

2009-2010

# *B.A.Ed. in General Science- Secondary*

**College of Sciences and Technology  
Woodring College of Education**

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## *What Is the Study of General Science-Secondary?*

The Science, Mathematics and Technology Education Program is a visionary and practical program designed to enrich the training and education of the K-12 pre-service teachers and, through them, their students. From a collaboration of the disciplines of Chemistry, Geology, Biology, Physics/Astronomy, Mathematics and Engineering Technology, the Science, Mathematics and Technology Education Program (SMATE) offers an opportunity for teachers and future teachers to gain specific skills and broaden talents within their chosen discipline.

This program is designed to prepare future teachers at the elementary and secondary level with an emphasis in Science.

## *Why Should I Consider This Major?*

If you want a broad base of knowledge in the field of science to prepare you for teaching at the secondary level, this major will provide it. You will take a range of introductory courses from different areas of science, including Biology, Chemistry, Physics and Geology. Other science majors focus on a single subject such as Biology or Chemistry (see *WWU bulletin*).

## *How to Declare:*

Consult with an advisor in the Science, Mathematics and Technology Education Department for direction on declaring a General Science major.

## *Mid-Program Checkpoint:*

Students intending to completing a Bachelor's of Arts in Education degree in General Science—Secondary within four years should complete the following courses by the start of their junior year. Students are expected to follow all prerequisite requirements for courses and seek early departmental advisement.

### **Coursework:**

CHEM 121, 122

MATH 114

GEOL 211, 212

PHYS 114, 115, 116 or 121, 122, 123

### *Contact Information:*

Science Education Department  
Website:  
<http://www.smate.wvu.edu/smate/>

### **Director:**

George Nelson  
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[George.Nelson@wwu.edu](mailto:George.Nelson@wwu.edu)

### *Sample Careers:*

Secondary Education Teacher



## General Science-Secondary Major Requirements: 88-99 Credits

PHYS 114 Principles of Physics I (5)

PHYS 115 Principles of Physics II with Lab (5)

PHYS 116 Principles of Physics III with Lab (5)

Or PHYS 121 Physics with Calculus I with Lab (5)

PHYS 122 Physics with Calculus II with Lab (5)

PHYS 123 Electricity and Magnetism with Lab (5)

CHEM 121 General Chemistry I (5)

CHEM 122 General Chemistry II (5)

CHEM 251 Elementary Organic Chemistry (5)

BIOL 204 Introduction to Evolution, Ecology & Biodiversity (4)

BIOL 205 Introduction to Cellular and Molecular Biology (5)

BIOL 206 Introduction to Organismal Biology (5)

GEOL 211 Physical Geology with Lab (5)

GEOL 212 Historical Geology (4)

Choose one:

ASTR 103 Introduction to Astronomy (4)

GEOL 252 The Earth and Its Weather (4)

EGEO 331 Climatology (4)

GEOL 340 Geological Oceanography (3)

SCED 370 Science and Society (3) *or equivalent*

SCED 481 Fundamentals of Teaching Science (2)

SCED 491 Methods in Secondary Education for Science Teachers (5)

**Additional credits from single science discipline (22-32)**

### *Other General Science Options:*

B.A. Ed. In General Science—Elementary (45 credits plus certification program)

**These courses are offered within this major and may be used to satisfy GUR or Writing Proficiency requirements.**

**QSR:** MATH 114

**LSCI:** BIO 204, 205, 206; GEOL 211, 212;

PHYS 115, 116 or 121, 122, 123

**WP:** Three Writing Proficiency points are required for graduation (they are noted as WP1, WP2, and WP3).

Check [Classfinder](#) or [Online Timetable](#) for departmental offerings each quarter.