

Course syllabus

CMG 2223 - Print Reading and Introduction to Building Information Management (BIM)

Term: Fall 2025

Course Time: Tuesday and Thursday: 1:00 PM to 2:40 PM

Classroom: Klehm Hall 3135

Course Dates: Aug. 25, 2025 – Dec. 12, 2025

Faculty: Dr. Reachsak Ly

Email: rly@eiu.edu (Preferred communication method)

Office: Klehm Hall 4014

Office Hours: Tuesday and Thursday, 10:00 AM to 1:00 PM or by appointment

Communication Response Time: Within 2 days

Required Textbooks and Readings

Required Textbook:

- Print Reading for Construction (6th Edition), Walter C. Brown & Daniel P. Dorfmueller, ISBN: 9781605258027
- Daniel John Stine, "Design Integration Using Autodesk Revit 2022," SDC Publications
- Readings: Several readings will be posted on D2L.

Course Prerequisite:

EGT 2043 - Computer-Aided Engineering Drawing

Course description:

This course provides an introduction to reading and interpreting construction drawings and specifications, along with an entry-level exploration of Building Information Modeling (BIM).

In the first portion of the course, students will learn how construction plans are organized and drawn, how to read and interpret architectural and engineering drawings, and how to apply this knowledge from conceptual design through final construction documentation.

In the second part of the course, students are introduced to the fundamentals of BIM, with a focus on creating and modifying 3D building models using Autodesk Revit. Students will learn how BIM supports the design, visualization, and documentation process in the construction industry, and how it differs from traditional computer-aided design (CAD) methods.

Course objectives:

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

- Read and interpret dimensions, line types, legends, and schedules.
- Explain the role of specifications and their relationship to drawings.
- Recognize and interpret site plans, floor plans, elevations, sections, and detail drawings.

- Identify symbols and notations for structural, mechanical, electrical, and plumbing systems.
- Interpret construction details for materials and systems such as concrete, masonry, wood, and steel.
- Describe the fundamental concepts and benefits of BIM in the architecture, engineering, construction, and operations (AECO) industry.
- Distinguish BIM from traditional CAD-based design methods.
- Create basic architectural and structural components in Revit.
- Modify and organize model elements to support design intent and documentation.
- Apply basic annotation, detailing, and sheet layout functions in Revit.
- Integrate model views and schedules for project communication.

Course Structure and evaluation

This course is a sixteen-week course. Sections are provided in the learning management systems with assignments for each module. Each section's assignment must be completed by due date and time. After the due date, the instructor will evaluate all student submissions.

The evaluation is based on engagement in-class activities, homework assignments, quizzes and final project. This course uses an active learning approach, in which students should be active outside of the classroom for learning. During the class time of the BIM section of the course we will have hands-on experiences to focus information modeling using Autodesk Revit.

Grading Structure

Content	Percentage
Print Reading assignments and quizzes	25%
Print Reading groupworks	15%
Revit assignment	35%
Team Project	15%
Attendance and Participation	10%
Total	100%

Grading Scale:

Individual grade items and your final grade will be assessed as follows:

A = 100- 90%

B = 89- 80%

C = 79-70%

D = 69-60%

F = less than 60%

Grading Policies

Deductions to your assignments grade for late submission will be given as follows:

0-24 hours late a deduction of 15% of the earned grade

24-48 hours late a deduction of 40% of the earned grade

48-72 hours late a deduction of 60% of the earned grade

More than 72 hours late No credit.

Assignments must still be submitted to get a grade for this course.

Course outline:

* The course schedule is subject to change throughout the semester. Revisions will be noted in class.

