Changing the Conversation:
Be > You Imagine

Mary Darrow, Transfer Coordinator
College of Engineering
Carol Heaverlo, Program Coordinator
Program for Women in Science and Engineering

Iowa State University College of Engineering
Objectives

- Discuss various media messaging that influences career aspirations.
- Discuss national and local STEM enrollment trends.
- Share resources and strategies to address STEM equity.
Two words that describe an engineer…
TTYP
National Academy of Engineering (NAE) Report

Changing the Conversation (CTC): Messages for Improving Public Understanding of Engineering

For more information, go to www.engineeringmessages.org/
Data collected over many years provide evidence that, despite the impact of engineering on our daily lives, most Americans do not understand what engineers do and are largely unaware of the opportunities available through an engineering education...

Women, African Americans, Hispanics, Native Americans, and some Asian American groups are significantly underrepresented in engineering, based on their proportions in the population at large.
Trends

Less than 20% of students enrolled in engineering degree programs are women, yet more women are now pursuing college degrees than men.

Girls take math and science courses at the same rates as boys, and perform as well as or better.
Academic Year Enrollments In Engineering

- Number of Women From IA CC
- Percent of Women from IA CC

- 02-03: 9
- 03-04: 7
- 04-05: 11
- 05-06: 8
- 06-07: 10
- 07-08: 5
- 08-09: 8
- 09-10: 8
- F10: 13

- 0.0% to 10.0% on the y-axis
- Years from 2002-2010 on the x-axis
Female Enrollment of Undergraduate and Professional STEM Students at Iowa State University

Iowa State University College of Engineering
Boys vs. Girls

Engineering is very good career choice

Gender and ethnicity

- African American boys (more than girls) think **salary extremely important** to job choices
- African American girls want a **job that makes a difference**
- Hispanic girls (more than boys) think engineers are **nerdy and boring**
- Hispanic boys are more likely to believe engineering has a **positive effect on people’s everyday lives**
Adults think...

Scientists more than engineers:
- Save lives
- Care about protecting the environment
- Improve the quality of our lives
- Sensitive to societal concerns
- Inclusive of women and minorities
- Care about the community
Engineering Messages
Recommendations

- Stop reinforcing the images of ‘nerdy and boring’
- Stop focusing on math and science as the needed inputs and instead focus on the outputs, career opportunities, and making a difference in the world
- Use the word create, not build
Engineering Messages Recommendations

- Use images of people, not things: especially avoid using gears and mechanical looking things
- Use the following five words in describing engineering: discovery, design, imagination, innovation, contribution
- Describe engineer as creative problem solvers, essential to health, happiness and safety
- Emphasize that engineers shape the future
Ten great reasons why you’ll love it

1. Love your work, AND live your life too!
2. Be creative.
3. Work with great people.
4. Solve problems, design things that matter.
5. Never be bored.
6. Make a big salary.
7. Enjoy job flexibility.
8. Travel.
9. Make a difference.
10. Change the world.

For Counselors & Parents
For Engineers
For Middle School Girls
(see engineer girl.org)
Engineer Your Life
Dream big. Love what you do.

- creativity has its rewards
- make a world of difference
- explore possibilities

Why Engineering? Meet Inspiring Women Find Your Dream Job Making It Happen

For Counselors & Parents
For Engineers
For Middle School Girls (see engineeringirl.org)

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http://www.engineeryourlife.org/
Prospective Students

Your education is an adventure, and engineering is an amazing place to explore. What does an engineer do? Creatively solve problems. Bring science to everyday use. Apply technology to make our world a better place. In the process of becoming an engineer, you will discover more about yourself and accomplish more than you thought possible.

BE > YOU IMAGINED.

www.engineering.iastate.edu/
Iowa State University College of Engineering

http://www.pwse.iastate.edu/
Gallery Tour of Media Messaging:

What’s the Message?
Engineering Students Changing the World
Engineering Programs to Explore

- Aerospace
- Agricultural
- Biological Systems
- Chemical & Biological
- Civil/ Environmental
- Computer
- Construction
- Electrical
- Industrial
- Materials
- Mechanical
- Software

Minors

- Bioengineering
- Nondestructive Evaluation (NDE)
- Nuclear Engineering
- Sales Engineering
$57,000 Starting Salary

88% Job Placement within 6 months of graduation

Demand is Increasing
Questions?