

Department of Engineering Technology

CNET 1160 – Construction Methods and Materials

Credit Hours: 3

Section 001

Fall 2018 Syllabus

| INSTRUCTOR Aloysius (Al) Attah, P.E. | | EVALUATION | |
|---|------------------|-------------|--|
| OFFICE | NTDP: Room F115G | Assignments | |

COURSE DESCRIPTION:

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

COURSE PREREQUISITES

None

COURSE MATERIALS

- "Construction Materials, Methods, and Techniques"; William P. Spence / Eva Kultermann, DELMAR/Cengage Learning, 2017; ISBN 9781305086272
- Additional supplemental materials will be provided as needed as handouts or web links in class.

COURSE OBJECTIVES:

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

- demonstrate ability for selecting appropriate construction materials and practices.
- Understand the terminology/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).

COURSE POLICY/GRADING:

Assignments:

- There will be homework assignments worth 20% towards your overall grade.
- Only **one late** assignment will be accepted during the semester and it must be submitted during the next class meeting; however, it will incur a **30%** penalty.
- All homework assignments must be typed and prepared professionally.
- You will be informed of the due date for each assignment

Team Exercises

- There will be team exercises worth 20% towards your overall grade.
- You may be required to perform these exercises during class or outside of class.
- A student who misses any of the exercises for any reason will receive a grade of **zero** for that exercise.
- Since these exercises are designed to promote student interaction/team work, there is no opportunity for a make-up even if a student has an excused absence from the instructor.

Tests and Final Exam:

- There will be two tests worth 15 % each (a total of 30%) towards your overall grade.
- There will be a comprehensive final exam worth 30% towards your overall grade.
- Both tests and final exam will be open book.
- One make-up test will be allowed with an excused absence from the instructor.

Extra Credit:

- There is none.

COURSE OUTLINE: *Subject to change*

| Week | Chapter / Topic |
|------|---|
| 1 | <ul style="list-style-type: none"> • Review of Syllabus • Chp. 1: The Construction Industry – An Overview • Chp. 2: Regulatory Constraints, Standards, and Sustainability (Standards and Codes) • Chp. 3: Properties of Materials |
| 2 | <ul style="list-style-type: none"> • Chp. 4: The Building Site • Chp. 5: Soils • Chp. 6: Foundations |
| 3 | <ul style="list-style-type: none"> • Chp. 7: Concrete • Chp. 8: Cast-in-Place Concrete • Chp. 9: Precast Concrete |
| 4 | <ul style="list-style-type: none"> • Chp. 18: Wood, Plastics, and Composites • Chp. 19: Products Manufactured from Wood • Chp. 20: Wood and Metal Light Frame Construction |
| 5 | <ul style="list-style-type: none"> • Chp. 20: Wood and Metal Light Frame Construction • Chp. 21: Heavy Timber Construction (Fasteners & Alternative Framing) • <i>Test 1: Friday, September 28, 8:30 a.m. – 9:20 a.m.</i> |
| 6 | <ul style="list-style-type: none"> • Chp. 15: Ferrous Metals • Chp. 16: Nonferrous Metals • Chp. 17: Steel Frame Construction |
| 7 | <ul style="list-style-type: none"> • Chp.10: Mortars for Masonry Walls |
| 8 | <ul style="list-style-type: none"> • Chp.11: Clay Masonry (Brick) • Chp.12: Concrete Masonry |
| 9 | <ul style="list-style-type: none"> • Chp.13: Stone • Chp.14: Masonry Construction |
| 10 | <ul style="list-style-type: none"> • Chp. 39: Plumbing Systems • <i>Test 2: Friday, November 2, 8:30 a.m. – 9:20 a.m.</i> |
| 11 | <ul style="list-style-type: none"> • Chp. 41: Electrical Equipment and Systems • Chp. 42: Electronic Signals and Security Systems • Chp. 24: Thermal Insulation and Vapor Barriers |
| 12 | <ul style="list-style-type: none"> • Chp. 25: Bonding Agents, Sealers, and Sealants • Chp. 26: Bituminous Materials – Roofing • Chp. 27: Roofing Systems |
| 13 | <ul style="list-style-type: none"> • Chp. 30: Cladding Systems • Chp. 32: Acoustical Materials • Chp. 40: Heating Air-Conditioning, Ventilation, and Refrigeration • <i>Thanksgiving Week – University closed on Thursday and Friday</i> |
| 14 | <ul style="list-style-type: none"> • Chp 31: Interior Finishes, Paints, and Coatings • Chp 33: Interior Walls, Partitions, and Ceilings • Chp 29: Doors, Windows, Entrances, and Storefronts |
| 15 | <ul style="list-style-type: none"> • Chp 34: Flooring • Ch. 28: Glass |
| 16 | <ul style="list-style-type: none"> • <i>Final Exam: Monday, December 10, 8:00 a.m. - 10:00 a.m.</i> |

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.