DEAR STUDENTS AND PARENTS:

On behalf of our faculty, staff, and students, we welcome you to the MSU College of Engineering. We hope your visit will find you agreeing that Spartan Engineers are “built better.”

To prepare our students for a global and rapidly changing workplace, we provide degree programs that emphasize qualities sought by employers and graduate schools:

- A solid technical foundation through classroom education
- Experience-based learning through co-ops, internships, and undergraduate research
  - A global perspective through study abroad
  - Communication, teamwork and hands-on design skills cultivated from the very beginning through the academic programs, professional development, and personal connections of the first-year engineering CoRe Experience.
  - A grounding in social understanding through involvement in the CoRe community, that includes service learning and community outreach opportunities.

More than 1,700 first-year engineering students are part of MSU’s CoRe Experience. CoRe immerses you in a living-learning environment where you will work in teams with other engineering students, get exposed to engineering careers, and network with professional engineers and employers.

CoRe classes let you dive into engineering design through hands-on projects developing creative solutions to real-world challenges. You have access to engineering-dedicated computer and design labs, and a whole network of support, including tutors, advisers, peer mentors, faculty and staff members dedicated to your success.

CoRe helps you build life-enriching connections with fellow students, faculty members, advisers, and industry representatives through social programs and activities that help build the whole engineer.

We hope you enjoy your day interacting with our faculty, staff and students. We invite you to return for a family visit to learn even more about opportunities in the MSU College of Engineering.

Go Green!

Leo Kempel
Dean
College of Engineering

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. Most 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.

Tours of the MSU CoRe Experience, THE STEM BUILDING, the Mechanical Engineering Manufacturing Teaching Lab, CAD/CAM, and Design Project Labs will also be offered. Check the program for meeting locations.

**SCHEDULE OVERVIEW**

*October 1, 2022 • 8:30 AM - 1:00 PM*

8:30 AM ........................................................................................................................................................................... Arrival

9:00 - 9:20 AM .......................................................................................................................................................... Welcome Session

1281 Anthony Hall

CHOOSE ONE PROGRAM TO ATTEND IN EACH SESSION

9:30 - 10:20 AM ........................................................................................................................................Session 1

10:30 - 11:20 AM ........................................................................................................................................Session 2

11:30 AM - 1:00 PM ........................................................................................................................................Mechanical Engineering Tour

ME Manufacturing Teaching Lab

CAD/CAM & Design Projects Labs

11:30 AM - 1:00 PM ........................................................................................................................................Resource Fair
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 with them!

Representatives will be available from:

- Engineering Academic Advisers
- Admissions
- Corporate Partners (Employers)
- Borg Warner
- TechSmith
- Diversity Programs Office (DPO)
- Division of Engineering Computing Services (DECS)
- Engineering CoRe Experience (First-Year Engineering Experience)
- Engineering CoRe Tour, STEM building tour, and Autonomous Bus Ride Experience
- Honors College
- Office of Financial Aid
- Residence Education and Housing Services
- Student Organizations
- VEX & VEX IQ Robotics
- Women in Engineering (WIE) Program
MECHANICAL ENGINEERING LAB TOURS

Tours of the Mechanical Engineering Manufacturing Teaching Lab, CAD/CAM and Design Project Labs will be available after the second session. Presentations will begin every half hour (11:30 a.m., noon and 12:30 p.m.)

**ME Design & Explore Computer Aided Design Technology (CAD)**
1307 Engineering Building

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, and learn how to you can be part of the excitement!

**Manufacturing Teaching Lab & Computer Aided Manufacturing (CAM)**
1240 & 1252 Engineering (Please note: closed-toe shoes are required.)

Design, Build, and Test are at the heart of mechanical engineering.
Check out our state-of-the-art teaching lab and tools available for the use of students, faculty, and staff.

STEM BUILDING TOURS

Walking tours of the STEM Building start every 15 minutes beginning at 11:30 a.m.

Meet at Engineering Building lobby, on the corner of Red Cedar Rd and South Shaw Ln.

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.

