M.E. Rinker, Sr.
School of Building Construction
University of Florida
Semester Course Outline

BCN 4252 – Introduction to Building Information Modeling **3 Credits**

Spring 2025

Instructor: Dr. Aladdin Alwisy, RNK 311, Rinker Hall
aalwisy@ufl.edu , Phone: 273-1157

Prerequisites: BCN 3255C – Graphic Communication in Construction

Description: Learn current building information modeling (BIM) software to identify design errors, to improve construction process.

Method:

- The class meets twice weekly: a one-hour session and a two-hour session.
- This is a computer-heavy course and you will use your personal computers for a majority of the class time.

Students are expected to **stay in the class** until they satisfactorily complete and turn in their assignments. A student is allowed to complete an assignment at home only if the student has remained for the full class period and needs additional time to complete the assignment

Objectives: At the completion of the course, students will be able to demonstrate the ability to:

- Use building information modeling to identify design errors (SACS 5, ACCE SLO 10)
- Use building information modeling to improve construction process (SACS 5, ACCE SLO 10)
- Create a basic building information model (SACS 5, ACCE SLO 10)
- Manipulate a building information model using current software tools (SACS 5, ACCE SLO 10)

SACS = Southern Association of Colleges and Schools
ACCE = American Council for Construction Education
SLO = Student Learning Outcome

SACS 5: Communicate technical and financial data effectively in speech and in writing to all stakeholders in the construction process.
ACCE SLO 10: Apply electronic-based technology to manage the construction process

Required Texts: Required content/material will be provided by the instructor through CANVAS.

Hardware & Software Requirements:

Hardware Requirements:

- **Mouse**
  - A **mouse** with a **scroll wheel** is **required** for this class.

- **Webcam and Microphone**
  - A **webcam** and **microphone** are required to attend some of the sessions, and office hours, and also to take some of the quizzes and tests online. Many laptops come with built-in cameras and microphones; if not, you will be required to have them separately.

- **Laptop**
  - A **laptop** computer is **required** for all the students in the Rinker School. Therefore, in this class, you will be allowed to work only on your own laptop. If anything goes wrong with your laptop, notify the instructor as soon as the problem occurs. In that case, you will be allowed to use only the computers in the Rinker School computer lab. If you use anyone else's computer (besides your own or a computer in the Rinker School computer lab), it will be considered a violation of the Rinker School policy and, thus, will be dealt with accordingly.
  - For more information about **BCN's computer requirements,** visit the website: https://dcp.ufl.edu/rinker/academics/computer-requirements/

Software Requirements:

- **Course-related Software:**
  - ***Latest Autodesk Revit*** :
    - Download Link: https://www.autodesk.com/education/free-software/revit
    - You need to create an Autodesk account using your UFL email address
    - The student-version is available for free through your Autodesk account
  - ***Latest Navisworks Manage:***
    - Download Link: https://www.autodesk.com/education/free-software/navisworks-manage
    - The student-version is available for free through your Autodesk account • Installation is very similar to Revit (Logging in to the same Autodesk account you created for Revit using your UFL email address)
    - Please make sure that you download and install **Navisworks Manage** and not Freedom

- **Other Software/App/Cloud-based Tools**
  - Related software will be introduced as we make progress throughout the semester
- ***Exam/Quiz related Software:***
  - ***Honorlock***
    - Honorlock ▪ All the exams, quizzes, in-class projects will be proctored online using
    - How to use Honorlock (Canvas Student Guide): https://www.youtube.com/watch?v=xLSRgrBMz6c&feature=youtu.be
    - Honorlock Student Guide:
    - https://drive.google.com/file/d/1kzVSvd_wlGm0Edaw38PE6KjKhobCQxVt/view

Classes For class hours and location, please check the Teaching Schedule from ONE.UF

Office Hours TBD

By Appointment:
Email aalwisy@ufl.edu. The subject line should read *BCN 4612 APPOINTMENT REQUEST-<your name>*.
Please provide a brief description of what you want to discuss. Also please suggest one or two alternate times for scheduling other student requests. I will send you an e-mail about the appointed time.

TA: TBD

Attendance: Attendance is mandatory. You have three unexcused absences. To have an absence excused, you need to bring proof of why it was unavoidable (doctors note, etc.)

Exams: *NO MAKEUP EXAMS.*
The exams' results must be discussed in person within 24 hours after the quiz/exam has been taken. After 24 hours the grade is final.

Final Project: The final project will cover a variety of topics taught throughout the year.

Final Exam: There is no final exam.

Bonus points: Bonus points opportunities will be given throughout the semester in class.

Grade Breakdown: Grades are viewed as a means to communicate evaluation of your work and progress. Specific evaluation criteria will be provided with each exam/project/class activity. Work will be evaluated through in-class feedback and/or written commentary. Projects, exams, and individual assignments during the semester will be numerical grades. Each of them will be evaluated and those evaluations will be provided to students based on their request. The breakdown of grades will depend on:

Grade Makeup: Final grades will be calculated as follows:

Attendance	100
BIM & Construction Management Project Assignments (A)	360
BIM & Reality Capturing & Visualization Project Assignments (B)	320
BIM & Field-related Technologies Project Assignments (C)	120
Final Poster /Project	100
	1000

Grade Scale: Divide the total points you earn by **The total possible points**. Grades will be given according to the following scale. **Decimal points will not be Rounded**.

