



Master Course Syllabus

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: <https://catalog.uvu.edu/>

Semester: Spring

Course Prefix: CMGT

Course Title: Construction Materials and Methods I

Year: 2025

Course and Section #: 1020-001

Credits: 3:2:2

Course Description

Provides a basic knowledge of the materials and methods used in heavy civil, commercial and residential construction projects. Includes lectures and engaged student presentations and labs.

Course Attributes

This course has the following attributes:

- General Education Requirements
- Global/Intercultural Graduation Requirements
- Writing Enriched Graduation Requirements
- Discipline Core Requirements in Program
- Elective Core Requirements in Program
- Open Elective

Other: *Click here to enter text.*

Instructor Information

Instructor Name: James A. Cox

Student Learning Outcomes

Examine the construction industry through guest presentations, course lectures, reading and writing assignments and student research presentations. The text is organized following the Construction Specifications Institute (CSI) Masterform™. Each division pertains to a material or area of the construction industry. This course will cover divisions 1(review), 2-5.

Student outcomes: The student outcomes for the Construction Materials and Methods I are the following:

1. An ability to identify, formulate, and solve broadly defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to the discipline.
3. An ability to develop and conduct experiments or test hypotheses, analysis and interpret data and use scientific judgment to draw conclusions.
5. An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.

Course Materials and Texts

CONSTRUCTION MATERIALS, METHODS, AND TECHNIQUES (5TH EDITION) by Spence and Kultermann - ISBN: 978-0-383-51383-5.

Course Requirements

Course Assignments, Assessments, and Grading Policy

EXAMS/QUIZZES: There will be two exams for this course. The questions will come from chapter review questions and lecture material. Exams and quizzes will be taken in class or online on scheduled dates. Pop quizzes will be given on a random basis, usually at the beginning of class. The questions will come from chapter. The intent is to prepare students for in class discussion and to keep up with reading assignments and attendance.

PARTICIPATION: Participation will be measured in three ways: 1) Class attendance and participation. 2) Group and individual assignments and presentations. 3) Engaged learning and outreach.

GRADING

Blueprint abbrev.	40 points
Chapter Assn.	224 points
Exams	4 @ 170 points
Group Presentation	1 @ 125 points
Group participation	60 points
Class Participation	50 points max. (varies with participation and attendance)
Concrete forming Lab	50 points
Foundation forming Lab	50 points
Roadway Assn.	48 points
FAC Assn.	48 points
Pop quizzes	70 points (Extra Credit)
TOTAL POINTS POSSIBLE	865 points

ASSIGNMENTS: Assignments turned in on time will be given the full credit earned. Each Assignments turned in late will be given 50% of credit earned.

GRADING SCALE PERCENTAGES:

A = 94-100	C = 73-75
A - = 90-93	C - = 70-72
B+ = 86-89	D+ = 66-69
B = 83-86	D = 63-65
B - = 80-82	D- = 60-62
C+ = 76-79	E = 0-59

ACADEMIC INTEGRITY: Each student is expected to maintain academic ethics and honesty in all its forms, including but not limited to cheating and plagiarism. As defined in the U.V.U Students Rights and Responsibilities Codes, Section VII-D Academic Responsibilities. No academic dishonesty will be tolerated in this course.

GROUP ASSIGNMENTS: Students will be divided into groups to participate in one assignment.

Group Presentation – Each student group will be assigned one of the chapter topics for a group presentation. Groups will have as much of the class period as needed for their presentation. Anytime remaining will be used for class discussion regarding the topic. Attendance will be taken and will be part of the class participation grade. If a member of a group knows they will be unavailable for the presentation, they must notify the group beforehand and make other arrangements on how they can contribute to the group as a whole. The grade will be based on the following:

- Presentation preparedness and participation.
- Presentation quality. PowerPoint is recommended.
- Use of pictures, charts, graphs, etc. to assist learners in visualizing the topic.
- Engaging other learners in the topic through questions and discussion, etc.

Required or Recommended Reading Assignments

Click here to enter text.

General Description of the Subject Matter of Each Lecture or Discussion

Week 1: Chapter 1 “Construction Industry” & 2 “Regulatory Constraints, Standards and Green Building”, choose groups for presentations

Week 2: Chapter 3 “Properties of Materials” & 4 “Building Site”

Week 3: Blueprint reading

Week 4: Chapter 5 “Soils” & 6 “Foundations”

Week 5: Rebar shop lab

Week 6: Chapter 7 “Concrete” and Job site Safety

Week 7: Chapter 8 “Cast-in-Place concrete”

Week 8: Chapter 9 “Precast Concrete” & 10 “Mortars for Masonry walls”

Week 9: Chapter 11 “Clay Masonry”

Week 10: Spring Break

Week 11: Chapter 12 “Concrete Masonry” and Brink DVD & Group Presentations

Week 12: Group Presentation & Chapter 14 “Masonry Construction”

Week 13: Group Presentation & Chapter 15 “Ferrous Metals”

Week 14: Group Presentation & Chapter 16 “Nonferrous Metals”

Week 15: Group Presentation & Chapter 17”Steel Frame Construction”

Required Course Syllabus Statements

Generative AI

Click here to enter text.

Using Remote Testing Software

This course does not use remote testing software.

This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers’ immediate surroundings, may require use of a webcam while taking an exam, may require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the

student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

Required University Syllabus Statements

Accommodations/Students with Disabilities

Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU [Accessibility Services](#) at accessibilityservices@uvu.edu or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at DHHservices@uvu.edu

DHH is located on the Orem Campus in BA 112.

Academic Integrity

At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their [rights and responsibilities](#). In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in [UVU Policy 541: Student Code of Conduct](#).

Equity and Title IX

Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – TitleIX@uvu.edu – 800 W University Pkwy, Orem, 84058, Suite BA 203.

Religious Accommodation

UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.

To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at accessibilityservices@uvu.edu. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a [specially dedicated space](#) for meditation, prayer, reflection, or other forms of religious expression.