Airbag Problem

An all-male team of engineers initially designed airbags for vehicles:

Lack of perspective

Women and children not considered

All-male vs. mixed teams
Representation of Women at the UW

- UW Women Undergraduates: 52
- CoE Women Undergraduates: 22
- Civil Engineering Women Undergraduates: 34
- Chemical Engineering Women Undergraduates: 35
- HCDE Women Undergraduates: 51
- UW Women Faculty: 22.4
- CoE Women Faculty: 22

Sources: [1, 2, 3, 4, 5] (2014-2015)
Here’s the Problem:
The CoE is lacking in women students and faculty.
“Women with STEM jobs earned 33 percent more than comparable women in non-STEM jobs – considerably higher than the STEM premium for men. As a result, the gender wage gap is smaller in STEM jobs than in non-STEM jobs” [esa.doc.gov, 2011].
Relevance to the CoE

Since 1991, the number of bachelor level Computer Science degrees awarded to women has decreased over 10% [ncwit.org, 2013].

- 1.2 million computer specialist job openings are expected in the U.S. by 2022, but only 39% of these positions are expected to be filled by U.S. computing graduates [nsf.gov, 2014].
- By comparison, mixed-sex teams filed more than 40% more information and technology patents than all-male teams [nsf.gov, 2014].
- Cedric Herring, a professor of Sociology at the University of Illinois, discovered companies that are more diverse “have more customers, a larger share of their markets and greater profitability” [Vedantum, 2007].
What We’re Proposing

Tours for 7th, 8th, and 9th grade **girls**

5 consecutive Saturdays per quarter (excluding Summer)

Cover two departments per tour, half day for each dept.

Highlight UW women in engineering

Hear from both faculty and students

Give hands-on exposure to each area of study
Sample Itinerary

Optional: Introduce/begin experiment
Tour the Department building and resources
Meet the faculty and staff
Student Panel
Conduct experiment

Estimated time per department: 4 hours
Goals

Increase the number women pursuing STEM degrees
Help map out a path from high school to UW CoE
Display the scope of engineering disciplines
Propose the possibility of graduate school
Highlight achievements of female faculty and students
Build STEM identity
Promote networking
Figure Sources


References


