Forging Pathways

Reflections on Year One of a Post-Transfer Pathways Program for Computing and Engineering Majors

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PROGRAM OBJECTIVES

TRANSFER SUCCESS ADVISING MODEL

- Develop and implement a model of transfer success advising (TSA) based on best practices that will serve students as they navigate the transfer application process and transition from the community college to a public research University.

TRANSFER SEMINAR CURRICULUM

- Develop, implement and evaluate first-year transfer seminar (TRS) courses for new transfer computing and engineering majors.

TRANSFER LEARNING COMMUNITY

- Develop and implement an active, collaborative, multi-institutional transfer learning community (TLC) to support long-term, data-driven change to improve transfer student success (especially underrepresented groups)

PRE- / POST-TRANSFER SURVEY

- Expand knowledge and empirical research about transfer students from community colleges majoring in computing and engineering.

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BACKGROUND

The Post-Transfer Pathways Program for Computing and Engineering Majors project seeks to develop, implement, and evaluate a program to support community college transfer students in their pursuit of a four-year STEM (computing or engineering) degree. Through this project, we generate empirical evidence about the impact of innovative models of transfer success advising and a first-year seminar on the transition as well as academic success and retention of transfer students majoring in computing and engineering from community colleges to research universities. In this poster we provide initial evidence of the impact of these seminars on students in the Fall 2017 cohort of the program. We also share knowledge about the use of inter-institutional collaboration structures and their impact on two and four-year institutions' efforts to improve the experiences and success of transfer students in computing and engineering majors. This presentation will focus on our successes, challenges, and insights gleaned from the first year of the Pathways project.

TRANSFER STUDENT SEMINAR

REFLECTIONS

"The Transfer Success Advisor and I discussed my options, such as transferring earlier or possibly working towards gaining my associate's through reverse rewarding. Her suggestions will most likely save me time and money in the future."
–Pre-transfer student from Howard Community College

"We had a good rapport in my (TRS sessions) and, now that I know those students, I am able to greet them in the hallway and build further connections. I think that this will be useful to both them and me when they take my classes later on."
–Faculty co-PI / TRS co-instructor from UMBC (Chemical Engineering)

"Make the class a necessary requirement. It was really helpful."
–UMBC transfer student in Fall 2017 Pathways TRS course (computing)

YEAR ONE OUTCOMES

- Five UMBC faculty members and two graduate student instructors collaborated to develop and implement the technical content for TRS courses in computing and engineering.
- Twenty-four new transfer students in computing and engineering majors were enrolled across the two TRS courses in Fall 2017.
- Two TLC meetings were held at UMBC (Spring and Fall 2017), with representation and engagement from all six partner community colleges.
- Faculty and staff participants in the TLC report that this network allows for ***improved understanding*** of transfer students' prior experiences and preparation, and ***opportunities to meet and develop relationships with key faculty and advising staff*** who can clarify transfer-related questions regarding computing and engineering programs.

KEY CHALLENGES

- Low response rate for first wave of pre-transfer survey; difficulty obtaining a captive audience of incoming transfer students in computing and engineering during orientation sessions.
- TRS course enrollment was lower than expected; designing relevant and attractive transition courses and aligning course content across computing majors (IS, BTA, CMSC, & CMPE) and engineering majors (ENCH & ENME).
- Identifying common concerns across partner community colleges and developing attainable goals for the TLC's collaborative work

LESSONS LEARNED

- For pre- and post- transfer survey, we amended our recruitment protocol to include an online informed consent process with our email outreach.
- For TRS course in computing, we shifted focus from transitional content to add more technical content, based on what was applicable to the needs of incoming transfer students in those majors.

UMBC Partners

- Center for Women in Technology
- Computer Science & Electrical Engineering
- Chemical, Biochemical, &
- Environmental Engineering
- Information Systems
- Mechanical Engineering
- Academic Engagement and Transition Programs

Maryland Community Colleges

- Anne Arundel Community College
- Community College of Baltimore County
- Harford Community College
- Howard Community College
- Montgomery College
- Prince George's Community College