DEAR STUDENTS AND FAMILY MEMBERS,

Welcome to the MSU College of Engineering. We are excited to have you here! We are one of the most sought-after colleges at MSU with a student body representing 29 states and 37 countries. Nearly 98% of the 2022 spring semester graduates who responded to our survey found job placement or decided to continue their education.

To prepare our students for a global, diverse, multi-generational and ever-changing workplace, we provide them access to courses and hands-on learning in nine academic departments and programs.

Our teams help all students adjust to life in the classroom and community. The mission of our First-year Engineering CoRe Experience is to provide students with an understanding of the roles engineers play in our society.

The college embraces diversity, equity, inclusion and accessibility. Among the more than 1,000 registered student organizations on campus, more than 40 focus on engineering. We also have units and organizations in the college dedicated to attracting and retaining talent. They focus on:

- Broadening Participation K-12
- International students
- First-generation Student Initiatives
- Women in Engineering Student Success
- Multi-cultural Initiatives
- Gender and Sexuality Student Success
- Veterans
- Students with disabilities

Safety remains a top priority here on campus. Visit MSU Police and Public Safety (dpps.msu.edu) and MSU ID Office (idoffice.msu.edu) for the latest news and updates.

We hope you enjoy this visit! For more information, check out our college website (egr.msu.edu), Facebook (Facebook.com/MSUEGRS), Twitter (twitter.com/MSU_EGR), Instagram (instagram.com/msu.egr) and LinkedIn (linkedin/company/msuegr).

Go Green!

Leo Kempel
Dean

Drew Kim
Assistant to the Dean
Recruitment, Scholarships, K-12 Outreach
We are excited to host you in the College of Engineering to show you what Michigan State University offers.

Preview Day is designed to help you explore your engineering degree options and learn about the programs available at MSU.

Today’s event will be conference-style. All academic sessions will be offered twice, so you have an opportunity to visit the programs in which you are most interested. Please read through the descriptions on the following pages and choose the sessions you would like to attend. If the session you select first is full, move to your next choice, then come back for the second session. Each session will last 50 minutes.

A resource fair will follow the sessions, providing information on admissions, financial aid, and a number of other campus resources. You will also have opportunities to speak with representatives from each academic unit within the College of Engineering.

**SCHEDULE OVERVIEW**

**October 14, 2023 • 8:30 AM - 1:30 PM**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 AM</td>
<td>Arrival</td>
</tr>
<tr>
<td>9:00 - 9:20 AM</td>
<td>Welcome Session 1281 Anthony Hall</td>
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<tr>
<td></td>
<td><strong>CHOOSE ONE PROGRAM TO ATTEND IN EACH SESSION</strong></td>
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<tr>
<td>9:30 - 10:20 AM</td>
<td>Session 1</td>
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<tr>
<td>10:30 - 11:20 AM</td>
<td>Session 2</td>
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<tr>
<td>11:30 AM - 1:30 PM</td>
<td>Resource Fair</td>
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The Resource Fair will take place in the Courtyard following the morning sessions. Representatives from campus resources will be available to answer your questions and discuss their programs and services. Be sure to stop by and visit them!

IN CASE OF RAIN, ALL RESOURCE FAIR TABLES WILL BE LOCATED IN THE ENGINEERING HALLWAYS ON THE FIRST FLOOR.

Representatives will be available from:

**Academic Departments**
- Applied Engineering Sciences
- Biosystems Engineering
- Civil and Environmental Engineering
- Chemical and Materials Science Engineering
- Computer Science and Engineering
- Electrical and Computer Engineering
- Mechanical Engineering

**Academic Programs and Services**
- The Center - Experience Engineering Careers
- First-year Engineering CoRe Experience
- MSU Michigan Scholars Program
- Division of Engineering Computing Services (DECS)
- The Future Spartan Engineers
- Engineering Inclusion & Diversity (EGRID) Student Success
  - Broadening Participation K12
  - First Generation Students
  - Gender & Sexuality Student Success
  - International Students
  - Multicultural Initiatives (Formerly DPO)
  - Students with Disabilities
  - Veterans
  - Women in Engineering (WIE) Student Success

