

Iowa State University

OF SCIENCE AND TECHNOLOGY

Program for Women in Science and Engineering

Fall 2019 (Nov 07, 2019)

Registration Period: Oct 03, 2019 - Oct 24, 2019

Conference Type: 9th/10th grade

(Session 1) 9:50 AM - 10:35 AM

Tag	Workshop	Location	Attendee Limits			Presenter	Description
			Total	Student	Adult		
A	Thunderstorms, Tornadoes, and More - Exploring Meteorology	Campanile Room	35	33	2	Natalie Trout	This session gives a brief overview of all the types of weather. What can you do with a meteorology degree, and weather trivia.
B	InventSTEM: Wind Energy	Cardinal Room	20	18	2	Sara Nelson	InventSTEM is a new program brought to you by 4-H and was conceptualized in partnership with Alliant Energy. This program is a way for youth to bring together innovation, creativity, and critical thinking to solve real-world problems. This session will introduce youth to the concept of wind energy through hands-on experience by building and designing a miniature wind turbine.
C	SAE Engineering Challenge	Gallery	31	29	2	Aaron Carr	Learn and apply engineering principles to create roll cages out of household items. Structures must protect the passenger.
D	Leaning Tower of Pasta	Pioneer Room	35	33	2	American Society of Civil Engineers Members	Are you interested in engineering what it takes for a town to survive? Come to this session to learn what Civil Engineering is all about and compete in a building competition using unconventional materials.

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F	WAT-ER You Drinking?	Room 3512	20	18	2	Engineering Without Borders Members	We will discuss the importance of engineering in providing clean water and share about how this connects to the work we are doing in Engineers Without Borders. Students will then have the opportunity to design their own water filters using commonly found materials to remove sediments from the water and compare what filters work the best and why.
G	The Cinderella Project	Room 3534	20	18	2	Gina Singer	Who doesn't love shoes? Learn the process a Product Design Engineer uses to design a new product while you design and build a pair of shoes using paper and glue. You will have the opportunity to design, prototype, test and market your own line of shoes.
H	What is Animal Science?	Room 3505	20	18	2	Amy Powell	Learn about the world of animal science from veterinary medicine to livestock management and production. Examine careers from the conception of the animal all the way through its life-cycle.
I	Coding Madlibs with Python Programming	Great Hall	19	18	1	Digital Women Members	In this session students will learn Python programming to create their own holiday themed Madlibs.
J	Bugs, soil, water and air...How nature works	Great Hall	20	18	2	Bert Swalla	This session will allow participants to engage in short experiments showing interactions between bugs, soil, water, and air, and demonstrations showing how different compounds burn different colors. Participants will also learn how this is applied in science.
K	Savvy Evidence	Great Hall	20	18	2	Mike Zeller	Experience the thrill of solving a crime scene mystery using the most modern equipment and science for DNA analysis available to Crime Scene Investigators (CSI) and scientists. In the session, students will learn how to use the equipment and then analyze actual DNA evidence to solve a crime.

(Session 2) 10:40 AM - 11:25 AM

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C	SAE Engineering Challenge	Gallery	30	28	2	Aaron Carr	Learn and apply engineering principles to create roll cages out of household items. Structures must protect the passenger.
D	Leaning Tower of Pasta	Pioneer Room	31	29	2	American Society of Civil Engineers Members	Are you interested in engineering what it takes for a town to survive? Come to this session to learn what Civil Engineering is all about and compete in a building competition using unconventional materials.
E	Let's Get Wired Up!	Gold Room	25	23	2	Collins Aerospace	Light up your school year with a wearable circuit! Make a fun circuit that you can wear or attach to your backpack, water bottle, etc
F	WAT-ER You Drinking?	Room 3512	20	18	2	Engineering Without Borders Members	We will discuss the importance of engineering in providing clean water and share about how this connects to the work we are doing in Engineers Without Borders. Students will then have the opportunity to design their own water filters using commonly found materials to remove sediments from the water and compare what filters work the best and why.

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(Session 3) 12:20 PM - 1:05 PM

Tag	Workshop	Location	Attendee Limits			Presenter	Description
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A	Explore the Opportunities in Construction	Campanile Room	20	18	2	Melinda Packebush	Meet with women in the construction industry to discuss the many careers in construction. You will also have the opportunity to do a hands-on construction activity.

