



CONSTRUCTION ★ ENERGY ★ MANAGEMENT

CNET 1160 – Construction Methods and Materials

3 Credit Hours

Spring 2026 Syllabus

Meeting Room: NTDP B155

Meeting Times: Tu/Th 5:30 PM –6:50 PM

Professor's Information

Name: ORLANDO R. BAGCAL, Ph.D., PE, CGP. Assoc DBIA

Office Location: NTDP Room F 101

Phone Number: 940.565.3562

Office Hours: Tu/Th 1:00 pm – 2:00 pm (via appointment)

Email: orlando.bagcal@unt.edu

IA Contact: TBA

Name:

Email:

Communication Expectations

The primary tools that will be used to communicate directly with students are email and the learning management system. Students should send personal concerns or questions to my email address. Students can expect to receive a response to emails within 48 hours. The time frame for receiving feedback on assignments is one to two weeks depending on the type of assignment. Grades will be posted within 48 hours after the assignments are graded and returned. Additionally, CLEAR has a webpage for students that provides Online Communication Tips (<https://clear.unt.edu/online-communication-tips>).

Welcome to UNT!

As members of the UNT community, we have all made a commitment to be part of an institution that respects and values the identities of the students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation. UNT's full Non-Discrimination Policy can be found in the UNT Policies section of the syllabus.

Course Description

The course covers principles, materials, and methods used to design and construct most types of large and small buildings.

Course Objectives

By the end of this course, students will be able to:

1. Demonstrate ability for selecting appropriate construction materials and practices.
2. Understand the terminology/basic process and methods used in the construction industry, along with an introduction to sustainability and "green building."

Course Structure

This course is delivered face-to-face. The length of the semester is sixteen weeks. The following course outline, which is subject to change, shows the planned chapters from the textbook to be covered weekly together with planned dates for assignments, exams, and final exam. Each assignment is due as shown below.

COURSE OUTLINE: Subject to change

WEEK #	Class Date	TOPICS	ASSIGNMENT/QUIZ	Assignment Due Date
1	01/13 01/14	Orientation/ Regulation, rules/ Construction Industry Overview/ Introduction/ The Making of Structures		
2	01/20 01/22	Sustainability in Construction Structural Foundations Types of Foundations	Assignment #1 Quiz #1	01/23
3	01/27 01/29	Intro to Wood Types of Wood	Quiz #2	
4	02/03 02/05	Heavy Timber Frame Construction	Assignment #2 Quiz #3	02/06
5	02/10 02/12	Wood Light Frame Construction (WLFC)	Assignment #3	02/13
6	02/17 02/19	Exterior Finishes of WLFC Stucco Sidings Veneer	Assignment #4 Quiz #4	02/20
7	02/26	MAJOR EXAM 1	Lessons 1 to 5	02/26
	02/24 02/26	Interior Finished of WLFC Drywall Plaster	Assignment #5	02/27
8	03/03 03/05	Intro to Masonry Clay Masonry Mortar Reinforcement	Assignment #6 Quiz #5	03/06
03/9 - 03/15			SPRING BREAK	03/9 – 03/15
9	03/17 03/19	Stone and Concrete Masonry Unit (CMU) Grout	Assignment #7 Research Paper	03/20 03/22
10	03/24 03/26	Masonry Wall Construction	Quiz #6	
	03/26	MAJOR EXAM 2	Lessons 6 to 10	03/26
11	03/31 04/02	Intro to Steel Steel Frame Construction	Assignment #8 Quiz #7	04/03
12	04/07 04/09	Light Gauge Steel Frame Construction	Assignment #9 Quiz #8	04/10
13	04/14 04/16	Intro to Concrete Concrete Construction Reinforcements	Quiz #9	
14	04/21 04/23	Site Cast Concrete Framing Systems	Assignment #10 Quiz #10	04/24
15	04/28 04/30	Precast Concrete Framing System		
		Term Project	Project Due	04/29
16	FINAL EXAM	COMPREHENSIVE FINAL EXAM	Lessons 1 to 15	TBA
<p>The professor reserves the right to change any information contained in this document, when necessary, with adequate notice given to the students. Any assignment turned in late will receive a grade of zero. All due dates are strictly enforced unless otherwise specified or modified by the professor. All assignments must be submitted through CANVAS. Any assignment submitted other than in CANVAS will not be graded.</p> <p>Quizzes can be given on any of the meeting days (i.e. either Tuesday or Thursday).</p>				

Course Prerequisites or Other Restrictions

There are no prerequisites for the course.