**Student Organizations**
- Aerial Intra-City Delivery Electric Drone
- Baja Society of Automotive Engineers
- Solar Car
- MSU Strength Augmenting Robotic eXoskeleton (STARX)
- VEX Robotics
- MSU Rocketry Team
- Audio Enthusiasts and Engineers (AEE)

**Michigan State University**
- Admissions Office
- Financial Aid Office
- Honors College
- Residence Education and Housing Services (REHS)
- MSU Army ROTC
CIVIL ENGINEERING
11:30am - 1:30pm | The bus is departing from Shaw Lane by the walkway towards International Center

Civil Infrastructure Lab on Jolly Road
Tour the Civil Infrastructure Laboratory (CIL) which includes facilities for smart infrastructure — such as sensor testing, 3D printing and robotics applications, and high-temperature and large-scale structural testing. Tours depart every 30 minutes.

STEM BUILDING
11:30am - 1:30pm | By Engineering Building lobby
Walking tours of the STEM Building start every 30 minutes beginning at 11:30 a.m.

Take a tour of MSU’s new STEM Teaching and Learning Facility. This award-winning facility was designed with students in mind and the 21st-century classroom and laboratory spaces are specifically geared toward gateway courses in biological sciences, chemistry, computer science, engineering and physics.

ENGINEERING CORNERSTONE-RESIDENTIAL FIRST YEAR EXPERIENCE
11:30am - 1:30pm | By Engineering Building lobby

Walking tours of the CoRe Experience in South Neighborhood start every 15 minutes beginning at 11:30 a.m. Meet in the Engineering Circle Drive on the west side of the Engineering Building facing Red Cedar Road.

Take a tour of the South Neighborhood, home of the CoRe Experience! You will visit engineering spaces, neighborhood resources, and a residential room all while you learn the history of MSU. CoRe will also be represented at the Resource Fair with information on the learning objectives and activities associated with academic and co-curricular programs taking place in South Neighborhood.
**Biosystems Engineering**
11:30am - 1:30pm | Farrall Hall Courtyard

Biosystems Engineering research open house
Visit active research projects in relation to producing sustainable energy products from biomass and algae, engineering ecological treatment systems, biosensors for disease detection, and a food safety pilot-scale processing plant! Talk with current faculty and students about classes, design projects, and careers in Biosystems Engineering!

**Chemical and Materials Science Engineering**
11:30am - 1:30pm | 2019 STEM Building

Come see how Electron Microscopes help us design next generation materials.

11:30am - 1:30pm | 22016 STEM Building
Plastics! Do they melt? Do they flow? Do they expand under heat?

**Computer Science and Engineering**
11:30am - 1:30pm | 3200 Engineering Building

Face Anti-spoofing demo by Xiao Guo - In face recognition systems, there is a need to validate that the face image being presented to the system is captured from a live individual, instead of a spoof. MSU has been a leading institution in developing state-of-the-art face anti-spoofing systems. We will be showing a live demo where the participant can test our anti-spoofing system.

11:30am - 1:30pm | 3105 Engineering Building

3D Perception demo by Abhinav Kumar - 3D perception is an enabling technology for autonomous vehicles, where the sensors can serve as the eyes of the driver. In this demo, we will showcase the various 3D detection and depth estimation capabilities developed in the computer vision lab of MSU.

**Electrical and Computer Engineering**
11:30am - 1:30pm | 2230 Engineering Building

Radar Lab - Research includes microwave and millimeter-wave remote sensing, millimeter-wave photonics, radiometry, radar, antennas, and electromagnetics. The lab will demonstrate a prototype radar system.

