

Secondary Mathematics GACE Report
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Committee Members: Gregory Chamblee, Sharon Taylor

Report:

Where are GACE objectives taught in the program of study?

See attached file.

Are there gaps where GACE objectives are not taught in the program?

The 2 charts below represent the maximum and minimum number of **NOT** taught GACE objectives during a mathematics major's program of study. Georgia Southern University mathematics majors do not always begin their university mathematics coursework enrolling in the same initial course. Many students enroll in MATH 1441 Calculus I as their first university level mathematics courses. Table 1 notes the GACE objectives **NOT** taught in their program of study. Some students begin their mathematics major university coursework by enrolling in MATH 1111 College Algebra. Table 2 notes the GACE objectives **NOT** taught in their program of study.

Table 1. GACE Objectives **NOT** Taught for Students Whose First University Mathematics Course is MATH 1441 Calculus I

Strand	Objectives Not Taught
Number Concepts and Operations	8 out of 9
Algebra	11 out of 20
Precalculus and Calculus	9 out of 18
Geometry and Measurement	1 out of 19
Data Analysis and Probability	0 out of 16
Mathematical Processes and Perspectives	5 out of 13

Table 2. GACE Objectives **NOT** Taught for Students Whose First University Mathematics Course is MATH 1111 College Algebra

Strand	Objectives Not Taught
Number Concepts and Operations	6 out of 9
Algebra	4 out of 20
Precalculus and Calculus	1 out of 18
Geometry and Measurement	1 out of 19
Data Analysis and Probability	0 out of 16
Mathematical Processes and Perspectives	5 out of 13

We note that some students may enroll in either MATH 1112 Trigonometry or MATH 1113 Precalculus as their first mathematics course. The number of **NOT** taught GACE objectives experienced will fall between the 2 charts noted above.

What program and/or course changes need to occur for GACE objectives to be adequately taught in the program?

We make the following recommendation:

1. Students who want to be secondary mathematics teachers need to enroll in an upper-division MATH course that will count towards their major course requirements. The course needs to be offered at a minimum on a two-year rotation cycle. This course needs to focus on:

- having students draw connections between MATH 1111, 1112, 1113, 1441, 2242, 2243, 3130, 3337 and STAT 5531 and the secondary mathematics classroom and
- providing students with opportunities to tutor and teach mathematics topics (i.e. review sessions, etc.) that students in the core typically enroll in at Georgia Southern University.

2. Students need to be asked to solve more open-ended problems as part of their coursework. More specifically, content tasks that will help students solve/better understand the process of solving the (1) algebra, (2) pre-calculus & calculus, (3) geometry and measurement, and (4) data analysis and probability constructed-response GACE items.