

## ABOUT THE MAJOR

The Bachelor of Science degree program has multiple tracks, each designed for specific career goals. The student's advisor will help the student choose the best track, based on the student's interests. This track is designed to offer students a solid background in applied mathematics, prepare them for employment in government agencies such as communications, national security, and computer-related fields or industry such as engineering or computational types of work. It also prepares students for further study in mathematics.

## ABOUT THIS MAP

This program map is intended ONLY as a guide for students to plan their course of study. It does NOT replace any information in the Undergraduate Catalog, which is the official guide for completing degree requirements. Use this map to help plan and guide your experience at UWG, including academic, co-curricular, and discovery opportunities. Everyone's experience is different and activities in this map are suggestions. Always consult with your advisors whenever possible for new opportunities and updates.

### WHERE CAN YOU GO WITH THIS DEGREE?

- Actuary
- Auditor
- Civil Engineer
- Computer Programmer
- Economist
- Financial Analyst
- Mathematician
- Mathematics Teacher
- Operations Analyst
- Scientist

### ADD A CERTIFICATE

- Communication in the Workplace
- Data Analytics
- Data Science

# MATHEMATICS

## APPLIED MATHEMATICS

*Bachelor of Science*

# 60

CORE CREDIT HOURS

# 36

MAJOR CREDIT HOURS

# 24

ELECTIVE CREDIT HOURS

Visit [westga.edu/program-maps](https://westga.edu/program-maps) for the latest version of this major map.



VISIT WOLFWATCH  
FOR MORE  
INFORMATION.



HAVE A QUESTION?  
CHECK IN WITH  
YOUR ADVISOR!



UNIVERSITY OF WEST GEORGIA

2023-2024

**TERM 1: FALL**

**A1: ENGL 1101** **3** CREDIT HOURS  
English Composition I

**A2: MATH 1113** **4** CREDIT HOURS  
Precalculus

**B2: XIDS 2002** **2** CREDIT HOURS  
(Recommended) First-Year Seminar

**E3: POLS 1101** **3** CREDIT HOURS  
American Government

**C1: FINE ARTS** **3** CREDIT HOURS

- MILESTONES:
- COMPLETE ENGL 1101 WITH C OR BETTER
  - COMPLETE MATH 1113 WITH C OR BETTER

**TERM 2: SPRING**

**A1: ENGL 1102** **3** CREDIT HOURS  
English Composition II

**D2: MATH 1634** **4** CREDIT HOURS  
Calculus I

**F: CS 1300** **4** CREDIT HOURS  
Introduction to Computer Science

**E2: HIST 2111 OR 2112** **3** CREDIT HOURS  
US History

**MATH 2009** **1** CREDIT HOUR  
Sophomore Seminar

- MILESTONES:
- COMPLETE A1 REQUIREMENT
  - COMPLETE MATH 1634 WITH C OR BETTER

**15 FALL CREDIT HOURS + 15 SPRING CREDIT HOURS = 30 CREDIT HOURS**

**CRUSH YOUR COURSEWORK**

- Focus on the core courses to build your foundation.
- Take MATH 1113 and 1634 right away.
- Complete ENGL 1101 and 1102.

**FIND YOUR PLACE**

- Explore campus resources, including the Writing Center, STEM Tutoring Center, etc.
- Explore clubs and organizations that are available to you.
- Visit the Office of Undergraduate Research.

**BROADEN YOUR PERSPECTIVES**

- Explore diversity, equity, and inclusion resources and opportunities across campus.
- Check out the education abroad office.

**CONNECT OFF-CAMPUS**

- Visit Wolves Vote to learn about the voting process and registration.
- Consider volunteering for a campaign or organization in your community.

**TAKE CARE OF YOURSELF**

- Visit the UWG Wellness Hub to find all the resources available to you!
- Visit Health Services.
- Get fit! Visit URec to see all your options.
- Visit the Center for Economic Education and Financial Literacy.

**PAVE YOUR PATH**

- Complete a self-assessment to see what careers and majors are right for you.
- Visit Office of Career and Graduate School Connections.
- Create your profile on Handshake.
- Consider applying for an on-campus job.

**TERM 1: FALL**

**F: MATH 2644** **4** CREDIT HOURS  
Calculus II

**F: MATH 2853** **3** CREDIT HOURS  
Elementary Linear Algebra

**CS 1301** **4** CREDIT HOURS  
Computer Science I

**B1: ORAL COMMUNICATION** **3** CREDIT HOURS

- MILESTONES:
- COMPLETE CALCULUS II & CS REQUIREMENT
  - COMPLETE MATH 2644 WITH C OR BETTER

**TERM 2: SPRING**

**F: MATH 2654** **4** CREDIT HOURS  
Calculus III

**MATH 3003** **3** CREDIT HOURS  
Transition to Advanced Mathematics

**C2: HUMANITIES** **3** CREDIT HOURS

**D1: SCIENCE + LAB** **4** CREDIT HOURS

- MILESTONE:
- COMPLETE CALCULUS SEQUENCE & D1 REQUIREMENT

**14 FALL CREDIT HOURS + 14 SPRING CREDIT HOURS = 28 CREDIT HOURS**

**CRUSH YOUR COURSEWORK**

- Complete MATH 2644, 2853, 3003 so that you are able to take advanced math courses.
- Identify and take courses in the track of your major.
- Complete other core courses.

**FIND YOUR PLACE**

- Discuss career tracks with your faculty mentor.
- Explore summer REU programs and other undergraduate research opportunities with faculty members.
- Attend events organized by Math Club.
- Attend UWG Scholars' Day.

