

REGISTRATION INFORMATION:

\$42/STUDENT

Register at:

www.ce.uwc.edu/waukesha/catalog

Scroll to "Youth Learning" category, then select "GEMS" from the class choices, follow the steps to select your workshops. You will need to submit your payment and required youth forms.

Each year, we strive to encourage young children to pursue their interests in STEM fields by presenting them with the opportunity to speak with and learn from those who have attained success in their field. They will have the opportunity to make connections with new people and like-minded individuals to encourage friendships and personal connections. For this reason, we are unable to honor requests for students to be put in the same workshops as a friend.

Students MUST be between the ages of 11-14. This program is primarily funded by sponsors. All workshops are held by professional specialists who are volunteering their services for the day to specifically engage with this age range in the STEM fields. Because of this, unfortunately, if your child is "almost" 11 years, they will need to wait to join our GEMS until next year. While this program targets female students, registration is available to all qualifying students regardless of their sex or gender identity.

KEYNOTE SPEAKER SPOTLIGHT:



**SEARCH IN
PROGRESS! WE ARE
IN THE FINAL
STAGES OF
SECURING A
KEYNOTE
SPEAKER. VIEW
OUR WEBSITE
WITH AN UPDATE
OF OUR FINAL
SELECTION!**

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Wildlife In Need Center



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UWMILWAUKEE

College of Engineering
& Applied Science

defining
HUMANITY

**COLLINS
ENGINEERS™**

A big thanks to our AAUW West Suburban Milwaukee Chapter for assisting us for our 2022 GEMS program and sponsorship for eight students to attend this conference

AAUW
empowering women since 1881

Questions?

We're happy to help!

www.uwm.edu/generalstudies/continuing-education

call: 262-521-5460

email: continuing-ed@uwm.edu

**UWM AT WAUKESHA
IS PROUD TO
ANNOUNCE OUR 13TH
ANNUAL**



GEMS

Girls' Engineering, Mathematics & Science

Conference for students ages 11-14

Saturday, May 7, 2022

8:30am-3:30pm

Join us for a great day full of:

- exciting workshops
- fun prizes
- a parent session
- a special luncheon
- and so much more!

UNIVERSITY of WISCONSIN
UWMILWAUKEE | **Waukesha**

Continuing Education & Professional Development

SCHEDULE OF EVENTS

8:00-8:30 am **Check-in at UWM at Waukesha**
8:30-9:25 am **Welcome Presentation**

Welcome to GEMS 2022 Conference! We are very excited to have everyone here with us. Grab a seat (socially distanced of course) and hear how our keynote speaker (TBD) has made an impact in her STEM field and how she got there! Finish off with some inspiring remarks about making your mark!

9:35-10:25 am **Session I**
10:35-11:25 am **Session II**
11:30am-12:05 pm **Lunch**
12:10-1:00 pm **Session III**
1:10-2:00 pm **Session IV**
2:10-3:00 pm **Session V**
3:00-3:15 pm **Wrap-up and pick-up**

PARENT PROGRAM

8:30-9:25 am **Welcome Presentation with child**
9:30-10:30 am **Internet Safety**
10:40-11:20 am **College Prep 101**

Parents! You won't want to miss this! Stay with your child for the morning Welcome Presentation and join us after the girls leave for refreshments during our Parent Program!

Internet Safety in a Media Driven World:

Parents will have the opportunity to participate in a workshop catered to one of the biggest growing issues in an adolescence's life today; social media. The UWM Police Department will explore ways that can help you keep your children safe, while still allowing them the freedom to use social media!

College Prep 101:

The parent program will also discuss higher education options, a suggested timeline for college preparations and what you can do to prep your student now and throughout their high school career.

WORKSHOPS

A Look Inside the Bovine Hide

If you are interested in veterinary medicine, this workshop is for you! Ever wonder what a cow heart feels like? How about lungs? Slip on a pair of exam gloves and palpate your way through these plus more fresh cow organs. Explore the development of calves with hands on reproductive tract examination then deliver your own calf by C-section. View jars containing interesting livestock parasites and anomalies. **Only available for sessions I and II**

Wildlife in Wisconsin

The Wildlife in Need Center is a wildlife hospital and education center that is dedicated to helping sick, injured and orphaned wildlife so that they may be released back into the wild, as well as educating others about our local wildlife. Our program will discuss what we do at the Wildlife in Need Center and ways that everyone can help their local wildlife. It will also feature some of our live educational ambassadors (aka rehabilitated animals) as we talk about them as well as their species and why they are important for our Wisconsin ecosystem. **Only available for sessions III, IV, V**

Do You Want to Build a Treehouse?

Architecture is everywhere around us from the house you live in, to your neighborhood park, to your local school or to the large stadium you enjoy your favorite team playing in! Learn how architects use the basics of building design, and how they collaborate with engineers and construction teams to put their vision into reality. Learn about shapes, building elements, design strategies and structural stability. You will use pre-cut shapes to put together your vision of a cool treehouse! Use your favorite building as the inspiration or produce something totally new! If you like creating, this workshop is for you....imagination has no boundaries! Come test yours!

Create Art with Electricity!

Join UWM College of Engineering & Applied Sciences engineers as we take a journey down an electrical wire by creating a simple circuit and an electrical current. Experiment with electric circuits-then use your discoveries to light up a project of your own design! Also learn how Wisconsin girls are bringing renewable power to mountain villages in Guatemala.

What's Behind Those Criminal Minds?

Learn how criminal psychologists look for personality patterns and study somebody's personality profile for suspicious cues. Those clues can help benefit private investigators, criminal cases or even help people resolve personal issues. We will test your handwriting and speech patterns to match them with certain personality types. Come learn the superpowers of psychologists!

Green Plastics

Green Chemistry, also called sustainable chemistry, is an area of chemical engineering focused on the design of products and processes that improve the safety and environmental impact of chemistry. This includes reducing the consumption of nonrenewable resources and developing technological solutions for reducing hazards, waste, and pollution. Participants will also have a hands-on experience observing the chemical properties of new, safe, environmentally friendly, naturally based, biodegradable and sustainable materials. Lastly, we will recognize some GEMS who led the way in enabling this significant achievement by creating the field of Biodegr(Edible)'s.

Roller Coaster Challenge

Do you love riding roller coasters or watching others on roller coasters? Have you ever wanted to design your own roller coaster? Use engineering and design skills to build your own roller coaster out of common household items and then test them out. Your roller coaster could be long, tall, incorporate hills, loops, and drops. You're the roller coaster engineer so you get to decide. Society of Women Engineers will be there with you on the wild ride.

The Crumpled Watershed Experiment

Students will create a watershed model out of household materials to simulate how a watershed functions. Additionally, participants will add pollution components to depict the impacts humans have on our surface waters and surrounding environment. Discussion will include how civil and environmental engineers study and design practices to protect our watershed systems.

Cracking Cancer's Code

Will you be the person that cures cancer? Cancer takes the lives of over 53,000 people annually. Find out how the role of genetics plays a part. This workshop will examine both normal and cancer cells (under a microscope) so you can learn if genetics or other factors can cause cancer. You'll see firsthand what the effects of cancer have on our cells.

Crime Fighting 911

Have you ever thought about working in the criminal justice system? Learn the principles of policing from Sir Robert Peel and how they are still applicable today. Discover what limitations the 4th, 5th, and 6th amendments have and how do they effect law enforcement's procedures. We'll be crime fighters and learn how to lift fingerprints, identify tool marks from impressions by using a casting material called Mikrosil.