

# MIDDLE SCHOOL SCIENCE, BACHELOR OF SCIENCE (734)

## Program Coordinator

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The middle school science major is for students who plan to teach science in grades 5 through 9. The middle school science major also requires completion of the science and mathematics education (SMED) program. Upon successful completion of both majors, the student will earn a Bachelor of Science degree and will qualify for an institutional recommendation for a Kentucky Provisional Certificate for teaching in the middle grades (5-9) science field. Students may earn dual certification in both Middle School Science and Middle Grades Mathematics. Students who have an interest in teaching at the secondary level may earn dual certification in Middle School Science/Secondary Biology or Middle School Science/Secondary Chemistry. Students should contact the SKyTeach Office, Kelly Thompson Hall 1011A, 270-745-3900 or visit [www.wku.edu/skyteach](http://www.wku.edu/skyteach) (<https://www.wku.edu/skyteach/>).

## Program Requirements (30-31 hours)

A baccalaureate degree requires a minimum of 120 unduplicated semester hours. More information can be found at [www.wku.edu/registrar/degree\\_certification.php](http://www.wku.edu/registrar/degree_certification.php). ([https://www.wku.edu/registrar/degree\\_certification.php](https://www.wku.edu/registrar/degree_certification.php))

Students who began WKU in the Fall 2014 and thereafter should review the Colonnade requirements located at: <https://www.wku.edu/colonnade/colonnaderequirements.php>. (<https://www.wku.edu/colonnade/colonnaderequirements.php>)

To major in Middle School Science, students must complete 30-31 semester hours of coursework with a "C" or higher in each course. All science courses must be completed with an average GPA of 2.75 or better.

Code	Title	Hours
<b>Core Courses</b>		
ASTR 104 or ASTR 106	Astronomy of the Solar System Astronomy of Stellar Systems	3
BIOL 122 & BIOL 123	Biological Concepts: Evolution, Diversity, and Ecology and Biological Concepts: Evolution, Diversity, and Ecology Lab	4
Select one of the following:		4
GEOL 111 & GEOL 113	The Earth and The Earth Laboratory	
GEOL 112 & GEOL 114	Earth's Past and Future and Earth's Past and Future Lab	
Select one of the following:		4
PHYS 201	College Physics I	
PHYS 231 & PHYS 232	Introduction to Physics and Biophysics I and Laboratory for Physics and Biophysics I	
<b>Upper-Level Science Courses</b>		

SMED 360	Research Methods for Math and Science Teachers	3
Select three of the following:		9
ASTR 405	Astronomy for Teachers	
BIOL 303	Life Science for Middle Grades Teachers	
CHEM 470	Chemistry / Middle School	
GEOL 305	Earth System Science for Teachers	
<b>Upper-Level Restricted Electives</b>		
Select one of the following:		3-4
BIOL 319 & BIOL 322	Introduction to Molecular and Cell Biology and Introduction to Molecular and Cell Biology Laboratory	
BIOL 325	Insect Biodiversity	
BIOL 326	Ornithology	
BIOL 327	Genetics	
BIOL 334	Animal Behavior	
BIOL 348	Plant Taxonomy	
GEOG 471	Technological Applications in Natural Resource Management	
GEOL 408	Structural Geology	
GEOL 310	Global Hydrology	
GEOL 311	General Oceanography	
GEOL 325	Introduction to Minerals and Crystalline Rocks	
GEOL 380	Introductory Field Techniques	
GEOL 405	Paleontology	
SMED 300	Middle Grades Science Skills and Methods	
SMED 400	Applying Middle Grade Science Across Disciplines	

**Total Hours** **30-31**

## Support Courses

Students must complete the following support courses:

Code	Title	Hours
BIOL 120 & BIOL 121	Biological Concepts: Cells Metabolism and Genetics and Biological Concepts: Cells, Metabolism, and Genetics Lab	4
Select one of the following:		3-5
MATH 117	Trigonometry	
MATH 136	Calculus I	
Select one of the following:		4-5
CHEM 105 & CHEM 106	Fundamentals of General Chemistry and Fundamentals of General Chemistry Laboratory	
CHEM 120 & CHEM 121	College Chemistry I and College Chemistry I Laboratory	
<b>Total Hours</b>		<b>11-14</b>

## Finish in Four Plan

### First Year

Fall	Hours	Spring	Hours
ASTR 104 or ASTR 106		3 GEOL 111 & GEOL 113 or GEOL 112/114	4
BIOL 120 & BIOL 121 or BIOL 122/123		4 BIOL 120 & BIOL 121 or BIOL 122/123	4
ENG 100		3 COMM 145	3
MATH 117		3 HIST 101 or HIST 102	3
SMED 101		3 SMED 102	3
		<b>16</b>	<b>17</b>

### Second Year

Fall	Hours	Spring	Hours
CHEM 105 & CHEM 106 or CHEM 120/121		4 PHYS 201 or PHYS 231/232	4
ENG 200		3 SMED 320	3
Colonnade: Arts & Humanities		3 Restricted Upper Division Elective*	3
SMED 310		3 World Language, if needed OR General Elective	3
World Language, if needed OR General Elective		3 General Elective	3
		<b>16</b>	<b>16</b>

### Third Year

Fall	Hours	Spring	Hours
SMED 340		3 SMED 360	3
MSS Elective		3 ENG 300	3
Restricted Upper Division Elective*		3 Restricted Upper Division Elective*	3
Colonnade: Connections (Social & Cultural)		3 MSS Elective	3
General Elective		3 MSS Elective	3
		<b>15</b>	<b>15</b>

### Fourth Year

Fall	Hours	Spring	Hours
SMED 470		3 MGE 490	5-10
General Education B		3 SMED 489	3
Colonnade: Connections (Systems)		3	
Colonnade: Connections (Local to Global)		3	
		<b>12</b>	<b>13</b>

**Total Hours 120**

\* Restricted upper division course. Student must select 3 of the following courses with the assistance of their advisor:

- ASTR 405 Astronomy for Teachers
- CHEM 470 Chemistry for Teachers
- BIOL 303 Life Sciences for Middle Grades Teachers
- GEOL 305 Earth Systems for Teachers