



## DIGITAL INDUSTRIES SOFTWARE

# Hour of Engineering

Introducing the E in STEM to middle school students

### Benefits

- Tailors learning content for middle school students to learn about the field of engineering
- Motivates students to explore because the learning content is engaging and fun
- Expands students' awareness of engineering career fields
- Develops student's critical-thinking and problem-solving skills

### Summary

Siemens Digital Industries Software's Hour of Engineering is a direct response to the predicted shortage of engineers. Hour of Engineering has been built to inspire middle school students to think about the possibility of an engineering career. Otherwise, by the time students reach high school many will have already decided against engineering based on common misconceptions about the field.

Hour of Engineering is an engaging online learning program designed to empower educators to introduce students to engineering with right sized learning content in as little as one hour, but it can easily be extended to support a full semester or more.

Using videos, real-world examples, challenges and 3D simulations, the learning materials encourage students to explore **engineering concepts and careers**. Challenges encourage **deep thinking and problem-solving skills that also extend offline for additional hands-on activities**.

Educators can confidently help students to build their science, technology, engineering and math (STEM) identity with interdisciplinary learning materials.

## Features

- Flexible learning modules, real-world career information, online and offline design challenges
- Standards-aligned curriculum
- Student and classroom achievement materials

## Hour of Engineering learning modules

### Explore engineering

Engineering careers are brought to life with learning materials and through authentic voices so students can understand various engineering career disciplines.

### Think like an engineer

Explores the various engineering design processes and ways of thinking employed today to create solutions that improve the world.

### Discover product design

Students experience creativity firsthand and learn about invention and innovation by developing and sharing new ideas or expanding on existing ideas to create new solutions.

### Consider a career in engineering

Students discover STEM career pathways and the rewards that await them.

### Design challenges

Each design challenge explores a unique engineering principle and engages students in problem-solving activities.

## Empowering educators

### Teacher's guide and lesson plans

A comprehensive teacher's guide is included to help educators get started and each learning module includes a lesson plan with suggested scope and sequence options so teachers can tailor their implementation based on class size, schedule and interests. Learning outcomes, material lists and assessment materials are also included.

### Create unique classrooms

Create unique classrooms and track individual students' progress with a unique student ID and classroom code.

### Educator resources

Engage parents and students with downloadable resources for your classroom, including parent night materials, testimonial videos and posters, certificates and stickers to encourage and recognize student achievement.

### Professional development

For educators who are new to STEM or want to discover new ways to inspire students in their STEM courses, we are pleased to provide a series of stimulating on-demand courses that will inspire you and your students.

1. Implementing the Siemens Hour of Engineering STEM Pathway.
2. Fostering Creativity and Innovation with STEM Instruction.
3. Project-Based Learning Applications in STEM.
4. Classroom Management Strategies for the STEM Classroom.
5. Creating Community Connections.

Educator will earn 2 credit hours for each course completed or up to a total of 10 credit hours for completing all the courses in the series.

To learn more about Siemens' STEM resources visit [www.siemens.com/solid-edge-educator](http://www.siemens.com/solid-edge-educator) and be sure to explore [www.hourofengineering.com](http://www.hourofengineering.com).

Siemens Digital Industries Software helps organizations of all sizes digitally transform using software, hardware and services from the Siemens Xcelerator business platform. Siemens' software and the comprehensive digital twin enable companies to optimize their design, engineering and manufacturing processes to turn today's ideas into the sustainable products of the future. From chips to entire systems, from product to process, across all industries, Siemens Digital Industries Software is where today meets tomorrow.

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