



Syllabus

BIM 342 – Revit Structure 2

Welcome to BIM 342!

We're going to have a great time learning together!

Communication Policy

You may contact me through the messaging system. Please communicate with me early and often if you are experiencing challenges in completing course assignments on time. I will answer your messages within 24 hours or less of receiving them.

Course Description (Goals and Objectives)

This course is designed to teach, students with an interest in the real-world structural aspects of building modeling, detailing and annotating of structural projects, with regard to design and interaction of other disciplines, also about the resources available to you thru the program aspects of the Revit Structure software.

Students will learn, thru project-based exercises, how to continue developing a commercial / residential structural model to completion of the final 3D model and structural drawings.

Topics will include the setting up a project for success, correctly modeling and placing key structural elements, using correct modeling, detailing and annotating practices.

Course Materials and Textbooks

Recommended Text: Exploring Autodesk Revit 2018 for Structure
Sham Tickoo

ISBN-10: 9781942689935

NOTE: The same textbook is used in the BIM 341 and BIM 342 Revit courses.

Course Prerequisites

Fundamental working knowledge of the Windows environment or instructor approval.
Manual drafting experience preferred.

Student Learning Outcomes/Learning Objectives

1. Continue modeling an accurate structure, for use in all program aspects of project and construction of a real-world model.
2. Design structural building systems which create buildings with structural integrity.
3. Develop building structures which limit or prevent accidental injury or death among users of the buildings.
4. Design and develop structural building systems.

By the end of this course, students will gain valuable knowledge about the tools for modeling in Revit Structure and have an understanding of its intricacies.

Autodesk Certification Exam Objectives

The curriculum covered in this course includes the following Autodesk Certification Exam Objectives:

Certification Exam Objective	Description
Collaboration Professional	Create and modify levels, Create and modify structural grids, Import AutoCAD files into Revit, Link Revit models, Control the visibility for linked objects, Control the visibility for linked objects.
Documentation	Using temporary dimensions, Annotate beams, Add and modify text annotations, Add and use dimensions and dimension labels, Use detail components, Create and modify column schedules, Create and modify footing schedules, Create and modify standard sheets.
Modeling	Place and modify structural columns, Place and modify walls, Create custom wall types, Place footings, Create a concrete slabs and/or floors, Create and modify stepped walls in foundations, Place rebar, Add beams, Add beam systems, Add joists, Add cross bracing to joists, Create and use trusses, Create and modify floors, Create and modify custom floors, Create and modify sloped floors, Add floor openings for stairs, Create and modify stairs, Create and modify ramps, Model and use roofs.
Views	Create section views, Create framing elevations, Use callout views.

Attendance

To satisfy the course attendance requirements, students are typically required to complete at a minimum, the initial graded discussion forum engagement by the 4th day of the course and the midterm before the end of the 11th day of the course. All remaining course deliverables including the second graded discussion forum engagement, quizzes and final are due before the end of the 18th day of the course. Course attendance is also evaluated by the timely submission of a student's quizzes. Students who fail to participate in the graded discussion forum or attempt their quizzes by the 8th day of class will be considered "absent" by VDCI. Specific due dates for this course can be found in "Deadlines for Submitting Project Deliverables".

Participation

Participation is evaluated by engagement in the Graded Discussion Forum. This forum encourages participation directly with instructors and students in a course. Typically, ten percent of the course grade is assigned for participation. A specific grading breakdown for this course can be found in "Weighted Grading Criteria".

Grading Policies

After you have successfully completed all the requirements for your course, you will receive a VDCI course completion certificate. If you are a VDCI Technology Certificate student, your course must be taken for a letter grade. Classes that are taken as an Audit will not qualify for a completion certificate or count towards a VDCI Technology Certificate Program or VDCI Digital Badge.

You can change your VDCI grading option from letter grade to Audit any time BEFORE the 18th day of class by contacting either the Program Manager or Program Coordinator.

Letter grades are based on the following scale. Your final course grade is based on the weighted grading criteria of the points you have earned.

Passing Grades	
A+	100%
A	93-99%
A-	90-92%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	73-76%
C-	70-72%

Non-Passing Grades	
D	60-69%
F	59% and below

Weighted Grading Criteria

Participation	10%
Quizzes	10%
Hands-On Quizzes	20%
Midterm Submission	20%
<u>Final Submission</u>	<u>40%</u>
TOTAL	100%

NOTE: Students can check their course progress in the Learning Hub at any time by clicking the Assignments link on the left sidebar of each course page.

Deadlines for Submitting Project Deliverables

Project deliverables must be submitted to me through the Learning Hub.

1. One post in the course Graded Discussion Forum is due before the end of the first Monday (4th day) of the course. Your grade for this post will be reduced by 10% (one full letter grade) for every day the deliverable is late.
2. The midterm is due before the end of the second Monday (11th day) of the course. Your grade for this deliverable will be reduced by 10% (one full letter grade) for every day the deliverable is late.
3. All remaining course deliverables are due by the end of the third Monday (18th day) of the course. This includes the second graded discussion forum engagement, quizzes and final.

4. Course deliverables will not be accepted any later than one day after the course has formally been closed (19th day). Your grade will be reduced by 10% (one full letter grade) for being late.

IMPORTANT: Please review all course due dates in the Learning Hub.

Final Project Deliverable File Types

When you submit your Final Project to me, please upload your Final Revit Model through the end of the course.

EXAMPLE: BIM342-Model.rvt

Discussion Forums/Student Engagement

Please be engaged in the Graded Discussion Forum. Your postings and responses in the Graded Discussion Forum are geared toward expanding the learning experience for you and your classmates in meaningful ways.

NOTE: The Graded Forum is a required and graded element for this course.

Please read the instructions for each Graded Discussion Forum assignment as they may differ in terms of content and response requirements.

To effectively participate in the discussion forum, you can:

1. Take a leadership role by being the first to post a topically-meaningful response in the Discussion Forum.
2. Reply thoughtfully to the postings of your classmates, including rebuttal of ideas/opinions.
3. Expand on the comments in the Discussion Forum by posing thought-provoking questions and/or providing topically-relevant/related outside links.
4. Post in a timely manner.

When I grade your Discussion Forum comments, I am most interested the quality of your postings/responses. Your contributions should add to the knowledge base of our course participants and provide substantive thought to receive points. If you are less knowledgeable about a topic, pose questions about the topic and/or share what you find when you research the topic yourself.

Academic Integrity Policy

The Virtual Design & Construction Institute (VDCI) is an institution of learning, career education, and technical skill development – a community based on academic honesty and integrity. As members of the VDCI community, faculty, students, and administrative staff share responsibility for maintaining this environment. It is essential that all members of the VDCI community subscribe to the ideal of academic honesty and integrity and accept individual responsibility for their work. Academic dishonesty is unacceptable and will not be tolerated at VDCI. Cheating, forgery, dishonest conduct, plagiarism, and collusion in dishonest activities erode the Institute's educational, research, and social roles.

If students who knowingly or intentionally conduct or help another student perform dishonest conduct, acts of cheating, or plagiarism will be subject to disciplinary action at the discretion of VDCI.