APPLIED MATHEMATICS
MAJOR: DYNAMICS AND
CONTROL OPTION (B.S.)

https://ceps.unh.edu/mathematics-statistics/program/ba/applied-mathematics-dynamics-control-option

Description
This degree program prepares students for employment and/or graduate study in a variety of fields and research specializations in which mathematics plays a critical role in the solution of important scientific and technological problems.

Graduation Requirements
In all courses used to satisfy the requirements for its major programs, the Department of Mathematics and Statistics requires that a student earn a grade of C- or better and have an overall grade-point average of at least 2.00 in these courses.

Requirements

Major Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 425</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 426</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 445</td>
<td>Mathematics and Applications with MATLAB</td>
<td>4</td>
</tr>
<tr>
<td>or IAM 550</td>
<td>Introduction to Engineering Computing</td>
<td></td>
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<tr>
<td>MATH 527</td>
<td>Differential Equations with Linear Algebra</td>
<td>4</td>
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<tr>
<td>MATH 528</td>
<td>Multidimensional Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH 531</td>
<td>Mathematical Proof</td>
<td>4</td>
</tr>
<tr>
<td>MATH 539</td>
<td>Introduction to Statistical Analysis</td>
<td>4</td>
</tr>
<tr>
<td>MATH 645</td>
<td>Linear Algebra for Applications</td>
<td>4</td>
</tr>
<tr>
<td>MATH 753</td>
<td>Introduction to Numerical Methods I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 407</td>
<td>General Physics I</td>
<td>4</td>
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</table>

Capstone - select one of the following: 4

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>MATH 797</td>
<td>Senior Seminar</td>
</tr>
<tr>
<td>MATH 798</td>
<td>Senior Project</td>
</tr>
<tr>
<td>MATH 799</td>
<td>Senior Thesis</td>
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</table>

Total Credits 44

Dynamics and Control Option Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHYS 408</td>
<td>General Physics II</td>
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<tr>
<td>MATH 647</td>
<td>Complex Analysis for Applications</td>
<td>4</td>
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<tr>
<td>MATH 747</td>
<td>Introduction to Nonlinear Dynamics and Chaos</td>
<td>4</td>
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<tr>
<td>ME 525</td>
<td>Statics</td>
<td>3</td>
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<tr>
<td>or CEE 500</td>
<td>Statics for Civil Engineers</td>
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<tr>
<td>ME 627</td>
<td>Dynamics</td>
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<tr>
<td>ECE 633</td>
<td>Signals and Systems I</td>
<td>3</td>
</tr>
<tr>
<td>ECE 634</td>
<td>Signals and Systems II</td>
<td>3</td>
</tr>
<tr>
<td>ECE 772</td>
<td>Control Systems</td>
<td>4</td>
</tr>
</tbody>
</table>

ONE approved elective at the 600-700 level, selected in consultation with your academic adviser. 4

Total Credits 32

1 MATH 525 Linearity I may be substituted for: MATH 645 Linear Algebra for Applications.
MATH 525 Linearity I & MATH 526 Linearity II may be substituted for: MATH 527 Differential Equations with Linear Algebra, MATH 528 Multidimensional Calculus, and MATH 645 Linear Algebra for Applications.