



Biology Seminar

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<https://www.edmonds.edu/programs-and-degrees/areas-of-study/math-and-natural-sciences/biology/contact/gwen-shlichta.html>

Course-based Undergraduate Research Experience (CURE) at a community college may provide bridge between community college and R1 institution to support URM student retention in Biology research

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Increasing opportunities for undergraduate students to practice research, particularly underrepresented student populations in STEM, improves the recruitment and retention of these students because they are exposed to an authentic research environment in their required courses and learn valuable skills necessary for success in their discipline. Community colleges are an excellent venue for providing more inclusive access to research experiences because underrepresented minorities (URMs) account for almost half of all undergraduates attending community colleges. We report on a Course-based Undergraduate Research Experience (CURE) at Edmonds College (EdC),

a community college where students of color account for over 41% of enrollment. Although URM students are just as likely to enroll in Biology programs compared to other students, they do not graduate from these programs at the same rate. We have extended our CURE in the Introductory Biology for Science Majors series via collaborating on a research project aimed at investigating organismal responses to climate change with University of Washington (UW), where the majority of EdC students complete their degree. We aim to increase student's sense of belonging and retention in biology by using research experiences to provide a bridge between community colleges and R1 institutions. We share an overview of the current CURE that we have been implementing that focuses on the Pierid butterfly responses to recent climate change. The CURE consists of two modules, each of which involve students reading and discussing the historic studies, refining methods for experiments repeating the data collection, conducting and analyzing the data, and comparing their collected data to the initial data. We are providing opportunities for students to build on their CURE experience by participating in either short or long term research opportunities at UW. Members of the UW lab visit the EdC laboratory to actively engage with students on conducting research and attend student poster sessions and presentations to give students feedback and external validation for their research. EdC CURE participants continue to engage with the EdC and UW labs after their transfer through invitations to lab talks and attending the yearly symposium to enhance their sense of belonging in STEM. We plan to evaluate whether the CURE and associated research experiences ease transitions from a community college to R1 institution and increase retention in the Biology major and STEM careers, with particular emphasis on students from underrepresented populations.

Seminar Speaker Host: Lauren Buckley

