



## Post Baccalaureate Teacher Certification Physics (9-12)

### Career Preparation

Missouri State University's Education Program, the largest and only one of its kind in Missouri, provides experiences that prepare students to become effective teachers. A comprehensive field-based component is part of this exciting program. Teachers who have completed a Missouri State University (MSU) Education program are generally considered to be highly qualified, successful classroom teachers. High-need areas currently include: Special Education, Math, Science, and Foreign Language. Post-Baccalaureate students who have had significant experience either in the classroom or with children are often considered more qualified and are frequently hired before those without the experience.

### Academic Program

The Post-Baccalaureate (Post-Bac) Education programs require satisfactory completion of competencies outlined by the Department of Elementary and Secondary Education (DESE). MSU offers several alternative routes to teacher certification which include: Post-Baccalaureate, Masters, and Provisional certification. All programs rely on coursework completed within an initial Bachelor's degree. Professional Education courses are sequenced to provide both study in the university setting and practical experience in classrooms.

### Courses

Students pursuing Post-Bac Teacher Certification at Missouri State need to submit original official transcripts from all universities, colleges, and institutions previously attended. Prior coursework will be evaluated and credit will be granted and applied for all equivalent certification requirements.

An Individualized Program of Study (IPS) will be provided to the student. The IPS is reviewed during an advising session. If a course was not initially determined to be equivalent, but may have provided the competencies required for certification, the student may submit a course description/syllabus for re-evaluation.

### Faculty and Staff Support

The Teacher Certification and several faculty offices are located in Hill Hall. Faculty members are actively involved in teaching, research, and service activities at the local, state, and national levels. While faculty may informally advise students, the Teacher Certification Advisement staff will provide the support and official advisement for all Post-Bac students pursuing teacher certification.

### Facilities

Missouri State University is fortunate to have Greenwood Laboratory School located on campus. Greenwood, a K-12 facility, provides students in the College of Education with first-hand experience in observing and working with students. The technology labs, located in Hill Hall, have the most recent innovations in instructional technology and are available for use by Education students.

### Special Services

The University and the College of Education are committed to the success of each student. Career Services, in cooperation with the College of Education, takes an active role in assisting Education students by providing information about teaching opportunities. Students are encouraged to meet with Career Services for job search assistance.

### For More Information

Teacher Certification Office  
Missouri State University  
901 S. National Ave.  
Springfield, MO 65897  
Office: 417-836-8772 Fax: 417-836-5008  
email: [teachercertification@missouristate.edu](mailto:teachercertification@missouristate.edu)  
[www.missouristate.edu/certification](http://www.missouristate.edu/certification)

## Required Coursework: Physics-Categorical (9-12)

### Special Requirements

The following courses are required as prerequisites to courses in either the education core or the content area for certification.

Course #	Title	Credits
COM 115	Fundamentals of Public Speaking	3 hours
PSY 121	Introductory Psychology	3 hours
CIS 101 or CSC 101	Computers for Learning	2 hours
		<b>8 hours</b>

### Professional Coursework

Course #	Title	Credits
EDC150	Introduction to Teaching	1 hour
SCI 214	Introduction to Science Teaching in the 21 <sup>st</sup> Century	1 hours
SEC 302	General methods of Instruction in the Middle and Secondary Schools	4 hours
IMT 365 or IMT662	Instructional Apps/Technology and Media Educational Applications of Computers for Teachers	3 hours
SCI 314	Techniques and Technology in Science Laboratory Teaching	3 hours
PSY 360	Educational Psychology	3 hours
SPE 340 or SPE715	Educational Alternatives for Exceptional Students Foundations in Special Education	2-3 hours
RDG 474 or RDG 710	Reading and Writing in the Content Fields Reading in the Content Fields	2-3 hours
EDC 350	School and Society	3 hours
SCI 414	Teaching of Secondary School Natural Sciences	3 hours
SFR486 or PSY486	Management and Assessment In the Middle School and Secondary Classrooms	3 hours
SCI 493	Supervised Teaching	6 hours
SCI 494	Supervised Teaching	6 hours
		<b>40-42 hours</b>

### Content Area Coursework

Course #	Title	Credits
PHY 100	Survey of Physics with Laboratory	4 hours
PHY 203	Foundations of Physics I	5 hours
PHY 204	Foundations of Physics II	5 hours
PHY 375	Twentieth Century Physics I	3 hours
PHY 385	Experiments in Twentieth Century Physics	2 hours
PHY 509	Special Topics in Physics and Astronomy	1-3 hours

### Elective Requirements

8 hours of electives at or above the **200 level** with the exception of PHY 501 and with no more than 3 hours at the 200 level.

### Additional Science Requirements

AST 115	Basic Astronomy	4 hours
BIO 121	General Biology I	4 hours
CHM 160	General Chemistry I	4 hours
CSC 111	Introduction to Computing	3 hours
GRY 108	Ecology and Society	3 hours

### History/Philosophy of Science and Technology

SCI 505	Intellectual Foundations of Science and Technology	3 hours
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### Math Requirements

MTH 261	Analytic Geometry and Calculus I	5 hours
MTH 280	Analytic Geometry and Calculus II	5 hours
MTH 302	Multivariate Calculus	3 hours
		<b>62 hours</b>

### Middle School (9-12) Option:

MID421 or MID810	Philosophy and Organization of Middle School Curriculum The Middle School – The Jr. High School	2-3 hours
MID439 or MID725	Middle School Instructional Strategies	3 hours
MID425	Middle School Curriculum	2 hours
RDG318	Foundations of Reading Instruction	3 hours
EEM305	Field Experiences in Education	2 hours
		<b>12-13 hours</b>