

State News for NSPE Members

Program to Attract Underrepresented Students to STEM

Rhode Island has become the ninth state in the country to have a MESA (Mathematics, Engineering, Science Achievement) chapter that will focus on underrepresented students in the state. The program aims to acquaint middle and high school students in urban areas, who are typically from low-income families and attend low-performing schools with few resources, with the STEM fields. It will also support students of color, females, and LGBTQ students.

The program aims to increase these students' participation in invention and design competitions and support their study of STEM subjects. The efforts will include University of Rhode Island campus-based workshops, mentoring, academic support, and interaction with community and corporate partners, such as internships. The partnership was announced at the annual MESA USA National Engineering Design Challenge in June.

Funding Will Help Maintain Coastline Water Quality

The US Environmental Protection Agency will allocate \$206,600 to Rhode Island to maintain water quality on beaches this year via the BEACH Act. The five New England coastal states will receive a total of more than \$1.1 million.

EPA anticipates the funding will help monitor beaches for fecal indicator bacteria, maintain and operate public notification systems, identify local pollution sources and report results of monitoring and notification activities to EPA and the public. When elevated levels of bacteria are detected, this funding supports beach warning or beach closing notifications to protect public health.

Since 2002, EPA has provided \$22.5 million to the five New England states for water quality monitoring and public dissemination of those findings.

Rhode Island Job Opportunities

Plumbing/Fire Protection Designer

SMMA

See other engineering job opportunities on the [NSPE Job Board](#).

Stay up to date on legislative issues through the [NSPE Advocacy Center](#).

Have You Registered for Virtual PECon 2021?

With sessions on leadership, innovation, diversity, ethics, time management, and more, there is a session for everyone at the [2021 Virtual Professional Engineers Conference](#) (Aug 3-5). The [early bird registration](#) rates end after today (July 14).

You won't want to miss out on the keynote speakers, networking with your friends and peers in Coffee Chats, solving everyday problems in MasterMind sessions, and [PE Day](#) (August 4). Here's a peek....



- [Managing Up, Out and Within](#) (Stephanie Buckingham and Paula E. Miles, P.E.)
- [Cyber-attacks and Resilience](#) (James Livermore and Dave Ubert)
- [NSPE Engineering Excellence Awards](#)
- [Mars Is a Harsh Mistress \(So is the Moon\)](#) (George Hamilton, P.E., F.NSPE)
- [Delegation: How to Manage the Monkeys on Your Back](#) (Shelley Rowe, P.E.)

Iowa Approves PE Exam Before Experience

PE license candidates in Iowa will have the opportunity to take the PE exam prior to meeting the four years of experience requirement.

Legislation (H.F. 284) signed by Governor Kim Reynolds in April eliminates the requirement that applicants for a professional engineer license must show necessary practical experience in engineering work prior to taking the PE exam. The bill does not alter other experience requirements for applicants.

Individuals applying for licensure in Iowa should access the Iowa Engineering and Land Surveying Examining Board [website](#) for updates on implementation of the

rule change.

In states that have “decoupled” the experience and examination requirements, applicants are still required to complete all education, examination, and experience requirements before being granted a PE license.

NSPE believes that licensing boards should provide the option of taking the PE exam as soon as applicants for licensure believe they are prepared to take the exam and have passed the FE exam. Applicants, upon passing the exam, should not be eligible for licensure before meeting all other jurisdictional requirements.

Can the Engineering Profession Achieve Racial Equity?

Engineering occupations are some of the highest-paying and most prestigious in the US labor market, but they are also some of the least diverse. A [new report](#) from the Georgetown University Center on Education and the Workforce finds that between 1990 and 2019, the total number of Black/African American and Latinx students who graduated with a bachelor’s degree in engineering increased nearly fourfold, but there is still far from equitable representation.



Over the same time period, the Latinx share of bachelor’s degrees in engineering increased from 3% to 13%, while the Black/African American share held steady at 4%. At this pace, achieving racial equity in engineering on par with population share would take 76 years for Latinx and Black/African American workers as a group and up to 256 years for Black/African American workers alone.

“Having a career in engineering means you’ve made it,” said Anthony Carnevale, CEW director and report lead author in a statement. “While it’s a marker of climbing the wage and status occupational pyramid, it’s also a social indicator of progress on racial and gender justice.”

The report addresses how Black and Latinx are underpaid in a profession that pays very well. A person with an engineering bachelor’s degree (and no graduate degree) earns 25% more on average than the typical bachelor’s degree holder in the first job after graduation.

However, as with almost all fields, Black/African American and Latinx workers earn less than the average. While White and Asian workers with a bachelor’s degree in engineering earn 61% and 71% more, respectively, than the average for all

bachelor's degree holders, Black/African American and Latinx engineering majors earn just 15% and 18% more, respectively. To attain earnings comparable to those of White engineering majors, Black/African American or Latinx engineers must earn an additional degree beyond the bachelor's degree.

The report authors emphasize that it shouldn't take decades or centuries to ensure diversity in the engineering workforce mirrors diversity in society. It will take a comprehensive, committed, and innovative approach from employers and universities to close the gap.

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**National Society of Professional Engineers | 1420 King Street | Alexandria, VA
22314**