2018-2019 Two-Tiered Mentoring of Two-Year College Students During a Summer Research Experience Program at the University of Texas at El Paso

Abstract

UTEP-ROCCS (University of Texas at El Paso Research Opportunities for Community College Students) is an NSF Supported summer research experience for undergraduate (REU) designed exclusively for two-year college students from across the United States that has been conducted the past 3 summers (2017-2019). In 2019, the program hosted 22 two-year college participants supported by 6 UTEP undergraduate mentors. Two participants had been part of previous summers’ cohorts and 9 Faculty mentors from UTEP and EPCC Community College (FCC). Surveys conducted during the first two years of the program showed that 90% of the time the participants felt the faculty and student mentors were supportive, encouraging, and able to respond to their questions and concerns. Ninety-two percent felt they received constructive, useful critiques of their field and research work, were motivated by the mentors to learn more, and were challenged to extend their abilities and skills for the success of their research projects. Over 94% had keeping them focused, the value of tours and other events, and the value of lab experiences) consistently had means within the lowest 25% of all questions. Lower means for several of these questions reflect the fact that few participants returned to their home institutions.

Evaluation of Participants’ Experiences

Project Effectiveness and Support Scale (PESS)

Mentoring Structure

Faculty Mentors (UTEP, EPCC, home institutions) Undergraduate Student Mentors

Evaluation of Participants’ Experiences

Mentor

Data analysis

Data collection

Project training

Supervision

Word cloud showing responses to question “What was the funniest joke of your ROCCS mentor that you have heard?” Words in blue were mentioned 50+ times and the smallest words were mentioned 2 times.

Where Are They Now?

2017-2018 ROCCS Participants

ROCCS class of 2017

ROCCS class of 2018

ROCCS class of 2019

Where are they now?

2017

2018

2019

2020

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Acknowledgements

All students are required to present at the AGU’s virtual poster session (VPS). One participant won third place for her 2018 VPS presentation. Fifteen participants have presented posters at GSA meetings (2017-2019) and 4 have presented at AGU meetings.

Student Mentors:

See poster session (189-5) for the student mentors’ summaries of how ROCCS has impacted them.

Faculty:

New field sites (for teaching and research)

New research projects for graduate students and other undergraduates

Exposure to new software

Enhances teaching methods

LESSONS LEARNED:

Two participants par student mentor was best ratio Significant time investment, for student mentors staying in campus housing it was a 24/7 job, for other student mentors and Rohrbaugh it was a 12 hrs/day, 7 days/week experience

Logistical support required 2-3 faculty

The ROCCS program is currently being revised to include a virtual component to the program.

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