

# MATHEMATICS, B.S.ED.

The Bachelor of Science in Education (B.S.E.), which provides training in Secondary Mathematics Education, is the degree program for prospective teachers of mathematics in secondary schools. Students receive thorough training in both Mathematics and Teacher Education. In order to graduate in 4 years, students in the B.S.Ed. program must complete all their academic coursework in 7 semesters, as their final semester is spent in a full-time student teaching field placement.

## Major in Mathematics, BSE

Code	Title	Hours
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### REQUIRED MATHEMATICS COURSES

A grade of C- or higher is required in all required math courses, except MATH 464.

Calculus I - Choose 1 of the following: 4-5

MATH 161	Calculus 1	
MATH 163H	Honors Calculus 1	

MATH 211	Calculus 2	4
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MATH 301	History of Mathematics	3
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MATH 305	Teaching Math in Secondary Schools 1	2
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MATH 310	Intro to Mathematical Proof	3
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MATH 311	Calculus 3	4
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MATH 322	Linear Algebra 1	4
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MATH 325	Mathematical Connections	3
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MATH 345	Abstract Algebra 1	3
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MATH 354	Classical and Transformational Geometry	4
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MATH 405	Teaching Math in Secondary Schools 2	3
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MATH 464	Real Analysis 1	3
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### REQUIREMENTS FOR NO OPTION DECLARED

STATISTICS REQUIREMENT - Choose 1 of the following options 1-2: 4-6

Option 1. Intro to Probability and Statistics (C- or Better)

MATH 333	Probability and Statistics	
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Option 2. Math Statistics I (C- or Better) and Statistics II (C- or Better)

MATH 335	Mathematical Statistics 1	
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MATH 435	Mathematical Statistics 2	
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MATHEMATICS ELECTIVES - Choose 3 hours from: 3

MATH 365	Ordinary Differential Equation	
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MATH 370	Operations Research	
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MATH 372	Financial Mathematics I	
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MATH 375	Numerical Analysis	
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MATH 393	Number Theory	
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MATH 395	Introduction Combinatorics	
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MATH 422	Linear Algebra 2	
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MATH 445	Abstract Algebra 2	
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MATH 457	Elementary Differential Geometry	
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MATH 465	Real Analysis 2	
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MATH 467	Partial Differential Equations	
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MATH 471	Mathematical Modeling	
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MATH 472	Financial Mathematics II	
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MATH 483	Point-Set Topology	
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Any 4@8 MATH course(s)

MATH 498	Independent Study	
MATH 535	Statistical Methods 1	
MATH 536	Statistical Methods 2	
MATH 566	Complex Variables	
MATH 577	Problems in Applied Math	
MATH 592	Graph Theory	

**Total Hours** 47-50

## Professional Education

Code	Title	Hours
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### EDUCATIONAL FOUNDATIONS

EDFN 211	Foundations Modern Education	3
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	Psychological Foundations of Teaching	3
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EDFN 241	Psyc Foundation of Teaching	
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### REQUIRED EDUCATION COURSES

EDSE 321	Issues in Secondary Education	3
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### ACCOMMODATIONS AND ADAPTATIONS

	Content Area Literacy for Diverse Classrooms	3
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EDSE 340	Cntnt Area Litrcy Divers Class	
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	Secondary Students w/Disabilities in Inclusive Settings	3
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SPED 346	Sec Stdnts w Disab Inclu Sttgs	
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### STUDENT TEACHING

EDSE 471	Student Teaching Seminar	3
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EDMA 461	Student Teaching in Math	9
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**Total Hours** 27

## Req Related for Mathematics, BSE

Code	Title	Hours
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### REQUIRED RELATED COURSES

CSCI 161	Introduction to Programming 1	4
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CSCI 140	Discrete Structures	4
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**Total Hours** 8

## Advanced Professional Studies, BSE

Code	Title	Hours
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### APS REQUIREMENTS

English Composition - Choose 1 of the following: 3

ENGL 110	English Composition	
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ENGL 110H	Hnrs:English Composition	
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English Literature - Choose 1 of the following: 3

ENGL 230	Introduction to Literature	
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ENGL 231	World Literature 1	
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ENGL 232	World Literature 2	
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ENGL 233	Early British Literature	
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ENGL 234	Later British Literature	
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ENGL 235	American Literary Tradition I	
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ENGL 236	Later American Literature	
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ENGL 237	Literary Research and Analysis	
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ENGL 241H	H:Explorations in World Lit	
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ENGL 242	Reading Our World:	
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ENGL 292	Science Fiction	
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ENGL 333	African-American Literature 1	
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ENGL 333H	Hnrs:African American Lit 1
ENGL 334	African American Literature 2
ENGL 334H	Hnrs:African American Lit 2
ENGL 336	New Dimensions to World Lit
ENGL 338	Folklore and Literature
ENGL 401	Old Eng Lang and Literature
ENGL 402	Middle Eng Lang and Literature
ENGL 418	

#### Mathematics

Two Mathematics courses are required for BSE students. You have taken 0 course(s). It is preferable to take two courses designated as G2. Click here to search for MATH courses on the current web schedule. BIOL 375 will fulfill one Mathematics course for BSE BIOL students.

EDFN 211	Foundations Modern Education	6
& EDFN 241	and Psyc Foundation of Teaching	

48 earned (transcript) credit hours are required

#### APS registration status

You ARE NOT eligible to register for courses requiring APS status.

#### ACT 126 - Educator Ethics Training

You must submit your Educator Ethics Training (If applying to APS AFTER Jan 15, 2020)

#### Pre-Service Testing Required

Pre-Service Testing Status is indicated by one of the following: 1.) PSTA - Pre-Service Testing Accomplished: Verified passing pre-service test scores meet the requirement. 2.) PSTI - Pre-Service Testing Incomplete: Non-passing pre-service test scores were submitted prior to the August 1, 2015 policy change. Passing scores must still be achieved in order to meet the PA certification requirements. 3.) PSTU - Pre-Service Testing Unverified: Unofficial copies of pre-service test scores were submitted. Official scores must be sent from the testing company in order to meet PA certification requirements. 4.) PSTX - Pre-Service Testing Waived: Per PDE - ACT 136, the Pre-Service Testing Requirement has been waived.

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#### Your GPA is below 3.0 - please see an advisor

If you are given the 2.8 GPA Exception for graduation and you graduate with a GPA lower than 3.0, you must have higher certification test scores in order to meet PA state certification requirements.

#### REQUIRED CLEARANCES

##### ACT 114 - FBI Fingerprint Needed

You must submit your FBI Fingerprint Clearance

##### ACT 34 - Criminal Record Check Needed

You must submit your Criminal Record Check

##### ACT 151 - Child Abuse Clearance Needed

You must submit your Child Abuse Clearance

##### Negative TB Test or Chest X-ray Needed

You must submit your Negative TB Test or Chest X-ray

##### No dispositions-related holds

If the requirement above is checked as complete, then there are currently no dispositions-related holds on your APS Status. Registration for APS courses is permitted when all APS requirements have been met. If it is incomplete, you have a hold and APS registration will not be allowed.

##### Full Admission to APS

When all requirements are met, you must submit application for admission to APS status. Click here for the application.

##### Total Hours

12