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An Inclusive Summer Research Experience Promotes Minority Student Engagement in STEM

Body

M50 - An Inclusive Summer Research Experience Promotes Minority Student Engagement in STEM

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Lane College is a Historically Black College with a mission to educate underserved minority students. As part of a primarily undergraduate teaching institution, the Division of Natural and Physical Sciences provides students with a variety of hands-on experiences, including an eight-week summer research experience. Prior to the implementation of the Lane College summer research experience, only a small number of students participated in summer research or internships at other institutions. The Lane College summer undergraduate research experience aims to be more inclusive by eliminating GPA requirements, encouraging first- and second-year students to apply, and allowing students to select any of the available research projects in the areas of biology, chemistry, computer science, mathematics, or physics, regardless of major. Each year, twelve to fifteen students participate in mentored research in the areas of biology, chemistry, computer science, mathematics, and physics. The students participate in a professional development course twice per week where they learn about career opportunities in science and mathematics, preparing personal statements, scientific writing, and practice on how to effectively present their research findings. The students conduct their research in small groups with a faculty mentor. At the end of the summer, students present their overall results at the Lane Summer Science Symposium. Evaluation of student attitudes towards the research experience during the first iteration in summer 2021 indicates students internalized STEM community values, and developed a sense of self-efficacy for research, a strong sense of project ownership, and a sense of belonging to the science research community. Students participating in the evaluation believe that the experience made science more interesting and that they have better clarity of career opportunities in STEM. Similar levels of engagement were observed in the summers of 2022 and 2023. Students participating in the program are encouraged to submit abstracts to both regional and national conferences. This has resulted in 14 students presenting annually at discipline-specific conferences and one publication co-authored by two summer research students. This work is supported by grants NSF EES 2011938 and EDU 1833960.

Sessions



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Sunday, Dec 3 5:35 PM
Room 252B