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Correlation Study: Student Success in Biochemistry as a Prerequisite for Integrated Pharmacology and Medicinal Chemistry

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Presenters

April Filter, Stacy Lin, Sydney Schultz, Rachel Anderson, Tori Twinem, Denise S. Simpson, and Melissa J. Beck



Research & Scholarship SYMPOSIUM

Correlation Study: Student Success in Biochemistry as a Prerequisite for Integrated Pharmacology and Medicinal Chemistry

Background: A rise in new schools of pharmacy has led to implementation of new curriculums. Pharmacy schools must adhere to standards set by the Accreditation Council of Pharmacy Education in order to provide knowledge of foundational sciences and prepare pharmacy students for the future. Prerequisites are typically foundational science courses taken early in the program so that students have the knowledge necessary to be excellent pharmacists. Within the Cedarville University School of Pharmacy, Biochemistry is a prerequisite course for Integrated Medicinal Chemistry and Pharmacology (PCoMedChem).

Objectives: The goal of this study is to determine if Biochemistry should remain a prerequisite course for Integrated Medicinal Chemistry and Pharmacology at Cedarville University under a TBL setting based on if student success in Biochemistry influences student success in PcoMedChem.

Methodology: The study will evaluate student individual and overall course grades for both Biochemistry and PcoMedChem. The data will include grades from the 2018-2021 cohorts of pharmacy students. Inclusion criteria consists of completion of Biochemistry and Integrated Medicinal Chemistry and Pharmacology. No exclusion of students exist because all student data will be evaluated. Students will complete a survey through Qualtrics regarding extracurricular commitments as well as perceptions towards the courses to supplement the findings and explain discrepancies.

Analysis: The demographics and students' perceptions will be compared in SPSS by analyzing frequency of responses. Using SPSS, the Wilcoxon test and Levene's test will be conducted followed by a Pearson or Spearman correlation, depending on distribution, in order to determine correlation between grades in Biochemistry and PcoMedChem. Additionally, an ANCOVA test will be used to analyze the data gathered from our survey. A p-value of 0.05 will be indicative of statistical significance.