UNIVERSITY OF MARYLAND 18 56

A. JAMES CLARK SCHOOL OF ENGINEERING

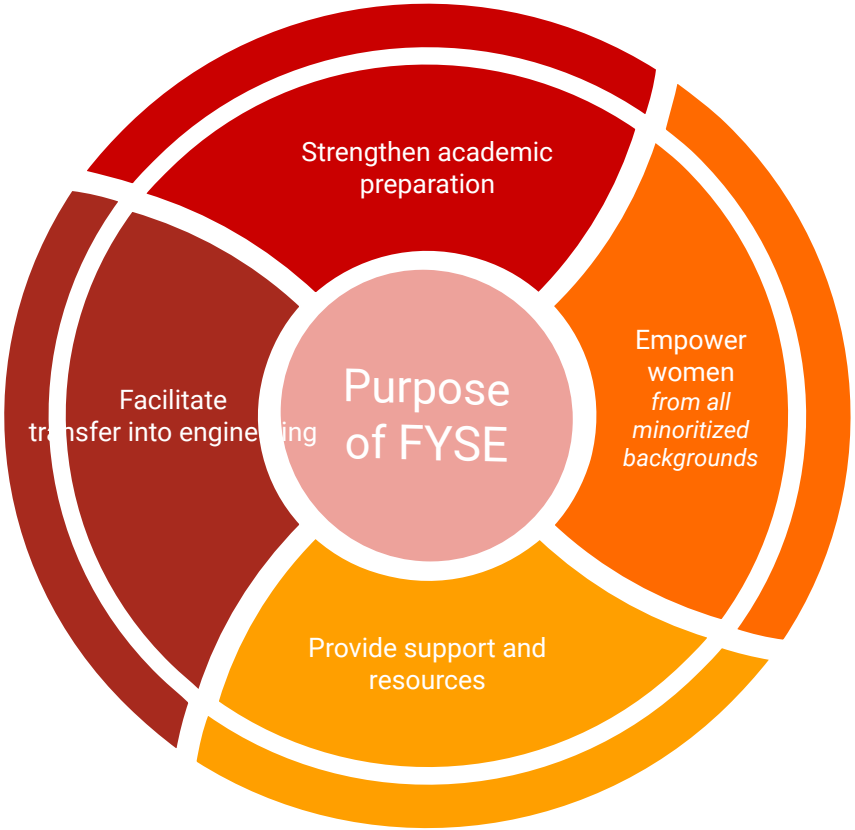
WOMEN IN ENGINEERING

First Year Summer Experience (FYSE) Program 2019

Overview of FYSE Program

- Three-week summer program hosted at UMD through WIE
- Focused on development and strengthening of math-intensive engineering problem-solving skills
- Designed for women students *not* admitted into the Clark School of Engineering

Purpose of the 2019 FYSE Program:



