MATHEMATICS/SECONDARY SCHOOL MATHEMATICS MINOR, TEACHER CERTIFICATION - ROCK STUDIES

Requirements for the Certification

Secondary teacher certification in some fields is earned through the master of education degree at Slippery Rock University. Students seeking secondary school teaching certification in mathematics must earn a bachelor of arts or a bachelor of science degree in mathematics and contact the Department of Secondary Education/Foundations of Education concerning its graduate program in education. Information about this program, including prerequisites for admission, may be obtained from the secondary education/foundations of education office in 114 McKay Education Building.

Related Links

Professional Licensure/Certification Page (http://www.sru.edu/Documents/offices/PRMA/PLC.pdf)

Curriculum Guide

GPA Requirement

Major GPA: 2.0 or higher
Overall GPA: 2.0 or higher

Summary*

Code	Title	Hours
Rock Studies Requirements		45
Other Basic Requirements		0-3
Computer Competency		0-3
Major Requirements		60
Natural Science & Math College-Wide Requirements		12
Electives		14

Rock Studies Requirements

Code	Title	Hours
The Rock		
SUBJ 139	University Seminar [1]	3
ENGL 102	Critical Writing	3
ENGL 104	Critical Reading	3
MATH 225	Calculus I	4
Select one of the following:		3
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLS 235	Civil Discourse and Democracy	
Subtotal		16
Integrated Inquiry		
Creative and Aesthetic Inquiry		
Select 3 Credits (http://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3
Humanities Inquiry		
Select 3 Credits (http://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3
Social Science Inquiry		
Select 3 Credits (http://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3
Natural Sciences Inquiry		
CHEM 107 & CHEM 111	General Chemistry I and General Chemistry I Lab	4
Physical Sciences Inquiry		
PHYS 211	General Physics I with Lab	4
Subtotal		17
Thematic Thread		
Select 12 Credits (http://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/) [2]		12
Total Hours		45

[1]   Course offered in multiple subjects; cannot take course in first major subject.

[2]   From at least 3 categories; no more than 6 credits from one department; 6 credits must be 300-level or above.

Basic Math Requirement

Check with your adviser or a current degree audit report to see if you have been exempted from this course. The credit earned in this course will not be counted toward the 120 credit hour minimum needed to earn a degree.

Code	Title	Hours
Complete one of the following:		0-3
Meet required minimum SAT or ACT math score OR		
ACSD 110	Beginning Algebra	
Total Hours		0-3

Computer Competency

Code	Title	Hours
Demonstrate "computer competency" by one of the following:		0-3
Pass Computer Competency Exam OR		
Select one of the following at SRU or another post-secondary institution:		
CPSC 100	Introduction to Computing for Liberal Arts	
CPSC 110	Computer Concepts	
CPSC 130	Introduction to Computing and Programming	
PE 202	Technology for Wellness	
Total Hours		0-3

Major Requirements

- 30 major credits must be taken at SRU or PASSHE
- 30 major credits must be taken at the 300 level or above
- 12 math credits must be taken at the 300-400 level at SRU

Code	Title	Hours
Mathematics Core Courses		
MATH 131	Discrete Mathematics [1,2]	3

MATH 230	Calculus II [1,2]	4
MATH 235	Foundations of Mathematical Proof [1,2]	3
MATH 231	Calculus III [1]	4
MATH 301	Differential Equations I [1]	3
MATH 309	Linear Algebra [1]	3
MATH 313	Introductory Analysis I [1]	3
MATH 325	Abstract Algebra I [1]	3
STAT 352	Mathematical Statistics I [1]	3
MATH 491	Mathematics Seminar [1]	1
Subtotal		30
Required Electives		
Choose five additional courses required [3]		15
Subtotal		15
Mathematics Sequences		
Two sequences are required - credits earned from these courses will be applied to above requirements.		
Select one of the following:		0
MATH 301 & MATH 302	Differential Equations I and Differential Equations II [1]	
MATH 301 & MATH 411	Differential Equations I and Partial Differential Equations [1]	
MATH 311 & MATH 312	Deterministic Models of Operations Research and Stochastic Models of Operations Research [1]	
MATH 325 & MATH 326	Abstract Algebra I and Abstract Algebra II [1]	
Select one of the following:		0
MATH 313 & MATH 314	Introductory Analysis I and Introductory Analysis II [1]	
STAT 352 & STAT 353	Mathematical Statistics I and Mathematical Statistics II [1]	
Subtotal		0
Approved Minors		
Select at least one of the following minors: [4]		15

Actuarial Science (http://catalog.sru.edu/undergraduate/health-engineering-sciences/mathematics-statistics/actuarial-studies-minor/)

