

A Review of Undergraduate Preparation, Student Success, and Challenges across the Southeastern Conference Universities due to the COVID-19 Pandemic

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Abstract

At the 2021 Southeastern Conference (SEC) Annual Engineering Deans meeting, discussions took place around the academic preparation of incoming students, the success of current students in engineering and computer science programs, and the impact of the COVID-19 pandemic on student success. In advance of the meeting, a series of questions were provided to the deans and were answered by ten of the SEC institutions followed by robust discussions during the meeting. This extended abstract will include summary results without identifying any participating institution. In conclusion, the majority of institutions expressed concerns about the preparation of incoming and continuing students in foundational courses in mathematics, science and engineering courses. It is believed that the impact of COVID-19 will be felt over several years, and colleges are called upon to address various deficiencies to support student success.

Keywords

STEM, COVID-19, coronavirus, retention, graduation, student success, engineering, test optional

Introduction

Due to the pandemic, the majority of SEC universities changed their admissions policies to ‘test-optional’, no longer requiring the ACT or SAT, for the incoming first-year class in fall 2021. The limited availability of the ACT/SAT during the 2020-2021 academic year prevented many high school seniors from taking the exam. The researchers wanted to understand how this policy change impacted entering engineering students at SEC institutions, placement into mathematics courses, and additional opportunities offered to students who might place in a lower math than anticipated. Researchers asked SEC engineering deans if they were noticing recent increases in DFW rates in engineering, math, or science courses. Strategies to address any increases were discussed as well.

Results

Ten of the SEC engineering deans completed the survey providing a strong representative sample of institutions across the conference. All responding institutions went ‘test-optional’ for fall 2021 with only one engineering college requiring an ACT or SAT for entering students. The majority of SEC engineering colleges use the ACT or SAT to place students into their first mathematics course. Most institutions are using the ALEKS math placement test if a student lacks an ACT/SAT or would like to be placed into a higher math course. Two institutions are using a combination of high school grade point average and math courses taken in high school to place students into math courses. Seven colleges are seeing a large increase in the percentage of

students placing into College Algebra which places students on a five-year academic plan, ultimately increasing their cost of study. Several colleges are offering math bridge programs, mostly focused on historically underrepresented students. One institution is offering students three options to 'level-up' over the summer.

Across the SEC institutions, most colleges saw an increase in DFW rates in introductory and sophomore level engineering courses such as thermodynamics, statics, and dynamics due to the pandemic. Many colleges are beginning to offer supplemental instruction and tutoring for those high DFW rate courses.

Finally, engineering deans were asked if their institution stopped placing students on academic probation or suspension during the pandemic. The majority of institutions continued to place students on academic probation, however most of the institutions did not dismiss students. Concerns were voiced about a future increased dismissal rate as various academic policies return to a pre-COVID-19 state.

References

None

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