



Engineer Your World 2019-2020 STEM Scale-Up Program

Grade Levels: 9-12, available in-school

Online Information Sessions: To attend a session on 1/29 (3:30-4:30pm), 2/6 (12-1pm), or 2/15 (7-8am) – or to request a session that works for your schedule – visit

www.engineeryourworld.org/learn-more/

Website: www.engineeryourworld.org and www.engineeryourworld.org/iowa/

Video Link: <http://engineeryourworld.org/students/> (scroll to bottom of page)

Award Provides:

- One-year license for *EYW I: Engineering Design and Analysis* curriculum, including lesson plans, teaching materials, samples and assessments
- Fee waiver for one educator to attend a two-week professional development institute (PDI) in Iowa City with lodging, parking, breakfast and lunch for 10 days.
- Equipment kit for a class of 24 students
- Year-round access to *EYW* instructional support specialists at UT Austin and the University of Iowa; membership in an online professional learning community of 300+ educators
- Webinars and in-person professional development opportunities throughout the year

Additional Cost(s) to Awardee In 2019-2020:

- Travel and dinner expenses for the two-week PDI in Iowa City

Approximate Sustainability Cost After Award Period:

- Annual licensing fee of \$1500 (if 9-12 school enrollment <200) or \$3000 (if 9-12 >= 200) per year for two years
- Roughly \$16 per student per year for consumables

Program Summary:

Engineer Your World (EYW) at The University of Texas (UT Austin) is proud to partner with The University of Iowa to bring Iowa high schools an innovative engineering program founded on the belief that all students can benefit from learning to solve problems like an engineer, regardless of their career aspirations. Our innovative, student-centered curriculum engages learners in collaborative, student-directed projects that build creative problem-solving and engineering design skills; teach the value of collaborating to solve complex, modern problems; and create a strong foundation for future STEM learning.

What Do Students Do? Students in *EYW I: Engineering Design and Analysis* design an easy-to-use pinhole camera for artists with disabilities, redesign a hand-powered flashlight to improve product performance and gain market share, design an experiment to brew the perfect cup of coffee, collect and analyze data to design a safer building, program electronic music, and create an automated aerial imaging system. To request a detailed course description and access to a sample lesson, visit www.engineeryourworld.org/learn-more/

Dual-Enrollment Option Students interested in earning college credit for their work in *EYW I* may apply to dual-enroll at UT Austin, home to *EYW* and a nationally top-ranked engineering program. Dual-enrolled students gain valuable insight into college-level performance expectations as they complete additional online assignments to demonstrate a deeper understanding of course concepts. See www.engineeryourworld.org/courses/dual-enrollment/

Who Should Take *EYW I*? *EYW I* is for all students, regardless of whether they are interested in becoming an engineer. Students who plan to pursue future engineering studies benefit from learning rigorous design skills and habits of mind and from exploring multiple engineering fields and professions. Those with other plans benefit from learning to think critically and solve complex problems – a skill that is useful in any field. *EYW I* is appropriate for students in grades 9-12 who have completed Algebra I.

Who Should Teach *EYW I*? We work with teachers from all backgrounds to ensure that they are successful in the *EYW* classroom. Learn about characteristics of successful *EYW* teachers and explore our professional development and ongoing support programs at www.engineeryourworld.org/teachers/

How Will *EYW I* Fit Into a School's STEM Pathway? *EYW* can work as a foundational design course or a capstone to a STEM sequence. See how different schools are using our courses at www.engineeryourworld.org/courses/stem-pathways.

Standards Alignment: *EYW I* is aligned with multiple sets of national (e.g., NGSS) and state standards. In Iowa, it addresses standards in STEM, reading, writing, social studies, and employability. Visit www.engineeryourworld.org/iowa to see state standards alignment.

Requirements to Implement the Program:

Educator(s) must attend a two-week professional development institute. **Before training or materials can be delivered, school must execute a three-year services agreement with UT Austin.** Schools needing to offer the course less frequently than annually can extend the term of their services agreement accordingly.

Professional Development:

Duration: Two weeks

Date(s): July 8-19, 2019

Location: The University of Iowa, Iowa City

STEM Scale-Up Program Application Link: www.iowaSTEM.gov/Scale-Up-Application