

FALL 2021 FIRST-TIME COHORT ONE-YEAR RETENTION BY MAC COURSE SEMESTER

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SUMMARY

Students who take a MAC Foundational course in their first fall or spring are more likely to retain into their second fall than those who do not take a MAC course at all during their first year. Retention rates for those who take the course in spring are higher than those who take the course in fall or who take it in both and spring. Overall retention into the first spring typically runs on average between 91% and 93% so a little less than 10% of the cohort has already dropped by the beginning of the spring semester. Perhaps the group that continues into spring is a little better academically prepared and thus more likely to retain anyhow, so one should caution against recommending that it is best to wait until spring to take the course. There is however strong evidence for taking the course sometime during the first year.

DATA

The population for this research was UNCG's first-time student cohort from Fall 2021. First-time cohorts consist of full-time, degree-seeking undergraduate students who are entering college for the first time. We refer to this cohort as the FTIC dataset. In the Fall of 2021 there were 2,513 first-time, full-time degree-seeking students. Students receiving an incomplete grade or who withdrew from their MAC course (n=43) were excluded from the analysis as they did not have the full treatment effect of participating and completing the course. This left three groups of students, ones who took a MAC Course in the fall only or fall and spring, those who took a MAC course in the spring only, and those who did not take any MAC foundational course in their first year.

METHODOLOGY

We used the FTIC dataset to test a model similar to the model we used in our academic profiles report (https://ire.uncg.edu/research/research_briefs/FirstYearCohortRetention.pdf). For this study, we included a race/ethnicity factor, a gender factor, a rural home factor, a first-generation college student factor, a Pell eligibility factor, high school GPA at admission, and credit hours attempted during the first fall term. These predictors served as covariates for the factor of interest: an indicator of whether a student took a MAC course in their first fall, first spring, or had not taken a MAC course yet. These variables were regressed on second Fall term retention.

RESULTS

Table 1 shows the population distribution by MAC course semester status. Students who took a MAC course in the fall or both the fall and spring were retained at 74.4 % and those who took a MAC course only in the spring

semester were retained at 80.9% both significantly higher than those who did not take the course at all in during their first year (66.5%).

TABLE 1. FALL 2021 ONE-YEAR RETENTION BY MAC COURSE SEMESTER

MAC Course Semester	N	Retained
Took MAC course in Fall or Fall & Spring	1,481	74.4%
Took MAC course in Spring Only	402	80.9%
Did not take MAC course in first year	327	66.5%
Excluded from analysis	43	23.3%

Table 2 provides the statistics based on the best logistic model for second fall term retention, showing only those predictors that were statistically significant. As has been found in prior research, students with a higher high school GPA and those who attempt more credit hours in their fall term were more likely to be retained into the second fall as were non-first-generation students. Of greater interest is the finding that MAC course takers were

TABLE 2. LOGISTIC REGRESSION RESULTS FOR FALL 2021 COHORT: ONE-YEAR RETENTION

Variable	Coefficient	Odds Ratio	Standard Error	p-value
Constant	-5.4389		0.6896	0.0004
High School GPA at Admission	1.3002	3.6700	0.1009	<.0001
1 st Generation vs Not 1 st Generation	-0.3538	0.7020	0.1018	0.0005
Hours attempted in 1 st fall	0.1188	1.1260	0.0390	0.0023
Took MAC course in Spring Only vs Never	0.7639	2.1470	0.1573	<.0001
Took MAC course in Fall or Fall & Spring vs Never	0.3491	1.4180	0.1242	0.0050

more likely to be retained into the second fall than were those that did not take any MAC courses during their first year. The odds of retention, having taken a MAC course in the spring term, were 2.15 times the odds of retention for those that did not take any MAC course their first year. Similarly, the odds of retention, having taken a MAC course in the fall alone or in both fall and spring, were 1.42 times the odds of retention for those that did not take any MAC course their first year.

IMPLICATIONS

The nature of the data and the type of analysis we performed does not allow us to address causality. That is, we cannot use the above to make any statements about retention rates being dependent upon MAC course participation. Without the ability to randomly assign students to particular MAC courses, or, to keep them from taking a MAC course, we are limited as to how we can control for other confounding factors that may influence retention, such as self-selection of more academically prepared students into particular MAC courses. Despite this, we believe that these results are of a magnitude that reflects a genuine beneficial effect of MAC participation on Fall retention.

If you have questions or comments about this brief, please contact: Mark Davenport at M_Davenport@uncg.edu