# Program Requirements

The following is a suggested schedule that includes the required courses for the BS in Statistics. It is recognized that many students will change the sequence and number of courses taken in any semester. Deviations from the prescribed course sequence, however, should be made with care to ensure that prerequisites for all courses are met.

## First Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>ENGL 104</td>
<td>Composition and Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MATH 171</td>
<td>Calculus I</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>STAT 182</td>
<td>Foundations of Statistics</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Select one of the following:</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td></td>
<td>ASTR 111</td>
<td>Overview of Modern Astronomy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BIOL 111</td>
<td>Introductory Biology I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BIOL 112</td>
<td>Introductory Biology II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CHEM 119</td>
<td>Fundamentals of Chemistry I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CHEM 120</td>
<td>Fundamentals of Chemistry II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 206 &amp; PHYS 226</td>
<td>Newtonian Mechanics for Engineering and Science and Physics of Motion Laboratory for the Sciences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 207 &amp; PHYS 227</td>
<td>Electricity and Magnetism for Engineering and Science and Electricity and Magnetism Laboratory for the Sciences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select one of the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COMM 203</td>
<td>Public Speaking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMM 205</td>
<td>Communication for Technical Professions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMM 243</td>
<td>Argumentation and Debate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Life and physical sciences (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#life-physical-sciences">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#life-physical-sciences</a>)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<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>)</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Credit Hours:** 15

## Second Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>MATH 221</td>
<td>Several Variable Calculus</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>POLS 206</td>
<td>American National Government</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>STAT 211</td>
<td>Principles of Statistics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Select one of the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COMM 203</td>
<td>Public Speaking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMM 205</td>
<td>Communication for Technical Professions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMM 243</td>
<td>Argumentation and Debate</td>
<td></td>
</tr>
<tr>
<td></td>
<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>)</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Credit Hours:** 16

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring</td>
<td>MATH 304 or MATH 323</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>POLS 207</td>
<td>State and Local Government</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>STAT 212</td>
<td>Principles of Statistics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Select one of the following:</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td></td>
<td>CSCE 110</td>
<td>Programming I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CSCE 111</td>
<td>Introduction to Computer Science Concepts and Programming</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CSCE 120 or CSCE 121</td>
<td>Program Design and Concepts or Introduction to Program Design and Concepts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CSCE 206</td>
<td>Structured Programming in C</td>
<td></td>
</tr>
<tr>
<td></td>
<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>)</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Credit Hours:** 16

## Third Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>STAT 404</td>
<td>Statistical Computing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>STAT 414</td>
<td>Mathematical Statistics I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<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>)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Mathematics elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Outside specialization elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Credit Hours:** 15

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring</td>
<td>STAT 408</td>
<td>Introduction to Linear Models</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>STAT 415</td>
<td>Mathematical Statistics II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Outside specialization elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>General elective</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

**Semester Credit Hours:** 15
**Fourth Year**

**Fall**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 406</td>
<td>Design and Analysis of Experiments</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Mathematics or Statistics elective ¹</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Outside specialization elective ³</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Statistics elective ⁵</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Credit Hours** 15

**Spring**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 482</td>
<td>Statistics Capstone or Interdisciplinary Data Analytics Practicum</td>
<td>3</td>
</tr>
<tr>
<td>or STAT 483</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Outside specialization elective ³</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Statistics elective ⁵</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>General elective ²</td>
<td>4-5</td>
</tr>
</tbody>
</table>

**Semester Credit Hours** 13

**Total Semester Credit Hours** 120

¹ Must make a grade of C or better.

² Select from ISEN 320, ISEN 340, ISEN 355; MATH 300, MATH 302, MATH 308, MATH 409, MATH 410, MATH 417 or MATH 437, MATH 442, MATH 446, MATH 447, MATH 469, MATH 470.

³ Students must take 12 hours in an outside specialization area upon approval by a departmental advisor. At least 6 hours must be upper-level hours.

⁴ Select from ISEN 320, ISEN 340, ISEN 350, ISEN 355; MATH 300, MATH 302, MATH 308, MATH 409, MATH 410, MATH 417 or MATH 437, MATH 442, MATH 446, MATH 447, MATH 469, MATH 470, STAT 315, STAT 335/CSCE 320, STAT 407, STAT 421, STAT 424/MATH 424, STAT 426, STAT 436, STAT 438, STAT 445, STAT 446, STAT 459, STAT 484, STAT 485, STAT 489, STAT 491.

⁵ Select from ISEN 350, STAT 315, STAT 335/CSCE 320, STAT 407, STAT 421, STAT 424/MATH 424, STAT 426, STAT 436, STAT 438, STAT 445, STAT 446, STAT 459, STAT 484, STAT 485, STAT 489, STAT 491.

Graduation requirements include a requirement for 3 hours of International and Cultural Diversity courses and 3 hours of Cultural Discourse courses. A course satisfying a Core category, a college/department requirement, or a general elective can be used to satisfy this requirement.