

CNET 2180 – Building Construction Techniques

3 Credit hours

Sections 001/101/102/103 – Fall 2019 Syllabus

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<u>Lecture Meeting</u> Room: K120 Mon. & Wed.- Section 001: 9:30 a.m. – 10:50 a.m.		Assignments/Presentations	

COURSE DESCRIPTION:

Contemporary techniques used in the construction industry; nature, use and characteristics of materials; construction methodology, application and sequencing in the building process. Course will include hands-on construction of a scale model of a building.

An evaluation is made available to you at the end of the semester for all organized classes at UNT, providing you a chance to comment on how this class is taught. UNT Provost office encourages your participation in this survey.

PREREQUISITES:

CNET 1160

REQUIRED TEXTBOOKS:

- A) Printreading for Residential and Light Commercial Construction " 6th Ed by Thomas Proctor, Leonard Toenjes. American Technical Publishers, Inc. ISBN 9780826904843

RECOMMENDED TEXTBOOK:

- B) "Construction Materials, Methods, and Techniques: Building for a Sustainable Future" by Eva Kultermann;/William P. Spence: Delmar/Cengage Learning; Fourth edition; 2016:ISBN 9781305086272

SUPPLEMENTAL TEXTS AND MATERIALS:

Architectural scale

OSHA Personal Safety Glasses required for Lab work

Additional supplemental materials will be given as handouts or web links in class/lab

COURSE OBJECTIVES: (TAC OF ABET Criteria and Program Educational Objectives Supported).

This course will provide the students with an understanding of terminology and basic process and methods used in the construction industry, along with an introduction to sustainability and "green building."

COURSE OUTCOMES: (ABET Student Outcomes addressed):

- #6 Selecting appropriate construction materials and practices (ABET #1: an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline).
- #2. Utilizing measuring methods, hardware, and software that are appropriate for field, laboratory, and office processes related to construction.

STUDENT LEARNING OUTCOMES: (Course Objectives Supported)

At the conclusion of this course, the student should be able to demonstrate ability for:

- Selecting appropriate construction materials and practices
- Using techniques for surveying, drawings, and mapping associated with building construction
- Utilizing modern surveying methods for construction layout

INSTRUCTIONAL OBJECTIVES:

Students who successfully complete CNET 2180 will be capable of the comprehension and application of construction materials and processes with respect to residential and commercial construction projects. "Real world" applications will be discussed in class.

Examinations will require detailed technical information as well as general knowledge of new processes, methods, and materials along with new trends in sustainability.

Presentations by the students will demonstrate the "hands-on" experience gained in the laboratory environment.

LEARNING STRATEGIES:

Lectures, laboratory workshop, demonstrations, problem solving examples, student dialogue, student presentations, teamwork.

LABORATORY OUTLINE:

- Students are required to provide and wear OSHA approved safety glasses and protective work-boots (over the ankle).
- Hard hats (provided by UNT) must be worn in the construction lab at all times.
- Adherence to safety rules and regulations is critical.
- Laboratory projects will follow a typical construction sequence as much as possible.
Note: The playhouse plan is not perfect. It simulates what is typically obtained in the real world where changes to the plans and specifications are usually expected. Therefore, you are expected to submit "Request for Information" (RFI) to obtain clarifications as necessary.

Laboratory "Group Norms"

1. Assist and support team members in each other's learning and safety
2. Start and end on time
3. Leave the laboratory clean and all tools back in their storage places

Lab Project /Presentations/Report:

- The lab project consists of playhouse construction which utilizes knowledge from CNET 1160.
- Each lab group will make weekly presentations during lab sessions on activities to be covered in the lab for that week.
- Each lab group will also make final project presentations.
- Students must participate in all the presentations to receive credit for all the presentations.
- The final lab report shall be written per Technical Writing guideline posted on Canvas.
- Each student's final project lab grade is a function of the student's lab attendance and active participation in constructing the playhouse.

COMPUTER USAGE:

This depends on assignments which will include internet searches for materials and specifications, process examples, and other work as needed.

ORAL COMMUNICATION USAGE:

Classes/labs will include presentation of solutions to classroom problems and/or assignments.

WRITTEN COMMUNICATION USAGE:

All reports assigned as homework must be prepared professionally.

LIBRARY USAGE:

Minimal usage is expected. Students are encouraged to utilize on-line resources, suggested supplemental texts and materials, and to provide examples of current relevant issues.

COURSE POLICY/GRADING:

Attendance/In-class Exercises

- Attendance will be taken at the discretion of the instructor. There will also be random in-class exercises designed to encourage students' presence and participation in class. These exercises may be given any time during a class session. A student who misses any of the exercises for any reason will receive a **grade of zero** for that exercise. Since in-class exercises are designed to promote student interaction/team work during class/lab sessions, there is no opportunity for a make-up even if a student has an excused absence from the instructor.

Assignments:

- Assignments will be given throughout the semester. The instructor will provide specific details for each assignment.
- The assignments will be selected at random for grading.
- All assignments shall be typed and legible. They shall contain all work required to reach the solution. These factors will be considered in your grade for the selected assignment.
- Only one late assignment will be accepted during the semester. It may be submitted any time within one week after it is due but it will be graded at 50% penalty. For example, if the raw grade for an assignment is 80%, then with the 50% penalty applied, the final grade will be 40%. Other late assignments will be assigned a grade of zero.

