

PHYSICS

Earth and Space Science Education

College of Arts and Sciences • Department of Physics

Degrees Available at SIUE

- Bachelor of Science + Secondary Teacher Certification in Physics
- Bachelor of Science + Earth and Space Science Education

Why Physics Education/Earth and Space Education?

Those with a strong desire to foster understanding and interest in the field of physics can choose to add a secondary education certificate in the specializations of physics or earth/space education. The added certifications enable graduates to teach at the high school level.

Why Physics Education/ Earth and Space Education at SIUE

With small student-to-faculty ratios, students seeking to obtain secondary education certification plus their bachelor's of science degree in physics have multiple opportunities to develop mentoring relationships with nationally recognized faculty. An added benefit is the diversity of the faculty's expertise in the areas of photonics and lasers, biophysics, and condensed matter physics. Because the faculty strongly believes in hands-on laboratory research and experience, students are able to identify ways to inspire young high school students and foster inquisitive minds. Secondary education certification is a joint collaboration with SIUE's College of Arts and Sciences and the School of Education.

Career Outlook

Physics graduates who obtain secondary education certification pursue positions in high schools or science education centers. Science teachers are in strong demand, especially those who demonstrate a passion and creativity for teaching a fundamental science. SIUE has a Career Development Center on campus to assist students in obtaining jobs across the country.

Admission Requirements

Admission to a teacher education program is a joint decision by the academic discipline in the College of Arts and Sciences and the School of Education. Therefore, it is essential that any student desiring teacher certification meet with an advisor in the Office of Clinical Experience, Certification and Advisment of the School of Education for admission to the teacher education program.

Graduation Requirements

The following requirements must be met in order to obtain a degree in physics:

- Earn a minimum of 124 hours of acceptable credit with a cumulative grade point average of 2.0 or higher;
- Complete the minimum number of credit hours required for a particular degree;
- Complete at least 12 hours of SIUE credit in major courses numbered above 299 with a cumulative grade point average of 2.0 or above;
- Earn a grade of "C" or better in all major courses numbered above 200;
- Complete at least 6 hours of credit in major courses numbered above 299 earned at SIUE within 2 years preceding graduation.

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Faculty

Professors

Hill, Roger C., Ph.D.

1969, California Institute of Technology

Associate Professors

Foster, Tom M., Ph.D.

2000, University of Minnesota

Garcia, Hernando, Ph. D.

1999, New Jersey Institute of Technology & Rutgers the State University of New Jersey

Glassman, Jack, Ph. D.

1997, University of New Mexico

Hamad, Abdullatif Y. (Chair), Ph. D.

1996, Oklahoma State University

Kaplan, David H., Ph.D.

1983, Cornell University

Assistant Professors

Glosser, Christopher, Ph.D.

2001, Michigan State University

Sabby, Jeffrey A. Ph.D.

2004, University of Arkansas Fayetteville



Sample Four-Year Curriculum

	FALL	SPRING
YEAR 1	CHEM 121a General Chemistry I (INSM) (4) CHEM 125a General Chemistry Lab I (1) ENG 101 English Composition I (3) IME 106 (recommended, PHIL 106, or MATH 106) (3) MATH 150 Calculus I (INSM) (5) Total 16	BIOL 150 Biology I (4) CHEM 121b General Chemistry II (DNSM) (4) CHEM 125b General Chemistry Lab II (1) ENG 102 English Composition II (3) PSYC 111 Foundations of Psychology (recommended ISS) (3) SPC 103 Interpersonal Communication (IGR) (3) Total 18
YEAR 2	BIOL 151 Biology II (4) CI 200 Introduction to Education (2) ESCI 111 Introduction to Physical Geology & Geography (3) PHYS 131a College Physics I (5) STAT 244 Statistics (4) Complete ICTS Basic Skills Test for Admission to the Teacher Certification Total 18	CHEM 241a Organic Chemistry (3) GEOG 210 Physical Geography (3) PHYS 131b College Physics II (5) PHYS 118 Astronomy (3) GEOG 211 Meteorology (3) Total 14
YEAR 3	GEOG 314 Climatology (3) PHYS 208 Space Physics (3) Introductory Fine Arts & Humanities or Introductory Social Sciences (3) ENG Introduction to Literature (recommended IFAH) (3) IS 364 The Atomic Era (II/IC) (3) Total 15	GEOG 202 Resource Use and Management (3) SCI 451 Integrated Science (3) Science Elective (3) Distribution Fine Arts & Humanities (3) Distribution Social Sciences (3) Total 15
YEAR 4	CHEM 494 or PHYS 494 – Methods of Teaching Chemistry or Physics in Secondary Schools (3) CI 315a Methods for Teaching in Secondary Schools (2) CI 440 Teaching Reading in Secondary Schools (3) EPFR 315 Educational Psychology (3) EPFR 320 Foundations of Education in a Multicultural Society (3) SPE 400 The Exceptional Child (3) Total 17	CI 315b Methods for Teaching in Secondary Schools (2) CI 352 Student Teaching (10) Total 12

TRANSFER STUDENTS Maximize your transfer experience - complete the **bolded** courses/requirements pre-transfer **AND** satisfy the Illinois Articulation Initiative (IAI) General Ed Core or receive an AA, AS, or AAT (early childhood, special ed, or math) degree from an IAI community college. If 'Minor' requirements are shown, discuss careful course selection with the academic advising contact listed. Transfer Credit Equivalency Guides are located at siue.edu/transfer/

B.S. in Physics with Secondary Education Teacher Certification Students interested in Secondary Education Teacher Certification are encouraged to complete the traditional BS in Physics then apply to the MAT program. The MAT program is offered by the School of Education.

Academic Advising Information

College of Arts and Sciences Undergraduate Advising
 Campus Box 1609
 SIUE
 Edwardsville, IL 62026-1609
 618.650.5525