Required Materials

1. **(Required)** Allen, E., Iano, J. (2020). Fundamentals of Building Construction: Materials and Methods - With Access - 7th edition **ISBN: 978-1-119-44619-4**
2. Additional supplemental materials will be provided as handouts or web links in class as needed.

Important Dates

Classes begin – January 12, 2026

Spring Break – March 9 – 15, 2026

Last day to drop with W grade – April 11, 2026

Final Exams – May 4 -8, 2025

A. Course Requirements

The table below contains all required assignments and graded activities for the course, along with a short description and the points possible with corresponding percentages.

Assignments and Graded Activities Based on the Course outline Shown under Course Structure.	Points Possible
<i>Individual Assignments (10 Assignment 35 points each)</i>	350
<i>Quiz (10 Quizzes @ 30 points each)</i>	300
<i>Research Paper</i>	100
<i>Exam No. 1</i>	150
<i>Exam No. 2</i>	150
<i>Exam No. 3 (Final Exam)</i>	200
<i>Final Individual Project</i>	250
<i>Attendance and Professionalism</i>	100
Total Points Possible	1600

Grading Rubric

Below is the grading scale (A-F) along with the point totals that will be used to calculate the final grade.

A = 1440 - 1600

B = 1280 - 1439

C = 1120- 1279

D = 960- 1119

F = 0 – 959

Note:

1. Any appeal on graded work must be accomplished through writing by emailing the professor within one week after receiving the graded paper/work. Attach copy of the document as a reference or basis for the appeal. The professor will respond with detailed information and explanation regarding the appealed grade.
2. Student who is caught cheating will be dealt with accordingly based on university and department policy and procedure (See Academic Integrity Policy).
3. The professor reserves the right to adjust the schedule of instruction and point distribution as needed in order to meet the course objective.

Individual Assignments

- A student is required to complete an assignment related to the topic/s presented in class. Completed assignments **must** be submitted to **CANVAS ONLY** on the due date specified in the course outline. Assignments submitted other than on Canvas will not be accepted. No extension permitted. Assignments are due every Friday at 5:00 PM unless otherwise specified by the professor. There will be 10 assignments required for this course.
 - Assignments must be completed individually unless otherwise instructed by the professor.
 - All assignments must be submitted via CANVAS. Assignment submitted other than in Canvas will not be graded.
 - Any assignment submitted after the deadline will receive a grade of zero.
 - All assignments shall be typed and prepared professionally using MSWord and/or PowerPoint and converted to pdf file before submitting to Canvas.
 - To maintain academic integrity on assignments, student works will be checked through plagiarism and AI generation. **Assignment with more than 20% plagiarized and 30% AI generated will not be graded and will receive a zero grade.**

Quizzes

Quizzes may be given on **ANY** of the **meeting days (i.e. either on Tuesday or Thursday)** during the week which covers topics presented in class. Quizzes can be in the form of objective questions such as multiple choice or essay, calculations, drawing and labeling and case studies/ analysis. There will be 10 quizzes required for this course.

Exams

Exams are major assessments of students' understanding of the course. Exam usually covers multiple chapters/ lessons covered in class. Exams can be a combination of multiple choice, true or false, calculation or analysis. There will be three major exams for this course.

Final Individual Project

Each student **must** submit a final project of their choice related to construction methods and materials. A scale model is required to illustrate the various components that made up a building system. See separate documents outlining the requirements for the Final Individual Project.

Research paper

Each student **must** submit a research paper of a topic determined by the professor with required outline, deliverables and grading rubrics related to building constructions.

B. Course Policies

Attendance and Professionalism

Students are required to attend class meetings regularly and to abide by the attendance policy established for the course. It is important that you communicate with the professor and the instructional team prior to being absent, so you, the professor, and the instructional team can discuss and mitigate the impact of the absence on your attainment of course learning goals. Please inform the professor and instructional team if you are unable to attend class meetings because you are ill, in mindfulness of the health and safety of everyone in our community.

If you are experiencing any symptoms of COVID-19 (<https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>) please seek medical attention from the Student Health and Wellness Center (940-565-2333 or askSHWC@unt.edu) or your health care provider PRIOR to coming to campus. UNT also requires you to contact the UNT COVID Team at COVID@unt.edu for guidance on actions to take due to symptoms, pending or positive test results, or potential exposure.

It is the responsibility of the student who missed the class session to find out what lecture or

materials covered and request any missed handouts from the faculty.

To receive points for Attendance and Professionalism, a student must not have more than 5 absences and must not miss more than 3 quizzes. Grades will be prorated based on the number of absences and missed quizzes.