Week	Date	Class topics	Readings / Assignments & Due Date
Week 1	Aug 26 Aug 28	Overview of Class Syllabus Introduction to Book and Plans Construction Drawing Organization Plan-set Information Types of Prints Uniform Drawing System	Units 1 & 4
Week 2	Sept 2 Sept 4	Plan Lines and Symbols Alphabet of Lines Construction Drawings Construction Math Measuring Drawing Scales	Units 2 - 5
Week 3	Sept 9 Sept 11	Reading Prints Site Plans Plan Views Architectural Drawings	Units 5 & 8
Week 4	Sept 16 Sept 18	Foundations & Structural Prints Footings, grade beams, slabs Structural components	Units 10 & 11
Week 5	Sept 23 Sept 25	Framing: Residential & Light Commercial Components of Framing Roof Framing Load-bearing Partitions	Unit 12
Week 6	Sept 30 Oct 2	MEP Mechanical Plans Electrical Drawings Plumbing Prints	Units 13, 14 & 15
Week 7	Oct 7 Oct 9	Specifications & Materials Specifications CSI Format Welding Symbols Estimating	Units 6, 7, 16 & 17
Week 8	Oct 14 Oct 16	Introduction and overview of BIM Differences between BIM and CAD How is BIM changing the AEC industry? Uses of BIM Introduction to Revit Navigation	
Week 9	Oct 21 Oct 23	BIM Authoring – Architectural modeling (Modeling basics, setting up projects, modeling basic building exterior objects)	
Week 10	Oct 28 Oct 30	BIM Authoring – Architectural modeling Object hierarchy Modeling Process for an Example Building	
Week 11	Nov 4 Nov 6	BIM Authoring – Architectural modeling Modeling Process for an Example Building	
Week 12	Nov 11 Nov 13	BIM Authoring – Family Creation Custom Modeling	
Week 13	Nov 18 Nov 20	BIM Authoring – Structural Modeling Workshop	
Week 14		Thanksgiving Break	
Week 15	Dec 2 Dec 4	Schedules and Quantities Workshop	

Week 16	Dec 8 Dec 10	Work on Final Project	
Final exam week		No Final Exam	

Note: This is a tentative schedule, and subject to change as necessary. The instructor reserves the right to make changes to the topics or sequence of topics, schedule, assignments, grading plan, and content of the course.

Academic Integrity:

Students are expected to maintain the principles of academic integrity and conduct as defined in EIU's Code of Conduct (<http://www.eiu.edu/judicial/studentconductcode.php>). Violations will be reported to the Office of Student Standards. In this class, students may assist each other in accomplishing a homework assignment, but the submitted work must be the student's own original work. **Copying work or plagiarism will not be tolerated. Students may *not* collaborate on tests or quizzes. Cheating or plagiarism will, at least, result in a zero on the assignment or exam.**

- AI expectations: Check the FDIC recommendation https://www.eiu.edu/fdic/ai_guidance.php

Students with Disabilities:

If you are a student with a documented disability in need of accommodations to fully participate in this class, please contact the Office of Student Disability Services (OSDS). All accommodations must be approved through OSDS. Please stop by Ninth Street Hall, Room 2006, or call 217-581-6583 to make an appointment

Emergency Preparedness Plan:

Instructions regarding procedures to follow in the event of an emergency are posted in all classrooms. Students are responsible for acquainting themselves with these instructions so that they are prepared in the event of an emergency.

The Academic Success Center:

Students who are having difficulty achieving their academic goals are encouraged to contact the Academic Success Center (www.eiu.edu/~success) for assistance with time management, test taking, note taking, avoiding procrastination, setting goals, and other skills to support academic achievement. The Center provides individualized consultations. To make an appointment, call 217-581-6696 or go to 9th Street Hall, Room 1302.

Skill Requirements

An Internet connection is necessary to participate in the assignments, access readings, transfer course work, and receive feedback from your instructional associate and/or professor. For this course, students should have a basic working knowledge of computers and Internet use as well as access to a computer with a broadband (DSL, cable, satellite) Internet connection. At a minimum, you must have a computer with Windows 7.0 or MAC 10.6. Microsoft Office 2010 including Microsoft Word, PowerPoint, and Excel are necessary. Adobe Acrobat may be used only if necessary, and with the permission of the instructor. Microsoft Office is the standard office productivity software utilized by EIU faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required.