



CONE 324.01E BUILDING CONSTRUCTION II

COURSE SYLLABUS: FALL 2026

INSTRUCTOR INFORMATION

Instructor: Mohamed Yamany, Ph.D., PMP, PMO-CP, Assistant Professor

Office Location: AG/ET 118A

Office Hours: T, R 11:00 am - 12:00 pm and 1:00 pm – 2:00 pm or by appointment.

Office Phone: 903.886.5474

Office Fax: 903.886.5960

University Email: Mohamed.Yamany@etamu.edu

Preferred Form of Communication: Office Hours or Email

Communication Response Time: 24-48 hours typically

Course Times: TR 05:00pm – 06:15pm

COURSE INFORMATION

Textbook:

BIM handbook: A guide to building information modeling for owners, designers, engineers, contractors, and facility managers

- Author: Sacks, R., Eastman, C., Lee, G., & Teicholz, P.
- Publisher: John Wiley & Sons, Inc.
- ISBN: 978-1119287537
- This book is available as an eTextbook from Amazon Digital Services, Inc.

Tools/Software used for instruction:

The following software is required. They are available for free at Autodesk Education with a verified .edu email.

- Autodesk Revit
- Autodesk Navisworks Manage

The syllabus/schedule are subject to change.

Course Description

This course introduces students to building construction and Building Information Modeling (BIM) through the development of a one-story residential house. Students learn architectural, structural, and MEP building systems, construction methods, and BIM fundamentals before using Autodesk Revit to create, coordinate, and analyze integrated building models. Through weekly hands-on exercises, students gain practical experience in site modeling, architectural, structural, and MEP modeling, quantity takeoff, clash detection, and basic 4D construction simulation.

Student Learning Outcomes

Students will actively participate in guided classroom exercises that simulate the planning, design, coordination, and digital modeling processes used in construction projects.

Through a combination of construction concepts and BIM applications, students will gain practical experience in developing coordinated building models while understanding how building systems are designed, constructed, and integrated.

Upon completion of this course, students will be able to:

- Explain the fundamentals of residential construction and building systems.
- Interpret architectural, structural, and MEP drawings.
- Describe the construction sequence of a residential building.
- Explain BIM concepts and their applications in the AEC industry.
- Develop architectural, structural, and MEP models using Autodesk Revit.
- Integrate multidisciplinary BIM models into a coordinated building model.
- Perform quantity takeoff, clash detection, and basic 4D construction simulation.
- Apply BIM tools to improve construction planning, coordination, and decision-making through practical modeling exercises.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

1. A scientific calculator for exams.
2. Microsoft Word, Excel, PowerPoint.

Instructional Methods

This course utilizes lectures, and assignments to assist students in achieving the course learning outcomes.

Student Responsibilities or Tips for Success in the Course

Students should attend the lectures and deliver the assignments in a timely manner.

The syllabus/schedule are subject to change.

GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

Weights of the assessments in the calculation of the final letter grade.

Grading Criteria		Score
1	Attendance & participation	10
2	In-class exercises (one submission for each class)	90
Total		100

To earn full grades on attendance and participation, students must attend all classes (unless excused due to valid reasons) and actively participate in class discussions.

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT

The syllabus/schedule are subject to change.

Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, an ETAMU campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

Interaction with Instructor Statement

The instructor will response to your questions on D2L tools within 48 hours. For urgent questions, and for questions that are not answered within 48 hours, please prefer e-mail correspondence.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

1. One day late assignment is accepted with a 15% grade deduction; after this, no assignment will be accepted.
2. You will be expected to do all the reading throughout the semester.
3. The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

The syllabus/schedule are subject to change.

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty

13.99.99.R0.10 Graduate Student Academic Dishonesty”

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:

<https://www.britannica.com/topic/netiquette>

ETAMU Attendance

For more information about the attendance policy please visit the [Attendance](http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx) webpage and [Procedure](http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx)

[13.99.99.R0.01.http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx](http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx)

The syllabus/schedule are subject to change.

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)
[Undergraduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

[Graduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides reasonable accommodation of their disabilities. If you have a disability requiring accommodation, please contact:

Office of Student Disability Resources and Services

East Texas A&M University

Velma K. Waters Library Rm 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation based on race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination based on sexual orientation, gender identity, or gender expression will be maintained.

The syllabus/schedule are subject to change.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun.

Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and East Texas A&M Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all East A&M campuses. Report violations to the University Police Department at 903- 886-5868 or 9-1-1.

COURSE OUTLINE / CALENDAR

Week	Class	Date	Lecture Topic
1	Thursday	Aug. 20	Course introduction; course objectives; grading; overview of residential construction; project participants; building life cycle; introduction to structural systems (wood, concrete, and steel)
2	Tuesday	Aug. 25	Structural systems: wood, reinforced concrete, and structural steel; advantages and disadvantages; why wood framing dominates U.S. residential construction
	Thursday	Aug. 27	Architectural design; architectural drawings; floor plans; elevations; sections; architectural components
3	Tuesday	Sept. 1	Structural design; structural drawings; foundations; floor framing; wall framing; roof framing
	Thursday	Sept. 3	MEP design; mechanical, electrical, and plumbing systems; coordination among disciplines
4	Tuesday	Sept. 8	Construction sequence of a wood-frame residential house from site preparation to project completion
	Thursday	Sept. 10	Introduction to BIM; evolution from CAD to BIM; BIM workflow
5	Tuesday	Sept. 15	BIM dimensions (3D–7D); BIM applications; benefits of BIM
	Thursday	Sept. 17	Revit interface; navigation; project browser; properties palette; views
6	Tuesday	Sept. 22	Project setup; levels; grids; dimensions; basic drawing tools
	Thursday	Sept. 24	Site modeling; project location; property boundaries; building pad
7	Tuesday	Sept. 29	Topography; driveway; walkways; basic landscaping

The syllabus/schedule are subject to change.

Week	Class	Date	Lecture Topic
	Thursday	Oct. 1	Architectural modeling I: exterior walls and interior partitions
8	Tuesday	Oct. 6	Architectural modeling II: doors, windows, and Revit families
	Thursday	Oct. 8	Fall Break – No Class
9	Tuesday	Oct. 13	Floors; room tags; floor finishes
	Thursday	Oct. 15	Roof modeling; roof types; ceilings; materials
10	Tuesday	Oct. 20	Structural modeling: foundations and slab-on-grade
	Thursday	Oct. 22	Structural modeling: wood framing, floor framing, and roof framing
11	Tuesday	Oct. 27	Mechanical systems; HVAC equipment; air terminals
	Thursday	Oct. 29	Duct systems and HVAC coordination
12	Tuesday	Nov. 3	Plumbing systems; water supply; drainage systems
	Thursday	Nov. 5	Electrical systems; lighting; switches; receptacles; electrical panels
13	Tuesday	Nov. 10	Model coordination; linking architectural, structural, and MEP models
	Thursday	Nov. 12	Quantity takeoff using Revit schedules
14	Tuesday	Nov. 17	Clash detection; interference checking
	Thursday	Nov. 19	Introduction to 4D BIM; linking a Microsoft Project schedule to the Revit model; course review
15	Tuesday	Nov. 24	Course integration, review, and advanced BIM applications in residential construction
	Thursday	Nov. 26	Thanksgiving Holiday – No Class
16	Tuesday & Thursday	Dec. 1 & 3	Student Questions and Course Discussions
17	--	Dec. 5	Final Examination Week – No Final Examination

Refer to the University Master Calendar for additional important dates.

The syllabus/schedule are subject to change.