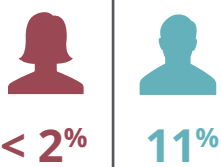


DIVERSIFYING STEM: INCREASING WOMEN'S PERSISTENCE ON THE TRANSFER PATHWAY

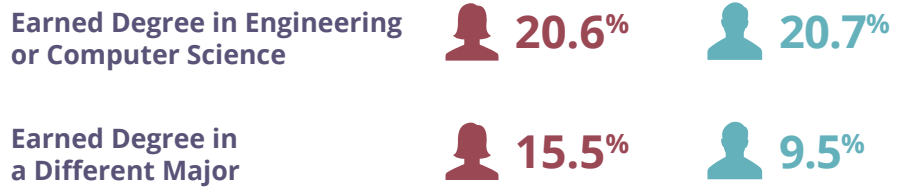
research.swe.org

Increasing diversity in STEM requires attention to the transfer success of students who begin their engineering and computer science (ECS) education at a community college. Findings from SWE's multi-phase research of the transfer success of community college students in Texas highlights the potential to increase diverse graduates in STEM through greater supports for students on this pathway.

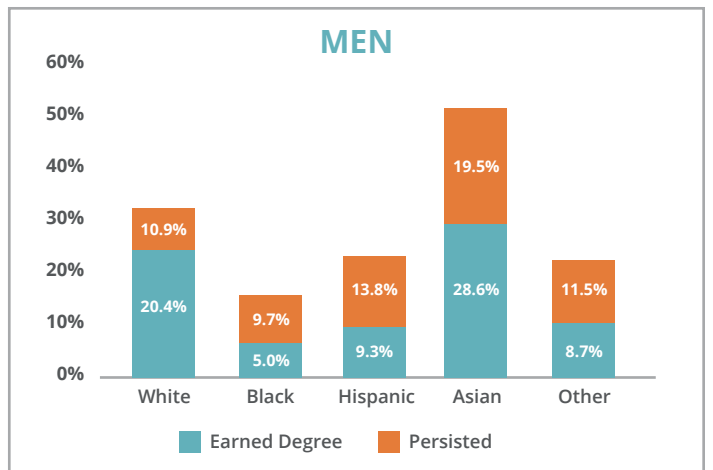
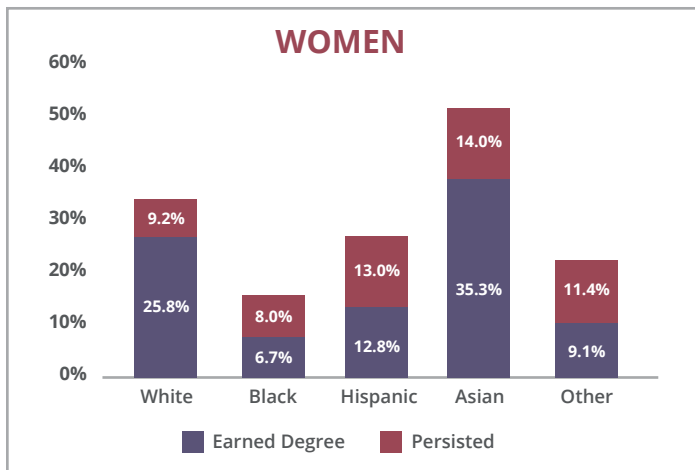
% of Transfer Students Majoring in Engineering or Computer Science



% of Transfer Students Who Earned Baccalaureate Degrees in Engineering or Computer Scienceⁱ