**Electrical and Computer Engineering (continued)**
11:30am - 1:30pm | 2221 Engineering Building

Human Augmentation Technologies lab - Research includes development of microsystem for biochemical, neural, and environmental sensing applications. The lab will demonstrate the design and fabrication of microsensor systems featuring 3D-printed biomedical devices and embedded systems for human behavior monitoring.

11:30am - 1:30pm | 2221 Engineering Building

3D Vision Lab - research includes application of 3D imaging for smart agriculture, autonomous driving, tremor tracking. The lab will demonstrate the utilization of 3D imaging in a compact robot prototype.

11:30am - 1:30pm | 2221 Engineering Building

Smart Microsystems Lab - Goal of the lab is to enable smarter, smaller, integrated systems by merging advanced modeling, control and design methodologies with novel materials and fabrication processes. The lab will display example robot prototypes.

**Mechanical Engineering**
11:30am - 1:30pm | 1240 & 1252 Engineering Building

Manufacturing Teaching Lab & Computer Aided Manufacturing (CAM) - Design, build and test are at the heart of mechanical engineering. Check out our state-of-art teaching lab and tools available for the use of students, faculty and staff. Please note: closed toe shoes are required to enter lab.

11:30am - 1:30pm | 1307 Engineering Building

CAD Instruction - As a future engineer you will learn how to design model, and build complex mechanical components and structures using CAD software. Stop in to see the latest technology in advanced manufacturing and 3D printing. Learn how you can be part of the excitement!

**Women in Engineering**
11:30am - 12:15pm and 12:30-1:15 p.m. | 1345 Engineering Building

The Women in Engineering (WIE) session is an opportunity to hear from current women studying engineering at Michigan State about their experiences. You will have a chance to ask them any questions you may have while enjoying a light snack sponsored by the Women In Engineering Recruitment & K-12 Outreach Office. WIE is offering this session at two different time slots, please register for the time that works best for you. In achieving its goals, the Women in Engineering program does not unlawfully discriminate. All events and programs are open to students of all genders.
APPLIED ENGINEERING SCIENCES (AES)
1230 Engineering - Session 1 & 2 (9:30 & 10:30 a.m.)

The Applied Engineering Sciences major is a unique interdisciplinary major that combines three academic components: 1) the foundation of traditional engineering programs (calculus, physics, chemistry, computing, and engineering science courses such as statics, thermodynamics and circuits), 2) systems-based coursework in the major, and 3) coursework in a concentration area outside the College of Engineering. Available concentrations are Supply Chain Management, Technical Sales, Packaging, Business Law, Computer Science, and Business Analytics with a Data Science minor. In this session, you have the opportunity to meet our faculty and students, and learn about opportunities in AES.

BIOSYSTEMS ENGINEERING (BAE)
116 Farrall Hall - Session 1 & 2 (9:30 & 10:30 a.m.)

Biosystems engineers integrate engineering and biology to improve our world. Biosystems engineers protect our natural environment as ecosystem engineers, protect human health as food engineers and biomedical engineers, and promote sustainable energy as bioenergy engineers. In this three-part session, you will: (1) visit with current students about undergraduate research; (2) participate in a panel of biosystems engineering faculty and students, learn about the curriculum, internships, design projects, and careers; and (3) tour laboratories in the areas of biosensors, food safety, ecosystems engineering, and bioenergy.

CHEMICAL ENGINEERING & MATERIALS SCIENCE (CHEMS)
1145 Engineering - Session 1 & 2 (9:30 & 10:30 a.m.)

Chemical engineers and materials scientists help create the technologies of today while enabling a sustainable, equitable future. By studying how to make the chemicals and materials used in everything, including medicine, transportation, communication, consumer products, environmental solutions, sustainable packaging, and green energy generation/storage, materials scientists and chemical engineers make the world safer, healthier, and cleaner for everyone. The Department of Chemical Engineering and Materials Science (CHEMS) offers these two essential, exciting disciplines in one department. Come get introduced to chemical engineering and materials science, with presentations from faculty members and current undergraduate students. Join us to learn how to create the future you want!

