CHEMISTRY

NON-ACS TRACK / SECONDARY EDUCATION OPTION / PRECALC START

Bachelor of Science

60 CORE CREDIT HOURS

45 MAJOR CREDIT HOURS

15 ELECTIVE CREDIT HOURS

UNIVERSITY OF WEST GEORGIA

2025-2026

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. This option prepares chemistry majors to become a secondary education chemistry teacher. The undergraduate curriculum equips students with the content knowledge of chemistry as well as leadership skills, scientific communication skills, and literacy in diversity and technology applicable to educational settings. The curriculum prepares students for the GACE (Georgia Assessments for the Certification of Educators) exam.

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.

Visit 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!

WHERE CAN YOU GO WITH THIS DEGREE?

- Chemical Industry
- Educator
- Environmental Studies
- Industrial Hygiene
- Patent Law
- Technical Sales

ADD A CERTIFICATE

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

HONORS COLLEGE

Consider joining if you have an Overall GPA of 3.2 and earned 15 college credit hours!

YEAR 1

TERM 1: FALL

C1: ENGL 1101 — 3 CREDIT HOURS
English Composition I

M: MATH 1113 — 4 CREDIT HOURS
Precalculus

I2: XIDS 2002 — 2 CREDIT HOURS
First-Year Seminar

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

CORE IMPACTS I, A, S, OR P — 3 CREDIT HOURS

MILESTONES:
- COMPLETE ENGL 1101 C OR BETTER
- COMPLETE MATH 1113 AND CHEM 1211/1211L B OR BETTER FOR CHEM 2086

TERM 2: SPRING

C2: ENGL 1102 — 3 CREDIT HOURS
English Composition II

T: MATH 1634 — 4 CREDIT HOURS
Calculus I

F: CHEM 1212 + LAB — 4 CREDIT HOURS
Principles of Chemistry II

CORE IMPACTS I, A, S, OR P — 3 CREDIT HOURS

MILESTONES:
- COMPLETE ENGL 1102 AND MATH 1634 C OR BETTER
- COMPLETE CHEM 1212/1212L 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.

YEAR 2

TERM 1: FALL

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

T: PHYS1111/2211 + LAB — 4 CREDIT HOURS
Introductory Physics I or Principles of Physics I

CHEM 2086 — 1 CREDIT HOUR
Chemistry Leadership Practicum*

MATH 1401 — 3 CREDIT HOURS
Elementary Statistics

CORE IMPACTS I, A, S, OR P — 3 CREDIT HOURS

MILESTONES:
- COMPLETE CHEM 2411 AND PHYS C OR BETTER
- * CHEM 2086 - MUST BE HIRED AS A WORKSHOP LEADER OR LABORATORY ASSISTANT TO TAKE THIS COURSE. CAN BE TAKEN IN A LATER SEMESTER.

TERM 2: SPRING

CHEM 3422 + LAB — 4 CREDIT HOURS
Organic Chemistry II

T: PHYS 1112/2212 + LAB — 4 CREDIT HOURS
Introductory Physics II or Principles of Physics II

CHEM 2130 — 1 CREDIT HOURS
Sophomore Chemistry Seminar

CORE IMPACTS I, A, S, OR P — 3 CREDIT HOURS

CORE IMPACTS I, A, S, OR P — 3 CREDIT HOURS

MILESTONE:
- COMPLETE ORGANIC CHEMISTRY I AND II, PHYSICS I AND II C OR BETTER

15 FALL CREDIT HOURS + 15 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).

YEAR 3

TERM 1: FALL

CHEM 3310K — 4 CREDIT HOURS
Analytical Chemistry

CHEM 3510* — 3 CREDIT HOURS
Survey of Physical Chemistry

MEDT 2501 — 3 CREDIT HOURS
Multiple Literacies for Ed (10 hours field experience)

CORE IMPACTS I, A, S, OR P — 3 CREDIT HOURS

ELECTIVE — 3 CREDIT HOURS

MILESTONE:
- COMPLETE CHEM 3310K C OR BETTER

* CHEM 3510 MAY BE TAKEN IN YEAR 4

TERM 2: SPRING

CHEM 4711 — 3 CREDIT HOURS
Biochemistry

CHEM COURSE — 3 CREDIT HOURS
CHEM 3000 or 4000 level Elective

EDUC 2120 — 3 CREDIT HOURS
Exper. Sociocult. Perspect. Diversity in Edc Contexts (10 hours field experience)

INTRO SCIENCE + LAB — 4 CREDIT HOURS
Take either BIOL1107+L, GEOL 1121+L or GEOL 1122+L

CORE IMPACTS I, A, S, OR P — 3 CREDIT HOURS

MILESTONE:
- 3.20 GPA IS REQUIRED FOR ACCELERATED MAT PROGRAM

16 FALL CREDIT HOURS + 16 SPRING CREDIT HOURS = 32 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).

YEAR 4

TERM 1: FALL

CHEM 4610 — 3 CREDIT HOURS
Inorganic Chemistry

CHEM 4908L — 2 CREDIT HOUR
Tools in Chemical Research

CHEM COURSE — 3 CREDIT HOURS
CHEM 3000 or 4000 level Elective

ELECTIVE — 3 CREDIT HOURS
Elective 3000 or 4000 level course

MILESTONES:
- MUST HAVE COMPLETED AT LEAST 24 CREDIT HOURS AT A 3XXX/4XXX LEVEL
- SUBMIT APPLICATION FOR GRAD SCHOOL; PASS OR EXEMPT GACE PROGRAM ADMISSION & ETHICS EXAM

TERM 2: SPRING

CHEM 4084 — 1 CREDIT HOUR
Senior Seminar

CHEM 4909L — 1 CREDIT HOUR
Chemistry Senior Capstone Project

CHEM 4411/5411* — 3 CREDIT HOUR
Scientific Communication (cross-listed)

ELECTIVE — 3 CREDIT HOURS
Elective 3000 or 4000 level course

ELECTIVE — 3 CREDIT HOURS
Elective 3000 or 4000 level course

ELECTIVE — 3 CREDIT HOURS

MILESTONES:
- SUBMIT APPLICATION FOR TEACHER EDUCATION ADMISSION, PASS GACE CONTENT EXAM, PASS GACE BROAD FIELD SCIENCE EXAM

* FOR ACCELERATED MAT CHEM 5411 SHOULD BE TAKEN

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

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.