

Why Do You Want to be an Engineer?

Univ. of Idaho STEM Research

Engineering student survey

Micron engineer survey



©2013 Micron Technology, Inc. All rights reserved. Products are warranted only to meet Micron's production data sheet specifications. Information, products, and/or specifications are subject to change without notice. All information is provided on an "AS IS" basis without warranties of any kind. Dates are estimates only. Drawings are not to scale. Micron and the Micron logo are trademarks of Micron Technology, Inc. All other trademarks are the property of their respective owners.

Idaho/Micron STEM research

Major Conclusions (to date)

- ▶ Student interest in math and science decline as they progress through school.
- ▶ Career Awareness – disconnect between liking math and science and wanting a STEM career
- ▶ Parent Influence – ability/inability to help students with math and science

Why Do you want to be an engineer?

Survey - Current college students

▶ Demographics

- 70% male/30% female
- 86% Caucasian
- 56% from suburban
- Average age: 21
- BSU, RIT, Iowa State
 - UW and BYU are releasing survey any day

Why Do you want to be an engineer?

Survey - Current college students

- ▶ At what age did you consider being an engineer? **16.1**
- ▶ What is the single biggest influence to become an engineer?
 - Parents – 38.3%
 - Other (self) – 28.4%
 - Teacher – 16.5

Why Do you want to be an engineer?

Survey - Current college students

- ▶ What makes you want to be an engineer? (multiple responses ok)
 - **Like to problem solve – 76.5%**
 - Like math and science – 71.6%
 - Money – 58.1%
- ▶ Do you know someone who is an engineer?
 - Yes – 80%
 - Parent (usually dad) = 18.2%
 - Relative (other than parent) = 29%
 - Uncle = 10.6%
 - Teacher = 1.3%

Why Do you want to be an engineer?

Survey - Current college students

- ▶ Have you ever attended an engineering camp, competition or other event that enhanced your interest in engineering?
 - No – 53%
 - Summer internship – 17.8%
 - FIRST – 10.1%
 - Science Olympiad – 7.7%
 - Other – 21.5%

Why Do you want to be an engineer? Survey – Micron Engineers

- ▶ Demographics
 - 89% male/11% female
 - 46% from suburban
- ▶ How many years ago did you graduate from an engineering school?
 - 1-4 – 17%
 - 5-10 – 25%
 - 11-16 – 21%
 - 17+ - 37%

Why Do you want to be an engineer? Survey – Micron engineers

- ▶ At what age did you consider being an engineer? **16.7**
- ▶ What is the single biggest influence to become an engineer?
 - Parents – 38%
 - Other (self) – 26%
 - Teacher – 15%

Why Do you want to be an engineer?

Survey – Micron Engineers

- ▶ What makes you want to be an engineer? (multiple responses ok)
 - **Like math and science – 80%**
 - Like to problem solve – 74%
 - Money – 44%
- ▶ Growing up, did you know someone who was an engineer?
 - Yes – 49%
 - Parent (usually dad) = 38.3%
 - Relative (other than parent) = 38.6%
 - Uncle = 20.6%
 - Teacher = 2.0% (most of them scout masters)

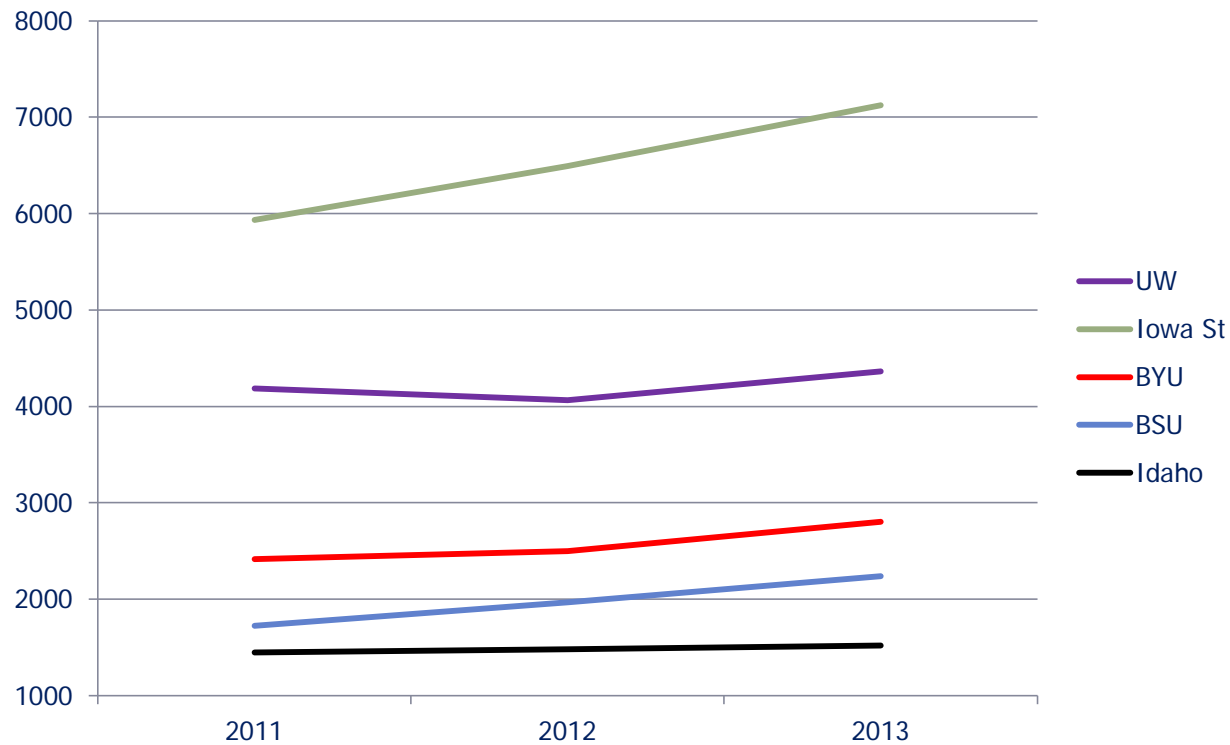
Why Do you want to be an engineer?

