APPLIED AND COMPUTATIONAL MATHEMATICS GRADUATE CERTIFICATE

Admission Requirements
Complete the following admission requirements:

• Hold a baccalaureate degree from an accredited institution
• Complete Calculus I (MATH F251X), Calculus II (MATH F252X), Calculus III (MATH F253X), Differential Equations (MATH F302) and Computer Science I (CS F201)\(^1\) or their equivalent;
• Complete Linear Algebra (MATH F314)\(^1\) or its equivalent.

\(^1\) Students must earn a C or better in each course.

Program Requirements
< Back to Department (https://catalog.uaf.edu/academic-departments/mathematics-statistics/)

Minimum Requirements for Applied and Computational Mathematics Graduate Certificate: 12 credits

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
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<td>General University Requirements</td>
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<td>Complete the general university requirements. (<a href="https://catalog.uaf.edu/graduate-certificates/#gurgraduatecertificatestext">https://catalog.uaf.edu/graduate-certificates/#gurgraduatecertificatestext</a>)</td>
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<td>Graduate Certificate Requirements</td>
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<td>Applied and Computational Mathematics Program Requirements</td>
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<td>Complete two of the following:</td>
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<tr>
<td>MATH F614</td>
<td>Numerical Linear Algebra</td>
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<tr>
<td>MATH F615</td>
<td>Numerical Analysis of Differential Equations</td>
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<td>MATH F660</td>
<td>Advanced Mathematical Modeling</td>
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<td>MATH F661</td>
<td>Optimization</td>
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<td>MATH F663</td>
<td>Graph Theory</td>
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<td>Select two or more from the following electives to total 12 credits for the certificate:</td>
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<td>Any course listed above not already taken</td>
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<td>Any of MATH F617, MATH F632, MATH F658, MATH F665</td>
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<td>At most one of MATH F631, MATH F641, MATH F645, MATH F651</td>
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<td>At most one of MATH F401, MATH F404, MATH F405, MATH F408, MATH F410, MATH F412, MATH F426, MATH F430, MATH F432, MATH F460</td>
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<td>At most one 3- or 4-credit 600-level statistics course, excluding STAT F698</td>
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