## Physics Professional Option (2012-2014)

**Updated 5/24/12**

### Freshman

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>M181 or M171</td>
<td>M182 or M172</td>
</tr>
<tr>
<td>Honors/Calc I (4-F)</td>
<td>Honors/Calc II (4-S)</td>
</tr>
<tr>
<td>PHSX240*</td>
<td>PHSX242*</td>
</tr>
<tr>
<td>Honors Mech (4-F)</td>
<td>Honors E&amp;M/Optics (4-S)</td>
</tr>
</tbody>
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*PHSX220/222 can be substituted for PHSX240/242 with advisor's approval

**Bio, Chem, or Earth Sci Elective (4 cr)**

### Sophomore

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td>M283 or M273</td>
<td>M284 or M274</td>
</tr>
<tr>
<td>Honor/MVCalc (4-F)</td>
<td>Honor/DEqu (4-S)</td>
</tr>
<tr>
<td>PHSX224</td>
<td>PHSX261</td>
</tr>
<tr>
<td>Therm/Mod (4-F)</td>
<td>LabElec I (2-F)</td>
</tr>
<tr>
<td>PHSX200</td>
<td>PHSX262</td>
</tr>
<tr>
<td>Research Sem (1-F)</td>
<td>LabElec II (2-S)</td>
</tr>
</tbody>
</table>

### Junior

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
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</thead>
<tbody>
<tr>
<td>PHSX490R</td>
<td>PHSX423</td>
</tr>
<tr>
<td>UG Research (2-S, S, Su) (completed before 499R)</td>
<td>Elect &amp; Mag I (3-S)</td>
</tr>
<tr>
<td>PHSX331</td>
<td>PHSX437</td>
</tr>
<tr>
<td>Comp Phys (1-F)</td>
<td>Laser Appl (3-S)</td>
</tr>
<tr>
<td>PHSX343</td>
<td>PHSX435</td>
</tr>
<tr>
<td>Modern (3-F)</td>
<td>Astro Phys (3-S, even)</td>
</tr>
<tr>
<td>PHSX320</td>
<td>PHSX442</td>
</tr>
<tr>
<td>Classic Mech (4-F)</td>
<td>Novel Materials (3-S, even)</td>
</tr>
<tr>
<td>PHSX427</td>
<td>PHSX451</td>
</tr>
<tr>
<td>Holography (3-S)</td>
<td>ElemenPart (3-S)</td>
</tr>
</tbody>
</table>

### Senior

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHSX425</td>
<td>PHSX444</td>
</tr>
<tr>
<td>Thermo Stat I (3-S)</td>
<td>Adv Phys Lab (4-FS)</td>
</tr>
<tr>
<td>PHSX461</td>
<td>PHSX462</td>
</tr>
<tr>
<td>Quant Mech I (3-F)</td>
<td>Quant Mech II (3-S)</td>
</tr>
</tbody>
</table>

### Senior Project

- 2 cr of 492 or 490R
- 12 credits

**Senior Project credits also count for PHSX490R or Physics elective requirements.**

**Note:** Physx320 has the option of PHSX301 or M348 as a pre-req. 2 credits of Phxs490R must be completed before taking PHSX499R.

A minimum of 120 total credits is required for graduation; 42 credits must be numbered ≥300.

C- or better is required for all required courses. D-, D, D+, and P credits only count towards electives and 120 total credits.

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### Physics Electives (7 cr; PHSX253 and PHSX ≥300)

- Math Electives (9 cr; M221 and M and STAT ≥300)

### Physics Electives (PHSX 253 and ≥300)

#### Fall

- M221
- IntrLinAlg (3-F, SSu)
- M329
- Matrix (3-S)
- M349
- Tech/App II (3-S)
- M382
- AdvCalc II (3-S)
- M386R
- SoftApp (3-S)
- M430
- MathBio (3-S)
- M431
- APPLM (3-F, odd)
- M450
- DynSys I (3-F, even)

#### Spring

- M333
- LinAlg (3-F)
- M348
- Tech/App I (3-F)
- M381
- AdvCalc I (3-F)
- M450
- ApplM (3-F, odd)
- M454
- DynSys I (3-F, even)

#### Fall & Spring

- PHSX240
- Photography (2-F)
- ASTR371
- SolarAstro (4-F)
- PHSX441
- SolidState (3-F, odd)
- ASTR393
- SolarAstro (4-F)
- PHSX441
- SolidState (3-F, odd)
- PHSX200
- Research Sem (1-F)

#### Spring

- ASTR373
- StarsGalUniv (4-S, odd)
- PHSX305R
- Holography (3-S)
- PHSX427
- AdvOptics (3-S, even)
- PHSX437
- Laser Appl (3-S, odd)
- PHSX435
- Astro Phys (3-S, even)
- PHSX442
- Novel Materials (3-S, even)
- PHSX451
- ElemPart (3-S, odd)

### Math Electives (221 and ≥300)

- Fall and Spring
- M221
- IntrLinAlg (3-F, SSu)
- M225
- InntLinAlg (3-F, SSu)
- M329
- Matrix (3-S)
- M349
- Tech/App II (3-S)
- M382
- AdvCalc II (3-S)
- M386R
- SoftApp (3-S)
- M430
- MathBio (3-S)
- M431
- APPLM (3-F, odd)
- M450
- DynSys I (3-F, even)

### See catalog for STAT courses ≥300

### See catalog for pre-requisites for elective courses.

#### Required Courses

- Course Name
- Course #
- (If of Credits, Semester Offered, Notes)

#### Elective Credits

- Fall
- Spring
- Not P/F

#### Suggested Electives

- PHSX240
- Honors Mech (4-F)
- PHSX242
- Honors E&M/Optics (4-S)
- PHSX253
- Photography (2-F)
- PHSX441
- SolidState (3-F, odd)
- PHSX220
- Research Sem (1-F)

#### Pre-Req

- Course

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**Note:** See catalog for pre-requisites for elective courses.