Biology (http://catalog.sru.edu/undergraduate/health-engineering-sciences/biology/biology-minor/)

Chemistry (http://catalog.sru.edu/undergraduate/health-engineering-sciences/chemistry/chemistry-minor/)

Computing (http://catalog.sru.edu/undergraduate/health-engineering-sciences/computer-science/computing-minor/)

Environmental Science (http://catalog.sru.edu/undergraduate/health-engineering-sciences/geography-geology-environment/environmental-science-minor/)

Geology (http://catalog.sru.edu/undergraduate/health-engineering-sciences/geography-geology-environment/geology-minor/)

Geophysics (http://catalog.sru.edu/undergraduate/health-engineering-sciences/geography-geology-environment/geophysics-minor/)

Meteorology (http://catalog.sru.edu/undergraduate/health-engineering-sciences/geography-geology-environment/meteorology-minor/)

Philosophy (http://catalog.sru.edu/undergraduate/liberal-arts/philosophy/philosophy-minor/)

Physics (http://catalog.sru.edu/undergraduate/health-engineering-sciences/physics-engineering/physics-minor/)

Psychology (http://catalog.sru.edu/undergraduate/health-engineering-sciences/psychology/psychology-minor/)

Public Health (http://catalog.sru.edu/undergraduate/health-engineering-sciences/public-health-social-work/public-health-minor/)

Secondary School Mathematics (http://catalog.sru.edu/undergraduate/health-engineering-sciences/mathematics-statistics/secondary-school-mathematics-minor/)

Statistics (http://catalog.sru.edu/undergraduate/health-engineering-sciences/mathematics-statistics/statistics-minor/)

Total Hours	60

[1]   Course counts for 50% of Major requirements and Major GPA

[2]   Minimum grade of C required to register for 300-400 level math

[3]   At most one at 200 level, other 300 level or above (except MATH 210, MATH 225, MATH 310)

[4]   Must compete at least 15 credits distinct from courses selected above (MATH 225 will not count as a distinct course).

*   Some courses may require pre-requisites. Please see course descriptions to determine if there are any pre-requisites for that specific course.

Secondary School Mathematics Minor Requirements

- At least six credits must be 300-level or higher. At least nine credit hours of mathematics courses used for the minor must be taken at Slippery Rock University.
- BS-Mathematics majors must choose at least 15 credits distinct from those being counted toward major.

Code	Title	Hours
Required Mathematics Courses		
MATH 235	Foundations of Mathematical Proof	3
MATH 304	Geometric Structures	3
MATH 320	Theory of Numbers	3
SPED 121	Overview of Special Education	3
SEFE 338	Standards-Based Instruction & Assessment in the Inclusionary Classroom	3
Additional Courses		
Select three of the following:		9
MATH 230	Calculus II	
MATH 231	Calculus III	
STAT 153	Elementary Statistics II	
STAT 252	Introduction to Statistical Modeling	
SEFE 230	Production and Utilization of Instructional Technology	
SEFE 245	Middle Level Learning Theory	
SEFE 250	Pre, Early, & Adolescent Development	
SEFE 300	Middle Level Cognitive Development	
SEFE 311	Teaching of Mathematics in the Middle School	
SEFE 326	ELL Strategies and Practice	

SEFE 370	Educational Measurements, Assessment and Evaluation	
SEFE 380	History and Philosophy of Education	
PHIL 313	Symbolic Logic	
PHIL 351	Philosophy of Natural Science	
Total Hours		24

*   Some courses may require pre-requisites. Please see course descriptions to determine if there are any pre-requisites for that specific course.

Natural Science and Math College-Wide Requirements

Code	Title	Hours
CHEM 107	General Chemistry I	3
CHEM 111	General Chemistry I Lab	1
MATH 225	Calculus I	4
PHYS 211	General Physics I with Lab	4
Total Hours		12

Computer Programming Language

Code	Title	Hours
Competency in an approved Computer Programming Language is Required - See Advisor Approval		
CPSC		

Important Curriculum Guide Notes

This Curriculum Guide is provided to help SRU students and prospective students better understand their intended major curriculum. Enrolled SRU students should note that the My Rock Audit may place already-earned and/or in progress courses in different, yet valid, curriculum categories. Enrolled SRU students should use the My Rock Audit Report and materials and information provided by their faculty advisers to ensure accurate progress towards degree completion. *The information on this guide is current as of the date listed. Students are responsible for curriculum requirements at the time of enrollment at the University*.

PASSHE - Pennsylvania State System of Higher Education Institutions

MATHEMATICS w/ SECONDARY SCHOOL MATHEMATICS MINOR - BS (6152 AND 52G)
This program is effective as of Fall 2019.
Revised 11-2019
UCC 10.15.2019