

## ABOUT THE MAJOR

The B.S. in Chemistry degree offers greater concentration in chemistry than the B.A. degree option and is recommended for those students planning careers in chemical industry or engineering or for those who plan to pursue graduate study. A senior research thesis and seminar is required and designed to introduce students to modern advanced techniques and approaches to chemical research in conjunction with a faculty advisor. The Bachelor of Science with a Major in Chemistry degree (ACS Track) is approved by the Committee on Professional Training of the American Chemical Society (ACS). This formal recognition means that the department has the faculty, curriculum and the instrumentation necessary to provide a quality education for undergraduate students. Graduates of this approved program are certified by the American Chemical Society.

## 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?

- Analytical Chemist
- Chemical Engineer
- Geochemist
- Hazardous Waste Chemist
- Organic Chemist
- Pharmacologist
- Quality Control Chemist
- Synthetic Chemist
- Toxicologist
- Water Chemist

### ADD A CERTIFICATE

- Atmospheric Science
- Forensic Sciences
- Stream Restoration
- Wildlife Ecology

# CHEMISTRY

## ACS GENERAL TRACK / PRECALCULUS START

*Bachelor of Science*

# 60

CORE CREDIT HOURS

# 42

MAJOR CREDIT HOURS

# 18

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  
First-Year Seminar

**F: CHEM 1211 + LAB** **4** CREDIT HOURS  
Principles of Chemistry I

**B1, C, OR E** **3** CREDIT HOURS

- MILESTONES:
- COMPLETE ENGL 1101 WITH C OR BETTER.
  - COMPLETE MATH 1113 AND CHEM 1211 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: CHEM 1212 + LAB** **4** CREDIT HOURS  
Principles of Chemistry II

**B1, C, OR E** **3** CREDIT HOURS

- MILESTONES:
- COMPLETE ENGL 1102 WITH C OR BETTER
  - COMPLETE CHEMISTRY II WITH B OR BETTER

**16 FALL CREDIT HOURS + 14 SPRING CREDIT HOURS = 30 CREDIT HOURS**

**CRUSH YOUR COURSEWORK**

- Choose Concentration (ACS track recommended).

**FIND YOUR PLACE**

- Connect with your faculty mentor.
- Join clubs (Chemistry Association or Emerging Healthcare Leaders recommended).

**BROADEN YOUR PERSPECTIVES**

- Look at the Chemistry Careers page on the American Chemical Society's webpage.

**CONNECT OFF-CAMPUS**

- Sign up for Handshake through Career Services.

**TAKE CARE OF YOURSELF**

- Look into on-campus self-care and stress resources especially Campus Center, Health Services, and Counseling Center.
- Find study buddies.
- Go to events, have fun (balance time between study, work, and fun).

**PAVE YOUR PATH**

- Look at the Careers page on the American Chemical Society's webpage.

**TERM 1: FALL**

**F: CHEM 2411 + LAB** **4** CREDIT HOURS  
Organic Chemistry I

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

**CHEM 2130** **1** CREDIT HOUR  
Sophomore Chemistry Seminar

**D1: PHYS 2211 + LAB** **4** CREDIT HOURS  
Introductory Principles of Physics I

**B1, C, OR E** **3** CREDIT HOURS

- MILESTONE:
- EXPLORE RESEARCH PROJECTS/PROFESSORS

**TERM 2: SPRING**

**CHEM 3422 + LAB** **4** CREDIT HOURS  
Organic Chemistry II

**D1: PHYS 2212 + LAB** **4** CREDIT HOURS  
Introductory Principles of Physics II

**B1, C, OR E** **3** CREDIT HOURS

**ELECTIVE** **3** CREDIT HOURS

- MILESTONE:
- COMPLETE ORGANIC II AND PHYSICS II BY THE END OF YEAR 2.

**16 FALL CREDIT HOURS + 14 SPRING CREDIT HOURS = 30 CREDIT HOURS**

**CRUSH YOUR COURSEWORK**

- Take Sophomore Seminar.
- Complete Organic Chemistry sequence.
- Complete Analytical Chemistry.
- Complete other supporting courses (see Advisor to have a clear roadmap).

**FIND YOUR PLACE**

- Join a research group or seek for student employment (workshop leader, laboratory assistant).
- Attend program/department/college events.
- Attend senior research presentations and on-campus conferences.
- Study and hang out in the student lounge (TLC 2116).

**BROADEN YOUR PERSPECTIVES**

- Explore internships or part-time jobs in career-related areas (industry, pharmacy, etc).
- Explore summer internships or REU programs.
- Explore volunteer opportunities with a club or in career-related areas.

**CONNECT OFF-CAMPUS**

- Sign up for Handshake through Career Services.
- Create an account in LinkedIn.
- Talk to alumni guest speakers and make connections.

**TAKE CARE OF YOURSELF**

- Talk to your faculty mentor.
- Look into on-campus self-care and stress resources especially Campus Center, Health Services, and Counseling Center.
- Find study buddies.
- Go to events, have fun (balance time between study, work, and fun).

**PAVE YOUR PATH**

- Write preliminary resume.
- Seek for resume-building opportunities related to your career goal (employment, research, activities, volunteering).

