



CNET 4780/CNET 4785 – Senior Design 1

1 Credit Hour

Section 001 – Fall 2023 Syllabus

Meeting Room: NTDP F187

Meeting Times: Tu 08:30 a.m. – 09:20 a.m.

Instructor Contact

Name: Aloysius (Al) Attah, Ph.D., P.E.

Office Location: NTDP Room F 101E

Phone Number: 940-565-2022

Office Hours: Tuesday 10:00 a.m. - 11:00 a.m.

Thursday 3:30 p.m. – 4:30 p.m.

Or By Appointment

Email: Aloysius.attah@unt.edu

Communication Expectations: The primary tool 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 72 hours. The time frame in 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) (<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

Project teams specify, plan, and perform management analysis of an engineering or construction product or process. Oral and written documentation required. Projects will be supplied by the local construction industry whenever possible.

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 activities.

COURSE OUTLINE:

The instructor reserves the right to change the following course outline/content at any time.

WEEK-DATE	TOPIC	WORK DUE - Practice Project Milestones (PPM) - Discussion Posts - Proposed Abstracts
1 – Aug. 22	- Review of Syllabus - Assign Practice Projects Topic 1: How to be a Team/Responsibilities of Team members	
2 – Aug. 29	Topic 2: Business Plan	PPM 1: Team Members with Responsibilities
3 – Sep. 5	Topic 3: Risk Assessment	PPM 2: Business Plan
4 – Sep. 12	Topic 4: Logistics/Layout	PPM 3: Risk Management
5 – Sep. 19	Topic 5: Budget	PPM 4: Logistics/Layout
6 – Sep. 26	Topic 6: Building Information Modeling (BIM) <i>Pair Teams with Actual Senior Design Project Sponsors (Subject to Change)</i>	PPM 5: Budget Outline
7 – Oct. 3	Topic 7: Quality Management in the Constructed Project	PPM 6: Building Information Modeling (BIM)
8 – Oct. 10	Topic 8: Schedule	PPM 7: Quality Management for the Assigned Practice Projects
9 – Oct. 17	Topic 9: Sustainability/Green Review	PPM 8: Schedule
10 – Oct. 24	Topic 10: Value Engineering/Analysis	PPM 9: Sustainability/Green Review
11 – Oct. 31	Review a Sample of Senior Design Project Report	PPM 10: Value Engineering/Analysis

12 – Nov. 7	Review a Sample of Senior Design Project Report (cont'd)	Assign Discussion Post No. 1 Due November 14
13 – Nov. 14	Presentation of Proposed Abstracts of Actual Senior Design Project (Part 1)	Assign Discussion Post No. 2 Due November 28
14 – Nov. 21	Thanksgiving Break (Nov. 20-26) No Classes	
15 – Nov. 28	Presentation of Proposed Abstracts of Actual Senior Design Project (Part 2)	
16 – Dec. 5	Pre-Finals Week	Proposed Abstracts of Actual Senior Design Project (One Per Team)
17 – Dec. 12	Finals Week	

Course Prerequisites or Other Restrictions

- **For CNET 4780:** The prerequisites are CNET 3190, CNET 3440, CNET 3460, and Senior standing
- **For CNET 4785:** The prerequisites are CNET 3190, CNET 3445, CNET 3465, and Senior standing

Course Objectives

At the conclusion of this course, students should be able to:

- *discuss* the construction project lifecycle from conception to completion as used in the construction industry.
- *implement* a team-based approach to construction projects.
- *prepare* preliminary versions of documentation regarding quality management, site logistics, budget, schedule, sustainability, value analysis, risk assessment, and business planning for a construction project.
- *communicate* the products of the planning process in oral and written formats.

Course Outcomes: (ABET Student Outcomes addressed):

- #10 Functioning effectively as a member or leader on a technical team. (ABET #4: an ability to function effectively as a member of a technical team).
- #12 Understanding of the need for and an ability to engage in self-directed continuous professional development.
- #14 Committing to quality, timeliness, and continuous improvement.

Materials

- All materials to be provided in class/on website, including excerpts from manuals, project documents from sponsors, etc.

Teaching Philosophy

My approach for teaching this course involves lecture, group presentations by students, class discussions, assignments, tests, and exam. To succeed in this course, I recommend you spend a minimum of two hours studying the course material for each hour of class lecture. To best benefit from the course, do not wait till the last minute before an assignment is due 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 my 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.