MSU ENGINEERING CORE EXPERIENCE TOURS

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.
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.
Computers and computing touch nearly every aspect of our lives, and their impact will only continue to grow. Computer scientists face diverse challenges to create technological advances and solutions to society’s critical problems. Computer Science graduates are employed in essentially all areas of industry, government, and education. The Department of Computer Science and Engineering invites you to visit with students and faculty from the department. Come hear about the exciting opportunities in computer science and engineering! You will also tour the 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 the rapidly evolving technologies that save lives, preserve our environment, increase our safety, provide wireless connectivity, and entertainment. Electrical engineers apply the physics of electric and magnetic phenomena to develop innovative solutions for medical, transportation, defense, mobility, electronics, and communications industries. Computer engineers develop new computer technologies - both hardware and software - that are vital to the success of many industries. In addition, ECEs have revolutionized society via the creation of companies such as Amazon, Uber, and Bose. Come 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 biomedical engineering, engineering mechanics, manufacturing, and global engineering.

EXPLORATORY ENGINEERING

2400 Engineering - Session 1 & 2 (9:30 & 10:30 a.m.)

This information session is designed for students interested in learning about the engineering profession who have not yet decided upon a major. It will provide an overview of the 11 engineering degree programs offered at MSU and how MSU prepares its graduates to be competitive in the global marketplace. Learn how Spartan Engineers are built better!

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.
OVERVIEW:
Engineering Building • Anthony Hall • Farrall Hall

FARRALL HALL:
(Biosystems Engineering)

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

WELCOME SESSION: 9 a.m. Room 1281
COMPUTER SCIENCE & ENGINEERING SESSIONS: 9:30 & 10:30 a.m. Room 1281
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. - 1:00 p.m.
LAB TOURS: 11:30 a.m., noon & 12:30 p.m.
CoRe EXPERIENCE TOURS: 11:30 a.m. - 1:00 p.m.
ENGINEERING BUILDING - SECOND FLOOR:

Exploratory Engineering Session

ENGINEERING BUILDING - SECOND FLOOR:
VARIOUS DEPARTMENT SESSIONS: 9:30 & 10:30 a.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)
- Exploratory Engineering (2400 Engineering)
- Transfer Students (1234 Engineering)
- Resource Fair (Courtyard)
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 for Future Spartan Engineers
  email: kima@msu.edu
  phone: (517) 353 - 7282

• **Luis Donado,**
  Assistant Director for Future Spartan Engineers
  email: donadoto@msu.edu
  web: egr.msu.edu/future-engineer

• **Teresa Isela VanderSloot,**
  Director, Women In Engineering Future Spartan Engineers
  email: iselava1@egr.msu.edu
  web: egr.msu.edu/wie/k12

• **Geralynn Phelps,**
  Assistant Director, Women In Engineering Future Spartan Engineers
  email: geralynn@egr.msu.edu

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

SUMMER CAMPS 2023

HIGH SCHOOL ENGINEERING INSTITUTE
Explore different engineering fields

WHO
High school women and men grade 10 - recent graduates in Fall 2023
WHEN
Residential program. Session 1: June 25 - 29; Session 2: July 9-13, 2023

MAKING A GAME OF IT
Learn programming skills, including building video games

WHO
High school women and men grade 10 - recent graduates in Fall 2023
WHEN
Residential program. July 9 - 14, 2023

SPARTAN LEGO® ROBOTICS

WHO
Girls and boys entering grades 4 - 6 in fall 2023
WHEN
Commuter program. Session 1: June 19 - 23; Session 2: June 26-30; July 10 - 14, 2023

FALL 2022 & SPRING 2023 EVENTS

SPARTAN LADIES IN COMPUTING

WHO
9th - 12th graders in Fall 2023
WHEN
July 9 - 13, 2023

SPARTAN GIRLS IN ENGINEERING

WHO
7th - 9th graders in Fall 2023
WHEN
June 25 - 29, 2023

DESIGN DAY TEACHERS WORKSHOP

WHO
Teachers of middle and high school science, technology, engineering and math (STEM) courses.
WHEN
December 9, 2022 & April 28, 2023

SPARTAN INNOVATION CREATIVITY DAY @ DESIGN DAY

WHO
Middle & high school students and special sessions for teachers (see Design Day Teachers’ Workshop information)
WHEN
December 9, 2022 & April 28, 2023

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