**TERM 1: FALL**

**CHEM 3310K** 4 CREDIT HOURS  
Analytical Chemistry

**CHEM 35XX** 3 CREDIT HOURS  
Physical Chemistry (see note below)

**CHEM 4083** 1 CREDIT HOUR  
Faculty Directed Research

**B1, C, OR E** 3 CREDIT HOURS

**ELECTIVE** 3 CREDIT HOURS

**MILESTONE:**  
• CHEM 3310K MAY BE TAKEN IN YEAR 2 SUMMER

**TERM 2: SPRING**

**CHEM 4711** 3 CREDIT HOURS  
Biochemistry

**CHEM 4330K** 4 CREDIT HOURS  
Instrumental Analysis

**CHEM 35XX** 3 CREDIT HOURS  
Physical Chemistry (see note below)

**CHEM 4083** 1 CREDIT HOUR  
Faculty Directed Research

**ELECTIVE** 3 CREDIT HOURS

**MILESTONE:**  
• COMPLETE TWO SEMESTERS CHEM 4083

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

**Additional Information:**

- **Physical Chemistry Courses:** Anywhere you see 35XX above, students can choose between Quantum Chemistry, Chemical Thermodynamics, and Structure, Bonding, & Reactivity with advisor approval/advice.
- **All Other Electives:** Math and Science Electives are preferred. Students should work with their advisor to choose electives that will support and complement their life goals.

**CRUSH YOUR COURSEWORK**

- Take Sophomore Seminar.
- Complete Organic Chemistry sequence.
- Complete Analytical Chemistry.
- Complete other supporting courses (see Advisor to have a clear roadmap).

**FIND YOUR PLACE**

- Join a research group or seek for student employment (workshop leader, laboratory assistant).
- Attend program/department/college events.
- Attend senior research presentations and on-campus conferences.
- Study and hang out in the student lounge (TLC 2116).

**BROADEN YOUR PERSPECTIVES**

- Explore internships or part-time jobs in career-related areas (industry, pharmacy, etc).
- Explore summer internships or REU programs.
- Explore volunteer opportunities with a club or in career-related areas.

**CONNECT OFF-CAMPUS**

- Sign up for Handshake through Career Services.
- Create an account in LinkedIn.
- Talk to alumni guest speakers and make connections.

**TAKE CARE OF YOURSELF**

- Talk to your faculty mentor.
- Look into on-campus self-care and stress resources especially Campus Center, Health Services, and Counseling Center.
- Find study buddies.
- Go to events, have fun (balance time between study, work, and fun).

**PAVE YOUR PATH**

- Write preliminary resume.
- Seek for resume-building opportunities related to your career goal (employment, research, activities, volunteering).

**TERM 1: FALL**

**CHEM 4610** 3 CREDIT HOURS  
Inorganic Chemistry

**CHEM 3550L** 2 CREDIT HOURS  
Physical Chemistry Lab

**CHEM 4083** 1 CREDIT HOUR  
Faculty Directed Research

**ELECTIVE** 4 CREDIT HOURS

**CHEM ELECTIVE** 3 CREDIT HOURS

**B1, C, OR E** 3 CREDIT HOURS

**TERM 2: SPRING**

**CHEM 4913L** 2 CREDIT HOURS  
Advanced Synthesis Laboratory

**CHEM 4084** 1 CREDIT HOUR  
Senior Seminar

**CHEM 4083** 1 CREDIT HOUR  
Faculty Directed Research

**B1, C, OR E** 3 CREDIT HOURS

**CHEM ELECTIVE** 3 CREDIT HOURS

**ELECTIVE** 3 CREDIT HOURS

**ELECTIVE** 3 CREDIT HOURS

**MILESTONES:**  
• COMPLETE 4 CREDIT HOURS OF RESEARCH (CHEM 4083)  
• COMPLETE THESIS AND ORAL PRESENTATION (CHEM 4084)

**16 FALL CREDIT HOURS + 16 SPRING CREDIT HOURS  
= 32 CREDIT HOURS**

**Additional Information:**

- **For Chemistry Electives:** Students are required to choose from: Advanced Organic, Spectroscopy, Materials Chemistry, Green Chemistry, and Physical Biochemistry.
- **All Other Electives:** Math and Science Electives are preferred. Students should work with their advisor to choose electives that will support and complement their life goals.

**CRUSH YOUR COURSEWORK**

- Take Senior Seminar.
- Take senior capstone course(s) and complete a senior project.
- Complete all required courses for a degree.

**FIND YOUR PLACE**

- Attend program/department/college events.
- Attend on-campus conferences.
- Study and hang out in the student lounge (TLC 2116).

**BROADEN YOUR PERSPECTIVES**

- Re-examine career paths with a chemistry degree (ACS Career page, alumni connections, your own aptitude and interest).

**CONNECT OFF-CAMPUS**

- Talk to alumni in a career field of interest, matched by your faculty mentor.

**TAKE CARE OF YOURSELF**

- Talk to your faculty mentor.
- Look into on-campus self-care and stress resources especially Campus Center, Health Services, and Counseling Center.
- Find study buddies.
- Go to events, have fun (balance time between study, work, and fun).

**PAVE YOUR PATH**

- Build hands-on experience through research and/or internships.
- Update your resume or CV.
- Apply for graduate schools, professional school, or jobs.
- Make sure to get help from Career Services for cover letters, resume, application, and interviews.