Industrial Technology classes there will be a substantial amount of lab work to be done. Normally 6 hours outside of scheduled class time each week for researching, reading, and general homework is expected for college level work. All required research, lab work, and practice will not be able to be completed within the scheduled class time. There may be some release time from class to complete some of the work. Hours for access to the lab will be announced when set.

Supplies

There are some expendable supplies you will need for the class such as pencils (lead), erasers, and paper. These supplies may be provided through the department through a set materials fee based on the average material use by students.

Storage

The lockers in the hallway may be checked out and used for storing your equipment and supplies. These lockers must be signed out with the secretary in the IT main office. You must supply your own lock. Do not leave any of your work or equipment lying around in the lab!

Quizzes

You will not be given advance notice of quizzes. They will be primarily written in nature. There will be no make-up quizzes.

Tests/Exams

All exams will be given on the announced date. Everything discussed and everything in the assigned reading, including laboratory material, is fair game for tests and quizzes. It is your responsibility to be in attendance the day of scheduled exams. Tests will be either administered through Blackboard or written in nature using various styles of questions covering terminology, equipment, processes, and other items discussed. Attendance for the tests is mandatory; no makeup tests will be given.

Midterm Exam

There will be no midterm exam given.

Final Exam

The final exam will be during the week of December 9-11, 2019 or per the university testing schedule. The specific date and time will be announced during the semester. The exam will include written, practical, and analytical portions, and will be comprehensive of the entire semester. Do not make any other plans for that day and time.

IT 3325-001 Construction Document and Codes
Fall 2019

Tentative Course Outline

The following is a tentative schedule for the semester. The dates provided are the dates the reading is assigned, and the reading is to be completed by the following class day.

Week #	Subject/Topics
1	Introduction to course, Schedule Office Hours Visit, Schedule Job Site Visit
2-15	<p>The History, BIM, and the Future of Construction Documents</p> <ul style="list-style-type: none"> • The History, CAD, BIM, and the Future of Construction Documents • The Context for Working Drawings • The Importance and Implications of Building Information Modeling (BIM) on the Industry. <p>Planning and Production of Drawings</p> <ul style="list-style-type: none"> • Production Management and Planning Importance of Mock-Up Sets and How to Prepare One Exchanging Data, Collaboration <p>Elements of Construction Drawings, Sequence, Format and Type of Drawings</p> <ul style="list-style-type: none"> • Plans: Site and Floor, Roof and Reflected Ceiling • Requirements for Final Construction Document set. • Format and requirements for Final Project Presentation. <p>Project Phases, Project Teams, and Project Delivery</p> <ul style="list-style-type: none"> • Project Phases: SD/DD/CD/BN/CA: Terms you should know! • The Importance and Implications of Construction Documents <p>Project Phases, Project Teams, and Project Delivery</p> <ul style="list-style-type: none"> • Project Phases: SD/DD/CD/BN/CA: Terms you should know! • The Importance and Implications of Construction Documents • General Information: Arrangement, Symbols, etc. • Order and Sequence of Information • The Role of the Owner/Architect/Contractor • The Roles of Engineers and Consultants • Qualifications • Interviews and Hiring Decisions • Contractual Relations • Civil Engineering • Structural Engineering • Mechanical/Electrical/Plumbing Engineering Assignments: • Submit an initial floor plan at with room names, room numbers, and column grid lines. • Room Finishes, Doors and Windows <p>Symbols, Annotations, and Drafting Conventions</p> <ul style="list-style-type: none"> • CSI Uniform Drawing System • Drawing Annotations, Abbreviations, Symbols, etc. Exterior and Interior Elevations • Exterior Envelope Assemblies • Cross-referencing to Elevations and Plans Assignments: Create elevations, building sections and a typical wall section.

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	<p>Dimensions, Controls, and Schedules</p> <p>Contract Conditions and Specifications</p> <ul style="list-style-type: none"> • General Conditions and Supplemental Conditions • CSI Specifications Format <p>Building Codes and Constraints</p> <ul style="list-style-type: none"> • Planning and Zoning • Building and Energy • Accessibility Standards
16	Final Exam