

BCN6787: Construction Information Systems
Spring 2011

Course Instructor: Dr. Raymond Issa

Office: RNK 304

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Phone: 352-273-1152

Office Hours: By appointment

Lecture Time: Tuesdays 5:10 PM- 8:00 PM (Periods 10-E1)

Pre-Requisites: BCN3255- computer graphic communications or previous experience with BIM or 3D modeling in another related discipline.

Teaching Assistant/ Lab instructor: Brittany Giel

Office: RNK 338

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Phone: 352-339-0237

Office Hours: Monday and Wednesdays from 2:30 pm to 4:00 pm or by appointment

Recommended Texts:

Autodesk Revit Architecture, Structure, and MEP 2011, Navisworks Manage training manuals, user guides, and datasets to supplement lab tutorials.

Eastman, C. et al. (2008). *BIM Handbook: a guide to building information modeling for owners, managers, designers, engineers, and contractors*, Wiley, New Jersey.

- I. **Course Description:** This course will cover the fundamental principles and practices of Building Information Modeling (BIM) and Virtual Design and Construction (VDC) in the construction context. Additional lectures may also be supplemented to present the use of information systems in the construction context.
- II. **Course Method:** Teaching methodology will consist of weekly hands-on tutorials in the computer lab which will present the basic practice of using a variety of BIM software tools including: Revit Architecture, Structure, and MEP; Autodesk QTO; and Autodesk Navisworks.
- III. **Objectives:**
 1. To be able read and interpret construction documentation and create an accurate and functional 3D model.
 2. To be able to evaluate 3D models to determine both modeling quality and reporting accuracy.
 3. To be able to visualize and communicate construction concepts using 2D and 3D applications.
 4. To be able to demonstrate skills related to creating, analyzing and implementing multi-dimensional BIMs to solve construction problems.
- IV. **Grading Criteria:**

• 6 Lab Assignments	30% (300 points/ 50 points each)
• Group Project	40% (400 points)
• Final Exam	30% (300 points)

The grades will be computed according to the following scale:

A	90-above	C	70-76.9
A-	87-89.9	C-	67-69.9
B	80-86.9	D	60-66.9
B-	77-79.9	F	Below 60

V. **Attendance**

As this is a graduate level course, attendance is not mandatory. However, all students are expected to be responsible for the material taught during the lab period. The course schedule is very rigorous given the amount of software to be covered. Therefore, failure to attend class may result in students falling behind.

VI. **Assignments:**

There will be a total of six assignments to be completed throughout the course. Each is worth 5% of your final grade. These assignments are designed to reinforce the basic modeling principles learned in the previous lab period and are a chance for you to apply modeling skills to a small project of simple scope. All assignments must be completed INDIVIDUALLY and submitted on the course website before the class begins.

VII. **Group Project:**

The class will be assigned to groups created by the instructor based on previous modeling skill level. Each group will be assigned to construct and/or update a multi-disciplinary federated BIM of a recently constructed building on campus using available as-built documentation. A comprehensive list of project criteria will be submitted to you at a later date.

VIII. **Final Exam:**

There will be no make-up exams. Failure to be present for a final exam may result in a failing grade.

IX. **Honors Policy:**

You are expected to follow the University Honors Policy when working on assignments, homework, projects, and exams. Please read and agree to this statement.

"I understand that the University of Florida expects its students to be honest in all of their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action, up to and including expulsion from the University."