The formula to calculate Attendance and Professionalism is given as follows:

$$A \& P = 100 - \left(\frac{\# \text{ of Absences} + \# \text{ of Missed Quizzes}}{8} \right) * 30$$

Excused Absences

1. An absence may be excused for the following reasons:
 - a. religious holy day, including travel for that purpose;
 - b. active military service, including travel for that purpose;
 - c. participation in an official university function;
 - d. illness or other extenuating circumstances;
 - e. pregnancy and parenting under Title IX; and
 - f. when the University is officially closed.
2. Student is responsible for requesting an excused absence in writing, providing satisfactory evidence (in advance or within 48 hours from the day the student missed the class) to the faculty member to substantiate excused absence and delivering the request personally to the faculty member assigned to the course for which the student will be absent.
3. When an absence is excused, the faculty member will provide a reasonable time after the absence for the student to complete an assignment or examination missed.

Late Work

- **No late or make-up work is accepted except for certain circumstances.** All assignments and quizzes are due by the deadline as posted on the course schedule.
- Please plan accordingly and complete these assignments in advance of their deadlines to ensure any unanticipated circumstances do not result in a missed assignment. User error does not qualify you for any kind of makeup or retake opportunity.
- Completing and submitting the assignments or quizzes responses by the due date is the sole responsibility of you.

Make Up Exams/ Quizzes/ Group Activity

- You are responsible for taking all exams and quizzes at the scheduled time announced by the professor.
- Exams, quizzes, assignments, or group exercises missed with acceptable valid reasons will be dealt with individually and accordingly.
- Exams, assignments or group exercises missed with **acceptable valid reasons** will be dealt with individually.
- All approved make up exams and/or quizzes are given at an assigned time and agreed period. If the student did not show up at the agreed scheduled time/day, it will render to a zero grade on that activity.
- The instructor reserves the right to adjust the schedule of instruction and point distribution as needed in order to meet the course objective.

Note: Acceptable valid reasons:

- a. religious holy day, including travel for that purpose;
- b. active military service, including travel for that purpose;
- c. participation in an official university function;
- d. illness or other extenuating circumstances;
- e. pregnancy and parenting under Title IX; and
- f. when the University is officially closed.

In all cases, students need to present proof upon returning to class and request personally a copy of the make-up laboratory activity (lab exercises) or talk to the instructor with regards to time and date to take the missed exam.

Teaching Philosophy

My approach for teaching this course involves lectures, group presentations by students, class discussions, assignments, tests, and exams. To succeed in this course, I recommend you spend a minimum of two hours studying the course material for each hour of the class lecture. To best benefit from the course, do not wait till the last minute before an assignment is due or the day of a test or exam to seek help. If you send questions via email, my goal is to respond within 48 hours. Therefore, use this as a guideline when you seek help.

Course Technology & Skills

Minimum Technology Requirements

Below is a list of the minimum technology requirements for students:

- Computer
- Reliable internet access
- Speakers
- Microphone
- Plug-ins
- Microsoft Office Suite
- [Canvas Technical Requirements](https://clear.unt.edu/supported-technologies/canvas/requirements) (<https://clear.unt.edu/supported-technologies/canvas/requirements>)

Computer Skills & Digital Literacy

Below is a list of course-specific technical skills students must have to succeed in the course:

- Using Canvas
- Using email with attachments
- Downloading and installing software
- Using spreadsheet programs
- Using presentation and graphics programs

Technical Assistance

Part of working in the online environment involves dealing with the inconveniences and frustration that can arise when technology breaks down or does not perform as expected. Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

UIT Help Desk: [UIT Student Help Desk site](http://www.unt.edu/helpdesk/index.htm) (<http://www.unt.edu/helpdesk/index.htm>)

Email: helpdesk@unt.edu

Phone: 940-565-2324

In Person: Sage Hall, Room 130

Walk-In Availability: 8am-9pm

Telephone Availability:

- Sunday: noon-midnight
- Monday-Thursday: 8am-midnight
- Friday: 8am-8pm

- Saturday: 9am-5pm

Laptop Checkout: 8am-7pm

For additional support, visit [Canvas Technical Help](https://community.canvaslms.com/docs/DOC-10554-4212710328) (<https://community.canvaslms.com/docs/DOC-10554-4212710328>)

Rules of Engagement

Rules of engagement refer to the way students are expected to interact with each other and with their instructors. Here are some general guidelines:

- While the freedom to express yourself is a fundamental human right, any communication that utilizes cruel and derogatory language on the basis of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal, or state law will not be tolerated.
- Treat your instructor and classmates with respect in any communication online or face-to-face, even when their opinion differs from your own.
- Ask for and use the correct name and pronouns for your instructor and classmates.
- Speak from personal experiences. Use “I” statements to share thoughts and feelings. Try not to speak on behalf of groups or other individual’s experiences.
- Use your critical thinking skills to challenge other people’s ideas, instead of attacking individuals.
- Avoid using all caps while communicating digitally. This may be interpreted as “YELLING!”
- Be cautious when using humor or sarcasm in emails or discussion posts as tone can be difficult to interpret digitally.
- Avoid using “text-talk” unless explicitly permitted by your instructor.
- Proofread and fact-check your sources.
- Keep in mind that online posts can be permanent, so think first before you type.