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B	What Does a Conservation Officer Do?	Cardinal Room	20	18	2	Stacey Braggs	If you're interested in learning about careers that involve natural resources and the outdoors, this session is for you! Participants will learn about the roles, duties and equipment of a Conservation Officer through interactive activities.
C	Material Advantage	Gallery	25	23	2	Material Advantage Club Members	This demonstration shows real world examples of Materials Engineering using examples of such as liquid nitrogen frozen marshmallows and melted pennies. These things show important properties within metals, ceramics, and polymers and how materials engineers manipulate them on a daily basis.
D	Moon Rovers	Pioneer Room	20	18	2	Cyclone Space Mining	Learn about the engineering design challenge through experimenting with and modifying your own moon rovers! Then learn about Cardinal Space Mining Club and how they use the engineering design process to build robots to mine a simulated lunar surface.
E	Let's Get Wired Up!	Gold Room	25	23	2	Collins Aerospace	Light up your school year with a wearable circuit! Make a fun circuit that you can wear or attach to your backpack, water bottle, etc
G	The Cinderella Project	Room 3534	20	18	2	Gina Singer	Who doesn't love shoes? Learn the process a Product Design Engineer uses to design a new product while you design and build a pair of shoes using paper and glue. You will have the opportunity to design, prototype, test and market your own line of shoes.
H	Exploring Laboratory Science	Room 3505	15	14	1	Courtney Mitra	This session will cover what Clinical Laboratory Scientists do behind the scenes in order to help the doctor diagnose what is going on with their patient including Microbiology, Coagulation, Hematology, Blood Bank and Chemistry. Participants will have a chance to test blood bags and perform urine testing.

Tag	Workshop	Location	Attendee Limits			Presenter	Description
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I	Harnessing the Power of Wind	Great Hall	25	23	2	Engineering Outreach	Ever wonder how STEM professionals test building designs, space shuttles, vehicles, and other inventions to see if they will withstand wind? In this session, you can experience the cool wind tunnels ISU uses for research and projects. And if you are lucky, you may get to see the tornado simulator in action!
J	Engineering, Business and Manufacturing—A Winning Combination!	Great Hall	20	18	2	Devna Popejoy-Sheriff	Many engineers will someday hold leadership positions in companies. Learn how closely related business and engineering are. Our students and staff will guide you through interactive activities using real world situations of running a Chocolate Factory (yes Chocolate) and other activities relating to Industrial Engineering. Industrial engineers work to makes a variety of systems more efficient, reliable, safer, and cheaper. Industrial engineers have the ability to work in any environment where there is a people and a process. Come join us for the fun.
K	College of Engineering Tour	Great Hall	30	28	2	Sadie Johnson	You'll get an overview of the College of Engineering and tour the facilities.
L	APPLYing Technology	Great Hall	20	19	1	Brooke Dardis	Have you ever wondered how you can change the world with technology? We will show you how girls your age have made an impact and how you can too! #MobileDevelopment #ChangeTheWorld

(Session 4) 1:10 PM - 1:55 PM

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D	Cracking the Human Code	Pioneer Room	25	23	2	Ha Vu Thi-Hong	Have you ever wondered what goes into sequencing a genome, how scientists can tell which species are closely related, or what "big data" is, exactly? Learn through hands-on activities the answers to these questions and more, and how bioinformaticians bridge the gap between computer science and biology to solve some of the biggest problems facing the scientific community today.
E	Save the Ship!	Gold Room	25	23	2	Peter Orth	In this session, you will get introduced into cryptography, how to break codes and how the laws of physics provide the ultimate security to transmitting information in a secure way. In a hands-on activity, you will also help rescue a captured boat of marine scientists from Iowa State by breaking the secret pirate code.
G	The Cinderella Project	Room 3534	20	18	2	Gina Singer	Who doesn't love shoes? Learn the process a Product Design Engineer uses to design a new product while you design and build a pair of shoes using paper and glue. You will have the opportunity to design, prototype, test and market your own line of shoes.

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