Survey – Micron Engineers

- ▶ Have you ever attended an engineering camp, competition or other event that enhanced your interest in engineering?
 - No – 78%
 - Yes – 22%
 - 1-4 years – 22%
 - 5-10 years – 28%
 - 11-16 years- 23%
 - 17+ years – 27%

If yes, Science Olympiad, JETS, USU Engineering State, various science competitions

UG Engineering enrollment 2011-2013





Focused on Memory | Engineered for Innovation

2014 ideas

- ▶ Brochure for parents to leave behind after classroom lessons...conversation starter about engineering careers
- ▶ Adding communication to parents whenever possible
- ▶ Student website
- ▶ Providing more information for parents to help provide guidance and materials to help start the conversation...does your student like problem solving, math and science...then a career in engineering could be in their future....

2014 ideas

- ▶ Do they enjoy math....don't have to be at the top of the class..just have an interest
- ▶ Career awareness upgrade
- ▶ Grants – have a parent component

Current students and Micron engineers

Current Engineering Students

At what age did you consider being an engineer? **16.1**

What is the single biggest influence to become an engineer?

- Parents – 38.3%
- Other (self) – 28.4%
- Teacher – 16.5

What makes you want to be an engineer? (multiple responses ok)

- Like to problem solve – 76.5%**
- Like math and science – 71.6%
- Money – 58.1%

Do you know someone who is an engineer?

- Yes – 80%
- Parent (usually dad) = 18.2%
- Relative (other than parent) = 29%
 - Uncle = 10.6%
- Teacher = 1.3%

Have you ever attended an engineering camp, competition or other event that enhanced your interest in engineering?

- No – 53%
- Yes – 47%
- Summer internship – 17.8%
- FIRST – 10.1%
- Science Olympiad – 7.7%
- Other – 21.5%

Engineers at Micron (domestic)

At what age did you consider being an engineer? **16.7**

What was the single biggest influence to become an engineer?

- Parents – 38%
- Other (self) – 26%
- Teacher – 15%

What made you want to be an engineer? (multiple responses ok)

- Like math and science – 80%**
- Like to problem solve – 74%
- Money – 44%

Did you know someone who was an engineer?

- Yes – 49%
- Parent (usually dad) = 38.0%
- Relative (other than parent) = 38.6%
 - Uncle = 20.6%
- Teacher = 2.0% (most of them scout masters)

Have you ever attended an engineering camp, competition or other event that enhanced your interest in engineering?

- No – 78%
- Yes – 22%
- 1-4 years – 22%
- 5-10 years – 28%
- 11-16 years- 23%
- 17+ years – 27%
- If yes, Science Olympiad, JETS, USU Engineering State, various science competitions

What other factors made you want to be an engineer?

(employees, broken out by how long ago did you graduate?)

#	Answer	1-4	5-10	11-16	17+
1	Money	48.37%	48.36%	52.77%	34.06%
2	Want to help people	14.13%	8.73%	6.81%	7.06%
3	Like to problem solve	82.07%	77.45%	74.89%	66.91%
4	Like math and science	86.96%	82.18%	80.00%	74.70%
5	Family recommendation	23.91%	18.18%	16.17%	8.76%
6	Peer influence	9.78%	10.91%	6.38%	6.33%
7	Other, please specify	8.15%	6.18%	6.38%	12.41%
	Total	503	693	572	864