COURSE SYLLABUS

CAD Certificate Program (Self-Paced)

Learn 2D drafting skills with AutoCAD and enhance your design capabilities with specialized tools like Revit and SketchUp. This program prepares you for a successful career in construction design, with real-world applications and project-based learning.

> 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/cad-certificate-program-online



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Course Outline

This package includes these courses

- Intro to AutoCAD Course (Self-Paced) (30 Hours)
- Intermediate AutoCAD Course (Self-Paced) (30 Hours)
- AutoCAD Construction Documents I Course (Self-Paced) (30 Hours)
- AutoCAD Construction Documents II Course (Self-Paced) (30 Hours)
- CAD Detailing Course (Self-Paced) (30 Hours)
- CAD Project Management Course (Self-Paced) (20 Hours)

Intro to AutoCAD Course (Self-Paced)

In this beginner-friendly AutoCAD course, you'll learn how to draw drafting symbols, kitchen and bath fixtures, and create a floor plan, all while assembling everything into one cohesive sheet file. You'll get hands-on experience with AutoCAD's user interface and essential commands, including drawing, modifying, layering standards, text, dimensioning, and plotting. Using source AutoCAD files, you'll work on a Habitat for Humanity residential project, starting from scratch and building your skills along the way.

- Create drafting symbols, kitchen and bath fixtures, and a floor plan, then combine them into a deliverable sheet file.
- Understand the differences between drawings for annotation and those for real-world modeling components.
- Learn to create and insert blocks, use external references, and know when to apply these skills.
- Master file management, layer-based drafting, integrating drawing components, and plotting while working on a residential project.

Intermediate AutoCAD Course (Self-Paced)

In this course, you will draft an abbreviated set of CAD construction documents for a Habitat for Humanity project, including floor plans, roof plans, and elevations. You'll learn to create blocks, use external references, and optimize workflow with advanced AutoCAD commands. Topics include file referencing, user coordinate systems, dynamic viewing, and managing

model/layout environments. This course strengthens your AutoCAD foundation and introduces intermediate-level techniques for efficiency and accuracy.

- Draft an abbreviated set of construction documents, including floor plans, foundation plans, electrical plans, and building elevations for a small residential project.
- Create and insert blocks, use external references, and apply these techniques to improve project efficiency.
- Demonstrate file and layer management, use of external file references, and navigate model/layout environments with user coordinate systems.
- Apply intermediate skills, including layer management, creating sheet layouts, and plotting, while refining your overall AutoCAD workflow.

AutoCAD Construction Documents I Course (Self-Paced)

Develop key AutoCAD skills by creating construction documents for a moderately complex one-story residence. This course takes you through drafting titleblock drawings, floor plans, multi-scale enlarged plans, roof plans, and building elevations. You will also learn practical CAD workflows, covering 2D drawing commands, dimensioning, layering, layout environments, and plotting.

- Create titleblock components and drawing labels for professional office documentation to develop deliverable sheet files.
- Draft floor plans, enlarged plans, roof plans, and building elevations for a moderately complex residential project, complete with detailed notes.
- Integrate referenced files to produce construction documents while demonstrating layer and file management, model/layout environments, and multi-scale drawing presentation.
- Organize deliverable sheet sets according to National CAD Standards.
- Apply intermediate skills to create sheet layouts and prepare files for plotting.

AutoCAD Construction Documents II Course (Self-Paced)

Advance your AutoCAD skills in this course focused on creating detailed construction documents for moderately complex residential projects. You'll learn to produce building elevations, sections, wall details, and metes and bounds drawings. The course emphasizes annotation consistency, layer management, plotting styles, and custom block creation to streamline documentation workflows.

- Create building elevations, sections, wall sections, modify detail drawings, and produce metes and bounds (Civil) drawings for a moderately complex residential project.
- Develop title sheets and appropriate general and keynote legends.
- Integrate referenced files to build construction documents, manage layers and files, and use model/layout environments for multi-scale drawings.
- Apply intermediate and advanced skills to create sheet layout environments and manage plotting.
- Organize deliverable sheet sets following National CAD Standards for consistency and accuracy.

CAD Detailing Course (Self-Paced)

Improve your architectural detailing skills in this online course. Learn to create detailed drawings from scratch and extract information from existing documents. You'll produce drawings at various scales and integrate them into full-scale deliverable sheet files. Led by a licensed architect, the course combines lectures, demonstrations, and labs to strengthen your proficiency in AutoCAD commands, dimensioning, layering, layout environments, and plotting.

- Create detailed drawings relevant to the course project.

- Produce deliverable sheet files for construction documents.
- Integrate referenced files to generate detailed content for construction documents.
- Manage layers and files, work with model/layout environments, and present multi-scale drawings.
- Apply intermediate and advanced skills for creating sheet layouts and preparing for plotting.

CAD Project Management Course (Self-Paced)

Connect CAD drafting to project management in this hands-on course on running AutoCAD projects. You will coordinate workflows, keep drawing sets accurate, and improve communication across a team, with an emphasis on office standards and the National CAD Standards.

- Identify the technical and managerial skills a CAD and project manager needs.
- Set up the AutoCAD interface to support office standards and team productivity.
- Apply an office-standard system for naming and organizing files.
- Work within the National CAD Standards.
- Restructure an inherited CAD project to meet national and office CAD standards.