B.S., MATHEMATICS

Program Requirements
Students must earn a C- grade or better in each course.

Minimum Requirements for Mathematics
B.S.: 120 credits

CONCENTRATIONS: MATHEMATICS (P. 1), STATISTICS (P. 1)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F251X</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH F252X</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH F253X</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH F265</td>
<td>Introduction to Mathematical Proofs</td>
<td>3</td>
</tr>
<tr>
<td>MATH F314</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH F305</td>
<td>Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH F320</td>
<td>Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>STAT F300</td>
<td>Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete two of the following:
- MATH F307 | Discrete Mathematics | 3 |
- MATH F426 | Numerical Analysis | 3 |
- STAT F300 | Statistics | 3 |

Complete at least 21 additional credits of electives.

The following are some suggested elective packages:

**Pure Math Suggested Elective Package**
- MATH F305 | Geometry | 3 |
- MATH F320 | Topics in Combinatorics | 3 |
- MATH F410 | Introduction to Complex Analysis | 3 |
- MATH F426 | Numerical Analysis | 3 |
- STAT F300 | Statistics | 3 |

**Applied Math Suggested Elective Package**
- MATH F302 | Differential Equations | 3 |
- MATH F432 | Introduction to Partial Differential Equations | 3 |
- MATH F410 | Introduction to Complex Analysis | 3 |
- MATH F460 | Mathematical Modeling | 3 |

Complete one from the following:
- MATH F408 | Mathematical Statistics | 3 |
- MATH F410 | Introduction to Complex Analysis | 3 |
- MATH F426 | Numerical Analysis | 3 |
- MATH F432 | Introduction to Partial Differential Equations | 3 |

Complete two from the following:
- MATH F307 | Discrete Mathematics | 3 |
- MATH F320 | Topics in Combinatorics | 3 |
- MATH F408 | Mathematical Statistics | 3 |

Complete one from the following:
- MATH F307 | Discrete Mathematics | 3 |
- MATH F320 | Topics in Combinatorics | 3 |
- MATH F321 | Number Theory | 3 |

Complete 2 from the following:
- MATH F307 | Discrete Mathematics | 3 |
- MATH F320 | Topics in Combinatorics | 3 |
- MATH F321 | Number Theory | 3 |

Complete one from the following:
- MATH F401 | Introduction to Real Analysis | 3 |
- MATH F405 | Abstract Algebra | 3 |
- MATH F410 | Introduction to Real Analysis | 3 |

Additional 3 elective credits at the F300 level or above

1. Fulfills the baccalaureate capstone requirement.
Acceptable elective courses include any math or statistics course at the F300 level or above, and CS F201. At least 15 credits must be math courses. In some cases, courses with strong mathematical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics. The requirement that at least 15 credits be math courses still applies.

We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in their undergraduate degree program, so that they can be appropriately advised of the State of Alaska requirements for teacher licensure. Students may choose to pursue a double major with education or complete a postbaccalaureate teacher certification program.

Acceptable elective courses include any MATH or STAT course at the F300 level or above. In some cases, courses with strong mathematical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics.

**Note:** All mathematics majors — including double majors — must have an advisor from the Department of Mathematics and Statistics.

**Note:** At least 12 approved mathematics credits at the F300 level or above must be taken while in residence on the Fairbanks campus.