Future Engineers Preview Day 2015
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.

Approximately 1,400 first-year engineering students are part of the MSU CoRe Experience, with more than 1,100 living in South Neighborhood. To best support CoRe students, classrooms, computer labs, and design labs for our first-year Cornerstone academic program are located in the South Neighborhood, along with CoRe’s co-curricular programming, first-year academic advising, tutoring, 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 connections with students who share your interests
• Connects students with faculty, employers and campus resources
• Provides opportunities for communities of students to engage topics such as energy, transportation, 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

Neeraj Buch
Associate Dean for Undergraduate Studies

Drew Kim
Assistant to the Dean
Recruitment, Scholarships, & K-12 Outreach
Welcome Future Engineers to Preview Day 2015!

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 10, 2015 • 9 a.m. - 2 p.m.

8:30 a.m. ................................................................. Arrival

9:00-9:20 a.m. .................................................. Welcome Session

1281 Anthony Hall

*(overflow: 1279 Anthony & 1345 Engineering)*

Choose one program to attend in each session

9:30-10:20 a.m. ................................................ Session 1

10:30-11:20 a.m. ................................................ Session 2

11:30 a.m. - 1 p.m. ............... ME Machine Shop, CAD/CAM & Design Projects Lab Tours

11:30 a.m. - 1 p.m. ................................................ Resource Fair

1 - 2 p.m. ........................................ CoRe Tours of South Neighborhood

*(meet at 1 p.m. in the Engineering Circle Drive at the west entrance to the building)*
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
- Campus Living Services/Residence Life (On-Campus Housing)
- Diversity Programs Office (DPO)
- Division of Engineering Computing Services (DECS)
- Engineering CoRe Experience
- Financial Aid
- Honors College
- Student Organizations
- Study Abroad
- The Center for Spartan Engineering (Career Services)
- Women in Computing (WIC)
- Women in Engineering (WIE) Program
MSU Engineering CoRe Experience
Walking tours of the CoRe Experience in South Neighborhood will begin at 1 p.m. CoRe will also be represented at the Resource Fair with information on the learning objectives and activities associated with the academic and co-curricular programs taking place in the South Neighborhood. Walking tours of the CoRe Experience will begin at 1 p.m. in the Engineering Circle Drive on the west side of the Engineering Building (facing Red Cedar Road).

Mechanical Engineering Lab Tours
Tours of the Mechanical Engineering Machine Shop, 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)
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 - Session 1 & 2

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 Media and Information.

Applied Engineering Science graduates are typically employed in a variety of corporate settings, often in positions that bridge engineering and business, such as project management, product management, sales, purchasing, supply chain and logistics, etc. In this session, you will have the opportunity to meet faculty and students in the program and learn more about the many opportunities.

BIOSYSTEMS ENGINEERING (BAE)
119 Farrall Hall - Session 1 & 2

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 AND MATERIALS SCIENCE (CHEMS)
1145 Engineering - Session 1 & 2
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 AND ENVIRONMENTAL ENGINEERING (CEE)
1234 Engineering - Session 1 & 2
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 undergraduate students and see the concrete canoe (which actually floats and is raced by our students) and the steel bridge.

COMPUTER SCIENCE & ENGINEERING (CSE)
1225 Engineering - Session 1 & 2
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 AND COMPUTER ENGINEERING (ECE)
2250 Engineering - Session 1 & 2
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 and mind-controlled robots and games.

MECHANICAL ENGINEERING (ME)
1345 Engineering Auditorium - Session 1 & 2
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
2400 Engineering - Session 1 & 2
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
2205 Engineering - Session 2 only
What Does it Take to Transfer into the MSU College of Engineering?
Learn the ins and outs of transferring from another institution into Michigan State University and the College of Engineering.
Preview Day
MAPS

OVERVIEW:
Engineering Building • Anthony Hall • Farrall Hall

Welcome Session (concurrent):
1345 Engineering Building
1279 & 1281 Anthony Hall

Dairy Store

SHAW LANE
RED CEDAR ROAD
ENGINEERING
FARRALL HALL
(Biosystems Engineering)
FARM LANE
WILSON ROAD
Welcome sessions are held concurrently in both Anthony Hall (1281 & 1279 Anthony) and the Engineering Building (1345 Engineering).
WELCOME SESSION:
1281 Anthony Hall
1279 Anthony Hall • 1345 Engineering

Anthony 1st Floor

= WELCOME SESSION

= RESOURCE FAIR
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 (2nd Floor)
- Mechanical Engineering
- No Preference Engineering (2nd Floor)
- Transfer Students (2nd Floor)
- Resource Fair
Preview Day

Session Schedule
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<th>SCHEDULE</th>
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| **WELCOME SESSION**  ~  **9:00 - 9:20 A.M.**  
Concurrent in 1281 Anthony Hall, 1345 Engineering & 1279 Anthony Hall |
<p>| <strong>APPLIED ENGINEERING SCIENCES (AES)</strong> |
| <strong>BIOSYSTEMS ENGINEERING (BAE)</strong> |
| <strong>CHEMICAL ENGINEERING (ChE) AND MATERIALS SCIENCE (MSE)</strong> |
| <strong>CIVIL AND ENVIRONMENTAL ENGINEERING (CEE)</strong> |
| <strong>COMPUTER SCIENCE AND ENGINEERING (CSE)</strong> |
| <strong>ELECTRICAL AND COMPUTER ENGINEERING (ECE)</strong> |
| <strong>MECHANICAL ENGINEERING (ME)</strong> |
| <strong>NO-PREFERENCE ENGINEERING</strong> |
| <strong>ENGINEERING TRANSFER STUDENTS</strong> |</p>
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<td>TOUR &amp; RESOURCE FAIR SCHEDULE</td>
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<td><strong>COLLEGE OF ENGINEERING RESOURCE FAIR</strong></td>
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<td>Learn more about Admissions, Financial Aid, Academic Programs, Student Groups, Honors College, Support Services and more.</td>
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<td><strong>DIVERSITY PROGRAMS OFFICE</strong></td>
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<td><strong>WOMEN IN ENGINEERING (WIE) &amp; WOMEN IN COMPUTING (WIC)</strong></td>
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<td><strong>MSU CoRe EXPERIENCE TOURS</strong></td>
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<td>First Floor Engineering Building Lobby and surrounding halls</td>
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<td>See us at the Resource Fair</td>
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Spartan Engineer
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 13-17; Commuter
Who: 8th-9th grade in Fall 2016

Spartaneering LEGO® Robotics Plus
When: Session 1: June 6-10; Commuter
Session 2: June 13-17; Commuter
Session 3: June 20-24; Commuter
Session 4: July 11-15; Commuter
Session 5: July 18-22; Commuter
Session 6: July 25-29; Commuter
Who: 4th-8th grade in Fall 2016

High School Engineering Institute (HSEI)
When: Session 1: June 19-23; Residential
Session 2: June 26-30; Residential
Session 3: July 17-21; Residential
Session 4: July 24-28; Residential
Who: Open to both U.S. and international students entering 10th-12th grade in Fall 2016

Introduction to Radar for Engineers
When: July 10-20; Residential
Who: Open to both U.S. and international students entering 11th & 12th grade in Fall 2016

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