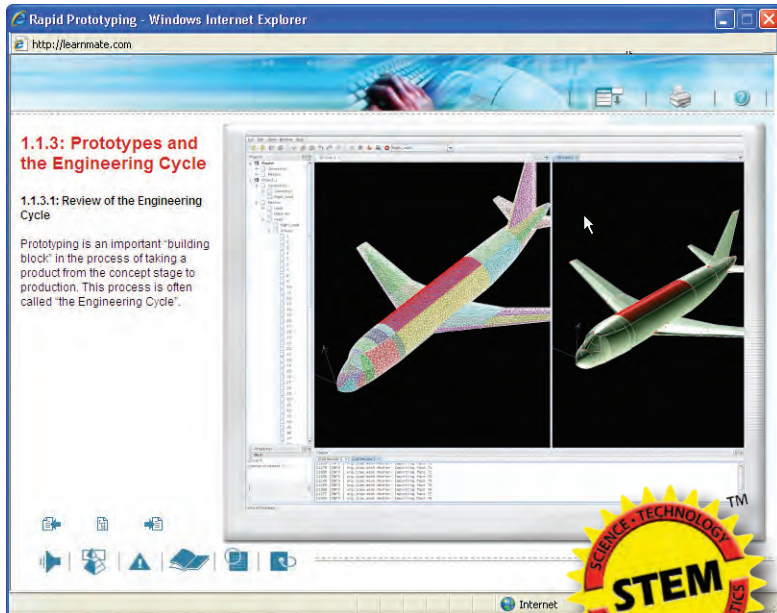


Rapid Prototyping and Concurrent Engineering

RAPID PROTOTYPING



Rapid Prototyping includes everything you need for successful blended learning. Through LearnMate™, essential resources are provided for both students and teachers.

- Students are always one click away from glossaries and help files available on each page.
- Teachers have instant access to handouts, tips and detailed activity instructions.

Fundamental level activities are designed to accommodate labs with no hardware, while advanced activities give labs with access to 3D printers and CNC machines complete instructions for hands-on activities building prototypes with the same technologies used in industry.

As a total lab solution, Rapid Prototyping can be equipped with intelitek's line of rapid prototyping technology hardware, including the Solido SD300 Pro 3D printer or one of intelitek's proven educational CNC machines.

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www.intelitek.com



Rapid prototyping technologies are revolutionizing the fields of manufacturing and engineering. intelitek's **Rapid Prototyping Program** includes robust curriculum covering this exciting and evolving field.

This course engages students by means of hands-on activities and compelling online curriculum that includes:

- a comprehensive overview of the history of rapid prototyping, current and emerging technologies and career choices in the field.
- multi-level activities including creating prototypes from specifications using various rapid technologies.
- a capstone project that challenges students to create a prototype using the technology of their choice, assemble and test the prototype and report the results of the project.

Rapid Prototyping is an excellent add-on to Engineering and CAD programs.

P O W E R E D B Y

LearnMate™

intelitek's Rapid Prototyping course is powered by LearnMate™, intelitek's innovative e-learning platform. LearnMate's self-paced interactive content may be deployed stand-alone or through the robust learning management system (LMS). The LearnMate™ e-learning suite provides everything needed for the ultimate blended learning experience:

- SCORM-compliant interactive content
- Anytime, anywhere accessibility
- Student and class management
- Grade tracking
- Skill/competency reporting mapped to national academic skill standards

Rapid Prototyping and Concurrent Engineering



RAPID PROTOTYPING

Materials Included

- Rapid Prototyping E-Learning Curriculum

Course Outline

1.1 (Core): Introduction to Prototyping	1.4 (Core): Proof of Principle Prototypes	1.7 (Activity): Advanced Additive Prototyping	1.10 (Core): Selecting A Rapid Prototyping Process
1.1.1: What is Prototyping?	1.4.1: Prototyping Materials	1.7.1F: Fundamental Activity: Scissors Mechanism	1.10.1: Key Benefits of Rapid Processes
1.1.2: Types of Prototypes	1.4.2: Prototyping Kits	1.7.1A: Advanced Activity: Scissors Mechanism	1.10.2: Prototyped Products
1.1.3: Prototypes and the Engineering Cycle	1.4.3: Fit, Form, and Function	1.8 (Core): Subtractive Processes	1.11 (Project): Creating a Solution
1.1.4: Prototypes and Concurrent Engineering	1.5 (Activity): Creating Simple Prototypes	1.8.1: CAD/CAM/CNC	1.11.1F: Fundamental Project
1.1.5: Time to Market	1.5.1F: Fundamental Activity: Four-bar Linkage	1.8.2: Milling	1.11.1A: Advanced Project
1.2 (Core): Rapid Prototyping Technologies	1.5.1A: Advanced Activity: Six-bar Rocker Linkage	1.8.3: Turning	
1.2.1: Uses for Rapid Prototyping	1.6 (Core): Additive Processes	1.8.4: Advanced Machining	
1.2.2: The History of Rapid Prototyping	1.6.1: Stereolithography (SLA)	1.8.5: Materials	
1.2.3: Additive and Subtractive Processes	1.6.2: Selective Laser Sintering (SLS)	1.8.6: Applications	
1.2.4: The Future of Rapid Prototyping	1.6.3: Laser Powder Forming (LPF)	1.8.7: Advantages and Disadvantages	
1.3 (Activity): Rapid Prototyping in Industry	1.6.4: Laminated Object Manufacturing (LOM)	1.9 (Activity): Advanced Subtractive Prototyping	
1.3.1: Careers in Rapid Prototyping	1.6.5: Fused Deposition Modeling (FDM)	1.9.1F: Fundamental Activity	
1.3.2: Rapid Prototyping Industry Report	1.6.6: Solid Ground Curing (SGC)	1.9.1A: Advanced Activity: Machining a Part	
	1.6.7: 3D Ink Jet Printing		
	1.6.8: Shape Deposition Manufacturing (SDM)		



LAB SOLUTIONS FOR RAPID PROTOTYPING

Select from the following add-on hardware for a total rapid prototyping lab solution!

Solido SD300 Pro

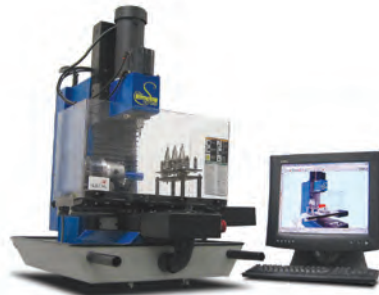


The only truly classroom-ready 3D printer!

Unlike other 3D printers, the SD300 Pro is perfectly suited for educational settings:

- No chemical bath!
- No curing time!
- No knife or other special instruments required!

Super proLIGHT 1000 Mill



A robust benchtop CNC machine!

Industrial strength features:

- User-friendly CNCBase control software
- Standard Fanuc-compatible G&M codes
- Precision linear motion system
- Optional 4th axis and 4-station ATC

proLIGHT 3000 Lathe



Benchtop lathe with proven reliability!

Versatile and classroom-friendly machine tool includes:

- User-friendly CNCBase control software
- Safety features tailored for classroom use
- Precision linear motion system
- Optional tailstock, tool turret and shield opener

Make Rapid Prototyping part of a comprehensive STEM program!

Rapid Prototyping courses can be combined with intelitek's dynamic e-learning content as part of a comprehensive engineering program! Customize your program by combining standards-based LearnMate™ E-Learning curriculum for:

- Rapid Prototyping
- CAD
- Mechanical Engineering
- Precision Machining
- Advanced Manufacturing
- and more!



Affiliated with:



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