CIVIL AND ENVIRONMENTAL ENGINEERING (CEE)
2243 Engineering - Session 1 & 2 (9:30 & 10:30 a.m.)

Civil and environmental engineers are responsible for designing, constructing, and maintaining the infrastructure that support our lives. This infrastructure includes roads and bridges on which we drive, buildings in which we live and work, water treatment plants that ensure we have safe drinking water, and wastewater treatment plants that protect our streams, lakes, and rivers. In this session you will learn about the undergraduate curriculum along with research, extracurricular activities, and internship opportunities supported by the department. The Department of Civil and Environmental Engineering invites you to visit with students and faculty from the department.
COMPUTER SCIENCE & ENGINEERING (CSE)
1281 Anthony Hall - Session 1 & 2 (9:30 & 10:30 a.m.)

Computer science and data science are two indispensable pillars of modern society, shaping our world in profound ways. Computer science underpins the very fabric of our digital age, enabling the creation of innovative technologies, from smartphones to self-driving cars. It drives advancements in healthcare, finance, education, and countless other fields, enhancing our quality of life. Data science harnesses the power of data, extracting meaningful insights that inform decision-making, fuel research, and drive innovation. The Department of Computer Science and Engineering invites you to learn about the Computer Science and Computational Data Science degree programs and to visit with students and faculty from the department. Our graduates are employed in essentially all areas of industry, government, and education. Come hear about these exciting opportunities and experience state-of-the-art labs within the department.

ELECTRICAL AND COMPUTER ENGINEERING (ECE)
2250 Engineering - Session 1 & 2 (9:30 & 10:30 a.m.)

Electrical and computer engineers are game changers at the core of rapidly evolving technologies that connect our world, from communications and healthcare to power, environment protection, autonomous driving, broadband wireless connectivity, secure supply chain, finance and robotics. Electrical engineers apply the physics of electric and magnetic phenomena to develop innovative solutions for medical, transportation/mobility, communications and defense industries. Computer engineers develop new computer-related technologies – both hardware and software – that are vital to the success of many industries, ranging from data centers to supply chain. Come and learn about the undergraduate curriculum, cutting-edge research activities, capstone design projects, entrepreneurship, and other opportunities in the ECE department.

MECHANICAL ENGINEERING (ME)
1345 Engineering Auditorium - Session 1 & 2 (9:30 & 10:30 a.m.)

Mechanical engineers design, build, analyze and test devices ranging from the largest power plants to the micro-electronic accelerometers in video-game controllers. Graduates are employed in fields such as aerospace, automotive, biomedical, electronics, energy generation, manufacturing, naval architecture, refrigeration, and robotics. ME at MSU emphasizes development of an outstanding technical foundation, an understanding of the global impact of engineering, and the tools for lifelong learning. The senior year culminates with an industry-sponsored, team-oriented design project synthesizing much of what has been learned throughout the undergraduate experience.

Come hear about ME at MSU from professors and students, and learn how you can tailor your program with options in aerospace, automotive powertrain, biomedical engineering, engineering mechanics, manufacturing, cryogenics, and energy.

TRANSFER STUDENTS
1234 Engineering - ONLY AVAILABLE FOR SESSION 2 (10:30 a.m.)

Learn what it takes to transfer from another institution into Michigan State University and the College of Engineering.
PREVIEW DAY
BUILDING MAPS

OVERVIEW:
Engineering Building • Anthony Hall • Farrall Hall

FARRALL HALL:
BIOSYSTEMS ENGINEERING SESSIONS:
9:30 & 10:30 a.m. Room 116

Welcome Session
1281 Anthony Hall

= BAE Session
EGR Lobby-CoRe tours start in the Engineering Circle Drive beginning at 11:30 a.m.
VARIOUS DEPARTMENT SESSIONS: 9:30 & 10:30 a.m.  
RESOURCE FAIR: 11:30 a.m. - 1:30 p.m.  
LAB TOURS: 11:30 a.m., noon & 12:30 p.m.  
CoRe EXPERIENCE TOURS: 11:30 a.m. - 1:30 p.m.
AES: Applied Engineering Sciences (1230 Engineering)

