

ABOUT THE MAJOR

Physics is a fundamental physical science. Its essentials form the foundation of all sciences as well as engineering and technology. The world of physics ranges from the smallest particles of subatomic matter to the galaxies. Physicists conduct research into the basic laws of nature or use existing knowledge about the physical world to develop applications and to design new products. A degree in physics prepares the student for a career in physics or related job industry, a governmental lab, teaching, as well as for further graduate study.

The B.S. in Physics with a Concentration in Astronomy is a modification of Plan A, the general physics major track, to emphasize observational astronomy and stellar and galactic astrophysics. This concentration is designed for students who plan to pursue graduate studies and/or careers in astronomy and astrophysics, as well as for students who desire an increased emphasis on image processing techniques and radiative processes and energy transport.

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?

- Aerospace Engineer
- Astronomer
- Data Scientist
- Geophysicist
- Lab Manager
- Medical Physicist
- Optical Engineer
- Physics Teacher
- Professor
- Research Scientist

ADD A CERTIFICATE

- Atmospheric Science

PHYSICS

ASTRONOMY CONCENTRATION

Bachelor of Science

60

CORE CREDIT HOURS

49

MAJOR CREDIT HOURS

11

ELECTIVE CREDIT HOURS

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!



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 2001 **1** CREDIT HOUR
The Physical Universe

D1: CHEM 1211/1211L **4** CREDIT HOURS
Principles of Chemistry I + Lab

ASTR 2313 **3** CREDIT HOURS
Astronomy

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

TERM 2: SPRING

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

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

D1: CHEM 1212/1212L **4** CREDIT HOURS
Principles of Chemistry II

C2: LANGUAGE COURSE **3** CREDIT HOURS
Foreign Language 1001/1002 or 2001/2002, or other Core C

B1, C1, OR E **3** CREDIT HOURS

- MILESTONES:**
- COMPLETE ENGL 1102 WITH C OR BETTER
 - COMPLETE CALCULUS I

15 FALL CREDIT HOURS + 17 SPRING CREDIT HOURS = 32 CREDIT HOURS

CRUSH YOUR COURSEWORK

- Enroll in XIDS 2001: Physical Universe and Core courses.
- Complete math courses through Calculus I.
- Take Principles of Physics I (or ASTR 2313) in your second semester.
- Attend physics workshops.
- Meet with your Physics mentor.

FIND YOUR PLACE

- Meet Physics faculty and learn about their research and scholarship opportunities.
- Join the Physics Engineering club.
- Connect with junior/senior Physics students and ambassadors.

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: PHYS 2211/2211L **4** CREDIT HOURS
Principles of Physics I

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

MATH 2853 OR ELECTIVE **3** CREDIT HOURS
Elementary Linear Algebra or Elective

ASTR 3683 **3** CREDIT HOURS
Astronomy Research

B1, C1, OR E **3** CREDIT HOURS

TERM 2: SPRING

F: PHYS 2212/2212L **4** CREDIT HOURS
Principles of Physics II

MATH 3303 **3** CREDIT HOURS
Ordinary Differential Equations

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

B1, C1, OR E **3** CREDIT HOURS

- MILESTONES:**
- COMPLETE PRINCIPLES OF PHYSICS SEQUENCE
 - COMPLETE MATH UP TO CALCULUS III

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

CRUSH YOUR COURSEWORK

- Complete Principles of Physics.
- Take Modern, Mathematical, Mechanics, E&M and Thermal.
- Establish your pathway/concentration.
- Take core and electives to balance upper-level coursework.

FIND YOUR PLACE

- Become a Student Assistant for a physics lab, workshops or the Observatory.
- Get involved in research or an internship.
- Apply for summer internships or REUs.
- Attend a scientific conference.

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

PHYS 3503 Modern Physics	3 CREDIT HOURS
PHYS 3113 Mechanics	3 CREDIT HOURS
ASTR 3133 Observational Astronomy	3 CREDIT HOURS
PHYS/ASTR OR MATH ELECTIVE	3 CREDIT HOURS
B1, C1, OR E	3 CREDIT HOURS

TERM 2: SPRING

PHYS 3213 Thermodynamics	3 CREDIT HOURS
PHYS 3133 Electricity and Magnetism	3 CREDIT HOURS
ASTR 4103/4433 OR PHYS 4323/4333	3 CREDIT HOURS
B1, C1, OR E	3 CREDIT HOURS
ELECTIVE	3 CREDIT HOURS

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

CRUSH YOUR COURSEWORK

- Complete Principles of Physics.
- Take Modern, Mathematical, Mechanics, E&M and Thermal.
- Establish your pathway/concentration.
- Take core and electives to balance upper-level coursework.

FIND YOUR PLACE

- Become a Student Assistant for a physics lab, workshops or the Observatory.
- Get involved in research or an internship.
- Apply for summer internships or REUs.
- Attend a scientific conference.

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

MATH ELECTIVE	3 CREDIT HOURS
PHYS/ASTR ELECTIVE	3 CREDIT HOURS
PHYS/ASTR ELECTIVE	3 CREDIT HOURS
ELECTIVE(S)	4 CREDIT HOURS

TERM 2: SPRING

B1, C1, OR E	3 CREDIT HOURS
ASTR 4103/4433 OR PHYS 4323/4333	3 CREDIT HOURS
MATH OR FREE ELECTIVE	3 CREDIT HOURS
PHYS/ASTR ELECTIVE	3 CREDIT HOURS
ELECTIVE(S)	3 CREDIT HOURS

13 FALL CREDIT HOURS + 16 SPRING CREDIT HOURS = 29 CREDIT HOURS

CRUSH YOUR COURSEWORK

- Finish your degree requirements.
- Complete your research/internships.
- Present at a conference.
- Write a scientific paper.
- Finish strong.

FIND YOUR PLACE

- Become a Physics Ambassador.
- Expand your professional network.
- Apply for internships in local industries or graduate programs.
- Attend career fairs. Send your resume to one of our alumni.

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.