

2013

## Examining Student Success: The Transition from H.S. to College of First-Year Engineering Students

Leroy L. Long III

*The Ohio State University*, longl2@erau.edu

Follow this and additional works at: <https://commons.erau.edu/publication>



Part of the [Engineering Education Commons](#)

---

### Scholarly Commons Citation

Long, L. L. (2013). Examining Student Success: The Transition from H.S. to College of First-Year Engineering Students. , (). Retrieved from <https://commons.erau.edu/publication/296>

Long, L., L. III. (2013). Examining student success: The transition from H.S. to college of first-year engineering students. Proceedings from the 2013 ASEE North Central Section Conference, Columbus, OH. This Conference Proceeding is brought to you for free and open access by Scholarly Commons. It has been accepted for inclusion in Publications by an authorized administrator of Scholarly Commons. For more information, please contact [commons@erau.edu](mailto:commons@erau.edu).

# The Transition from H.S. to College of First-Year Engineering Students

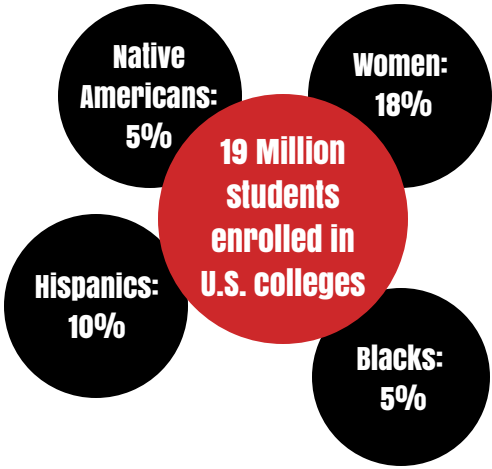
To improve retention and graduation rates, institutions have become interested in the experiences of first-year students

# 50%

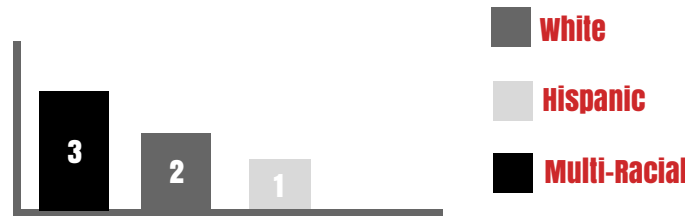
of all undergraduates who express initial intentions to major in STEM switch fields during their first or second year



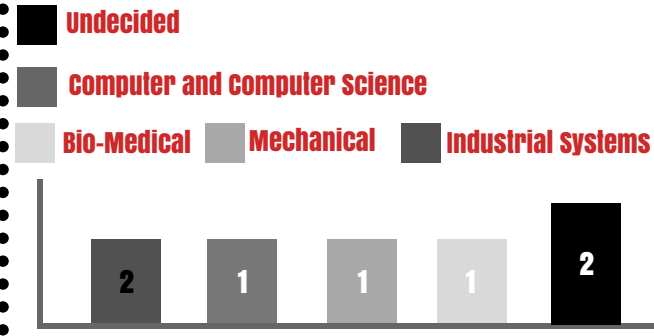
The purpose of the study was to understand the experiences of first-year engineering students during their transition from high school to college



**6** full-time first-year students from a large predominantly white mid-western university were interviewed. The institution had a population of approximately 1,600 first-year engineering students



**5** anticipated engineering majors were listed by participants



## Pre-College Experiences of First-Year Engineering Students

**Nearly all students enjoyed playing sports and video games**

Walter, a male undecided engineering major said, "I played a lot of sports in high school, like my freshman and sophomore year I played football and freshman through senior year I played baseball and varsity baseball."

## Challenges Students Faced while Transitioning from H.S. to college

**All but one participant reported having to take difficult/time consuming courses**

Whitney, a female industrial systems engineering major said, "Fall Quarter of engineering was hard, it was definitely a struggle for me... the drawings and the labs and...the breadboards and the circuitry was really hard. I've never worked with stuff like that...Math...is hard because I do not have the best professor this year so I'm basically teaching myself a lot of everything."

## Reasons Why Students chose Engineering

**All 6 participants mentioned having an interest in either math, science, or technology**

Blake, a male mechanical engineering major said, "I'm really interested in technology and I'm very good in math. And...advisors [in a college preparatory program]...told me that I should look into a field of engineering."

## Recommendation

Students' transition into college could be eased through help completing application material, more financial support, assistance with initial academic coursework, and advice on ways to manage the range of available academic and social opportunities in college.

