CHEMISTRY

ACS GENERAL TRACK / ALGEBRA START

Bachelor of Science

60 CORE CREDIT HOURS

44 MAJOR CREDIT HOURS

16 ELECTIVE CREDIT HOURS

ABOUT THE MAJOR

This degree has as its core a number of fundamental courses in chemistry and allows for students with interests in additional fields to build a broad based curriculum. Combining this degree with a minor or second major prepares students for a variety of career opportunities in addition to laboratory positions and include the following: with business – technical sales; with biology or geology – environmental studies, industrial hygiene; with political science followed by law school – patent law; with education – middle school or high school teaching.

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?

- 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

HONORS COLLEGE

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

UNIVERSITY OF WEST GEORGIA

2026-2027

YEAR 1

TERM 1: FALL

C1: ENGL 1101 — 3 CREDIT HOURS
English Composition I

MATH 1111 — 3 CREDIT HOURS
College Algebra

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

COMM 1110 — 3 CREDIT HOURS
Public Speaking

CORE IMPACTS A OR S2 — 3 CREDIT HOURS

MILESTONES:
- **COMPLETE ENGL 1101 C OR BETTER**
- **COMPLETE MATH 1111 D OR BETTER**

TERM 2: SPRING

C2: ENGL 1102 — 3 CREDIT HOURS
English Composition II

M: MATH 1113 — 4 CREDIT HOURS
Precalculus

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

CORE IMPACTS A OR S2 — 3 CREDIT HOURS

MILESTONE:
- **COMPLETE ENGL 1102 C OR BETTER**
- **COMPLETE MATH 1113 AND CHEM 1211 C OR BETTER**

14 FALL CREDIT HOURS + 14 SPRING CREDIT HOURS = 28 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 1212 + LAB — 4 CREDIT HOURS
Principles of Chemistry II

CORE IMPACTS P1 OR S1 — 3 CREDIT HOURS
US or World History

T2: MATH 1634 — 4 CREDIT HOURS
Calculus I

P: POLS 1101 — 3 CREDIT HOURS
American Government

TERM 2: SPRING

CHEM 2411 + LAB — 4 CREDIT HOURS
Organic Chemistry I

T2: PHYS 2111 + LAB — 4 CREDIT HOURS
Introductory Principles of Physics I

F: MATH 2644 — 4 CREDIT HOURS
Calculus II

CHEM 2130 — 1 CREDIT HOUR
Sophomore Chemistry Seminar

MILESTONE:
- ****IF UNABLE TO DO SUMMER CHEM 3422+L, TAKE CHEM 3310K INSTEAD OF CHEM 2411+L**
- **CHOOSE A RESEARCH PROFESSOR**

TERM 3: SUMMER

CHEM 3422 + LAB — 4 CREDIT HOURS
Organic Chemistry II

CORE IMPACTS P1 OR S1 — 3 CREDIT HOURS
US or World History

14 FALL CREDIT HOURS + 13 SPRING CREDIT HOURS + 7 SUMMER CREDIT HOURS = 34 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

PHYS 2212 + LAB — 4 CREDIT HOURS
Principles of Physics II

CHEM 3523 — 3 CREDIT HOURS
Structure & Bonding (Can be taken in Fall of Year 4)

CHEM ELECTIVE — 3 CREDIT HOURS
3500 or 4000 level CHEM course

CHEM 4083 — 1 CREDIT HOUR
Faculty Directed Research

MILESTONE:
- **TO REGISTER FOR CHEM 4083, COMPLETE AN INDEPENDENT STUDY FORM WITH YOUR RESEARCH PROFESSOR**

TERM 2: SPRING

CHEM 4330K — 4 CREDIT HOURS
Instrumental Analysis

CHEM 35XX — 3 CREDIT HOURS
Physical Chemistry Course

CHEM 4083 — 1 CREDIT HOUR
Faculty Directed Research

ELECTIVE — 3 CREDIT HOURS

ELECTIVE — 3 CREDIT HOURS

MILESTONE:
- **TO REGISTER FOR CHEM 4083, COMPLETE AN INDEPENDENT STUDY FORM WITH YOUR RESEARCH PROFESSOR**

15 FALL CREDIT HOURS + 14 SPRING CREDIT HOURS = 29 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 ELECTIVE — 3 CREDIT HOURS
3500 or 4000 Level CHEM Course

CHEM 3550L — 2 CREDIT HOURS
Physical Chemistry Lab

CHEM 4083 — 1 CREDIT HOURS
Faculty Directed Research

CORE IMPACTS A OR S2 — 3 CREDIT HOURS

ELECTIVE — 3 CREDIT HOURS

MILESTONE:
- **TO REGISTER FOR CHEM 4083, COMPLETE AN INDEPENDENT STUDY FORM WITH YOUR RESEARCH PROFESSOR**

TERM 2: SPRING

CHEM 4913L — 2 CREDIT HOURS
Advanced Synthesis Lab

CHEM 4084 — 1 CREDIT HOUR
Senior Seminar

CHEM 4711 — 3 CREDIT HOURS
Biochemistry

CHEM 4083 — 1 CREDIT HOUR
Faculty Directed Research

ELECTIVE — 3 CREDIT HOURS

ELECTIVE — 4 CREDIT HOURS

MILESTONE:
- **TO REGISTER FOR CHEM 4083, COMPLETE AN INDEPENDENT STUDY FORM WITH YOUR RESEARCH PROFESSOR**

15 FALL CREDIT HOURS + 14 SPRING CREDIT HOURS = 29 CREDIT HOURS

Upper Level CHEM Labs: Must take all 4 courses
- CHEM 3310K (offered every fall & spring); CHEM 3550L (odd Fall semesters only); CHEM 4330K (odd Spring Semester only); CHEM 4913L (Even Spring semester only)

For Chemistry Electives:
- Students are required to choose from: The third Physical Chemistry Course (CHEM 35XX-see note below) or any CHEM 4XXX course excluding CHEM 4083, 4086, and 4081.

Physical Chemistry Courses:
- Anywhere you see 35XX above, students can choose between 3521: Quantum Chemistry (even Spring Semesters only), 3522: Chemical Thermodynamics (odd Spring Semesters only), and 3523: Structure, Bonding, & Reactivity (all Fall semesters). Check with your advisor/mentor for career-based advice.

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.**