

SAMPLE Four-Year Plan

B.S. Physics - Engineering and Industry Emphasis

The curriculum in the physics major is fairly structured though students are able to move through the coursework in many ways. This four-year plan illustrates one possible path a student could take to complete a degree in four years. This is not an official document and is not the only way that a physics degree can be completed in four years. Current students should refer to their degree audit for specific graduation requirements. Courses in bold indicate major-based coursework that is completed in the first year.

First Year

Fall Semester	Units
PHYSCS 180 Physics for Scientists & Engineers I (F)	5
PHYSCS 190 Frontiers of Engineering & Physics (F)	1
MATH 253 Calculus & Analytical Geometry I	5
ENGLISH 101 Intro to College Writing and Reading	3
INTRAUNV 104 New Student Seminar	1
Total Credits	15

Spring Semester	Units
PHYSCS 181 Physics for Scientists & Engineers II (S)	5
MATH 254 Calculus and Analytical Geometry II	4
PHYSCS 205 Statics (S)	3
ENGLISH 102 Intro to College Writing, Reading, Research	3
Total Credits	15

Notes: The math and English courses you will take during your first year will depend on UW System placement exam scores or ACT/SAT sub-scores. This four-year plan reflects the math and English courses most common for students in this major. All students are encouraged to complete placement testing prior to attending Warhawks SOAR (Student Orientation, Advising, and Registration).

Opportunities: Joining a university-sponsored club and actively participating is strongly encouraged. Involvement in a club or activity will help you develop interpersonal skills, give you the opportunity to learn and practice leadership skills, and adds to your resume. Some options that may be of particular interest to students with a Physics major include: American Physical Society, Research Apprentice Program (RAP), Robotics Club, Rocket Club, Society of Physics Students (SPS), SURF, and various travel study options.

Second Year

Fall Semester	Units
PHYSCS 221 Intermediate Laboratory (F)	2
PHYSCS 324 Methods of Theoretical Physics (F)	4
CORE 140 Global or 120 Historical Perspectives	3
MATH 255 Calculus and Analytic Geometry III	4
PEGNRL 192 Personal Health and Fitness for Life	1
Total Credits	14

Spring Semester	Units
PHYSCS 310 Mechanics: Dynamics (S)	3
PHYSCS 330 Electronics (S/odd)	4
MATH 355 Matrices and Linear Algebra	3
General Education elective	3
CORE 110 World or the Arts	3
Total Credits	16

Notes: By completing the requirements of the Physics major, students complete the Bachelor of Science/BS degree requirements. Some classes are offered fall semester only, denoted: (F); or spring semester only, denoted: (S).

Opportunities: Undergraduate research is not required as part of the physics program but is highly recommended for students who have an interest in attending graduate school in the future. Completing a directed research project with a faculty mentor has many benefits: it develops a student's critical thinking and writing abilities, signals to graduate school programs that a student is prepared for independent research of their own, and it can provide a student with financial support since many undergraduate research opportunities are paid.



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Third Year

Fall Semester	Units	Spring Semester	Units
PHYSICS 364 Thermal Physics (F/even)	3	PHYSICS 325 Classical Electromagnetism (S)	3
MATH 361 Differential Equations (F)	3	PHYSICS 344 Modern Physics (S)	4
CHEM 102 General Chemistry I	5	PHYSICS 389 Physics Junior Seminar (S)	1
COMM 110 Intro to Public Speaking	3	COMPSCI 170 Intro/Python or 174 Intro/C++	3
CORE 130 Individual and Society	3	CHEM 104 General Chemistry II	5
Total Credits	17	Total Credits	16

Notes: This major does require a minor and students can choose any approved minor. However, students in this major complete many of the requirements of a Math minor through completion of courses required in this program.

Opportunities: An internship is not required for the physics major but can be a great opportunity for practical experience. An internship is an experiential learning opportunity that provides students with hands-on experience in a potential career field, supervision and coaching from prospective employers, and the ability to learn professional norms and behaviors. In addition, completing an internship allows students to differentiate themselves in a competitive job market. Students should begin planning for an internship by the beginning of the junior year and can complete the internship in the junior or senior year.

Fourth Year

Fall Semester	Units	Spring Semester	Units
PHYSICS 489 Physics Senior Seminar (F)	1	*PHYSICS elective	3
*PHYSICS elective	3	MATH 459 Partial Differential Equations (for Math minor)	3
ENGLISH 370 Adv. Comp or PWP 371 Writing/Sciences	3	General Education elective/s	3-6
U.S. Racial/Ethnic Diversity Course	3	CORE 390 World of Ideas	3
General Education elective	3	Department Exit Interview is required	
Total Credits	13	Total Credits	12-15

Notes: All students must earn 120 credits to earn a bachelor's degree and all requirements in this program can be completed in fewer than 120 credits. Most students have the opportunity to choose additional courses in the fourth year to expand skills, explore interests, or try something new.

*Physics electives include: EGR 110 (3 credits), Physics 498 or 498R which range from 1-3 credits with maximum of 3 credits, and Physics 360 (3 credits). Consult with your Physics Advisor about other elective options.

Opportunities: LSINDP 399: Career Information in Letters and Sciences is a 1-credit course that focuses on career and graduate school opportunities; identifying skills, strengths, and work values; creating effective job search materials; developing a networking strategy; and planning for a successful post-graduation transition.

Planning for Graduation: Students are encouraged to apply for graduation one full semester prior to their intended graduation date. Information about commencement is on the Registrar's Office website (<http://www.uww.edu/registrar/graduation>) and the application for graduation is available to students in the WINS Student Information System.

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