**BROADEN YOUR PERSPECTIVES**

- In a student organization? Suggest you all complete an implicit bias workshop.
- Consider a study abroad program. Check out students' stories of their experiences.

**CONNECT OFF-CAMPUS**

- Complete an internship in your field.
- Consider a summer or part-time job.
- Ask your department about networking opportunities with alumni.

**TAKE CARE OF YOURSELF**

- Take a fitness class, climb the rock wall, or join an intramural team.
- Consider whether counseling is right for you: take a mental health screening.

**PAVE YOUR PATH**

- Draft your resume and attend a resume blitz.
- Learn about how to network on social media and update your Handshake profile.
- Draft your personal statement.
- Visit the graduate school to find out about graduate programs and admission requirements.

**TERM 1: FALL**

<b>MATH 3243</b> Advanced Calculus	<b>3</b> CREDIT HOURS
<b>MATH 3303</b> Ordinary Differential Equations	<b>3</b> CREDIT HOURS
<b>MATH 4013</b> Numerical Analysis	<b>3</b> CREDIT HOURS
<b>D1: SCIENCE + LAB</b>	<b>4</b> CREDIT HOURS
<b>E4: SOCIAL SCIENCE</b>	<b>3</b> CREDIT HOURS

**TERM 2: SPRING**

<b>MATH 4353</b> Complex Analysis	<b>3</b> CREDIT HOURS
<b>MATH 4473</b> Combinatorics	<b>3</b> CREDIT HOURS
<b>MATH 4513</b> Linear Algebra I	<b>3</b> CREDIT HOURS
<b>DIRECTED ELECTIVE I</b>	<b>3</b> CREDIT HOURS
<b>ELECTIVE</b>	<b>3</b> CREDIT HOURS

**16 FALL CREDIT HOURS + 15 SPRING CREDIT HOURS = 31 CREDIT HOURS**

**CRUSH YOUR COURSEWORK**

- Complete MATH 2644, 2853, 3003 so that you are able to take advanced math courses.
- Identify and take courses in the track of your major.
- Complete other core courses.

**FIND YOUR PLACE**

- Discuss career tracks with your faculty mentor.
- Explore summer REU programs and other undergraduate research opportunities with faculty members.
- Attend events organized by Math Club.
- Attend UWG Scholars' Day.

**BROADEN YOUR PERSPECTIVES**

- In a student organization? Suggest you all complete an implicit bias workshop.
- Consider a study abroad program. Check out students' stories of their experiences.

**CONNECT OFF-CAMPUS**

- Complete an internship in your field.
- Consider a summer or part-time job.
- Ask your department about networking opportunities with alumni.

**TAKE CARE OF YOURSELF**

- Take a fitness class, climb the rock wall, or join an intramural team.
- Consider whether counseling is right for you: take a mental health screening.

**PAVE YOUR PATH**

- Draft your resume and attend a resume blitz.
- Learn about how to network on social media and update your Handshake profile.
- Draft your personal statement.
- Visit the graduate school to find out about graduate programs and admission requirements.

**TERM 1: FALL**

<b>MATH 4363</b> Partial Differential Equations	<b>3</b> CREDIT HOURS
<b>MATH 4413</b> Abstract Algebra I	<b>3</b> CREDIT HOURS
<b>DIRECTED ELECTIVE II</b>	<b>3</b> CREDIT HOURS
<b>ELECTIVE</b>	<b>3</b> CREDIT HOURS
<b>ELECTIVE</b>	<b>3</b> CREDIT HOURS

**TERM 2: SPRING**

<b>E1: HIST 1111 OR 1112</b> World History	<b>3</b> CREDIT HOURS
<b>MATH 4483</b> Graph Theory	<b>3</b> CREDIT HOURS
<b>MATH 4983</b> Senior Project	<b>1</b> CREDIT HOUR
<b>DIRECTED ELECTIVE III</b>	<b>3</b> CREDIT HOURS
<b>ELECTIVE</b>	<b>3</b> CREDIT HOURS
<b>ELECTIVE</b>	<b>3</b> CREDIT HOURS

**MILESTONE:**  
• COMPLETE ALL 120 CREDIT REQUIREMENT

**15 FALL CREDIT HOURS + 16 SPRING CREDIT HOURS = 31 CREDIT HOURS**

**CRUSH YOUR COURSEWORK**

- Complete other major courses that fit with your career goals and elective in other disciplines.
- Complete the required senior project.
- Explore internship opportunities.

**FIND YOUR PLACE**

- Hone your leadership skills in clubs/organizations
- Ask about undergraduate research conference and presentation opportunities.
- Explore job opportunities and/or apply to graduate school.

**BROADEN YOUR PERSPECTIVES**

- Assess your cultural competency.
- Consider working abroad and research visa regulations.
- Explore practices of creating more inclusive careers.

**CONNECT OFF-CAMPUS**

- Ask for advice from professionals in your field of interest.
- Explore career shadowing opportunities.

**TAKE CARE OF YOURSELF**

- Explore a farmer's market for fresh produce.
- Develop a post-graduation exercise plan.
- Explore your loan repayment options and complete your exit counseling.

**PAVE YOUR PATH**

- Request references from professors and supervisors.
- Draft your resume cover letter and personal statement and revise it with career services.
- Attend business fairs and career fairs at UWG and across the state.
- Attend an interview workshop.
- Apply for graduate programs.