MATHEMATICS, B.S.ED.

The Bachelor of Science in Education for Mathematics Majors provides training in Secondary Mathematics Education and is the degree program for prospective teachers of mathematics in secondary schools. Students receive thorough mathematical content knowledge and pedagogical training to prepare them to teach. In order to graduate in 4 years, students in the B.S.E. program must complete all their academic coursework in 7 semesters, as their final semester is spent in a full-time student teaching field placement. Successful graduates will be certified to teach mathematics in grades 7 through 12 in Pennsylvania and can easily transfer this certification to any state.

### Major in Mathematics, BSE

**Code** | **Title** | **Hours**
---|---|---
**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:  
- MATH 161 Calculus 1 (4-5)  
- MATH 163H Honors Calculus 1 (4)  
MATH 211 Calculus 2 (4)  
MATH 301 History of Mathematics (3)  
MATH 305 Teaching Math in Secondary Schools 1 (2)  
MATH 310 Intro to Mathematical Proof (3)  
MATH 311 Calculus 3 (4)  
MATH 322 Linear Algebra 1 (4)  
MATH 325 Mathematical Connections (3)  
MATH 345 Abstract Algebra 1 (3)  
MATH 354 Classical and Transformational Geometry (4)  
MATH 405 Teaching Math in Secondary Schools 2 (3)  
MATH 464 Real Analysis 1 (3)  
**REQUIREMENTS FOR NO OPTION DECLARED**  
STATISTICS REQUIREMENT - Choose 1 of the following options 1-2:  
- MATH 333 Probability and Statistics (3)  
- MATH 335 Mathematical Statistics 1 (3)  
- MATH 345 Mathematical Statistics 2 (3)  
MATHEMATICS ELECTIVES - Choose 3 hours from:  
- MATH 365 Ordinary Differential Equation (3)  
- MATH 370 Operations Research (3)  
- MATH 372 Financial Mathematics I (3)  
- MATH 375 Numerical Analysis (3)  
- MATH 393 Number Theory (3)  
- MATH 395 Introduction Combinatorics (3)  
- MATH 422 Linear Algebra 2 (3)  
- MATH 445 Abstract Algebra 2 (3)  
- MATH 457 Elementary Differentl Geometry (3)  
- MATH 465 Real Analysis 2 (3)  
- MATH 467 Partial Differential Equations (3)  
- MATH 471 Mathematical Modeling (3)  
- MATH 472 Financial Mathematics II (3)  
MATH 483 Point-Set Topology (3)  
Any 4@8 MATH course(s) (3)  
MATH 498 Independent Study (3)  
MATH 535 Statistical Methods 1 (3)  
MATH 536 Statistical Methods 2 (3)  
MATH 566 Complex Variables (3)  
MATH 577 Problems in Applied Math (3)  
MATH 592 Graph Theory (3)

**Total Hours**  
47-50

### Professional Education

**Code** | **Title** | **Hours**
---|---|---
**EDUCATIONAL FOUNDATIONS**  
EDFN 211 Foundations Modern Education (3)  
EDFN 241 Psychological Foundations of Teaching (3)  
**REQUIRED EDUCATION COURSES**  
EDSE 321 Issues in Secondary Education (3)  
**ACCOMMODATIONS AND ADAPTATIONS**  
EDSE 340 Content Area Literacy for Diverse Classrooms (3)  
SPED 346 Secondary Students w/Disabilities in Inclusive Settings (3)  
**STUDENT TEACHING**  
EDSE 471 Student Teaching Seminar (3)  
EDMA 461 Student Teaching in Math (9)  
**Total Hours**  
27

### Req Related for Mathematics, BSE

**Code** | **Title** | **Hours**
---|---|---
**REQUIRED RELATED COURSES**  
CSCI 161 Introduction to Programming 1 (4)  
CSCI 140 Discrete Structures (4)  
**Total Hours**  
8

### Advanced Professional Studies, BSE

**Code** | **Title** | **Hours**
---|---|---
**APS REQUIREMENTS**  
English Composition - Choose 1 of the following:  
- ENGL 110 English Composition (3)  
- ENGL 110H Hnrs:English Composition (3)  
English Literature - Choose 1 of the following:  
- ENGL 230 Introduction to Literature (3)  
- ENGL 231 World Literature 1 (3)  
- ENGL 232 World Literature 2 (3)  
- ENGL 233 Early British Literature (3)  
- ENGL 234 Later British Literature (3)  
- ENGL 235 American Literary Tradition I (3)  
- ENGL 236 Later American Literature (3)  
- ENGL 237 Literary Research and Analysis (3)  
- ENGL 241H H:Explorations in World Lit (3)  
- ENGL 242 Reading Our World: (3)  
- ENGL 292 Science Fiction (3)  
- ENGL 333 African-American Literature 1 (3)  
- ENGL 333H Hnrs:African American Lit 1 (3)
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  
& EDFN 241  and Psychological Foundations 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.

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

48 earned (transcript) credit hours are required

Total Hours 12