Physics (BS) - Meteorology Double Major

Degree Requirements

Majors in Arts and Sciences may be completed with a minimum of 120 semester hours unless designated otherwise. At least 30 hours of course work, which represents 25% of the required 120 hours, must be at the upper division level in order to fulfill the University’s residency requirement. At least 15 of the 30 upper-division hours must be in the major or concentration area. An overall grade-point-average (GPA) of 2.0 is required for graduation. In addition, a minimum GPA of 2.0 is required in the student’s major or concentration area.

The Meteorology program, with the Department of Earth Sciences, and the Department of Physics jointly offer a double major in Meteorology and Physics. This curriculum is intended for students who anticipate graduate study in Atmospheric Science, yet wish a very strong background in Physics. As constructed, this curriculum will require the student to complete an extra seventeen (17) hours over the maximum 120 hours required for either major alone. The changes from the current Option B: General Physics curriculum for a student intending to pursue graduate study in Meteorology include: removal of six (6) Physics Elective hours, two courses, and the addition of PH 366. Requirements removed from the regular Meteorology curriculum are the completion of Meteorology electives and the satisfaction of one of the four Meteorology Tracks; the Physics Major will replace the normal requirements for a Meteorology track and the electives. Only Meteorology-Physics double majors may have these track and elective requirements waived. The double major satisfies the minor requirement for the College of Arts and Sciences.

<table>
<thead>
<tr>
<th>Meteorology Major Requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MET 353</td>
</tr>
<tr>
<td>MET 341</td>
</tr>
<tr>
<td>MET 354</td>
</tr>
<tr>
<td>MET 355</td>
</tr>
<tr>
<td>MET 356*</td>
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<tr>
<td>MET 357</td>
</tr>
<tr>
<td>MET 454</td>
</tr>
<tr>
<td>MET 455</td>
</tr>
<tr>
<td>MET 456 (W)*</td>
</tr>
</tbody>
</table>

For students ultimately planning to find employment with the National Weather Service these electives are highly recommended:

| GY 475*                                                            |
| MET 492                                                            |

*Note: GY 475, MET 456(W), and MET 356 are only offered in the summer

<table>
<thead>
<tr>
<th>Physics Major Requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH 107</td>
</tr>
<tr>
<td>PH 201</td>
</tr>
<tr>
<td>PH 202</td>
</tr>
<tr>
<td>PH 303</td>
</tr>
<tr>
<td>PH 348</td>
</tr>
<tr>
<td>PH 366</td>
</tr>
</tbody>
</table>
PH 367
PH 385(W)
PH 411
PH 448
PH 463

The following additional technical courses are required in these three areas:

Mathematics and Statistics:
MA 125
MA 126
MA 227
MA 238
ST 315

Chemistry:
CH 131
CH 132

Computer and Information Sciences:
CIS 210 OR
CIS 227

All Physics majors will be required to take an assessment test, at no cost to the student, and an exit interview before graduation as directed by the department.

General Education Requirements For Physics Majors (All Options)
Areas I, II, and IV of the General Education Requirements for Physics are specified in the College of Arts and Sciences section. Note that Area III requirements (Mathematics and Natural Sciences) are fulfilled by the major requirements specified above.

General Comments
• A sample program may be found at http://www.southalabama.edu/departments/academicsuccess/fyac/advisingguides/resources/A%20PH_DoubleMajorPhysMet_4%20Year%20Plan.pdf
• PH 114 and PH 115 with either PH 201 or PH 202 may be substituted for PH 201 and PH 202 with the prior approval of the physics department chair.
• The sequences PH 114, PH 115 and PH 201, PH 202 may not both be taken for credit.

<table>
<thead>
<tr>
<th>Double Major in Meteorology and Physics (137 Hours)</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>137</td>
</tr>
<tr>
<td>Physics</td>
<td>34</td>
</tr>
<tr>
<td>Mathematics/Stat</td>
<td>18</td>
</tr>
<tr>
<td>Meteorology</td>
<td>33</td>
</tr>
<tr>
<td>Chemistry</td>
<td>8</td>
</tr>
<tr>
<td>CAS</td>
<td>2</td>
</tr>
<tr>
<td>Art/Humanities</td>
<td>12</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>12</td>
</tr>
<tr>
<td>Communication</td>
<td>9</td>
</tr>
<tr>
<td>Language</td>
<td>6</td>
</tr>
<tr>
<td>CIS</td>
<td>3</td>
</tr>
</tbody>
</table>
Department Information

Department of Physics web site
http://www.southalabama.edu/physics/

The curriculum in the Department of Physics serves three groups of students: those preparing for careers in physics, those pursuing professional fields such as medicine and engineering, and those electing physics and astronomy as part of the natural science requirement for Bachelor of Arts or Bachelor of Science Degrees. The degree program in physics allows for flexibility to the extent that the serious student can select related courses in biology, chemistry, geology, computer science, and engineering to prepare for a career in such interdisciplinary areas as biophysics, geophysics, oceanography, and environmental science. Three options for a Bachelor of Science degree in Physics are offered. One option (the Premedical Option) is for those students pursuing medicine as a career. Links to sample programs and requirements for each option are given in the degree General Comments sections of each Area of Study. Students pursuing a degree in Physics also must have a minor in another discipline. In addition, the Department of Physics offers a double major with the Meteorology program within the Department of Earth Sciences.

All first-time freshmen must successfully complete CAS 100: First Year Experience, as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry.

The Physics Pre-Medical Option requires a minimum of 129 hours, while the other Physics options require a minimum of 120 hours.