What it Takes to Become a Physics Teacher

During your study to become a well-educated physics teacher you will work hard in a physics program that develops your knowledge and critical thinking skills through active learning. You will take several clinical, readings, laboratory, and physics teaching methods courses taught by the Department of Physics for physics education majors, as well as professional education courses offered by the College of Education. You will find plenty of outlets for your curiosity about the nature of the physical world and the laws that govern it. You will use your creativity to promote science understanding through the use of demonstrations, computers, and innovative teaching techniques. Join others who have the “right stuff” to become physics teachers by enrolling in the Physics Teacher Education program at Illinois State University.

Do You Have What it Takes?

If you want to know what sort of career goal to set for yourself, look to your past for clues. Who are the people you most admire? Are they teachers and scientists? What subjects do you find interesting? Have you taken and enjoyed science and math courses throughout your high school years? Are you a member in a science club? Have you participated in science competitions or field trips? Are your hobbies and readings related to science?

Just how one arrives at a decision about whether or not to become a physics teacher is simple. Talk with your parents, your physics teacher, and your school counselor. They will have some idea of your needs, interests, and abilities and can help you to make a good career choice.

Making the Correct Program Choice

Choosing the correct university is an important factor in obtaining the best education available. The decision about which university to attend should be based on information about the quality of its teacher preparation program. The Illinois State University's Physics Teaching program strives to be the very best in the State of Illinois. The program has:

★ Excellent personnel, resources, and facilities.
★ Six physics teaching methods courses.
★ A model classroom with resource center.
★ Coordination with the College of Education.
★ Performance-based assessments.
★ Full national and state accreditation.

The ISU Physics Department currently is the fourth largest undergraduate physics program in the Midwest. It ranks tenth in size nationally. Because of the reputation of its academic personnel and the strength its program of study, ISU's Physics Teaching program has grown to become among the largest in the nation.

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ISU Physics Teaching

Why Physics Teaching?

Teaching physics at the high school level can be very rewarding. Physics teachers often work with the most talented and highly motivated students. They spend their days explaining the marvels of the physical universe, and guiding their students to a better understanding of diverse phenomena. Physics teachers see physics as fundamental to understanding. The technological applications of science that propel society are all based on physics. By inspiring and preparing future generations, high school physics teachers are able to “touch the future” in ways that few others can. If you want to have a direct positive impact on the lives of other people, consider becoming a physics teacher.

The demand for future physics teachers is great. “Baby boomer” teachers are beginning to retire, and the percentage of students who take high school physics continues to increase. According to one recent estimate, half of all teachers currently in service will retire within the next ten years. The State of Illinois currently has some 500 physics teachers, and 50 will retire or otherwise depart the profession each year on the average. This number far exceeds the availability of qualified replacement physics teaching candidates. Because physics teachers are in demand, landing a satisfying job and earning a good salary from the very start is a real possibility. Many of our students land jobs before the end of student teaching.

Why Illinois State?

Illinois State University has a long tradition of preparing teachers. Ever since its founding as Illinois’ first public university in 1857, the University has distinguished itself as the premier teacher education institution in the State. Approximately one-half of all secondary school teachers in downstate Illinois currently hold teaching degrees from Illinois State University. Nearly one of every seven teachers in the classrooms of Illinois’ public schools holds a degree from Illinois State University. ISU’s rate of teacher graduation places it among the top ten largest producers of teachers in the nation.

ISU is fully accredited by the National Council for Accreditation of Teacher Education (NCATE). The physics teaching program is fully accredited by the National Science Teachers Association (NSTA). Such national accreditation provides the foundation for a meaningful system of quality assurance for the science teaching profession, and ensures rigorous, high quality teacher preparation. Students are assured of the best teacher preparation available.

The Physics Teaching Sequence at a Glance

The program provides a firm foundation in physics through a well-structured sequence of courses. We also offer some specialized courses to give you a taste of the variety of physics applications.

Our classes are small, allowing ample opportunity for individualized attention. All courses are taught by instructors who are strongly committed to undergraduate education.

Courses taken by Physics teaching majors are listed below. A brief description of each course is provided in the Illinois State University catalog and on our website (www.phy.ilstu.edu).

(1) Basic Physics Courses
PHY 107 Frontiers of Physics
PHY 110 Physics for Science and Engineering I
PHY 111 Physics for Science and Engineering II
PHY 112 Physics for Science and Engineering III

(2) Intermediate Physics Courses
PHY 217 Methods of Theoretical Physics
PHY 220 Mechanics I
PHY 240 Electricity and Magnetism I or PHY 284 Quantum Mechanics I
PHY 270 Experimental Physics

(3) Physics Teaching Methods Courses
PHY 209 Introduction to Teaching HS Physics
PHY 302 Computer Applications in HS Physics
PHY 310 Readings for Teaching HS Physics
PHY 311 Teaching High School Physics
PHY 312 Teaching Physics Historical Perspectives
PHY 353 Student Teaching Seminar

This plan of study is augmented by additional required course work in Biological Sciences, Chemistry, and Environmental Science or Earth and Space Science. Students complete some 50 hours of clinical experiences in area schools prior to student teaching for 10 weeks during the spring semester of the senior year.