

Program News

Engineering Accredited by ABET

EMU's Bachelor of Science in Engineering program is now accredited by the Engineering Accreditation Commission of ABET (www.abet.org), the global accreditor of college and university programs in applied and natural science, computing, engineering, and engineering technology.

Built upon a pre-engineering program, in 2016, we established the Engineering degree program at EMU. Since then we have developed and revised the curriculum, conducted extensive assessments, and implemented continuous improvement plans. Students who graduated from the engineering program successfully obtained employment in industry or service, or continued to graduate studies.

The attainment of ABET accreditation is a momentous success for the Engineering program. This is the program's initial ABET accreditation, which extends retroactively from Oct. 1, 2019. That means all students who graduated in the program but one who was one year ahead of the start of the program were considered graduated from an ABET-accredited program.

STEM Mentorship Program

Fall 2022 marked the beginning of EMU's STEM Mentorship Program, which pairs EMU students with community-based, professional mentors in their fields. In the first year, the program had 11 student-mentor pairs; three seniors from engineering—**Luke Wheeler**, **Ethan Spicher** and **Ben Bontrager-Singer**—and the rest sophomores through seniors majoring in other STEM disciplines. The intention is for students to meet with

their mentors monthly to talk about anything from networking to career prospects, though that varied by pair. **If you are interested in mentoring a student**, please contact our Dean at tara.kishbaugh@emu.edu.

Faculty News

Research and Sabbatical

Stefano Colafranceschi's research agenda (High Energy Physics) recently expanded into large database systems. He took on the role of convener for the software group responsible for developing an Oracle-based database system for the CMS (content management system) experiment at CERN (the European Organization for Nuclear Research). He led the collaborative efforts of the group, overseeing the development of a back-end and front-end.

Daniel King completed a Sabbatical in spring, 2022. He studied educational research into effective physics labs and developed revised course modules promoting experimentally-focused cognitive tasks. He also investigated Joule's Mechanical Equivalent of Heat experiments as a historical case study of useful lab skills and how approaches to data analysis have evolved over time.

Program Director Change

In the fall of 2023, **Daniel Showalter** will assume responsibilities as the Program Director for the Math and Computer Science programs at EMU. **Owen Byer** will step down from this role as he begins a two-year leave of absence. During his leave, Owen will pursue other work opportunities in the "real world", after a one-semester Visiting Professor position at Westmont College in Santa Barbara, CA.

Student Accomplishments

2022 Program Awards

Outstanding Senior in Computer Science: **Isaac Andreas & Trajon Brown**

Outstanding Senior in Mathematics: **Ike Esh & Hannah Leaman**

Outstanding Senior in Engineering: **Jonas Beachy & Laura Troyer**

2023 Program Awards

Outstanding Senior in Computer Science: **Seth Andreas & Noah Swartzentruber**

Outstanding Senior in Mathematics: **Caleb Hostetler**

Outstanding Senior in Engineering: **Ben Bontrager-Singer & Caleb Hostetler**

Competitions

The team of **Caleb Hostetler (Sr)**, **Laura Benner (Soph)** and **Mana Acosta (Soph)** placed first out of 70 teams in the international Kryptos Code-breaking Competition hosted by the University of Central Washington. This is EMU's fifth first-place win since the contest began in 2011. Amazing!

Two EMU teams competed in the International Collegiate Programming Contest this year. The team of **Caleb Hostetler (Sr)**, **Hebron Mekuria (Jr)**, and **Noel Abeje (Jr)** did an outstanding job of solving five problems and finishing second only to Lehigh University at our local site in the competition.

Hebron Mekuria (Jr) won an award for Best Hack for Multi-Cultural Innovation at the 2023 Black Wings Hacks conference, for her team's idea to connect people with insufficient health coverage to licensed medical professionals.

Problem Corner

Congratulations to Don Hooley (1977), Laura (Hershey) Herr (2012), and Andrew Troyer (2017) for correctly determining the number of arrangements of the letters of 'mennonite' that contain 'men' (2520) and 'no men' (120) in the Fall 2021 Problem Corner.

New Problem:

You are given two wicks of different lengths and a box of matches. Each wick burns completely for exactly one hour, though not at a constant rate. Describe how you can use these materials to determine a 45-minute time interval. Extension: How could you determine a 6-minute interval?

Send your solution to daniel.showalter@emu.edu with the words "Problem Corner" in the subject line.

Do you know a prospective student who is interested in studying math at EMU?

Contact daniel.showalter@emu.edu for information about applying for the Brenneman-Longacher Endowed Math Scholarship.

Recipients receive \$1,500 per year for four academic years, as long as they continue in the math major.



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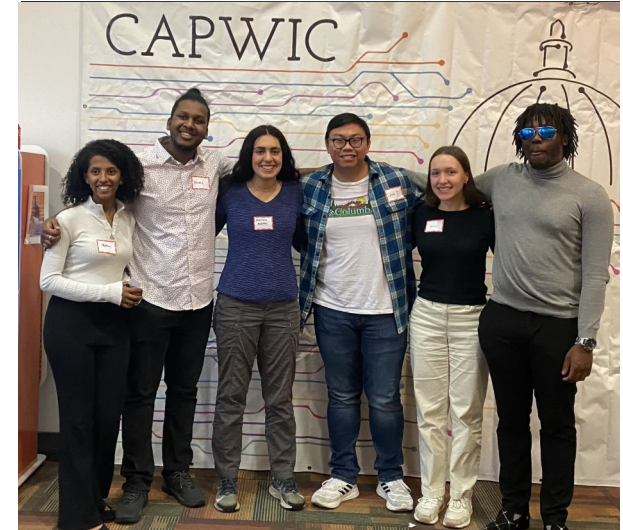
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Math, Computer Science, and Engineering
Eastern Mennonite University
Summer 2023

CAPWIC Conference



The math, computer science, and engineering programs at EMU allocate funds to provide professional development opportunities for students. One such opportunity is the Capital Region Celebration of Women in Computing (CAPWIC) conference, hosted by the Association for Computing Machinery (ACM). In March, six EMU students attended this conference at Virginia State University. They attended sessions and keynote speeches that highlighted the critical roles women and people of color have played in the history and present of computer science. Left to right: **Hebron Meku-ria, Noel Abeje, Mana Acosta, Chuck Tirtasaputra, Laura Benner, and Zavion Taylor.**