PHYSICS - BS, PHYSICAL SCIENCE TEACHING TRACK

Program Requirements

First Year

Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARSC 201</td>
<td>Self-Directed Experiences with Adolescents</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 103 or ENGL 104</td>
<td>Introduction to Rhetoric and Composition or Composition and Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>MATH 171</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 101</td>
<td>Freshman Physics Orientation 1</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 150</td>
<td>Introduction for Programming for Physics 1</td>
<td>3</td>
</tr>
<tr>
<td>American history (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history</a>) 2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 15 |

Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 102</td>
<td>Observational Astronomy 1</td>
<td>1</td>
</tr>
<tr>
<td>MATH 172</td>
<td>Calculus II 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 206 &amp; PHYS 226</td>
<td>Newtonian Mechanics for Engineering and Science and Physics of Motion Laboratory for the Sciences 1</td>
<td>4</td>
</tr>
<tr>
<td>American history (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history</a>) 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Language, philosophy and culture (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture</a>) 2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 15 |

Second Year

Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 221</td>
<td>Several Variable Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>MATH 308</td>
<td>Differential Equations 1</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 207 &amp; PHYS 227</td>
<td>Electricity and Magnetism for Engineering and Science and Electricity and Magnetism Laboratory for the Sciences 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 221</td>
<td>Optics and Thermal Physics 1</td>
<td>3</td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 14 |

Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 225</td>
<td>Electronic Circuits and Applications</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 309</td>
<td>Modern Physics 1</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 331</td>
<td>Theoretical Methods for Physicists 1</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>INST 222</td>
<td>Foundations of Education in a Multicultural Society 3</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 317/ APST 317</td>
<td>Racial and Ethnic Relations</td>
<td>3</td>
</tr>
<tr>
<td>TEFB 273</td>
<td>Introduction to Culture, Community, Society and Schools</td>
<td>3</td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 15 |

Third Year

Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>INST 210</td>
<td>Understanding Special Populations 5</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 302</td>
<td>Advanced Mechanics 1</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 304</td>
<td>Advanced Electricity and Magnetism 1</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 332</td>
<td>Theoretical Methods for Physicists II</td>
<td>3</td>
</tr>
<tr>
<td>POLS 206</td>
<td>American National Government</td>
<td>3</td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 15 |

Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 303 or PHYS 305</td>
<td>Advanced Mechanics II or Advanced Electricity and Magnetism II</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 327</td>
<td>Experimental Physics 1</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 328</td>
<td>Experimental Physics II</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 412</td>
<td>Quantum Mechanics 1</td>
<td>3</td>
</tr>
<tr>
<td>TEFB 322</td>
<td>Teaching and Schooling in Modern Society</td>
<td>3</td>
</tr>
<tr>
<td>RDNG 465 or RDNG 372</td>
<td>Reading in the Middle and Secondary Grades or Reading and Writing across the Middle Grades Curriculum</td>
<td>3</td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 15 |

Fourth Year

Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 408</td>
<td>Thermodynamics and Statistical Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>POLS 207</td>
<td>State and Local Government</td>
<td>3</td>
</tr>
<tr>
<td>TEFB 324</td>
<td>Teaching Skills II 7</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>CHEM 119</td>
<td>Fundamentals of Chemistry I</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 107 &amp; CHEM 117</td>
<td>General Chemistry for Engineering Students and General Chemistry for Engineering Students Laboratory</td>
<td>2</td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 16 |

Spring

<table>
<thead>
<tr>
<th>Course</th>
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<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 120</td>
<td>Fundamentals of Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>TEFB 406</td>
<td>Science in the Middle and Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>Creative arts (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts</a>) 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Science or technical elective 9</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>General Elective 8</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 15 |

| Total Semester Credit Hours | 120 |

1 A Physics major must complete the foundation courses (ASTR 102, PHYS 101, PHYS 150, PHYS 206/PHYS 226, PHYS 207/PHYS 227, PHYS 221, PHYS 309 PHYS 331, MATH 171, MATH 172, MATH 221,
MATH 308) with a grade of C or better and have a 2.0 cumulative GPA before taking non-foundation upper-level physics courses.

2 Any course in this category from the approved University Core Curriculum (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/) list of courses.

3 INST 222 is an approved Social and Behavioral Science, International and Cultural Diversity and Cultural Discourse class.


5 INST 210 is an approved Social and Behavioral Science and Cultural Discourse class.

6 PHYS 327 is an approved W course. PHYS 328 is an approved C course.

7 Students must apply, and be admitted, to aggieTEACH - Science, before beginning this class. Students are required to have 2.75 overall GPA and a 2.5 GPA in content areas.

8 Electives should be chosen in consultation with the student’s advisor. Electives may be selected from any 100-499 course not used elsewhere, except ENGL 103; MATH 100-148, 165-166, 365-366 (http://catalog.tamu.edu/undergraduate/course-descriptions/math/); PHYS 201, PHYS 202.

9 Any upper-division course in geo/life/physical sciences, mathematics/statistics, or engineering (except 485/491).