

Instructor Information

Dr. Eric Busby
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Email: eric.busby@sulross.edu
Office Hours: By Appointment

Class Time and Location: Wednesday
5:30pm – 7:30pm
Industrial Technology Building RM 105

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.

Student Learning Outcomes

This course is designed to meet one or more of the following Student Learning Outcomes:

1. Students will learn the important role of architectural construction documents and codes in transforming design concepts into real projects.
2. Students will understand the sequencing of architectural construction documents as issued to the general contractor.
3. Students will demonstrate an understanding of the composition of construction documents (drawings, specifications, and contracts) issued to the general contractor.
4. Students will develop skill and proficiency in the ability to present clearly identified solutions using graphical communication conventions and standards used in industry.

THIS SYLLABUS MAY CHANGE AT ANYTIME

Marketable Skills

- 1. Students will demonstrate knowledge of project management, project planning, scheduling, and estimating.**
2. Students will demonstrate knowledge of industry safety practices.
3. Students will understand and implement lean philosophies to improve efficiency and eliminate waste.
- 4. Students will demonstrate the ability to communicate information and ideas verbally and in writing so others will understand.**

Course Objectives

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

- Prepare a basic set of architectural construction documents for a project with emphasis on plans, elevations, and sections.
- Create written communications appropriate to the construction discipline.
- 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 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 the design team 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 attend each week. As such the class structure, lesson topics, and overall learning environment will emphasize more than just knowledge comprehension.

SRSU Disability Services Statement

SRSU Disability Services. Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Alpine students seeking accessibility/accommodations services must contact Mary Schwartz Grisham, M.Ed., LPC, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email mschwartz@sulross.edu. Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas, 79832.

Library Information

The Bryan Wildenthal Memorial Library in Alpine offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, library.sulross.edu. Off-campus access requires logging in with your LoboID and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or phone (432-837-8123).

The Southwest Texas Junior College (SWTJC) Libraries at Uvalde, Del Rio, and Eagle Pass. Offer additional access to library spaces and resources. Del Rio, Eagle Pass, and Uvalde students may also use online resources available through SWTJC website, library.swtjc.edu. The SWTJC Libraries serve as pick-up locations for Inter-Library Loan (ILL) and Document Delivery from the Alpine campus.

Diversity Statement

"I aim to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, socioeconomic class, age, nationality, etc.). I also understand that the crisis of COVID, economic disparity, and health concerns, or even unexpected life events could impact the conditions necessary for you to succeed. My commitment is to be there for you and help you meet the learning objectives of this course. I do this to demonstrate my commitment to you and to the mission of Sul Ross State University to create an inclusive environment and care for the whole student as part of the Sul Ross Familia. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you."

Classroom Climate of Respect

Importantly, this class will foster free expression, critical investigation, and the open discussion of ideas. This means that all of us must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others. Similarly, we must all learn how to probe, oppose, and disagree without resorting to tactics of intimidation, harassment, or personal attack. No one is entitled to harass, belittle, or discriminate against another on the basis of race, religion, ethnicity, age, gender, national origin, or sexual preference. Still, we will not be silenced by the difficulty of fruitfully discussing politically sensitive issues.

Attendance and Participation

Attendance is necessary! Attendance and regular participation in the classroom are essential for maintaining the best learning environment. Learning not only occurs between the student and course materials, but, just as importantly, peer to peer, professor to student, and student to professor. If you do not attend classes, you could lose your financial aid. You must attend and participate in your on-campus or online course(s) before the course certification date and continue beyond the course withdrawal date.

Participation in this course via the Internet is the responsibility of the student. Your instructor is also required by law to validate/certify your attendance in your on-campus or online course(s) for you to receive financial aid. To meet this attendance requirement in an any course, you must demonstrate academic activity to establish eligibility for federal student aid with activities such as, but not limited to, the following examples: initiating contact with your instructor to ask a question about the academic subject studied in the course, submitting an academic assignment, taking an exam, completing an interactive tutorial, participating in computer-assisted instruction, attending a study group that is assigned by the instructor, or participating in an online discussion about academic matters relating to the course.

