DEGREE: BSE
MAJOR: MATH
OPTION: STAT

Total credit hours required: 120.0 minimum

REQUIREMENTS AND POLICIES FOR THE BSE MATHEMATICS MAJOR

A. Policies for Admission to the Major
1. New students (freshmen and transfers) must be admitted to the Mathematics major by the Office of Admissions upon admission to the University.
2. Admission into the Mathematics major from other departments is upon approval of the chairperson of the Department of Mathematics. A "C-" or better in MATH 161 and all Math courses already taken which count toward a Mathematics major is required for admission.
3. Non-degree and continuing education students must be admitted to the Mathematics major by the Office of Admissions, subject to approval by the chairperson of the Department of Mathematics.

B. Policies for Retention in the Major
1. University requirements for retention.
2. A Mathematics major taking any Math course required as a prerequisite for a later Math course must earn a grade of "C-" or better in that course before being admitted to the later course for which it is a prerequisite.
3. Periodically, a Mathematics major's progress will be reviewed in accordance with the "Department Evaluation of Majors" policy stated in the University catalog. A student who does not demonstrate satisfactory progress will be notified of the department's concern. Subsequent notifications may result in being terminated as a major in the department.

C. Policies for Completion of the Major
1. Completion of all University curricular requirements.
2. Any student in the BSE Mathematics program must earn a grade of "C-" or better in MATH 405 prior to student teaching. In order to receive a departmental approval for student teaching, a math major must attain at least a "C-" in each of the prerequisites for MATH 405: MATH 161, 211, 310, 311, 322, 333, 345, and 353 or 355.
3. Additionally, prior to student teaching, each student is subject to a departmental review.

D. Admission to Advanced Professional Studies and Certification (Education Majors)
All students enrolled in teacher preparation programs must be admitted to Advanced Professional Studies and meet Pennsylvania State requirements and university requirements prior to being enrolled in their initial Advanced Professional course. Students must meet additional Pennsylvania State requirements in order to be certified. A listing of Advanced Professional Studies courses and requirements is available in each department office, the Field Services office, and the Field Services website.

Note to the student: This form is provided as a guide. It is your responsibility to consult regularly with your advisor to be aware of changes and curriculum details which are not incorporated on this form.
MAJOR SEQUENCE AND DEGREE REQUIREMENTS

Major: **BSE MATHEMATICS**
Option: **STATISTICS**

Major Field Requirements: **46.0-50.0 credits**
Other Requirements: **35.0 credits**

When applicable, up to six of the **REQUIRED RELATED** courses may be credited toward the Liberal Arts Core subject to normal distribution rules.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Short Title</th>
<th>C.H.</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>MATH 161</td>
<td>Calculus I*</td>
<td>4.0</td>
<td>____</td>
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<tr>
<td>MATH 211</td>
<td>Calculus II</td>
<td>4.0</td>
<td>____</td>
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<tr>
<td>MATH 301</td>
<td>History of Mathematics</td>
<td>3.0</td>
<td>____</td>
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<tr>
<td>MATH 310</td>
<td>Intro Mathematical Proof</td>
<td>3.0</td>
<td>____</td>
</tr>
<tr>
<td>MATH 311</td>
<td>Calculus III</td>
<td>4.0</td>
<td>____</td>
</tr>
<tr>
<td>MATH 322</td>
<td>Linear Algebra I</td>
<td>4.0</td>
<td>____</td>
</tr>
<tr>
<td>MATH 345</td>
<td>Abstract Algebra I</td>
<td>3.0</td>
<td>____</td>
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<tr>
<td>MATH 353</td>
<td>Survey of Geometry</td>
<td>3.0</td>
<td>____</td>
</tr>
<tr>
<td>MATH 355</td>
<td>Transformational Geometry</td>
<td>3.0</td>
<td>____</td>
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<tr>
<td>MATH 405</td>
<td>Teaching Math Second School</td>
<td>5.0</td>
<td>____</td>
</tr>
<tr>
<td>MATH 464</td>
<td>Real Analysis I</td>
<td>3.0</td>
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</tbody>
</table>

*With permission, MATH 163 Honors Calculus I may be taken in place of MATH 161.

**REQUIRED MATHEMATICS COURSES (36-37.0 credits)**

**REQUIRED RELATED COURSES (8.0 credits)**

- MATH 335 Mathematical Statistics I 3.0
- MATH 435 Mathematical Statistics II 3.0
- MATH 535 Statistical Methods I 3.0
- MATH 536 Statistical Methods II 3.0
- MATH 537 Stat Prob Solving Seminar 1.0

**Professional Education Courses (27.0 credits)**

- EDFN 211 Foundations Modern Education 3.0
- EDFN 241 Psych Foundations of Teaching 3.0
- EDSE 321 Issues in Secondary Education 3.0
- EDSE 340 Content Area Literacy 3.0
- SPED 346 Sec Students w/Disabilities 3.0
- EDSE 471 Differentiating Instruction 3.0
- EDMA 461 Student Teaching 9.0

**REQUIRED RELATED COURSES (8.0 credits)**

- CSCI 161 Intro to Programming I 4.0
- CSCI 140 Discrete Structures 4.0

MATH-350  SPRING 2015