Name	Range	
A	100%	to 94%
A-	< 94%	to 90%
B+	< 90%	to 87%
B	< 87%	to 84%
B-	< 84%	to 80%
C+	< 80%	to 77%
C	< 77%	to 74%
C-	< 74%	to 70%
D+	< 70%	to 67%
D	< 67%	to 64%
D-	< 64%	to 61%
E	< 61%	to 0%

Project Assignment

- **Late assignments and a late final project will not be accepted, regardless of the circumstances.** For late assignments and late final project, the student will receive a zero on the assignment/final project.
- All work turned in for this course should have professional quality in content and presentation.
- Assignments may be graded by detailed checking or based on the overall attempt. The instructor may choose not to grade some homework.
- All the assignments and final project have to be **submitted exclusively in CANVAS.**
- It is **your responsibility** to verify the successful submission of the assignments/final project in CANVAS. Submission by **email** or **digital media** (such as a USB drive) **will not be accepted**.
- If you have technical difficulties with CANVAS, please contact the UF Help Desk at learning-support@ufl.edu, or (352) 392-4357 - select option 2, or go to the Ground floor of the Hub. If your technical difficulties cause you to miss a due date, you MUST report the problem to UF Help Desk **before the due date/time**. Include the ticket number that you are given in an email to the instructor to explain the late assignment due to a problem with CANVAS.
  - Types of questions that should be directed to the Help Desk: ▪ I cannot log into CANVAS
    - I have clicked on the "submit" button for my assignment and nothing is happening
    - I cannot upload an assignment
    - CANVAS has given me an error message and I cannot submit my assignment.
  - Poor internet connections cannot be accommodated with a ticket from the UF Helpdesk.
  - The instructor reserves the right to accept or decline tickets from the UF Helpdesk based on individual circumstances.
- An introduction and support for the E-Learning in CANVAS system can be found at: https://lss.at.ufl.edu/help/Student_Faq
- Due to the nature of the class and the Revit/Navisworks software, any consultation regarding assignments/final project and the use of the software will be conducted exclusively **in person** and consultations **via email will not be conducted**.

Student Evaluations: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/ .

Accommodations: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Honor Code: All students in this course are subject to the requirements of the University of Florida's Honor Code https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/ . Cheating will not be tolerated. Although joint work on assignments may be acceptable in some cases, duplication of an assignment either manually or electronically will be dealt with as an act of academic dishonesty. "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."

Counseling: Contact information for the Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc/Default.aspx (Links to an external site.), 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies

Reservations And Remedies: The instructor reserves the right to modify the course schedule, grade make-up, grade scale, modules, and any other aspect of the course as deemed fit throughout the term without notice. The updated Syllabus will be uploaded on the course's Canvas. For any questions, issues, or concerns about the course (assessment, policies, schedule, etc.), please contact the instructor to remedy them.

Weekly Course Schedule:

Week/ Date	Type	Topic/Description
Week 1	Presentation	**Introduction to BCN4252 & Software Requirements**
	Presentation	**Module 1: BIM & Construction Management** • Site Development, Rendering, & Walkthrough
Week 2	Project Assignment	• Site Development, Rendering, & Walkthrough

Week/ Date	Type	Topic/Description
	Project Assignment	• Site Development, Rendering, & Walkthrough
Week 3	Presentation	**Module 1: BIM & Construction Management** • Class Detection
	Project Assignment	• Class Detection
Week 4	Presentation + Navisworks	• Class Detection
	Navisworks + Project Assignment	• Class Detection
Week 5	Presentation	**Module 1: BIM & Construction Management** • Quantity Take-off
	Project Assignment	• Quantity Take-off
Week 6	Presentation + Revit	• Quantity Take-off
	Revit	• Quantity Take-off
Week 7	Navisworks	• Quantity Take-off
	Project Assignment	• Quantity Take-off
Week 8	Presentation	**Module 2: BIM & Reality Capturing & Visualization** • 360 Photo/Videography
	Project Assignment	• 360 Photo/Videography
Week 9	Presentation	• 360 Photo/Videography
	Presentation	• 360 Photo/Videography
Week 10	Project Assignment	**SPRING BREAK**
Week 11	Presentation	**Module 2: BIM & Reality Capturing & Visualization** • Virtual & Augmented Reality (AR)
	Project Assignment + Q/A	• Virtual & Augmented Reality (AR)

Week/ Date	Type	Topic/Description
Week 12	Presentation + AR Flow	**Module 3: BIM & Field-related Technologies** • Photo/Video-Grammetry & Laser Scanning (+Robotics)
	Project Assignment	• Photo/Video-Grammetry & Laser Scanning (+Robotics)
Week 13	Presentation	• Photo/Video-Grammetry & Laser Scanning (+Robotics)
	Lab Visit	Workday
Week14	Presentation + AI Flow	**Module 3: BIM & Field-related Technologies** • Artificial Intelligence (AI)
	Project Assignment	• Artificial Intelligence (AI)
Week 15	Project Assignment	**Final Project** • Workday & Poster Review
	Intro to Final Poster Presentation	• Workday & Final Poster Review
Week 16		**Final Project Presentation**