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 today will find you agreeing that Spartan Engineers are “built better.”

To prepare our students for the global and rapidly changing workplace of the 21st century, we provide degree programs that emphasize developing all of the qualities sought by employers and graduate schools, including:
- A solid technical foundation through classroom education
- Experiential education through co-ops, internships and undergraduate research
- A global perspective through study abroad
- Communication and teamwork skills
- Immersion in innovation through hands-on design from your very first days on campus
- A grounding in social understanding through living in the CoRe community, service learning, and community outreach opportunities.

More than 1,400 first-year engineering students are involved in the CoRe (Cornerstone & Residentidal Engineering) Experience, including more than 700 living in Wilson Hall. Classrooms, computer labs, and design labs for our first-year Cornerstone courses are located in the South Neighborhood, as well as first-year academic advising and access to other student services.

The CoRe Experience:
- Creates a community of engineering students
- Provides a venue for collaborative study, supported by free tutoring
- Fosters social interaction with students who share your interests
- Fosters engagement with faculty, employers and campus resources,
- Provides opportunities for communities of students to engage topics such as sustainability, health, and innovation.

We hope you enjoy your day interacting with our faculty, staff and students, and seeing what is only a sampling of their many activities and accomplishments. We invite you to return for a family visit where you can meet with us in a smaller setting.

Go Green!!

Leo Kempel  
Acting Dean  
College of Engineering

Thomas F. Wolff  
Associate Dean for Undergraduate Studies

Drew Kim  
Assistant to the Dean  
Recruitment, Scholarships,  
& K-12 Outreach
Welcome Future Engineers to Preview Day 2013!

We are excited to have you here in the College of Engineering to show you all that Michigan State University has to offer. Preview Day is designed to help you explore your options and learn more about the many different engineering programs available at MSU.

Today’s event will be run 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 session descriptions on the following pages and choose the sessions you would like to attend. If the session you choose first is full, move to your next choice and then come back in the next session block. 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, as well as an opportunity to speak with representatives from each academic unit within the College of Engineering. Tours of the MSU CoRe Experience and the Mechanical Engineering Machine Shop, CAD/CAM and Design Project Labs will also be offered. Check the program for meeting locations.

College of Engineering Preview Day Schedule
October 5, 2013 • 9 a.m. - 1 p.m.

8:30 a.m. ................................................................. Arrival
9:00-9:20 a.m. .................................................. Welcome Session
1281 Anthony Hall
(overflow: 1279 Anthony)

Choose one program to attend in each session
9:30-10:20 a.m. ................................................... Session 1
10:30-11:20 a.m. .................................................. Session 2
10:30-1 p.m. ........................................ CoRe Tours of Wilson Hall
(groups will meet in the lobby vestibule next to Sparty’s)
11:30 a.m. - 1 p.m. ......................... ME Machine Shop, CAD/CAM & Design Projects Lab Tours
11:30 a.m. - 1 p.m. ....................... Third Session for AES
11:30 a.m. - 1 p.m. ....................... Resource Fair
A Resource Fair will be available in the First Floor lobby (near Sparty’s) and surrounding hallways 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:

- Academic Units of the College of Engineering
  - Applied Engineering Sciences
  - Biosystems Engineering
  - Chemical Engineering and Materials Science
  - Civil and Environmental Engineering
  - Computer Science and Engineering
  - Electrical and Computer Engineering
  - Mechanical Engineering
- Admissions
- Army ROTC
- Campus Living Services/Residence Life (On-Campus Housing)
- Diversity Programs Office (DPO)
- Division of Engineering Computing Services (DECS)
- Engineering Library
- Engineering CoRe Experience
- Financial Aid
- Honors College
- Student Organizations
- Study Abroad
- The Center for Spartan Engineering
- Women in Computing (WIC)
- Women in Engineering (WIE) Program
**Tours**

**MSU Engineering CoRe Experience**
Walking tours of the CoRe Residential Experience at Wilson Hall will be available after the conclusion of the first session (from 10:30 a.m. - 1 p.m.). CoRe will also be represented at the Resource Fair with information on the learning objectives and activities associated with the Cornerstone Engineering program and Engineering Residential Experience services provided in the South Neighborhood.

Walking tours of the Engineering Residential Experience in Wilson Hall will begin in the lobby vestibule next to the Sparty's on the west side of the Engineering Building (facing Red Cedar Road) leaving every 20 minutes beginning at 10:30 a.m. The last group tour will begin at 12:30 p.m.

**Mechanical Engineering Lab Tours**
Tours of the Mechanical Engineering Machine Shop, CAD/CAM and Design Project Labs will be available following 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)**
1312 Engineering Building
As a future engineer, you will learn how to design, model and build complex mechanical components and assembly structures using state of the art CAD software. Stop in to see the latest technology in 3D printing and learn how to you can be part of the excitement!

**Machine Shop and Computer Aided Manufacturing (CAM) B250 Engineering Building (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 machine shop and all the tools that are available for the use of students, faculty, and staff. Watch a live presentation of the Computer Numerical Control (CNC) machine, which is operated through a computer interface.
SESSION DESCRIPTIONS

APPLIED ENGINEERING SCIENCES (AES)  1230 Engineering

Are you interested in both engineering and business? If so, AES may be a good fit for you. AES is built on three pillars: 1. foundational math and science courses; 2. foundational courses in the College of Business; and 3. core courses across the breadth of engineering disciplines. On top of the three pillars, AES students complete depth requirements by taking AES courses concentrating on systems analysis and design and one of six depth concentrations: Supply Chain Management, Technical Sales, Packaging, Business Law, Computer Science, or Telecommunications.

