

First-Year Retention Rates Higher for Students of ACUE Faculty at The University of Southern Mississippi

Students return in year two at higher rates after taking at least one course by ACUE faculty in their first year.

At The University of Southern Mississippi (USM), faculty began taking ACUE microcredential courses in Fall 2016. Given the phase-in of USM faculty who take ACUE courses over time, some students may take courses taught by ACUE faculty while others may not. This analysis focuses on two cohorts of first-year students at USM in academic years 2017–18 and 2018–19. Over these years, first-year students took courses taught by 62 ACUE faculty and 775 non-ACUE faculty. The analysis finds evidence that first-year students who took at least one course taught by an ACUE faculty had a higher likelihood of returning to USM in the subsequent academic years.

Key Findings

- **Retention:** First-year students who took at least one course taught by ACUE faculty were **significantly more likely to return** to USM in the subsequent academic year compared to first-year students who took no courses taught by ACUE faculty.
 - Taking at least one course taught by ACUE faculty was associated with a 1.33 times higher likelihood of returning the subsequent academic year, $p = .038$.
 - The higher likelihood corresponds to an increase in the probability of returning in the subsequent academic year from 66 to 70 percent, a 4-percentage point increase.
 - These results indicate that, controlling for student demographics, an estimated additional 139 students in total returned across both years than would have otherwise.
- **Dosage Effect:** The higher the proportion of courses that first-year students took with ACUE faculty, the **more likely they were to return** in the subsequent academic year, $p = .007$.
 - Analyses suggest that a change from 0 to 50% of courses taken with ACUE faculty is associated with a 5-percentage point increase in the probability of returning.
- **Estimated Return on Investment (ROI):** Using the retention results and additional information (see Methodology), we estimated the following ROI for ACUE faculty who taught first-year students in academic years 2017–18 and 2018–19: **861% ROI over 2 years.**



Increased likelihood of returning when the student takes 50% of their courses with ACUE faculty



Return on Investment

Methodology

This analysis focuses on two cohorts of first-year students at USM in academic years 2017–18 and 2018–19. The sample comprises 3,982 students. In 2017–18, there were 1,902 total first-year students (of which 1,562 were taught by at least one ACUE faculty). In 2018–19, there were 2,080 total first-year students (of which 1,914 were taught by at least one ACUE faculty).

The focus on first-year students helps to reduce the possibility of bias attributable to systematic sorting of students into courses taught by ACUE faculty. It is believed, however, that there was minimal potential for students to sort based on ACUE faculty status given the phase-in of faculty over time to taking ACUE microcredential courses.

To further mitigate bias, the model controls for the following student-level characteristics:

- Gender
- Race/ethnicity (White, Black, and “Other”)
- Age
- First generation status
- Pell recipient status
- ACT score
- High school GPA
- In-state/out-of-state status
- Major (STEM vs. non-STEM)
- Transfer credits
- Total credits attempted in students’ first year
- Whether a student was in USM’s Honors College or Lucky Day program
- Cohort

We calculate USM’s ROI for their ACUE partnership across the analysis years by dividing USM’s total additional net benefits (revenue minus costs) by the total cost of their investment in ACUE. A positive ROI therefore indicates a positive overall return while a negative ROI indicates a negative overall return.