COURSE SYLLABUS

BIM Certificate Program (Self-Paced)

Gain expertise in Building Information Modeling (BIM) with Revit Architecture to create 3D models for commercial building projects. This hands-on program teaches you the technical skills and workflows for BIM while preparing you for a successful career.

> Group classes (Live Online) and onsite training are available for this course. For more information, email onsite@graduateschool.edu or visit: https://www.graduateschool.edu/certificates/bim-certificate-program-online



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Course Outline

This package includes these courses

- Intro to Revit Course (Self-Paced) (30 Hours)
- Intermediate Revit Course (Self-Paced) (30 Hours)
- BIM Construction Documents I Course (Self-Paced) (30 Hours)
- BIM Construction Documents II Course (Self-Paced) (30 Hours)
- BIM Construction Documents III Course (Self-Paced) (30 Hours)
- BIM Detailing Course (Self-Paced) (20 Hours)

Intro to Revit Course (Self-Paced)

In this beginner course, you'll explore how information is connected throughout a Revit (BIM) model using Revit Architecture tools. Learn to create 3D building models that automatically generate 2D architectural drawings, including floor plans, elevations, and 3D perspectives. You'll work from a pre-made template to build a complete Building Information Model, place views on sheets, and export drawings to PDF. The course provides source Revit files and step-by-step instructional videos to guide you through each stage of the project.

- Understand core Revit concepts and their role in Building Information Modeling (BIM).
- Navigate and utilize the Revit User Interface effectively.
- Build a 3D model to see how project information is connected throughout the design.
- Apply proper workflows to complete Revit tasks efficiently.
- Develop a complete project with floors, walls, ceilings, stairs, curtain walls, and roofs to enhance 3D modeling and 2D documentation skills.
- Produce high-quality presentation graphics for architectural projects.
- Organize and manage building data using schedules.

Intermediate Revit Course (Self-Paced)

In this online intermediate BIM course, you will build on your Revit Architecture skills by learning advanced techniques for documenting a building project. You'll refine an existing Revit model, explore design options, create custom schedules, develop 2D and 3D parametric families, and produce a streamlined set of construction documents. By the end of the course, you'll be able to transform a conceptual model into a fully integrated and interoperable construction document set.

- Incorporate DWG files to enhance Revit details and drawings.
- Apply element tagging for accurate cost estimation and material take-offs.
- Utilize design options to present and compare multiple design scenarios.
- Develop 3D parametric families for reusable building components.
- Create customized schedules for doors, materials, and rooms to support construction documentation and take-offs.
- Implement BIM project management strategies to maintain efficient, well-organized models.

BIM Construction Documents I Course (Self-Paced)

This online Revit course is the first in a series focused on creating construction documents using Revit Architecture. You'll model a single-story commercial building, import AutoCAD drawings, and create a site model. Then, you'll expand the model with a two-story addition, applying advanced Revit techniques used in real-world AEC workflows.

- Use BIM modeling tools to create an architectural model, including an existing building, partial demolition, and new construction.
- Build topography and create a site plan using external files, incorporating hardscape and landscaping elements.
- Differentiate project phases by visually distinguishing between existing construction and new construction.
- Create professional-quality renderings for presentations and documentation.

BIM Construction Documents II Course (Self-Paced)

You will develop construction documents for the commercial building and site from BIM 301, including sheet drawings, keynotes, detail drawings, and schedules.

- Prepare a complete set of architectural construction documents that integrate site and building models from BIM Construction Documents I.
- Create progress sets of construction documents, representing 30%, 60%, 90%, and 100% deliverable submittals.
- Produce floor plans, sections, and elevations for sheet layouts.
- Add keynotes to elements of the project model and develop schedules and architectural details extracted from the BIM model.

BIM Construction Documents III Course (Self-Paced)

Build on an existing commercial building model to complete a coordinated Revit drawing set. Develop plan annotations, material and graphic legends, elevations, wall sections, enlarged plans and interior elevations.

Create gross and rentable area plans, use phasing for a future tenant layout, and complete revisions and quality-control checks before exporting the drawing set.

- Complete floor plan documentation, graphic symbols and material legends.
- Create elevations, wall sections, enlarged plans and interior elevations.
- Document gross and rentable building areas.
- Use phasing to develop a future tenant layout.
- Review revisions and quality control, then export the drawing set.

BIM Detailing Course (Self-Paced)

Get skilled at producing detailed construction drawings that deliver structural integrity, safety, and design clarity. This course sharpens your Revit abilities so you can create thorough building system details and manage them according to industry standards.

- Produce detail drawings of building systems that show structural integrity and sound construction practices.
- Build and integrate detail drawings that reduce or prevent accidental injury or death among the people who use the buildings.
- Prepare detail drawings that illustrate construction systems, products, and finishes.
- Create details and organize the detail information to meet project-based lineweight and National CAD/BIM standards.