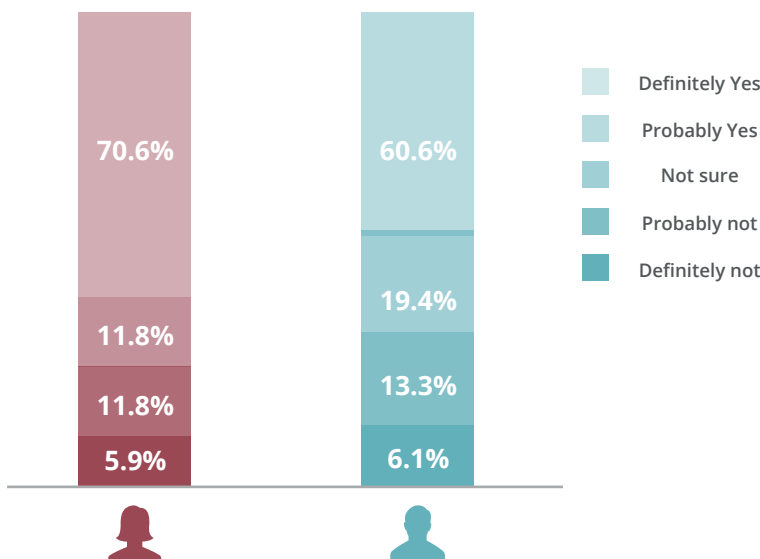
PERSISTENCE AND COMPLETION OF BACCALAUREATE DEGREES IN ENGINEERING OR COMPUTER SCIENCE AMONG COMMUNITY COLLEGE TRANSFER STUDENTSⁱⁱ



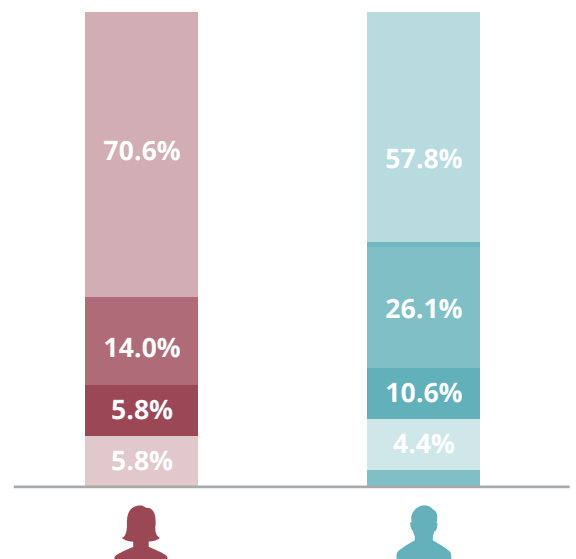
Community college students were asked about their intentions to complete their degrees and pursue a career in engineering or computer science. Students also provided insight into the challenges they experience prior to transfer.

INTENTIONS TO PURSUE A BACCALAUREATE DEGREE AND CAREER IN ENGINEERING OR COMPUTER SCIENCE:

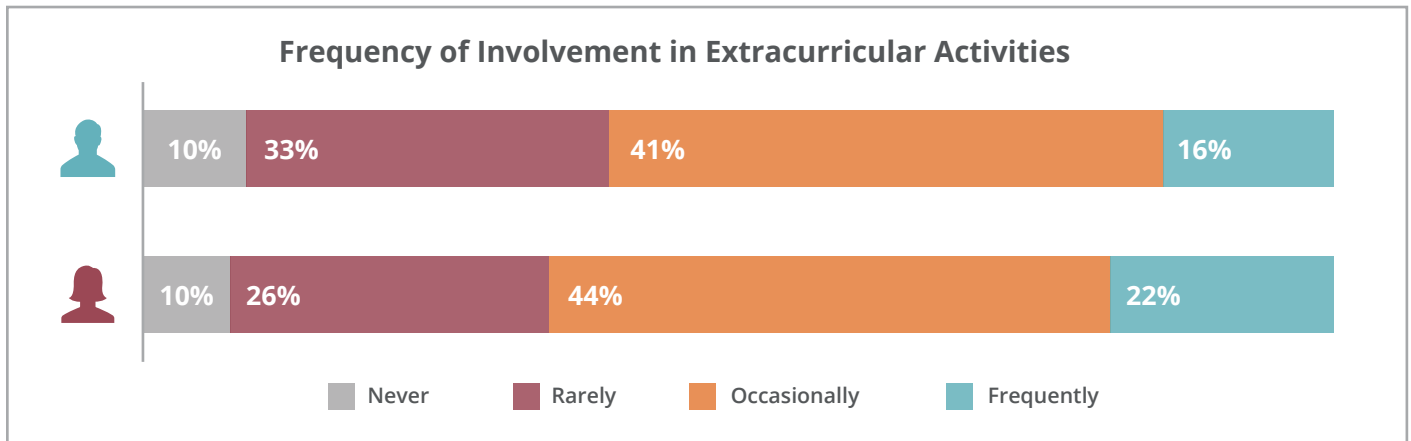
Intention to Pursue a Bachelor's Degree in Engineering or Computer Science