See these [Engagement Guidelines](https://clear.unt.edu/online-communication-tips) (<https://clear.unt.edu/online-communication-tips>) for more information.

Class Participation

Tests/Examination Policy

- There will be three required exams as shown in the course outline in addition to the 10 quizzes.
- Should a student lose Internet connection during an exam (when administered online), the student should contact the Student Helpdesk and document the remedy ticket number before contacting the instructor.

Assignment Policy

The official due dates for assignments are as shown under “Course Structure” or Course Outlines. Additional instructions will be posted in CANVAS under the assignment link. File type assignments should be saved as pdf. Files should be submitted through CANVAS only under each assignment link on the due date specified.

The University is committed to providing a reliable online course system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and contact the UNT Student Help Desk: helpdesk@unt.edu or 940.565.2324 and obtain a ticket number. The instructor and the UNT Student Help Desk will work with the students to resolve any issues at the earliest possible time.

Late Work

- All work turned in after the deadline will receive a grade of zero unless the student has a university-excused

absence and provides documentation with 48 hours of the missed deadline.

- All assignments must be submitted through CANVAS on the due date specified. Any assignments submitted other than in CANVAS will not be graded.

Instructor Responsibilities and Feedback

- I strive to help students grow and learn; provide clear instructions for projects and assessments, answer questions about assignments, identify additional resources as necessary, provide grading rubrics, review and update course content as necessary.
- Please refer to the section on “**Communication Expectations**” covered earlier for more information.

Students’ Responsibilities

See separate documents for student expectations and responsibilities.

Syllabus Change Policy

This syllabus is subject to change. Students will be notified of any changes.

C. UNT Policies

Academic Support & Student Services

Student Support Services

Mental Health

UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

- Student Health and Wellness Center (<https://studentaffairs.unt.edu/student-health-and-wellness-center>)
- Counseling and Testing Services (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- UNT Care Team (<https://studentaffairs.unt.edu/care>)
- UNT Psychiatric Services (<https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry>)
- Individual Counseling (<https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling>)

Chosen Names

A chosen name is a name that a person goes by that may or may not match their legal name. If you have a chosen name that is different from your legal name and would like that to be used in class, please let the instructor know. Below is a list of resources for updating your chosen name at UNT.

- UNT Records
- UNT ID Card
- UNT Email Address
- Legal Name

*UNT eulIDs cannot be changed at this time. The collaborating offices are working on a process to make

this option accessible to UNT community members.

Pronouns

Pronouns (she/her, they/them, he/him, etc.) are a public way for people to address you, much like your name, and can be shared with a name when making an introduction, both virtually and in-person. Just as we ask and don't assume someone's name, we should also ask and not assume someone's pronouns.

You can add your pronouns to your Canvas account so that they follow your name when posting to discussion boards, submitting assignments, etc.

Below is a list of additional resources regarding pronouns and their usage:

- What are pronouns and why are they important?
- How do I use pronouns?
- How do I share my pronouns?
- How do I ask for another person's pronouns?
- How do I correct myself or others when the wrong pronoun is used?

Additional Student Support Services

- Registrar (<https://registrar.unt.edu/registration>)
- Financial Aid (<https://financialaid.unt.edu/>)
- Student Legal Services (<https://studentaffairs.unt.edu/student-legal-services>)
- Career Center (<https://studentaffairs.unt.edu/career-center>)
- Multicultural Center (<https://edo.unt.edu/multicultural-center>)
- Counseling and Testing Services (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- Pride Alliance (<https://edo.unt.edu/pridealliance>)
- UNT Food Pantry (<https://deanofstudents.unt.edu/resources/food-pantry>)

Academic Support Services

- Academic Resource Center (<https://clear.unt.edu/canvas/student-resources>)
- Academic Success Center (<https://success.unt.edu/asc>)
- UNT Libraries (<https://library.unt.edu>)
- Writing Lab (<http://writingcenter.unt.edu/>)

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