

Physics at Wittenberg

Wittenberg physics majors are valued by graduate programs and by employers for their strong science and math background, their hands-on skills with computers and test equipment, and their ability to communicate orally and in writing. Our graduates are working in a wide variety of jobs including college faculty, high school teachers, research scientists, engineers, patent examiners, software developers, and technical writers. Our majors who choose to go on to graduate school have excellent acceptance rates into strong programs in physics, astronomy, engineering, and biomedical science.

Curriculum

Regardless of your particular interests, it's important to start taking the core math and physics courses as early as possible. (See the next page for a sample schedule leading to the B.S. degree.) At the advanced level, we offer courses in all the main fields of physics as well as in applied physics and astrophysics.

Research and internship opportunities

All physics majors gain research experience in a senior capstone project of their choosing. Most students do additional research by working with Wittenberg faculty or participating in off-campus internships. Funding for student research at Wittenberg is available, and students have been placed in internships in a variety of engineering firms, academic institutions, and government laboratories. We encourage and enable students to present their research at national and regional professional society meetings. Faculty research areas include dusty plasma physics using a tomographic PIV (particle image velocimetry) system—the only one of its kind at an undergraduate university; sub-atomic physics; radar and electromagnetics; atomic physics; and astronomy. Faculty have also mentored recent student-designed projects in fluid dynamics, biomechanics, and superconductivity. Many physics majors find on-campus employment as tutors in the Math Workshop, or assisting faculty with laboratories, research, and special projects. A variety of double majors and minors, as well as study abroad experiences, are pursued by many of our students.

Student organizations

Society of Physics Students (SPS): The Wittenberg chapter of SPS has worked on projects such as building a radio telescope; developed and led physics activities for Girl Scout Science Night; hosted speakers and movie nights; and traveled to national and regional physics meetings. We also have an active chapter of Sigma Pi Sigma, the national physics honor society.

Wittenberg Astronomical Society: This organization fosters interest in astronomy for the entire Wittenberg community. Activities include viewing sessions at Weaver Observatory, field trips to places such as Adler Planetarium in Chicago and rural dark-sky sites, and eclipse and meteor-shower observing.



For more information

Prof. Elizabeth George, Physics Department chair: egeorge@wittenberg.edu, (937)327-7854, Science 308

Sample schedule for the B.S. degree with a major in Physics

Note: Physics 200B (Mechanics and Waves) is offered every semester and is a prerequisite for all other 200-level physics courses. The prerequisite for Physics 200B is Math Placement 4 or Math 120Q, with Math 201 (Calculus I) strongly recommended. Other physics courses beyond Physics 200B are offered in fall or spring as shown.

Year 1:

<i>Fall</i>			<i>Spring</i>	
Physics 200B	5		Physics 213/214/215	5
English 101 (W)	4		Math 202Q	4
Math 201Q	4		Language 112F	5
Gen Ed or elective	4		First year seminar	1
First year seminar	1			
Total credits	18			15

Year 2:

<i>Fall</i>			<i>Spring</i>	
Physics 218	5		Gen Ed or elective	4
Gen Ed or elective	4		Math 212	4
Math 215	4		Chem 162	5
Chem 121B	5		Phys 220 (W)	5
	18			18

Year 3:

<i>Fall</i>			<i>Spring</i>	
Physics 311	4		Physics 330, 332, or 411	4
Physics 313	2		Physics 350 (W)	1
Comp Sci 150	5		Physics elective	4
Physics 360	0		Physics 360	1
Physics elective	2		Gen Ed or elective	4
Gen Ed or elective	4		Gen Ed or elective	2
	17			16

Year 4:

<i>Fall</i>			<i>Spring</i>	
Physics elective	2		Physics elective	4
Physics 460	0		Research	2
Gen Ed or elective	4		Physics 460	1
Gen Ed or elective	4		Gen Ed or elective	4
Gen Ed or elective	4		Gen Ed or elective	4
	14			15