

# Educate. Motivate. Create.

The Autodesk® Design Academy software curriculum was developed to support science, technology, engineering, and mathematics (STEM) education and is intended for secondary schools looking to offer students a relevant and engaging STEM course set that maps to national standards. By applying mathematic and scientific principles to real-life engineering and architecture projects, students quickly understand the relevance of what they are learning. Surveys indicate that students exposed to a pre-engineering or pre-architecture program score higher on national standards tests for math and science.

## Features and Benefits

Revit® Architecture software is purpose-built for building information modeling (BIM). The building design and documentation system mirrors the real world of building and enables future professionals to master building design and examine constructability. With Revit Architecture students spend less time learning software and more time mastering design while building skills for the future.

The Building Information Modeling with Revit Architecture Curriculum and Student Workbook provide everything you need to get started, including the following:

- With the Autodesk Design Academy curriculum, these benefits are just the beginning:
- The curriculum builds relevancy for STEM education.
- It engages students in real-world architectural and engineering projects through project-based learning.
- The curriculum maps to ITEA standards for technological literacy, NCTM standards for mathematics, NCTE standards for language arts, and NCSESA standards for science.
- It includes an academic standards summary document that lists all the standards met by the Design Academy and the corresponding curriculum unit.
- The curriculum was developed by educators for educators and their students.
- It gives students a working knowledge of Autodesk design tools.
- It helps prepare students for careers in design, engineering, technology, and architecture.
- The Design Academy curriculum can be customized to meet classroom needs.

## Getting Started

The Autodesk Design Academy curriculum complements your abilities as an instructor to expedite student use of Autodesk software. A Getting Started section outlines project-based learning and the design process, explains how to map your curriculum to state and national standards, and provides syllabi for architectural, civil, and mechanical design as well as evaluation rubrics. It also includes desktop navigation tools, such as instructions for creating an AutoCAD® software icon, file management techniques, Quick Start guides, and sample projects.

## Core Curriculum

The project-based curriculum includes design basics, pre-architecture, pre-mechanical engineering, and pre-civil engineering content, as well as new content from the Introduction to Engineering foundation course from Project Lead the Way, new geometry lessons, and a section on animation and illustration. In addition, a new section on sustainable design helps students understand how design can affect the environment.

This core curriculum is broken down into units, lessons, and exercises. Each unit includes key terms, standards, concepts, a project, a summary, and self-test questions. A Test Your Skills unit draws from all skills taught in the previous units. Additional interdisciplinary projects further challenge your students.

## Partnerships

In addition, the Design Academy curriculum supports the Autodesk partnership with the FIRST Robotics Competition, FIRST Vex Challenge, and F1 (Formula 1) in Schools Technology Challenge. Innovative FIRST (For Inspiration and Recognition of Science and Technology) programs help build self-confidence, knowledge, and life skills while motivating students to pursue opportunities in science, technology, and engineering. Through the popularity of F1 racing, the F1 in Schools™ initiative creates a fun environment for students to experience the engineering process.

#### **Autodesk Student Engineering and Design Community**

The Student Engineering and Design Community is now available to secondary and middle-school teachers and students. Whether your design interests are in architecture or engineering, this popular online community offers teachers and their students access to free\* student editions of Autodesk 3D design software, learning resources and tutorials, and more. It provides a place for teachers and students to reinforce STEM concepts that are crucial to academic and professional success. Teachers also have the opportunity to share curricula and discuss projects and best practices with peers. Register today at [www.autodesk.com/school](http://www.autodesk.com/school).

Help your students excel in STEM and develop the skills that are the foundation of student success regardless of their future career choices. It's easy. Visit [www.autodesk.com/designacademy](http://www.autodesk.com/designacademy) and get started today!

*\*Free products are subject to the terms and conditions of the end-user license agreement that accompanies download of the software. The software is for personal use for education purposes and is not intended for classroom or lab use.*

The Sustainable Design section of the Autodesk Design Academy curriculum offers students great examples and lays the foundation for future study.

—U.S. Green Building Council  
Formal Education Committee