Course Requirements

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

<i>Assignments and Graded Activities</i>	<i>Points Possible</i>
<i>10 Practice Project Milestones @ 25 Points Each (Group)</i>	<i>250 points</i>
<i>2 Discussions Posts @ 50 Points Each (Individual)</i>	<i>100 points</i>
<i>Proposed Abstract- Actual Senior Design Project (Group)</i>	<i>50 points</i>
<i>Attendance / Class Participation (Individual)</i>	<i>100 points</i>
<i>Total Points Possible</i>	<i>500 points</i>

Grading

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

A = 450-500

B = 400-449

C = 350-399

D = 300-349

F = 0-299

Under the “Course Structure” are more details on assignments and graded activities.

Additional Information on Graded Activities

1. Each student will be assigned to a group and the group will remain together for the rest of the semester.
2. All members of a group who worked on group activities will receive the same grade. Those who did not work on group activities will receive a grade of zero for the specific activities.
3. Unless otherwise instructed, all assignments will be submitted via CANVAS.
4. 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.

Course Policies

Practice Project Milestones (PPM):

- Each team will apply the requirements of the senior design project to the assigned practice project.
- Each milestone will be due on the date listed in the course outline.
- Each team will be selected at random to present a practice project milestone “**Topic**” due on a given date to the class for discussion.

Face Coverings

UNT encourages everyone to wear a face covering when indoors, regardless of vaccination status, to protect yourself and others from COVID infection, as recommended by current CDC guidelines. Face covering guidelines could change based on community health conditions.

Attendance

Students are expected 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) (<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.

Course Materials for Remote Instruction

Remote instruction may be necessary if community health conditions change or you need to self-isolate or quarantine due to COVID-19. Students will need access to a [webcam and microphone – faculty member to include what other basic equipment is needed] to participate in fully remote portions of the class. Additional required classroom materials for remote learning include: [list specific software, supplies, equipment or system requirements needed for the course]. Information on how to be successful in a remote learning environment can be found at <https://online.unt.edu/learn>

Class Participation

1. Students are expected to participate in the classroom as shown under the “Course Structure”.
2. There will be two discussion posts (individually). The due dates are shown under the course structure. Additional instructions will be provided for each discussion post.

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.

Tests/Examination Policy

- Other than the graded activities, there are no scheduled tests/exams.

Assignment Policy

The official due dates for assignments are as shown under “Course Structure”. Additional instructions will be posted in CANVAS under the assignment link. File type assignments should be saved as .DOC. Files should be submitted via Assignment drop box.

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 student to resolve any issues at the earliest possible time.

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.

Syllabus Change Policy

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

UNT Policies

Academic Integrity Policy

Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University. [Insert specific sanction or academic penalty for specific academic integrity violation.]

ADA Policy

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the [ODA website \(https://disability.unt.edu/\)](https://disability.unt.edu/).

Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)

The University of North Texas (UNT) prohibits discrimination and harassment because 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 in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.

Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational

Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. Visit UNT's [Code of Student Conduct](https://deanofstudents.unt.edu/conduct) (https://deanofstudents.unt.edu/conduct) to learn more.

Access to Information - Eagle Connect

Students' access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail [Eagle Connect](https://it.unt.edu/eagleconnect) (https://it.unt.edu/eagleconnect).

Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 of the semester to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the [SPOT website](http://spot.unt.edu/) (http://spot.unt.edu/) or email spot@unt.edu.

Survivor Advocacy

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct. Federal laws and UNT policies prohibit discrimination on the basis of sex as well as sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking and/or sexual assault, there are campus resources available to provide support and assistance. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-5652648.

Important Notice for F-1 Students taking Distance Education Courses

Federal Regulation

To read detailed Immigration and Customs Enforcement regulations for F-1 students taking online courses, please go to the [Electronic Code of Federal Regulations website](http://www.ecfr.gov/) (http://www.ecfr.gov/). The specific portion concerning distance education courses is located at Title 8 CFR 214.2 Paragraph (f)(6)(i)(G).