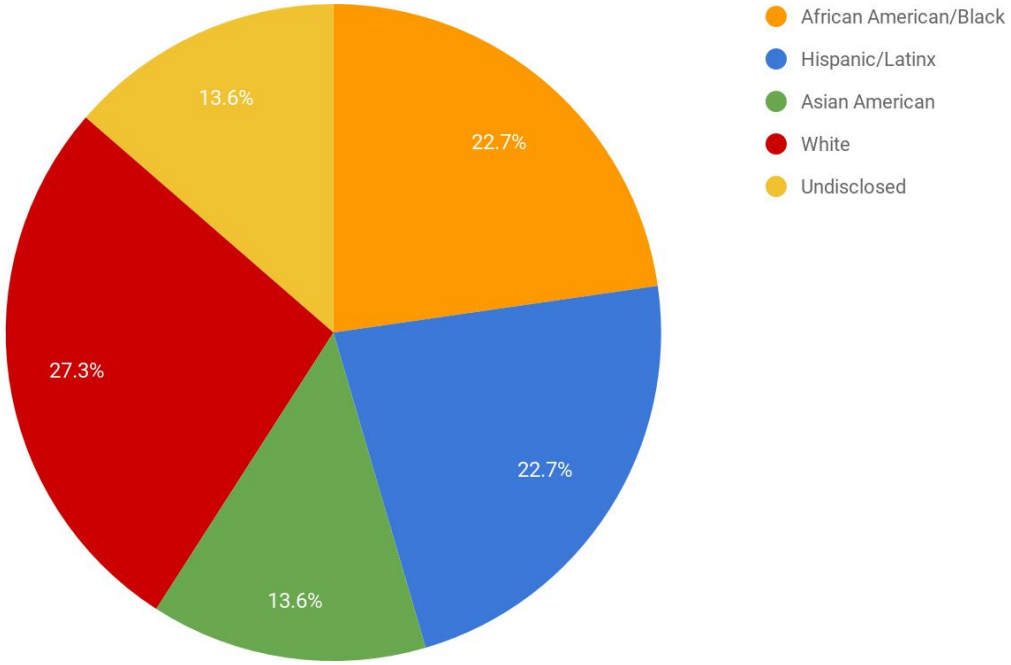
Changes to FYSE

- Originally designed to serve both:
  - first-year engineering and non-engineering admits
  - men and women
- Now focused on:
  - Women students interested in studying engineering, but not admitted
  - Strengthening pathways into and success in engineering

Participant Overview

- Twenty-four students admitted to participate -> Twenty-one attended
- All identified as women
- All applied to major in engineering
- All admitted into Division of Letters and Sciences at UMD

