WVUteach

Biology 9-Adult

Teaching changes lives. It is a rewarding profession that makes a difference. Well-prepared science and mathematics teachers are some of the most sought after in our state and nation's middle and high schools and are vital to making a positive impact for future generations.

The Secondary STEM Education teacher preparation pathway at WVU is designed to give undergraduate students the opportunity to explore the profession of teaching in science and/or mathematics, improve their practice as educators, and earn a secondary (middle and/or high school) teaching certification—all while pursuing a 4-year degree in a STEM field. This gives graduates the flexibility to pursue a career in middle or high school teaching, or to pursue non-teaching jobs or graduate programs in their field.

Students in the Secondary STEM Education pathway as part of their STEM degree will take coursework in education and field-based experiences in school classrooms, some of which helps satisfy General Education Foundations (GEF) requirements and other degree requirements. Students will continue to take the courses and other requirements as part of their STEM degree, though with some slight variations.

Advisors in the STEM degrees will be able to support students who are interested in the Secondary STEM Education pathway. Students should also contact the WVU School of Education in the College of Applied Human Sciences for more information on the pathway and its requirements.

Students seeking Biology 9-Adult teaching certification complete the Biology B.A. or B.S. major requirements and the following (27 hours). The Secondary STEM Education curriculum can be completed within the 120 hours required for graduation with a B.A. or B.S. in Biology:

WVUTEACH: BIOLOGY 9-ADULT

Code	Title	Hours
ARSC 120	Inquiry Approaches to Teaching	1
ARSC 220	Inquiry-Based Lesson Design	1
UTCH 221	Knowing and Learning in Mathematics and Science (GEF 4)	3
UTCH 322	Classroom Interactions in Math and Science	3
UTCH 420	Project-Based Instruction in Mathematics and Science	3
UTCH 430	Apprentice Teaching in Math and Science	10
MATH 318	Perspectives on Mathematics and Science (GEF 5)	3
BIOL 376L	Research Methods Laboratory	3
Total Hours		27

ADDITIONAL COURSEWORK FOR NON-BIOLOGY MAJORS

Code	Title	Hours
Select one of the following:		**4-8**
BIOL 101 & 101L & BIOL 102 & BIOL 102L	General Biology 1 and General Biology 1 Laboratory and General Biology 2 and General Biology 2 Laboratory	
or		
BIOL 115 & 115L	Principles of Biology and Principles of Biology Laboratory	
BIOL 117 & 117L	Introductory Physiology and Introductory Physiology Laboratory	
BIOL 219 & 219L	The Living Cell and The Living Cell Laboratory	
BIOL 221	Ecology and Evolution	
Biology B.S. Electives		**9-12**
Select 3 hours from Cell and Molecular Biology *		
Select 3 hours from Organismal Biology **		
Select 3 hours from Evolution and Ecology ***		
Additional Coursework		**24**
Geology		
Select one of the following sequences:		

GEOL 101 & 101L	Planet Earth and Planet Earth Laboratory
GEOL 103 & 103L	Earth Through Time and Earth Through Time Laboratory
Physics	
Select one of the following sequences:	
PHYS 101 & 101L & PHYS 102 & PHYS 102L	Introductory Physics 1 and Introductory Physics 1 Laboratory and Introductory Physics 2 and Introductory Physics 2 Laboratory
PHYS 111 & 111L & PHYS 112 & PHYS 112L	General Physics 1 and General Physics 1 Laboratory and General Physics 2 and General Physics 2 Laboratory
PHYS 112	General Physics 2
or PHYS 105	Conceptual Physics
Mathematics	
MATH 150	Applied Calculus
or MATH 155	Calculus 1

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Please see Biology B.S. (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/biology/biology_bs/) page for more information regarding these requirements.

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The following courses may fulfill this requirement: EXPH 386, EXPH 387, PALM 301, ANPH 301, ANPH 424, WMAN 330, or WMAN 426. These are not included in the **Organismal Biology** requirement in the Biology B.S. (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/biology/biology_bs/) program.

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The following courses may fulfill this requirement: BIOL 301, BIOL 338, BIOL 361, BIOL 363, BIOL 420, BIOL 455, BIOL 461, BIOL 463, BIOL 464, BIOL 477, AEM 401, GEOL 331, WMAN 313, WMAN 314, WMAN 425, or WMAN 446. These are not included in the **Evolution and Ecology Biology** requirement in the Biology B.S. (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/biology/biology_bs/) program.