



IT 3325: Methods and Techniques of Construction
Department of Industrial Technology



Instructor Information

Prof. Keith Nixon

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Class Times and Place

Lecture: Hybrid Online & In person Wednesday 11:00AM - 12:40PM

Office Hours: By Appointment Only

Spring Semester 2023

Final Exam / Project Due Date & Time

May 12-17, 2023

Course & Catalog Description

This course of study is designed to provide the student with an opportunity to explore the processes, tools, and materials utilized in the construction industry. It is designed to introduce the student to the variety of techniques used in the construction of buildings and other structures. Emphasis is placed on developing an understanding of the requirements pertaining to the knowledge, equipment, materials, and special skills needed within the various processes of the construction industry.

Course Outcomes

This course focuses on the methods and techniques used in constructing buildings. Students will have the opportunity to gain comparative knowledge in construction terminology, units of measure, standard designations, sizes, graduations, testing methods, reference standards, and regulatory codes.

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

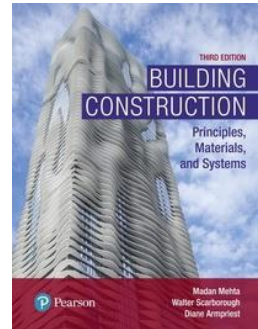
- Analyze construction documents for the planning and management of construction processes.
- Explain the various methods of construction.
- Demonstrate knowledge of safety rules and regulations.
- Demonstrate the proper use/selection and maintenance of hand and power tools and measuring instruments.
- Define and understand construction terminology.
- Research and investigate the construction project.
- Understand and apply building material and assemblies.
- Demonstrate the ability to understand construction details.
- Describe commonly used construction materials.
- Understand the role of the construction team.

- Identify construction classifications.
- Understand the importance of specifications and material description data.
- 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.

Required Materials

Textbook

Building Construction: Principles, Materials, Systems, 3rd Edition by Madan Mehta and Walter Scarborough and Diane Armppriest, Pearson; 3rd Edition ISBN-10: 0-13-445417-0 ISBN-13 978-0-13-445417-7



References (not required)

Architectural Graphic Standards

Author: American Institute of Architects

Building Construction Illustrated, 5th Edition

Author: Francis D.K. Ching

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.

Time Commitment

Students should be prepared to spend approximately **3-5 hours per week outside of class** on assignments that will include: Reading Assignments, completing assignments, class projects, and studying for tests and quizzes.

Attendance and Late Assignment Policy

All assignments are due on posted due dates. **NO LATE ASSIGNMENTS WILL BE ACCEPTED.**

Participation, Attendance, and other assignments

A high degree of engagement is expected and will contribute to your learning as an active participant. This includes interacting with the instructor and other students, completing outside of class assignments and readings, and being prepared to participate in discussions. This class is the beginning of your journey to becoming a professional. Evidence of professionalism includes collegial attitude, participation, and punctuality.

Personalized assignments can be requested in the form of tailored exercises for each individuals' career/degree path. These will be in the form of extra credit or assignment substitute. Job site visits to provide a more detailed understanding of construction materials can also be arranged for credit. There will be additional extra credit opportunities throughout the semester involving the methods and techniques used in construction today.

Evaluation

A student's grade will be determined based on the following percentages:

Journals, Quizzes, Exams, Projects

Grading Scale: 100-90 = A, 89-80 = B, 79-70 = C, 69-60 = D, 59-0 = F

All tests and quizzes will be OPEN BOOK. Journals do NOT require any replies.

Code of Classroom Conduct

- Maintain integrity on all assignments and tests
- Participate in all weekly discussions
- Turn in Assignments on time
- THERE WILL BE NO LATE WORK ACCEPTED.

Reasonable Accommodation Statement

It is the SRSU policy to provide reasonable accommodation to students with disabilities. If you would like to request such accommodations because of physical, mental, or learning disabilities, please contact the ADA coordinator in Student Services: Ferguson 112, 837-8203.

Course Outline

WK #	Subjects
1	Introduction to course, Schedule Office Hours Visit
2-15	Chapter 1 – An Overview of the Building Delivery Process Chapter 2 – Design and Construction Regulations Chapter 3 – Loads on Buildings Chapter 4 – Load Resistance Chapter 5 – Properties of the Envelope I Chapter 6 – Properties of the Envelope II Chapter 7 – Fire and Smoke Related Properties Chapter 8 – Acoustical Properties of Materials Chapter 9 – Principles of Joints and Sealants Chapter 10 – Principles of Sustainable Construction Chapter 11 – Soils and Excavations Chapter 12 – Below Grade Construction Chapter 19 – Structural Steel Construction Chapter 20 – Cold-formed Steel Construction Chapter 26 – Masonry and Concrete Bearing Wall Construction Chapter 27 – Exterior Wall Cladding I Chapter 31 – Windows and Doors Chapter 36 – Floor Coverings
16	Final Exam / Final Project

Note: Class schedules subject to change.

SRSU Distance Education Statement

Students enrolled in distance education courses have equal access to the university's academic support services, such as library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website. Directions for filing a student complaint are located in the student handbook.