Participant Overview

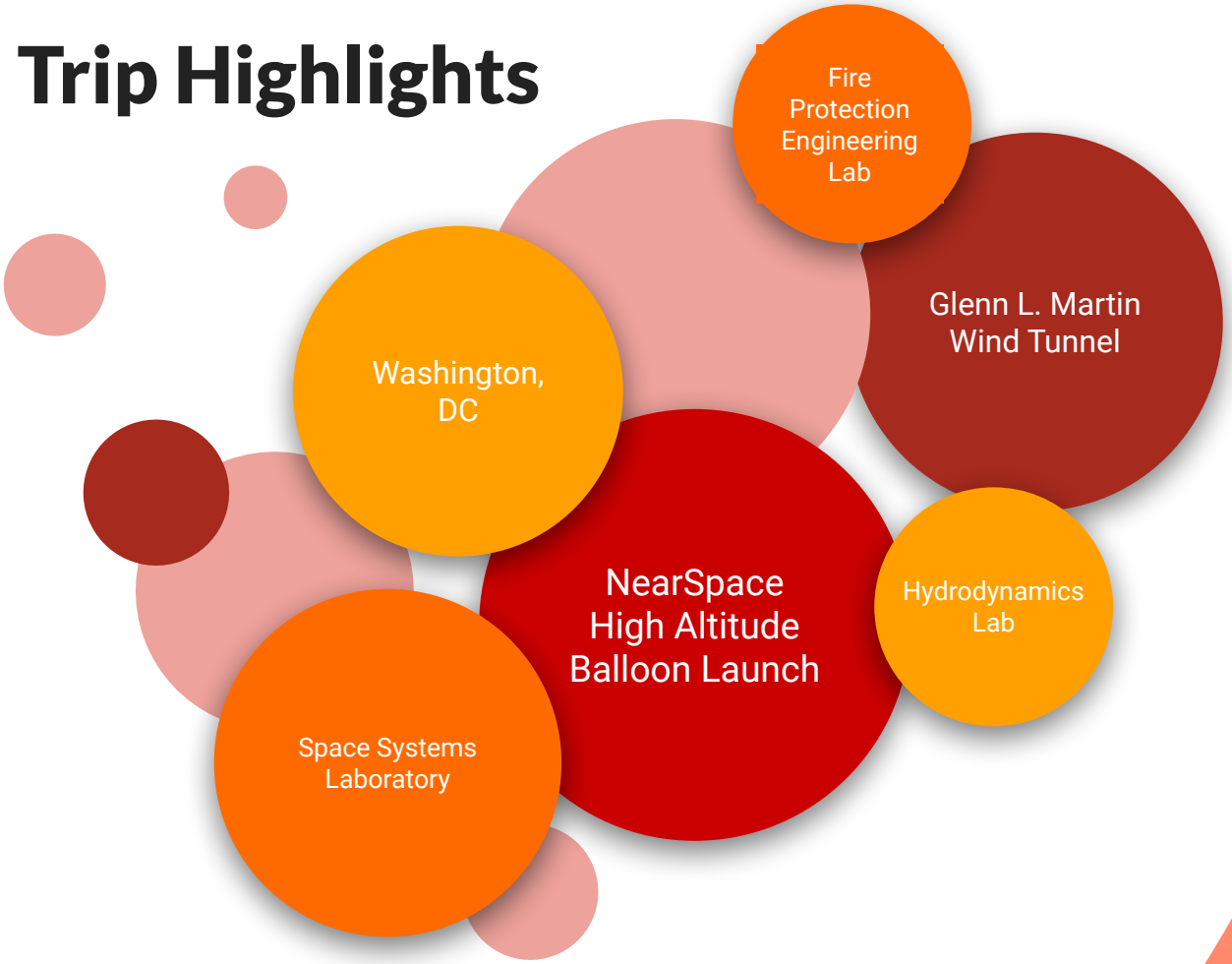


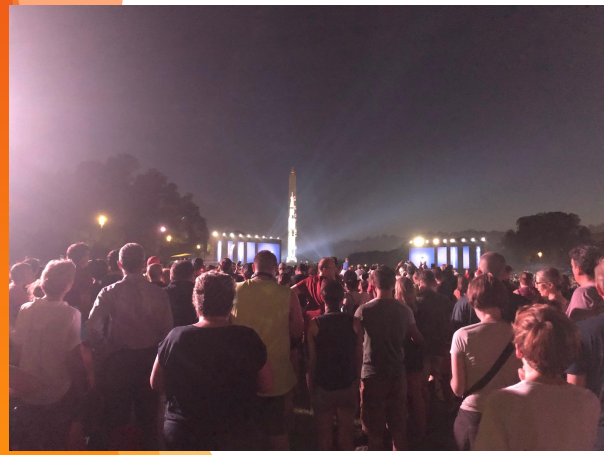
Structure of FYSE

- **Academic**
  - Daily full-day class sessions
  - Curriculum developed and implemented by engineering faculty and instructors
  - Emphasis on pre-calc and application of engineering problem-solving
  - Supplemental computer application course on MATLAB
  - Final project - truss building competition

- **Extra-Curricular & Community-Building**
  - Living together in Residence House
  - Group challenge course
  - Seminar speakers
    - Deans of Clark School of Engineering
    - Dr. Bowden on "Learning from Failure"*
    - Advisor from L&S*
    - Engineering transfer coordinator*
  - Field trips
  - Lab tours

