

## Engaging Math and Science Students in Engineering Design

This professional development course offers nine months of coaching and support for teachers aiming to integrate engineering design in their classrooms. Initiated by a week-long online workshop facilitated by teachers with experience in using engineering successfully, this program will assist teachers in gaining the knowledge and confidence needed to implement engineering design challenges that inspire their students to apply math and science concepts to solve real-world problems.

**DATES:** July 12–16, 2021

**TIME:** 11:00 a.m.–2:00 p.m. EDT

**LOCATION:** Zoom

**PRICE:** \$500

Courses are subject to cancellation if minimum enrollment is not met.

### Course Highlights

- Experience content-infused engineering design challenges and develop a Next Generation Science Standards (NGSS) practices aligned framework for the engineering design process for your classroom
- Learn how to encourage engineering mindsets in students
- Discuss the differences between engineering design facilitation and traditional math and science instruction
- Discuss engineering with a professional engineer
- Prepare for NGSS implementation by designing and peer teaching your own content-integrated engineering design lessons

# VIRTUAL COURSE



I really felt I got so much out of the workshop and am excited to implement ideas in my classroom next year. I felt I walked away with a deeper understanding of the engineering design process and much more confidence and skills in using the engineering design process in my science classroom.”

- Shannon Morey, Physics and Computer Science Teacher  
Abbott Lawrence Academy, Lawrence, MA

Financial support may be available; visit [www.knowlesteachers.org/knowles-academy](http://www.knowlesteachers.org/knowles-academy) to learn more. Optional graduate course credit is available; additional fees apply. Course is subject to cancellation if minimum enrollment is not met.

To register for this course or to learn more, visit [www.knowlesteachers.org/knowles-academy](http://www.knowlesteachers.org/knowles-academy).



The Knowles Academy offers state-of-the-art professional development experiences for teachers. All Academy courses are designed and facilitated by experienced teachers who understand the complexities of teaching in today's world. All courses include one semester or year of mentoring to assist teachers as they work to successfully implement what they've learned in their own classrooms. Participation in the Knowles Academy also gives teachers access to a national network of educators who share resources and ideas, and support each other to continually improve their teaching practice.

## Key Knowles Academy Features



### Teachers Supporting Teachers

Teachers learn best from other teachers. All professional development that we provide includes experienced teachers as facilitators and coaches.



### Professional Community Development

Teaching can be isolating. All of our professional development services are designed to build teacher community so that participants can continue to support each other's learning and professional growth long after the professional development experience ends.



### Long-term Support for Sustainable Change

Effective teacher professional development must be sustained and tied to classroom practice. All Knowles Academy courses include long-term support from coaches, opportunities for teachers to ground their learning in their current practice, and engage with other Knowles Academy participants over an extended period.



### Professional Expertise & Leadership

Designing and implementing effective professional development requires a diverse range of expertise and experience. All of our professional development services draw and build on the expertise developed within the Knowles community over the last 20 years.

## ABOUT KNOWLES

The Knowles Teacher Initiative supports the efforts of high school mathematics and science teachers to improve education in their classrooms and beyond. Visit [www.knowlesteachers.org](http://www.knowlesteachers.org) to learn more.

All Knowles Academy courses can be customized to meet the specific needs of schools and districts.  
[www.knowlesteachers.org/knowles-academy](http://www.knowlesteachers.org/knowles-academy)