Q1.
Please complete the program assessment plan. The format is similar to the one for the 2016 plans. If you need assistance, please contact the Office of Assessment. You can enter the data and return to complete, using the same computer and original link. Once you submit, that action is final. You will receive a copy of your submittal.
Be sure to review academic program outcomes for appropriate rigor (Bloom's taxonomy) and assessable results. Avoid vague or general statements that cannot be quantified or measured.
The update of Academic Program Assessment Plans (AY 2019-2021) are due by September 30, 2019.

Q2. Person completing the report

Beth Schaefer

Q3. Email address of person completing the report

schaeferb@georgian.edu

Q4. Program Name

Mathematics

Q5. School or Department

- ◉ School of Arts and Sciences
- ◯ School of Business and Digital Media
- ◯ School of Education
- ◯ other, please specify

Q6. Level of Program

- ◉ Undergraduate Major
- ◯ Graduate-Masters
- ◯ Graduate-certificate only
- ◯ Undergraduate-University wide
- ◯ other, please specify

Q7. Assessment Plan for years

- ◉ Fall 2019 through Fall 2022
- ○ Fall 2020 through Fall 2023
- ○ Fall 2021 through Fall 2024

Q8. Indicate the name of the major(s), minor(s), and the associated degree(s) for this academic program.

Major(s)	Mathematics
Degree(s)	BA
Minor(s)	Mathematics

Q9. **State your learning outcomes**

☑ Learning Outcome (LO) 1
> Students will perform, understand, and apply the properties of mathematical operations throgh assignments and testing in the program's core coursework

☑ Learning Outcome (LO) 2
> Students will produce solutions of real world and theoretical problems in a precise and logical fashion and identify key mathematical structures through assignments, presentations and testing in the program's core coursework

☑ Learning Outcome (LO) 3
> Students will communicate effectively orally and in writing and develop skills for productive teamwork through assignments/projects, presentation and testing in the program's core coursework

☑ Learning Outcome (LO) 4
> Students will use computer-aided technology to visualize mathematical graphs and functions, and support problem solving with accuracy, be facile with technology usage and functions, and be discriminate in the use of programming and applications, as evidence in assignments, presentations, and testing in the program's core coursework

☐ Learning Outcome (LO) 5
>

Q10. **Related USLG-Undergraduate Student Learning Goals. Align the program learning outcomes stated above with the associated USLG.**

	Foundational Knowledge of Human Cultures and the Physical and Natural World	Intellectual and Practical Skills	Personal and Social Responsibility	Integrative Learning	Mastery of a Defined Body of Knowledge at a Baccalaureate Level
Learning Outcome 1	☑	☐	☐	☐	☑
Learning Outcome 2	☐	☑	☐	☐	☐
Learning Outcome 3	☐	☐	☐	☑	☐
Learning Outcome 4	☐	☐	☐	☐	☐

Learning Outcome 5 ☐ ☐ ☐ ☐ ☐

Q11. **Related GSLG-Graduate Student Learning Goals. Align the learning outcomes stated above with the associated GSLG.**

This question was not displayed to the respondent.

Q12. **Related BRIDGE-General Education Goals**

This question was not displayed to the respondent.

Q13. **Related Accreditation Standard** *(if applicable)*

☐ Learning Outcome (LO) 1

☐ Learning Outcome (LO) 2

☐ Learning Outcome (LO) 3

☐ Learning Outcome (LO) 4

☐ Learning Outcome (LO) 5

Q14. **Course Mapping**. Program Courses and Experiential Learning mapping to Program Outcomes. Map **all** program courses to the program's learning outcomes here. List courses with short catalog name, i.e. EN101. Please check to see if all program courses are mapped to at least one program outcome.

How do students learn this? In what course(s) and/or co-curricular experience(s)?

☑ Learning Outcome (LO) 1
MA115, MA116, MA209, MA210, MA215, MA218, MA331, MA400, MA401

☑ Learning Outcome (LO) 2
MA115, MA116, MA209, MA215, MA321, MA331, CS123

☑ Learning Outcome (LO) 3
MA210, MA215, MA311, MA312, MA312, MA321, MA400, MA401

☑ Learning Outcome (LO) 4
MA115, MA116, MA209, MA331, CS123

☐ Learning Outcome (LO) 5

Q15.
 Formative Assessment will occur in.....

(Designate the selected course from above mapping where evidence will be collected.)

- ☑ Learning Outcome (LO) 1
  > MA115

- ☑ Learning Outcome (LO) 2
  > MA116

- ☑ Learning Outcome (LO) 3
  > MA210

- ☑ Learning Outcome (LO) 4
  > MA115 and CS123

- ☐ Learning Outcome (LO) 5
  >

Q16.
Summative Assessment will occur in.....
(Designate the selected course from above mapping where evidence will be collected.)