Field Trip Highlights



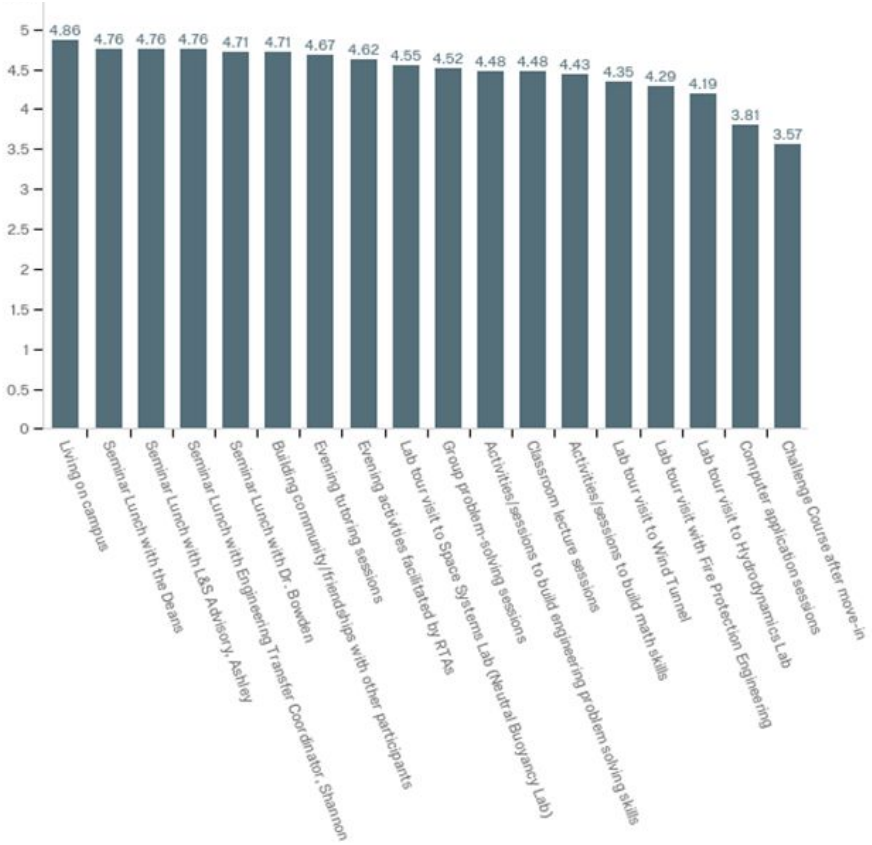



First Year Summer Experience
Lunch with the Deans
Welcome Dr. Pines & Dr. Kiger!

Program Evaluation

- At conclusion of program, all 21 participants opted to complete anonymous survey
- Participants asked to rate value of program components and activities, evaluate classroom, instruction, and extra-curriculars, and provide feedback for staff, etc.

Program Evaluation: Value of activities



On a five-point Likert scale, participants rated most activities with a score of 4 or higher

*"I feel much **more confident** in my decision to go into engineering after not receiving admittance to the engineering school. I have also made many **valuable contacts**."*

*"It greatly exceeded my expectations. The **teachers, students, and RTAs** were all very friendly and helpful. I **learned a lot** about being a transfer student, the engineering school, and engineering in general. I feel **more confident** about my current situation and pursuing engineering."*

*"It's really helpful with refreshing what you've learned in math and helps **strengthen your skills**. it also allows you to have connections and friends before the school year starts."*

*"I participated in FYSE because I found that it would be a valuable program to **jumpstart my academic pursuits** in college and help with transitioning into my intended major."*

*"It allowed me to **meet many other women** who share the same interests"*

*"[FYSE's greatest strength is] its **faith in us as future engineers**. What pushed us the most is their desire to see us succeed and to help us succeed."*

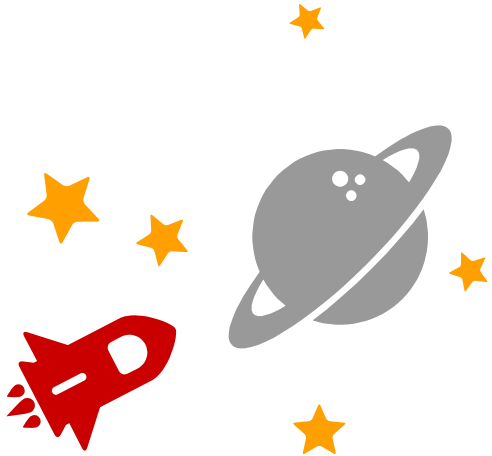
*"It exceeded my expectations because it educated me more about the actual **applications of engineering** I had first thought and also showed me **it's ok to make mistakes.**"*

*"The greatest strength of the program is the **community it brings together** and the resources it provides."*

*"Applying and completing this program is one of the **best** decisions I have ever made. **Thank you** so much for allowing me to have this opportunity."*

Next Steps

- All FYSE participants tracked longitudinally on the following:
  - Original major
  - Current major
  - Transition into engineering
  - Semester-to-semester retention
  - Graduation rates
  - Engineering degree attainment



Thank you to the Maryland Space Grant Consortium

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For questions or more information, please feel free to contact:

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