First Generation Engineer Program (FGE)
The Problems

Privilege
  ○ Students from underprivileged homes are disadvantaged in Engineering classes before their start (Ex. Little or no knowledge of lab equipment and devices).

Structural Bias
  ○ Students with no engineering backgrounds lack information access to the engineering field.

Stereotype Threat
  ○ Students that are disadvantaged in Engineering classes may feel at risk of conforming to stereotypes.
What do the studies say?

A study by Susan and Aaryan on first generation students.

Lower odds of enrolling in bachelors degree.

Students hesitant to enroll in technical degrees.

Lower retention rates for first generation students.
Impacts on College and Society

Anxiety of failing in assigned task, lowers the performance.

Confirms the stereotype that your parents have to be engineers for students to be good engineers.

Increases economic inequality in society – first generation students often are often economically disadvantaged because of bias and stereotypes.

Creates a less diverse group of students in colleges and workforce afterwards.
The First Generation Engineer Program

Pre-engineering class.
Designed to have hands on projects.
Familiarize students with lab equipment
Class open to First Generation Engineers, or anyone who is curious about engineering and really does not know much about it.
Discovery Days for Underclassmen.
Expected Results

Reduce
- Stereotype threat
- Structural Bias

Increase
- Diversity in College and Eventually in the workforce
- Inclusive Culture
- Better performance from first generation students
Questions/Comments
References

