



## Post Baccalaureate Teacher Certification Chemistry – Categorical/Unified Science (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: Chemistry-Categorical/Unified Science (9-12)

### Special Requirements

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

### Professional Education

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	Instructional Apps/Technology and Media	3 hours
or		
IMT 662	Educational Applications of Computers for Teachers	
SCI 314	Techniques and Technology in Science Laboratory Teaching	3 hours
PSY 360	Educational Psychology	3 hours
SPE 340	Educational Alternatives for Exceptional Students	2-3 hours
or		
SPE 715	Foundations in Special Education	
RDG 474	Reading and Writing in the Content Fields	2-3 hours
or		
RDG 710	Reading in the Content Fields	
SFR486	Management and Assessment in the Middle School and Secondary Classroom	3 hours
or		
PSY486		
EDC 350	School and Society	3 hours
SCI 414	Teaching of Secondary School Natural Sciences	3 hours
SCI 493	Supervised Teaching	6 hours
SCI 494	Supervised Teaching	6 hours
		<b>40-42 hours</b>

### Middle School (5- 9) Option

MID421	Philosophy and Organization of Middle School Curriculum	2-3 hours
or		
MID810	The Middle School – The Jr. High	
MID439	Middle School Instructional Strategies	3 hours
or		
MID725	Advanced Theory and Practice in the Teaching of Early Adolescents	
MID425	Middle School Curriculum	2 hours
RDG318	Foundations of Reading Instruction	3 hours
EEM305	Field Experiences in Education	2 hours

**12-13 hours**

### Content Area

Course #	Title	Credits
CHM 160	General Chemistry I	4 hours
CHM 170	General Chemistry II	3 hours
CHM 175	General Chemistry Laboratory	2 hours
CHM 200	Essentials of Organic Chemistry	5-10 hours

### Need All of the Following:

CHM 435	Investigation in Chemistry for Teachers	2 hours
CHM 302	Introduction to Analytical Chemistry	5 hours
CHM 352	Introduction to Biochemistry	3 hours
CHM 460	Environmental Chemistry I	3 hours
CHM 505	Fundamentals of Physical Chemistry	4 hours
PHY 123	Introduction to Physics I	4 hours
BIO 121	General Biology I	4 hours
MTH 287	Computational Calculus with Analytic Geometry	3 hours

### Choose one

GLG 110	Principles of Geology	4 hours
GLG171	Environmental Geology	

### History/Philosophy of Science

SCI 505	Intellectual Foundations of Science and Technology	3 hours
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### Complete All Requirements in ONE of the Following Areas:

#### Categorical Chemistry

CHM 375	Inorganic Chemistry	3 hours
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#### Unified Science-Chemistry

CHM 463	Environmental Analysis	1 hour
BIO 122	General Biology II	4 hours
GLG 110	Principles of Geology	4 hours
GRY 135	Atmospheric Science	4 hours
PHY 124	Introduction to Physics II	4 hours

**Categorical – 52 hours**

**Unified – 66 hours**