# Statistics - 5-Year Bachelor of Science and Master of Science in Statistics

## Program Requirements

The following is a suggested schedule that includes the required courses for the combined BS/MS 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>Fall</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 104 Composition and Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>MATH 171 Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>STAT 182 Foundations of Statistics</td>
<td>1</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>4</td>
</tr>
<tr>
<td>ASTR 111 Overview of Modern Astronomy</td>
<td></td>
</tr>
<tr>
<td>BIOL 111 Introductory Biology I</td>
<td></td>
</tr>
<tr>
<td>CHEM 119 Fundamentals of Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CHEM 120 Fundamentals of Chemistry II</td>
<td></td>
</tr>
<tr>
<td>PHYS 206 &amp; PHYS 226 Newtonian Mechanics for Engineering and Science and Physics of Motion Laboratory for the Sciences</td>
<td></td>
</tr>
<tr>
<td>PHYS 207 &amp; PHYS 227 Electricity and Magnetism for Engineering and Science and Electricity and Magnetism Laboratory for the Sciences</td>
<td></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>)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Second Year

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

### Third Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 404 Statistical Computing</td>
<td>3</td>
</tr>
<tr>
<td>STAT 414 Mathematical Statistics I</td>
<td>3</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>)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics elective ¹</td>
<td>3</td>
</tr>
<tr>
<td>Outside specialization elective ²</td>
<td>3</td>
</tr>
</tbody>
</table>

### Spring

| STAT 408 Introduction to Linear Models | 3 |
| STAT 415 Mathematical Statistics II | 3 |
| Outside specialization elective ² | 3 |
### Fourth Year

#### Fall

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 406</td>
<td>Design and Analysis of Experiments</td>
<td>3</td>
</tr>
<tr>
<td>STAT 641</td>
<td>The Methods of Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral sciences (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences</a>)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Mathematics or Statistics elective (^3)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Outside specialization elective (^2)</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

#### Spring

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 482 or STAT 483</td>
<td>Statistics Capstone or Interdisciplinary Data Analytics Practicum</td>
<td>3</td>
</tr>
<tr>
<td>STAT 642</td>
<td>The Methods of Statistics II</td>
<td>3</td>
</tr>
<tr>
<td>Outside specialization elective (^2)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>General elective</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

### Fifth Year

#### Fall

Graduate coursework \(^5\) 15

#### Spring

Graduate coursework \(^5\) 15

### Total Semester Credit Hours

150

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1. 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.
2. 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.
3. 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; STAT 315, STAT 335/CSCE 320, STAT 407, STAT 421, STAT 424/MATH 424, STAT 426, STAT 436, STAT 438, STAT 445/STAT 645, STAT 446/STAT 646, STAT 459/STAT 659.
4. Courses to be used towards both the BS and MS degree in Statistics. 36 hours for a non-thesis option or 32 hours for a thesis option (up to six of which are STAT 691). Graduate hours must be taken from 600 level STAT courses not including STAT 601, STAT 651, STAT 652, or STAT 658. Students are required to take one semester hour of STAT 681 and two semester hours of STAT 684. For additional information concerning this and other requirements of the Master’s program including the Master’s diagnostic examination, reference the Master of Science in Statistics (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/science/statistics/ms/) graduate catalog page.
5. 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.

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/