**MATHEMATICAL PHYSICS OPTION**

This option is offered within the following major(s):


<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MTH 251</td>
<td>*DIFFERENTIAL CALCULUS</td>
<td>4</td>
</tr>
<tr>
<td>MTH 252</td>
<td>INTEGRAL CALCULUS</td>
<td>4</td>
</tr>
<tr>
<td>MTH 253</td>
<td>INFINITE SERIES AND SEQUENCES</td>
<td>4</td>
</tr>
<tr>
<td>or MTH 306</td>
<td>MATRIX AND POWER SERIES METHODS</td>
<td></td>
</tr>
<tr>
<td>MTH 254</td>
<td>VECTOR CALCULUS I</td>
<td>4</td>
</tr>
<tr>
<td>MTH 255</td>
<td>VECTOR CALCULUS II</td>
<td>4</td>
</tr>
<tr>
<td>MTH 256</td>
<td>APPLIED DIFFERENTIAL EQUATIONS</td>
<td>4</td>
</tr>
<tr>
<td>MTH 341</td>
<td>LINEAR ALGEBRA I</td>
<td>3</td>
</tr>
</tbody>
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**Chemistry**

- CH 231 & CH 261: GENERAL CHEMISTRY and *LABORATORY FOR CHEMISTRY 231
- CH 232 & CH 262: GENERAL CHEMISTRY and *LABORATORY FOR CHEMISTRY 232
- CH 233 & CH 263: GENERAL CHEMISTRY and *LABORATORY FOR CHEMISTRY 233

**Physics Core**

- PH 211 & PH 221: *GENERAL PHYSICS WITH CALCULUS and RECITATION FOR PHYSICS 211
- PH 212 & PH 222: *GENERAL PHYSICS WITH CALCULUS and RECITATION FOR PHYSICS 212
- PH 213 & PH 223: *GENERAL PHYSICS WITH CALCULUS and RECITATION FOR PHYSICS 213
- PH 315: PHYSICS OF CONTEMPORARY CHALLENGES
- PH 335: TECHNIQUES OF THEORETICAL MECHANICS
- PH 365 & PH 366 & PH 367: COMPUTATIONAL PHYSICS LAB and COMPUTATIONAL PHYSICS LAB
- PH 411: ELECTRONICS
- PH 422: PARADIGMS IN PHYSICS: STATIC FIELDS
- PH 423: PARADIGMS IN PHYSICS: ENERGY AND ENTROPY
- PH 424: PARADIGMS IN PHYSICS: OSCILLATIONS AND WAVES
- PH 425: PARADIGMS IN PHYSICS: QUANTUM FUNDAMENTALS
- PH 426: PARADIGMS IN PHYSICS: CENTRAL FORCES
- PH 427: PARADIGMS IN PHYSICS: PERIODIC SYSTEMS

**Senior-level Physics**

- PH 401: RESEARCH
- PH 403: *THESIS

Select two of the following:

- PH 431: CAPSTONES IN PHYSICS: ELECTROMAGNETISM
- PH 441: CAPSTONES IN PHYSICS: THERMAL AND STATISTICAL PHYSICS
- PH 451: CAPSTONES IN PHYSICS: QUANTUM MECHANICS

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**Mathematical Physics Electives**

Select 15 credits

<table>
<thead>
<tr>
<th>Hours</th>
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<tbody>
<tr>
<td>15</td>
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**Total Hours**: 114

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1. 15 credits of approved upper-division courses in physics or mathematics at the 400 level or beyond, including at least one laboratory course, which form a coherent set. At least 8 of these credits must be in mathematics.

- Baccalaureate Core Course (BCC)
- Writing Intensive Course (WIC)

**Option Code**: 587