The paragraph reads:

(G) For F-1 students enrolled in classes for credit or classroom hours, no more than the equivalent of one class or three credits per session, term, semester, trimester, or quarter may be counted toward the full course of study requirement if the class is taken on-line or through distance education and does not require the student's physical attendance for classes, examination or other purposes integral to completion of the class. An on-line or distance education course is a course that is offered principally through the use of television, audio, or computer transmission including open broadcast, closed circuit, cable, microwave, or satellite, audio conferencing, or computer conferencing. If the F-1 student's course of study is in a language study program, no on-line or distance education classes may be considered to count toward a student's full course of study requirement.

University of North Texas Compliance

To comply with immigration regulations, an F-1 visa holder within the United States may need to engage in an on-campus experiential component for this course. This component (which must be approved in advance by the instructor) can include activities such as taking an on-campus exam, participating in an on-campus lecture or lab activity, or other on-campus experience integral to the completion of this course.

If such an on-campus activity is required, it is the student's responsibility to do the following:

- (1) Submit a written request to the instructor for an on-campus experiential component within one week of the start of the course.
- (2) Ensure that the activity on campus takes place and the instructor documents it in writing with a notice sent to the International Student and Scholar Services Office. ISSS has a form available that you may use for this purpose.

Because the decision may have serious immigration consequences, if an F-1 student is unsure about his or her need to participate in an on-campus experiential component for this course, s/he should contact the UNT International Student and Scholar Services Office (telephone 940-565-2195 or email internationaladvising@unt.edu) to get clarification before the one-week deadline.

Student Verification

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses.

See [UNT Policy 07-002 Student Identity Verification, Privacy, and Notification and Distance Education Courses](https://policy.unt.edu/policy/07-002) (<https://policy.unt.edu/policy/07-002>).

Use of Student Work

A student owns the copyright for all work (e.g. software, photographs, reports, presentations, and email postings) he or she creates within a class and the University is not entitled to use any student work without the student's permission unless all of the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.

- Use of the work does not affect any potential profits from the work.
- The student is not identified.
- The work is identified as student work.

If the use of the work does not meet all of the above criteria, then the University office or department using the work must obtain the student's written permission.

Download the UNT System Permission, Waiver and Release Form

Transmission and Recording of Student Images in Electronically-Delivered Courses

1. No permission is needed from a student for his or her image or voice to be transmitted live via videoconference or streaming media, but all students should be informed when courses are to be conducted using either method of delivery.
2. In the event an instructor records student presentations, he or she must obtain permission from the student using a signed release in order to use the recording for future classes in accordance with the Use of Student-Created Work guidelines above.
3. Instructors who video-record their class lectures with the intention of re-using some or all of recordings for future class offerings must notify students on the course syllabus if students' images may appear on video. Instructors are also advised to provide accommodation for students who do not wish to appear in class recordings.

Example: This course employs lecture capture technology to record class sessions. Students may occasionally appear on video. The lecture recordings will be available to you for study purposes and may also be reused in future course offerings.

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) (<https://studentaffairs.unt.edu/student-health-and-wellness-center>)
- [Counseling and Testing Services](https://studentaffairs.unt.edu/counseling-and-testing-services) (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- [UNT Care Team](https://studentaffairs.unt.edu/care) (<https://studentaffairs.unt.edu/care>)
- [UNT Psychiatric Services](https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry) (<https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry>)
- [Individual Counseling](https://studentaffairs.unt.edu/counseling-and-testing-services/services/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 eulDs 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) (<https://registrar.unt.edu/registration>)
- [Financial Aid](https://financialaid.unt.edu/) (<https://financialaid.unt.edu/>)
- [Student Legal Services](https://studentaffairs.unt.edu/student-legal-services) (<https://studentaffairs.unt.edu/student-legal-services>)
- [Career Center](https://studentaffairs.unt.edu/career-center) (<https://studentaffairs.unt.edu/career-center>)
- [Multicultural Center](https://edo.unt.edu/multicultural-center) (<https://edo.unt.edu/multicultural-center>)
- [Counseling and Testing Services](https://studentaffairs.unt.edu/counseling-and-testing-services) (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- [Pride Alliance](https://edo.unt.edu/pridealliance) (<https://edo.unt.edu/pridealliance>)
- [UNT Food Pantry](https://deanofstudents.unt.edu/resources/food-pantry) (<https://deanofstudents.unt.edu/resources/food-pantry>)

Academic Support Services

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