AES graduates typically pursue careers as integrating engineers and managers in technical companies; many go on to pursue further professional study in business through MBA programs, in the legal professions through JD law degrees, or in various disciplinary areas through MS or PhD programs. A number of AES graduates reach the highest levels of Fortune 500 companies. As a prelude, visit the AES website at http://aes.egr.msu.edu

BIOSYSTEMS ENGINEERING (BAE)  119 Farrall Hall

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, learning 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 (ChE) (MSE)  1145 Engineering

Come see and hear an introduction to the Department of Chemical Engineering and Materials Science (CHEMS). Ask faculty members and current undergraduate students about our two programs. Presentations will focus on the two exciting curricula and opportunities for our students and graduates.
CIVIL & ENVIRONMENTAL ENGINEERING (CEE)  
1234 Engineering  
Civil and environmental engineers are responsible for designing, constructing, and maintaining the infrastructure that support our lives as we know it. This infrastructure includes the roads and bridges on which we drive, the buildings in which we live and work, the water treatment plants that ensure we have safe drinking water, and the wastewater treatment plants that protect our streams, lakes, and rivers. In this session you will learn about the undergraduate curriculum along with research, extracurricular, and internship opportunities supported by the department. You will also have the opportunity to meet with students group members, see the concrete canoe (which actually floats and is raced by our students) and steel bridge, and tour our state-of-the-art civil and environmental laboratories.

COMPUTER SCIENCE & ENGINEERING (CSE)  1225 Engineering  
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. As a result, 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 & COMPUTER ENGINEERING (ECE)  
2250 Engineering  
Come learn about the undergraduate curriculum, research activities and opportunities in the ECE department. You will meet the different student groups in ECE: Institute of Electrical and Electronics Engineers (IEEE) and Audio Enthusiasts and Engineers (AEE). After the student panel, you will have the chance to see the latest cutting edge research demonstrated by our students including the “Robotic Fish”.
MECHANICAL ENGINEERING (ME)  1345 Engineering Auditorium

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.

NO-PREFERENCE ENGINEERING

Engineering in the 21st Century: Issues and Opportunities  2243 Engineering

This information session is designed for students interested in learning more about the Engineering profession and will be especially useful for no-preference students. It will provide an overview of the ten degree programs offered here at MSU and how MSU prepares its graduates to be competitive in the global marketplace. Learn how Spartan Engineers are built better!

TRANSFER STUDENTS

What Does it Take to Transfer into the MSU College of Engineering?  2205 Engineering

Learn the ins and outs of transferring from another institution into Michigan State University and the College of Engineering.
Preview Day MAPS
MSU College of Engineering

WELCOME SESSION:
1281 Anthony Hall
1279 Anthony Hall (overflow)

1st Floor Anthony

Overview
Preview Day MAPS
MSU College of Engineering
Engineering Building First Floor

Departments
- Applied Engineering Sciences
- Biosystems Engineering (119 Farrall Hall)
- Chemical Engineering and Materials Science
- Civil and Environmental Engineering
- Computer Science and Engineering
- Electrical and Computer Engineering
- Mechanical Engineering
- No Preference Engineering (2nd Floor)
- Transfer Students (2nd Floor)
- Women in Engineering
- Women in Computing (Second Floor)

Tours of the CoRe Experience begin in the vestibule of the Engineering Building every 20 minutes beginning at 10:30 a.m.
Departments

- Applied Engineering Sciences
- Biosystems Engineering (119 Farrall Hall)
- Chemical Engineering and Materials Science
- Civil and Environmental Engineering
- Computer Science and Engineering
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<td>DIVERSITY PROGRAMS OFFICE</td>
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**COLLEGE OF ENGINEERING CoRe EXPERIENCE TOURS**
Cornerstone & Residential Engineering Experience

**MECHANICAL ENGINEERING TOURS**
ME Design & CAD (computer aided design)
Tours of Machine Shop & CAM (computer aided manufacturing)

**COLLEGE OF ENGINEERING RESOURCE FAIR**
Learn more about Admissions, Financial Aid, Academic Programs, Student Groups, Honors College, Support Services and more.
<table>
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<th>SESSION 2 ~ 10:30 - 11:20 A.M.</th>
<th>Resource Fair &amp; Tours 11:30 AM - 1 P.M.</th>
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<td>First Floor Engineering Building Lobby and surrounding halls</td>
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Build a **Better** future as a **Spartan Engineer**

**Explore Engineering Before You Even Enter College.**
Our pre-college engineering programs will show you how to bring your intellect and creativity together to have fun, solve problems, and discover your career interests.

**Spartan Engineering for Teens**
*When:* June 16-20; Commuter  
*Who:* 8th-9th grade in Fall 2014

**Spartaneering LEGO® Robotics I & II**
*When:*  
  - Session 1: June 16-20; Commuter  
  - Session 2: June 23-27 Commuter  
*Who:* 4th-8th grade in Fall 2014

**High School Engineering Institute (HSEI)**
*When:*  
  - Session 1: June 22-26; Residential  
  - Session 2: July 13-17; Residential  
  - Session 3: July 20-24 Residential  
*Who:* Open to both U.S. and international students entering 10th-12th grade in Fall 2014

**BEACON High School Summer Institute**
*When:* July 6-10; Residential  
*Who:* 11th-12th grade in Fall 2014  
(by invitation only)

**Introduction to Robotics Engineering at MSU**
*When:* July 27-31, Residential  
*Who:* Open to both U.S. and international students entering 10th-12th grade in Fall 2014

Use your smartphone or tablet to check out these and other pre-college programs. Or, go to: [www.egr.msu.edu/future-engineer/programs](http://www.egr.msu.edu/future-engineer/programs) to learn more and register.