- ☑ Learning Outcome (LO) 1
  > MA401

- ☑ Learning Outcome (LO) 2
  > MA331

- ☑ Learning Outcome (LO) 3
  > MA401 and MA312

- ☑ Learning Outcome (LO) 4
  > MA331

- ☐ Learning Outcome (LO) 5
  >

Q17. **Assessment Protocol.** How and when do you assess the achievement of all students in your program before they graduate and record the results of your assessment.

Formative Assessment

	LO 1	LO 2	LO 3	LO 4	LO 5
Direct Evidence	Fall 2019 Selected class assignments evaluated by rubric and content analysis	Spring 2020 Test-embedded questions that measure student solutions of real-world problems, evaluated by rubric and content analysis	Spring 2021 Selected class assignemtns evaluated by rubric and content analysis	Fall 2021 In-class technology based assignment evaluated by a rubric	
Indirect Evidence	Analysis of DFW rates and student's rates of program and degree completion and time frame	Analysis of DFW rates and student's rates of program and degree completion and time frame	Analysis of DFW rates and student's rates of program and degree completion and time frame	Analysis of DFW rates and student's rates of program and degree completion and time frame	

Q18. **Assessment Protocol**. How and when do you assess the achievement of all students in your program before they graduate and record the results of your assessment.

Summative Assessment

	LO 1	LO2	LO3	LO4	LO5
Direct Evidence	Fall 2019 Final exam evaluated related to program content using Departmental approved rubric	Spring 2020 Final exam related to program content evaluated using Departmental approved rubric	Fall 2020, Spring 2021 Final exam related to program content evaluated using Departmental approved rubric	Fall 2021 Semester project that measures technological competence and evaluated by department-approved rubric	
Indirect Evidence	Analysis of DFW rates and student's rates of program and degree completion and time frame	Analysis of DFW rates and student's rates of program and degree completion and time frame	Analysis of DFW rates and student's rates of program and degree completion and time frame	Analysis of DFW rates and student's rates of program and degree completion and time frame	

Q19. **What do you consider satisfactory achievement of this outcome? Why?**

Formative Assessment

	LO 1	LO2	LO3	LO4	LO5
Direct Evidence Benchmark	75% of students achieve at or above the developing level. Content analysis shows 75% of identified objectives are correctly answered by at least 60% of students.	75% of students achieve at or above the developing level. Content analysis shows 75% of identified objectives are correctly answered by at least 60% of students.	75% of students achieve at or above the developing level. Content analysis shows 75% of identified objectives are correctly answered by at least 60% of students.	80% of students achieve at or above the developing level in all rubric criteria	
Indirect Evidence Benchmark	DFW rates below 15%, student's rate of program and degree completion and time frame for such meets or exceeds the university's average	DFW rates below 15%, student's rate of program and degree completion and time frame for such meets or exceeds the university's average	DFW rates below 15%, student's rate of program and degree completion and time frame for such meets or exceeds the university's average	DFW rates below 15%, student's rate of program and degree completion and time frame for such meets or exceeds the university's average	

Q20. **What do you consider satisfactory achievement of this outcome? Why?**

Summative Assessment

	LO 1	LO2	LO3	LO4	LO5

Direct Evidence Benchmark	Content analysis shows 75% of identified objectives are correctly identified by at least 0% of students	Content analysis shows 75% of identified objectives are correctly identified by at least 0% of students	Content analysis shows 75% of identified objectives are correctly identified by at least 0% of students	80% of students achieve at or above the accomplished level in all relevant rubric criteria	
Indirect Evidence Benchmark	DFW rates below 15%, student's rate of program and degree completion and time frame for such meets or exceeds the university's average	DFW rates below 15%, student's rate of program and degree completion and time frame for such meets or exceeds the university's average	DFW rates below 15%, student's rate of program and degree completion and time frame for such meets or exceeds the university's average	DFW rates below 15%, student's rate of program and degree completion and time frame for such meets or exceeds the university's average	

Q21. **Program Assessment Time Frame:** Time Frame for Assessing the outcome.
Indicate the year of the plan where the data will be analyzed. Also indicate if data will be collected annually. This is helpful for gathering assessment artifacts from small classes or groups.

	Year 1 of Plan	Year 2 of Plan	Year 3 of Plan	Data collected annually
Learning Outcome 1	✔	☐	☐	☐
Learning Outcome 2	☐	✔	☐	☐
Learning Outcome 3	☐	✔	☐	☐
Learning Outcome 4	☐	☐	✔	☐
Learning Outcome 5	☐	☐	☐	☐

Location Data

Location: (40.088104248047, -74.196296691895)

Source: GeoIP Estimation