COURSE SYLLABUS

SOLIDWORKS CSWP Certification Course Online

This course provides comprehensive, three-level training in SOLIDWORKS, equipping you with the skills needed to excel in design and engineering fields. Through projects and expert instructor guidance, you'll learn essential SOLIDWORKS tools, prepare for the Professional Certification (CSWP) exam, and create professional-grade designs.

> Group classes (Live Online) and onsite training are available for this course. For more information, email partnerships@vdci.edu or visit: https://vdci.edu/courses/solidworks-professional-certification



admissions@vdci.edu • (619) 758-9300

Course Outline

This package includes these courses

- Intro to SOLIDWORKS Course Online (30 Hours)
- Intermediate SOLIDWORKS Course Online (30 Hours)
- Advanced SOLIDWORKS Course Online (30 Hours)

Intro to SOLIDWORKS Course Online

Learn the essentials of 3D modeling and design with this beginner's SOLIDWORKS course. This course covers the core tools and workflows of SOLIDWORKS, including part modeling, assemblies, and technical drawings, providing a solid foundation for more advanced design challenges. You will learn the following:

- Navigate the SOLIDWORKS interface and core toolkits with confidence
- Apply sketching tools, constraints, and dimensions to drive parametric models
- Build 3D parts using essential features (extrude, revolve, cut, fillet, shell, pattern)
- Design with intent so models remain clean, organized, and easy to edit
- Create assemblies, add mates, and manage part relationships
- Produce professional 2D drawings with views, dimensions, and annotations
- Complete a cohesive project: a playground modeled as parts and sub-assemblies, finished with a blueprint set

Intermediate SOLIDWORKS Course Online

This course provides a comprehensive exploration of SOLIDWORKS, focusing on advanced tools and techniques to create professional-grade designs. It is ideal for individuals aiming to refine their design expertise and achieve greater precision in their 3D modeling projects. In this course, you will learn the following:

- Learn how to use advanced SOLIDWORKS features, including sheet metal, weldments, and solid modeling
- Build and animate complex assemblies with advanced mates, exploded views, and configurations
- Create professional-grade blueprints & renderings, with custom templates, tolerances & visualizations
- Customizing SOLIDWORKS settings and workflows to enhance productivity and design efficiency
- Techniques for generating detailed technical drawings and documentation for manufacturing
- Tips for collaboration and version control in team-based design projects

Advanced SOLIDWORKS Course Online

Develop advanced SOLIDWORKS modeling skills by creating complex parts and assemblies, exploring motion studies and analysis tools, and producing portfolio-ready designs while preparing for the SOLIDWORKS Professional Certification.

- Apply advanced SOLIDWORKS workflows and troubleshooting strategies to create complex parts and assemblies, preparing the student for the SOLIDWORKS Professional Certification.
- Use mechanical mates, motion studies, and analysis tools to simulate real-world mechanical behavior and evaluate performance and manufacturability.
- Model and refine advanced surface and mesh geometries to produce streamlined bodies, sculpted products, and manufacture-ready components.
- Differentiate and work effectively with B-rep, CSG, mesh, and graphics bodies while leveraging specialized features.
- Create visually compelling, presentation-ready content by controlling cameras, lighting, materials, and drawings for high-quality renders and product pages.