CONE 433.01E CONSTRUCTION PROJECT CONTROLS

COURSE SYLLABUS: FALL 2025

INSTRUCTOR INFORMATION

Instructor: Mohamed Yamany, Ph.D., PMP, PMO-CP, Assistant Professor
Office Location: AG/ET 119B
Office Hours: M, W 10:00 am - 12:00 pm and 2:00 pm – 3:00 pm or by appointment.
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Preferred Form of Communication: Office Hours or Email
Communication Response Time: 24-48 hours typically
Course Times: MW 04:00pm – 05:15pm

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

Course Description

This course is designed to equip students with a comprehensive understanding of technology and its practical application in the construction industry. Throughout this course: 1. Students will engage in hands-on experience with Building Information Modeling (BIM) software tools, mastering the creation of 3D models, efficient project management, and effective collaboration among project stakeholders. 2. Students will have the chance to explore the tangible application of BIM in real-world construction projects. 3. Students will demonstrate how these digital technologies enhance both the efficiency and precision of construction projects. Prerequisites: CONE 322- Construction Planning and Scheduling with a minimum grade of C.

Student Learning Outcomes

Students will work in project teams to simulate engineering and construction processes for a real-world project. Students will focus on collaboratively modeling a building in BIM and preparing BIM-informed schedules and cost estimates by utilizing advanced BIM solutions and their individual strengths. By working together in a team environment and simulating real world working practices, students will be able to test BIM practices in the way to become creative and innovative practitioners.

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

- Use of Building Information Modeling (BIM) in construction
- Create a Building Information Model
- Develop 4D construction visualization models
- Use the 3D/4D model for construction planning and acquisition
- Employ BIM to estimate project cost (5D)
- Understand emerging BIM applications and research topics

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.

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**	60
2	**Midterm Exam**	170
3	**Final Exam**	170
4	**Lab Assignments (Each lab assignment counts equally)**	300
5	**Class Project**	300
Total		1000

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 Texas A&M University-Commerce 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 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, a TAMUC 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 readings throughout the semester.
3. Each exam will be given in class. Exams are closed book and notes (necessary formulas will be provided on a separate page). Students will need a scientific calculator for exams. Cell phones are not acceptable as a calculator. Use of unauthorized aids on exams will result in a grade of zero.
4. There will be one group project.
5. 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.

6. No make-up exams will be permitted unless official documentation for absences is provided (e.g., death in the family, illness).

"Texas A&M University-Commerce 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

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 webpage and Procedure 13.99.99.R0.01.

http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

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 for reasonable accommodation of their disabilities. If you have a disability requiring an 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 on the

basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce 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 A&M-Commerce 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 A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

COURSE OUTLINE / CALENDAR

Week	Date	Topics	Homework
1	8/25	Class Introduction	
	8/27	Lecture: Introduction to BIM	
2	9/1	**Labor Day - Campus Closed**	
	9/3	Lecture: Introduction to BIM Lab: BIM Software Installation	
3	9/8	Lecture: Technologies in Construction Management	
	9/10	Lab: 3D Modeling (Architectural: Revit)	
4	9/15	Lecture: BIM Tools and Parametric Modeling	
	9/17	Lab: 3D Modeling (Architectural: Revit)	
5	9/22	Lecture: BIM Interoperability	Lab assignment #1 due

	9/24	Lab: 3D Modeling (Architectural: Revit)	
6	9/29	Lecture: BIM for Owners and Facility managers	Class Project #1 due
	10/1	Lab: 3D Modeling (Structural: Revit)	
7	10/6	Lecture: BIM for Architects	Lab assignment #2 due
	10/8	Lab: 3D Modeling (Structural + MEP: Revit)	
8	10/13	Lecture: BIM for Contractors	Lab assignment # 3 due
	10/15	Lab: 3D Modeling (MEP + Custom elements: Revit)	
9	10/20	Lecture: BIM based Design Checking	Class Project #2 due
	10/22	Lecture: Design Coordination/ clash detection (Navisworks)	
10	10/27	Lecture: Future of BIM and Digital Twin	Lab assignment # 4 due
	10/29	Lab: 4D construction sequencing (Navisworks)	
11	11/3	Lecture: The Future: Building with BIM	Lab assignment # 5 due
	11/5	Lab: 4D construction sequencing (Navisworks)	
12	11/10	No class-Midterm Exam	
	11/12	Lab: Siteworks (Revit)	
13	11/17	Lab: Cloud-based BIM Collaboration #1	Class Project #3 due
	11/19	Lab: Cloud-based BIM Collaboration #2	
14	11/24	**Thanksgiving Break**	
	11/26	**Thanksgiving Break**	
15	12/1	Lab: Cloud-based BIM Collaboration #3	
	12/3	Lab: Cloud-based BIM Collaboration #4	
16		**Final Exam**	Final Exam

Refer to the University Master Calendar for additional important dates.

The *syllabus/schedule are subject to change.*