BAE: Biosystems Engineering (116 Farrall Hall)

CHEMS: Chemical Engineering & Materials Science (1145 Engineering)

CEE: Civil and Environmental Engineering (2243 Engineering)

CSE: Computer Science and Engineering (1281 Anthony)

ECE: Electrical and Computer Engineering (2250 Engineering)

ME: Mechanical Engineering (1345 Engineering)

Transfer Students (1234 Engineering)
ANTHONY HALL:

WELCOME SESSION: 9 a.m. Room 1281
COMPUTER SCIENCE & ENGINEERING SESSIONS: 9:30 & 10:30 a.m. Room 1281

= Welcome Session
= CSE Sessions
Choosing the university and major that is right for you is one of the most important decisions you'll ever make — and we want to make sure that you have all of the information you need to make educated decisions about your future. Get to know us in a face-to-face visit and set an appointment to meet with a member of our recruiting team:

**Drew Kim**
Assistant to the Dean  
Future Spartan Engineers  
email: kima@msu.edu  
phone: (517) 353 - 7282  
web: www.egr.msu.edu/future-engineers

**Luis Donado**
Assistant Director  
Future Spartan Engineers  
email: donadoto@msu.edu  
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**Teresa Isela VanderSloot**
Director of Broadening Participation K12  
email: iselava1@msu.edu  
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**Geralynn Phelps**
Assistant Director of Broadening Participation K12  
email: geralynn@egr.msu.edu  
web: egr.msu.edu/wie/k12

428 S. Shaw Lane, Room 1340  
Michigan State University  
East Lansing, MI 48824

CHECK OUT OUR WEBSITE FOR MORE INFORMATION ON
Summer Programs 2024

**Semiconductors Residential Summer Program (By invitation only)**
- **TYPE:** residential
- **WHO:** rising 9th and 10th grade students in Fall of 2024
- **WHEN:** June 17 – June 21

**High School Engineering Institute**
Explore different engineering fields through hands-on activities.
- **TYPE:** residential
- **WHO:** students entering grades 10th to 12th in Fall 2024 and recent graduates
- **WHEN:** session 1: June 23-27, session 2: July 7-11

**Making a Game of It**
Learn programming skills, including making and coding video games.
- **TYPE:** residential
- **WHO:** students entering grades 11th and 12th in Fall 2024 and recent graduates
- **WHEN:** July 7-12

**Spartan LEGO Robotics**
Build and test robotic systems, like EV3 and VEX IQ
- **TYPE:** commuter
- **WHO:** students entering grades 4th to 7th in Fall 2024
- **WHEN:** session 1: June 17 to 21, session 2: June 24 to 28, session 3: July 8-12

**Spartan Girls in Engineering**
- **TYPE:** residential/commuter
- **WHO:** students entering grades 7th to 9th in Fall 2024
- **WHEN:** June 23 to 27

**Discover the Wonders of Computing**
- **TYPE:** residential/commuter
- **WHO:** students entering grades 7th to 9th in Fall 2024
- **WHEN:** July 7 to 11

**Women in Engineering**
- **TYPE:** residential/commuter
- **WHO:** students entering grades 10th to 12th in Fall 2024
- **WHEN:** July 14-18

**Engineering and Science Success Academy (ESSA)**
- **TYPE:** residential (4-5 weeks)
- **WHO:** admitted incoming MSU freshmen majoring in engineering
- **WHEN:** July (specific dates TBD)

CHECK OUR WEBSITE FOR UPDATES & FUTURE CAMPS!
LEARN MORE AND REGISTER AT: www.egr.msu.edu/future-engineer