Infographic: 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:

**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 is 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

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**Participants**

- **African Americans participated in one-on-one interviews:** 27
- **Latino Americans participated in one-on-one interviews:** 22

**Statistics**

- **Increase in U.S. college enrollment rates over the past 3 decades:** 64%
- **Under represented minority students continue to lag behind their White counterparts in U.S. college graduation rates:**