Any student dropped for non-participation will receive an “F” in the course dropped. Inactivity may include the following:

- not logging on to the course not submitting assignments
- not participating in scheduled activities
- not communicating with the instructor by phone or email, and/or
- not following the instructor's participation guidelines stated in the syllabus

Any student who has not attended, logged on to this course, or submitted assignments by January 26, 2022 will be considered to have exceeded the University’s policy on “excessive absences” and may be automatically dropped from the course. Blackboard statistics track the logins made and document the sections of the course accessed. These statistics will be used by your professor as a factor in documenting your participation in the course.

Your professor will use Blackboard statistics to document logins to the course and assignments accessed.

Class Structure

The course is a traditional “Face-to-Face” course with periodic online lectures. This course is designed to be a guided study, and not just a dissemination of information. It will be run on a lecture\discussion\activity format. Lectures will utilize power points, demonstrations, videos, and visits to the internet for research. Lectures will be given primarily to enhance the learning environment, 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. ***Students are responsible for completing all assigned work.***

Discussion Participation (As Required)

Discussion topics are set up for each module; you are expected to contribute to each discussion by posting a comment and replying to at least 2 other posts. Five points can be earned for each discussion following the guidelines below. Spelling and grammar count.

Time Commitment

You will be expected to log on to the course site 5-6 times per week. You are also expected to participate in all assigned activities including discussions in the course. 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.

Academic Integrity

Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. A scholar is expected to be punctual, prepared, and focused; meaningful and pertinent participation is appreciated. Examples of academic dishonesty include but are not limited to: Turning in work as original that was used in whole or part for another course and/or professor; turning in another person’s work as one’s own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden.

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.

Assignments

All assignments are to be submitted via Blackboard. No late work will be accepted without proper documentation or prior approval by the instructor.

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.

Technology Requirements

Since this is an advanced computer-aided drafting course, students are required to have the appropriate technology to successfully participate in the course.

Software Requirements: A FREE student version of AutoCAD 2020 and Revit 2020 can be downloaded by joining the Autodesk Student Community. Click [here](#) for more information about educational downloads.

Internet Access: Students must have access to a high-speed internet connection (at least 20 Mbps download speed).

Computer Hardware Requirements: Students must have a computer with a Windows 10 operating system or greater that can run the desktop student version of AutoCAD 2020 and Revit 2020. Autodesk's system requirements for AutoCAD 2020 and Revit can be found [here](#). Online meetings require a computer to have a speaker (or telephone) for audio. Please note: AutoCAD 2020 and Revit runs only on the Windows operating system. It will not run on a Chromebook. Mac users will need either Apple Boot Camp or Parallels installed to run Autodesk software.

Recommended Accessories: A dual monitor display setup is strongly recommended. A computer with a webcam and a microphone is recommended.

If you don't have access to the technology required for this course, please inform the instructor.

Group Project Statement

This course includes a group/team project. During this process you will collaborate on tasks required to deliver a complete set of architectural construction drawings. You are permitted and encouraged to share your information however, you will be required to submit the individual section(s) of the project document(s) or report that you were directly responsible for producing. Therefore, it is important to understand that you are responsible for the academic integrity of the entire project/report, including the contributions of other group members. At the end of your project, each team member will be required to provide a clear statement of the contributions of each member of your group to the group activities.

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 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.

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.

Grading Policy

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 100-point (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.

Final grades will be determined by totals in these areas:

- 15% quizzes
- 25% final exam (comprehensive)
- 30% assignments: homework, lab work, and discussion participation
- 30% 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 any unusual circumstances there will be **NO INCOMPLETES** given at the end of this semester.

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 be completed independently.

Supplies

There are some expendable supplies you will need for the class such as pencils (lead), erasers, and paper.

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. The exams will cover material from class lecture and assigned readings. It is your responsibility to complete the exam when scheduled. Tests will be either administered through Blackboard using various styles of questions covering terminology, equipment, processes, and other items discussed. Participation 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 2-4, 2022. 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 4303 Architectural Working Drawings and Specifications
Spring 2022
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. <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