Mathematics, B.S.

2024–25 Catalog

Academic Advising Center
2nd Floor Lanier Hall
478-445-2361
advising@gcsu.edu

The example four-year plan is designed to provide a blueprint for students to complete their degrees within four years. These plans include recommended sequences of courses. Individual plans will vary based on previously earned credit, such as Dual Enrollment and AP credit, as well as the student's academic goals. Students will work with an academic advisor to develop a more individualized plan to complete their degree.

This example four-year plan is applicable to students admitted during the 2024–25 academic year.

Total Credits Required: 120 credits
Required GPA for Graduation: 2.0 (institutional)

Courses requiring a C or better are denoted with an asterisk (*). Courses only offered in the fall semester are denoted with a plus sign (+). Courses only offered in the spring semester are denoted with a double-plus sign (++).
Legend is available on the last page of this document.

Year 1							
Fall				**Spring**			
Course	**Title**	**Hours**	**Area**	**Course**	**Title**	**Hours**	**Area**
MATH 0001	First-Year Academic Seminar	1		ENGL 1102	English Composition II	3	Core
ENGL 1101*	English Composition I (pre-req to ENGL 1102)	3	Core	MATH 2150*	Linear Algebra (pre-req to MATH 4989)	3	Field
MATH 1261*	Calculus I (pre-req to MATH 1262, 1401, and 2150, and PHYS 2211/2211L)	4	Core + Field	MATH 1262*	Calculus II (pre-req to MATH 2263, MATH 3030, and PHYS 2212/2212L)	4	Field
CSCI 1301*	Computer Science I (pre-req to CSCI 1302)	3	Core + Cognate	CSCI 1302*	Computer Science II	3	Field + Cognate
POLS 1101	American Government	3	Core	GC1Y 1000	Critical Thinking (student's choice) (pre-req to GC2Y 2000)	3	Core
	Total Semester Hours:	**14**			**Total Semester Hours:**	**16**	
Summer	Students who start with MATH 1113: Pre-Calculus should consider taking MATH 1262 in the summer of Year 1.						
Notes:	ENGL 1101, ENGL 1102, MATH 1261 (or MATH 1113), and GC1Y 1000 must be completed by 30 earned hours. First-Year Academic Seminar is a graduation requirement and impacts a student's GPA; however, it does not count toward the minimum of 120 semester hours required for a degree.						

Year 2							
Fall				**Spring**			
Course	**Title**	**Hours**	**Area**	**Course**	**Title**	**Hours**	**Area**
MATH 2263*	Calculus III (pre-req to MATH 4261, 4300, 4340, and 4989)	4	Field	MATH 4340*++	Differential Equations	3	Major
MATH 3030*	Foundations of Mathematics (pre-req to MATH 4081, 4110, 4261, 4300, 4510, and 4989)	3	Major	MATH 4510*++	Geometry (pre-req to MATH 4081 and 4261)	3	Major
MATH 1401*	Elementary Statistics	3	Cognate	GC2Y 2000	Global Perspectives (student's choice)	4	Core
Core Humanities	Humanities and Ethics (student's choice)	3	Core	Core Art	Fine Arts (student's choice)	3	Core
Lang 1001*	World Language I (1001-level)	3	Field	Lang 1002*	World Language II (1002-level)	3	Field
	Total Semester Hours:	**16**			**Total Semester Hours:**	**16**	
Summer	GC2Y 2000 can be completed as part of a study abroad program in the summer.						
Notes:	Students must complete a world language course at the 1002 level or higher. Complete the WebCAPE exam to determine placement for first course. GC2Y 2000 must be taken between 30–59 earned hours.						

Year 3							
Fall				**Spring**			
Course	**Title**	**Hours**	**Area**	**Course**	**Title**	**Hours**	**Area**
MATH 4110*+	Number Theory (pre-req to MATH 4081 and 4261)	3	Major	MATH 4261*++	Mathematical Analysis I	3	Major
MATH 4300*+	Complex Variables	3	Major	MATH 4989*	Intro to Research in Math (pre-req to MATH 4990)	1	Major
CHEM 1211K* or PHYS 2211* + PHYS 2211L*	Principles of Chemistry I & Lab (pre-req to CHEM 1212K) or Introductory Physics I & Lab (pre-reqs to PHYS 2212/2212L)	4	Core + Cognate	CHEM 1212K* or PHYS 2212* + PHYS 2212L*	Principles of Chemistry II & Lab or Introductory Physics II & Lab	4	Core + Cognate
HIST 2111 or HIST 2112	The United States to 1877 or The United States Since 1877	3	Core	Core Social Science	Social Science (student's choice)	3	Core
Gen Elective	Any general elective course	3	Elective	Gen Elective	Any general elective course	3	Elective
	Total Semester Hours:	**16**			**Total Semester Hours:**	**14**	
Notes:	Students must secure a research advisor and arrange registration for MATH 4989 in the spring of Year 3. At least one 4000-level MATH class must be completed before taking MATH 4989. General electives can be in any discipline and any level (1000–4999).						

Year 4							
Fall				**Spring**			
Course	**Title**	**Hours**	**Area**	**Course**	**Title**	**Hours**	**Area**
MATH 4990*	Senior Project	3	Major	MATH Elective*	4000-level MATH elective	3	Major
MATH 4081*+	Abstract Algebra I	3	Major	Upper-Level Gen Elective	3000- or 4000-level general elective	3	Elective
Upper-Level Gen Elective	3000- or 4000-level general elective	3	Elective	Upper-Level Gen Elective	3000- or 4000-level general elective	3	Elective
Upper-Level Gen Elective	3000- or 4000-level general elective	3	Elective	Gen Elective	Any general elective course	3	Elective
Gen Elective	Any general elective course	3	Elective	Gen Elective	Any general elective course	3	Elective
	Total Semester Hours:	**15**			**Total Semester Hours:**	**15**	
Notes:	MATH 4990 is a continuation of the capstone experience and should immediately follow MATH 4989. Arrangements for registration should be coordinated through your research advisor. One 4000-level MATH elective will be offered per year. Students are advised to take a 4000-level MATH elective when it is offered (provided they meet the prerequisite). General electives can be in any discipline and any level (1000–4999, unless specified as upper-level).						

Legend	
Area	**This section of the plan references the area of the curriculum the course fulfills.**
Core	Core IMPACTS — coursework required for every student regardless of major, which includes the following areas: **I**nstitutional Priority (GC1Y 1000 and GC2Y 2000); **M**athematics and Quantitative Skills; **P**olitical Science and U.S. History; **A**rts, Humanities, and Ethics; **C**ommunicating in Writing; **T**echnology, Mathematics, and Sciences; and **S**ocial Sciences.
Field	Core Field of Study courses, part of each major's requirements. These courses prepare students for further study in their chosen major field. Field of Study courses are specific to each major program.
Major	Mathematics Major requirements
Cognate	Cognate courses are required courses within a student's curriculum. These courses are connected to the major but may be from other academic disciplines.
Elective	Course(s) a student selects. Hours are needed to meet overall graduation hours. Number of electives varies per major. Electives can be used towards GC Journeys, minors, or professional/graduate school pre-requisites, or to take courses of interest.