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## Infographic: Academic and Social Barriers to Black and Latino Male Collegians' Success in Engineering and Related STEM Fields

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# ACADEMIC AND SOCIAL BARRIERS TO BLACK AND LATINO MALE COLLEGIANS' SUCCESS IN ENGINEERING AND RELATED STEM FIELDS\*



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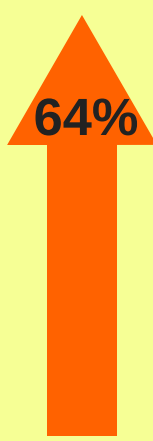
In order to help AA and LA students overcome “barriers” to their success in STEM, we offer recommendations to educators and practitioners\*\*

## Participants

**27** African Americans participated in one-on-one interviews

**22** Latino Americans participated in one-on-one interviews

## Statistics



Increase in U.S. college enrollment rates over the past 3 decades



Under represented minority students continue to lag behind their White counterparts in U.S. college graduation rates

## 4 Academic and social barriers

**1** Feel alone and invisible

*"...not that it's impossible for a minority to succeed in my major, but the conditions in which to succeed aren't ideal. One because there aren't as many people that look like you."  
(Black male bio-chemistry major)*

Recommendation

Increase outreach efforts that target AA and LA students to improve the representation of these URMs



**2** Lack same race peers and faculty

*"Sometimes you feel like you may be able to understand things better..." (Hispanic male chemistry major)*

Recommendation

Make intentional efforts to pair AA and LA students with same-race upperclassmen mentors where possible



**3** Have difficulty applying theory to practice

*"I just got bored, yeah I know about the topic, I see other people they're passionate about it...it's not something where I'm like yeah I'm going to change the whole world."  
(Black male environmental science major)*

Recommendation

Work with industry partners to create real-world design projects and to help faculty understand what skills and competencies are most important for graduates



**4** Lack the pre-college preparation necessary to succeed in STEM fields

*"A lot of my troubles with class are normally born with mishandling time, mishandling energy as well, and not have the knowledge to study effectively."  
(Black male mechanical engineering major)*

Recommendation

Partner with local K-12 schools to increase student exposure to and interest in STEM-related content, and to improve counselor/staff awareness of needed pre-college STEM coursework



NOTE: \*This study is part of a larger, longitudinal study titled, Investigating the Critical Junctures: Strategies that Broaden Minority Participation in STEM Fields, funded by the National Science Foundation; \*\*The abbreviation "AA" means African American or Black and "LA" means Latino American or Hispanic



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