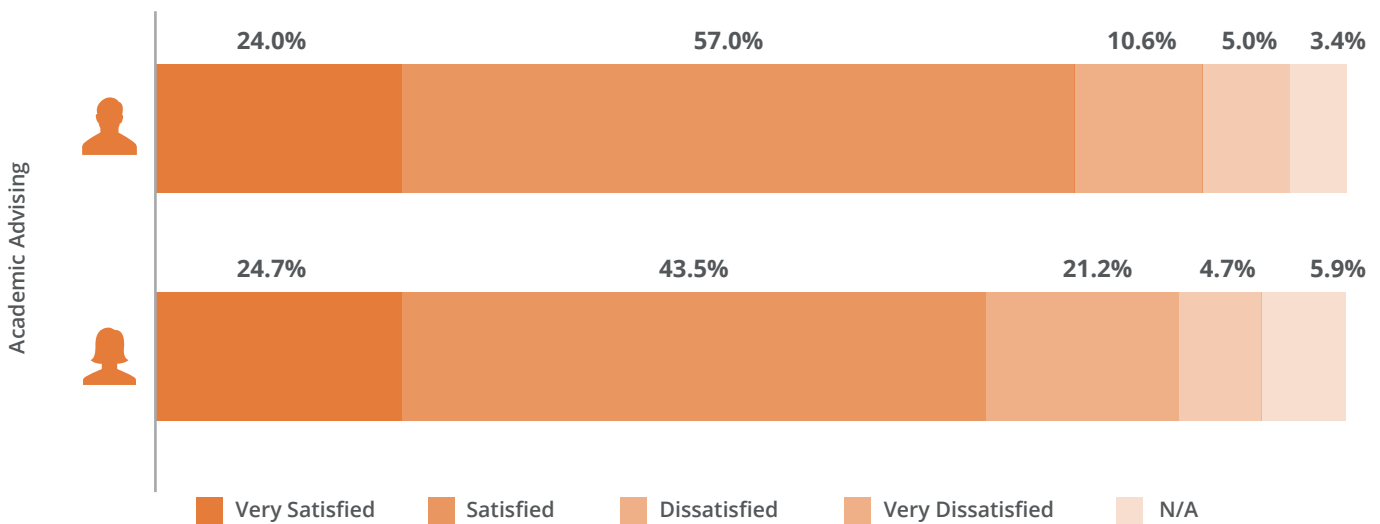
Intention to Pursue a Career in Engineering or Computer Science



EXTRACURRICULAR OR ACADEMIC CLUB INVOLVEMENT CAN BE DIFFICULT TO FIT INTO BUSY SCHEDULES FOR MANY COMMUNITY COLLEGE STUDENTS:



WOMEN REPORT LOWER LEVELS OF SATISFACTION WITH ACADEMIC ADVISING THAN MEN:ⁱⁱⁱ



RECOMMENDATIONS

- 1 Improve advising for transfer students. A lack of information is not the problem. Rather, students need to be advised by someone who can help them navigate through the information and help them solidify their transfer plan.
- 2 Provide more financial support. Financial challenges lead many students to delay their move to a four-year university. The impact of working while taking classes also makes it difficult to enroll full-time and make time for student engagement activities.
- 3 Provide more information about career pathways. Over half of students in this study expressed limited or no knowledge about the engineering profession prior to entering college. Women also reported learning less about engineering as a profession during their time at community college than men.
- 4 Strengthen interpersonal relationships, networking, and mentorship. Students would benefit from more involvement in extracurricular activities academically, socially, and professionally. Mentorship offers an important source of guidance and encouragement.
- 5 Focus on boosting confidence. Decreased confidence in math and science can contribute to persistence in STEM. Interventions intended to counteract stereotypes and increase confidence can have a measurable impact on persistence.

Visit <https://research.swe.org> to download SWE's Diversifying STEM reports. 

ⁱ Students from the 2008/09 cohort who had declared a major in engineering or computer science at some point, and earned baccalaureate degrees by Fall 2015.

ⁱⁱ From the 2011/12 cohort who had earned or were still pursuing baccalaureate degrees in engineering or computer science in Fall 2015.

ⁱⁱⁱ Regarding academic advising at the community college in preparation for transfer to complete their baccalaureate degrees.