High School Engineering Institute

6/16-20, 6/23-27, 7/14-18

Audience

110 STEM focused sophomores, juniors and seniors from The United States and other countries. Interested students apply and are selected based on GPA, transcripts and completed applications.

Funding

Participants pay a fee of $ 700. This fee includes the educational and fun activities, plus room and board. Limited scholarships are available for students in need and they are provided by private donors.

Objectives

Provide in-depth experiences in engineering majors though short lectures, demonstrations, hands-on experiments, team-based problem solving, and tours

Identify, formulate and solve engineering problems (Grand Challenges of Engineering, Priority Research Areas of the College of Engineering)

Apply **STEM** (Science, Technology, Engineering and Math) knowledge to solve problems

Analyze and interpret data

Learn about an engineer's everyday work

Build teamwork skills

Description

Intended for rising high school sophomores and juniors seriously considering engineering as their career choice, the program is designed to give in-depth experiences in engineering majors. Each day students will learn about a different major and spend time with an engineering faculty member, a graduate student, and an undergraduate student engaged in short lectures, demonstrations, hands-on experiments, team-based problem-solving, and tours. Presentations by Honors College, Admissions Office, Engineering Recruitment and K-12 Office, Study Abroad and The Center (Co-op/Internship, and Undergraduate Research Opportunities), and tours of engineering research facilities will be conducted. Three different sessions were held in 2013.

Outcomes

Students completed program evaluations on the last day of the program. The students feedback below **f**ocuses on their experiences ,including educational sessions, instructors, mentors, and social activities.

- The highest rated benefits of the program were a more clear identification of the student towards engineering, getting to know other people and an increased likeness for engineering.
- 100 % of students indicated that the instructors were knowledgeable about their areas and were also easy to approach and ask questions.
- The totality of participants agreed that the staff and student mentors were helpful and great at upholding rules and regulations.
- The educational sessions that received the greatest scores were Mechanical, Electrical, Materials Science Engineering, and VEX Robotics.
- Participant also showed high satisfaction with presenters from other university branches, such as Admissions and Honors College.

Additional Significant Information

HSEI staff includes personnel from the office of Recruitment and K-12 Outreach, professors from different departments and graduate and undergraduate students.

The engineering sessions are all taught by professors and they provide a great opportunity for prospective students to explore engineering at MSU and connect with faculty and authorities.

Contact Information

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