Exams:

- There will be a midterm exam as shown in the course outline.
- A final exam will be given during the final exam period as shown in the course outline.
- Exams will be cumulative, covering all topics including:
 - All presentations and any topics discussed in class
 - Any chapters of the text noted in the course outline
 - Any work carried out to complete exercises, assignments, and the lab.

Extra Credit:

- There is none.

COURSE OUTLINE
(Subject to change)

Week		Topic	Textbook / Handout
1	Lecture	Course Introduction / Review of Syllabus	Handout
	Lecture	Permits and Engineering	Handout: Permits and Engineering Handout: How To Build A Play House
	Lab	<ul style="list-style-type: none"> • Tour of the construction lab • Know your lab team members • Start forming lab project sub teams 	
2	Mon. Sep. 2	Labor Day – University closed	
	Lecture	<ul style="list-style-type: none"> • Permits and Engineering • Problem Solving Steps 	Handout: Problem Solving Steps
	Lab	<ul style="list-style-type: none"> • Obtain architect's rule and safety glasses. • Finalize lab project sub teams • Develop playhouse construction schedule • Identify team member's responsibilities for constructing the Play House 	
3	Lecture	<ul style="list-style-type: none"> • Problem Solving Steps • Print reading 	A) Proctor & Toenjes Chp. 1
	Lecture	<ul style="list-style-type: none"> • Print reading 	A) Proctor & Toenjes Chp. 1
	Lab	Tool Safety Certification	
4	Lecture	<i>Guest Speaker</i>	
	Lecture	Surveying Fundamentals	Handout
	Lab	Start Construction of Play House (Use Option 1 for floor construction).	A) Proctor & Toenjes Chp. 2 B) Kultermann & Spence Chp. 19 and Chp. 20
5	Lecture	Surveying Mathematics	Handout
	Lecture	Tape Measurements	Handout
	Lab	Construction of Play House continues	
6	Lecture	Multifamily Dwelling – Plans A1.1 <i>TEXO Competition</i>	A) Proctor & Toenjes Chp. 6 Chp. 3
	Lecture	Multifamily Dwelling – Plans A1.1	A) Proctor & Toenjes Chp. 6
	Lab	Construction of Play House continues	
7	Lecture	Multifamily Dwelling – Plans	A) Proctor & Toenjes

		A1.3	Chp. 6
	Lecture	Multifamily Dwelling – Plans A1.11	A) Proctor & Toenjes Chp. 6
	Lab	Construction of Play House continues	
8	Lecture	Multifamily Dwelling – Plans A1.12	A) Proctor & Toenjes Chp. 6
	Wed. Oct. 16	Midterm Exam	
	Lab	Construction of Play House continues	
9	Lecture	Multifamily Dwelling – Plans A2.1	A) Proctor & Toenjes Chp. 6
	Lecture	Multifamily Dwelling – Plans A3.2	A) Proctor & Toenjes Chp. 6
	Lab	Construction of Play House continues	
10	Lecture	Multifamily Dwelling – Plans A4.1	A) Proctor & Toenjes Chp. 6
	Lecture	Multifamily Dwelling – Plans A4.2	A) Proctor & Toenjes Chp. 6
	Lab	Construction of Play House continues	
11	Lecture	Multifamily Dwelling – Plans A5.1	A) Proctor & Toenjes Chp. 6
	Lecture	Multifamily Dwelling – Plans A5.4	A) Proctor & Toenjes Chp. 6
	Lab	Construction of Play House continues	
12	Lecture	Project Closeout: Punch Lists	Handout
	Lecture	Project Closeout: Substantial Completion	Handout
	Lab	Construction of Play House continues	
13	Lecture	Project Closeout: System Testing and Documentation	Handout
	Lecture	Project Closeout – Record/As-Built Drawings	Handout
	Lab	Complete Construction of Play House	
14	Lecture	Play House Report / Presentations	
	Lecture	Play House Report / Presentations	
	Lab	Finalize As-Built Drawings for Play House	
15	Lecture	Financial Resolution of the Project with a Focus on the Play House	Handout
	Lecture	Review for Final Exam	
	Lab	Team Photo	
16	Wed. Dec. 11	Final Exam Wednesday: 08:00 a.m. – 10:00 a.m.	

OTHER POLICIES

Academic Integrity: <https://deanofstudents.unt.edu/academic-integrity>

This course will adhere to UNT academic policies, including those for academic integrity (<http://vpaa.unt.edu/academic-integrity.htm>) and overall conduct (<http://deanofstudents.unt.edu/conduct>). It is your responsibility as a UNT student to be familiar with these policies, but feel free to ask the instructor any questions pertaining to these.

ADA Policy

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time, however, ODA notices of reasonable 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 reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the Office of Disability Accommodation website at <http://disability.unt.edu/>. You may also contact them by phone at [940.565.4323](tel:940.565.4323).

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 at <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.