

| <b>CORE CURRICULUM</b><br>Core courses must be chosen from approved lists.<br><i>bit.ly/1d6oP6l</i>  | Minimum Hours<br>Required                         | <b>OPTION 2: COMPUTATION</b><br>Designed to provide the necessary foundation and hands-on skill in computation for the student who plans a career or further study in computational physics or computer science. Students who complete this option may simultaneously fulfill some of the requirements of the Scientific Computation and Data Sciences Certificate.       | Minimum Hours<br>Required |
|--|---|---|---------------------------|
| <b>First Year Signature Course</b>   | <b>3</b>  |   |                           |
| <b>English Composition</b>   | <b>3</b>  |   |                           |
| <b>Humanities</b>  | <b>3</b>  |   |                           |
| <b>American &amp; Texas Government</b>   | <b>6</b>  |   |                           |
| <b>American History</b>  | <b>6</b>  |   |                           |
| <b>Social &amp; Behavioral Science</b>   | <b>3</b>  |   |                           |
| <b>Mathematics</b> (Fulfilled by course in major)  | <b>0</b>  |   |                           |
| <b>Science &amp; Technology-I</b> (Fulfilled by courses in major)  | <b>0</b>  |   |                           |
| <b>Science &amp; Technology-II</b> (Fulfilled by courses in major)   | <b>0</b>  |   |                           |
| <b>Visual &amp; Performing Arts</b>  | <b>3</b>  |   |                           |
| <b>SKILLS &amp; EXPERIENCE FLAGS</b><br>Flags attached to courses are displayed in the online Course Schedule.   |   |   |                           |
| <b>Two Writing Flags:</b>  | <input type="checkbox"/> <input type="checkbox"/> |   |                           |
| 1. Core Writing Flag (cannot also fulfill another core curriculum requirement)   |   |   |                           |
| 2. Additional Writing Flag<br><i>Note: One of the two writing flags must be upper-division.</i>  | <input type="checkbox"/>                          |   |                           |
| <b>One Quantitative Reasoning Flag</b>   | <input type="checkbox"/>                          |   |                           |
| <b>One Global Cultures Flag</b>  | <input type="checkbox"/>                          |   |                           |
| <b>One Cultural Diversity in the U.S. Flag</b>   | <input type="checkbox"/>                          |   |                           |
| <b>One Ethics and Leadership Flag</b>  | <input type="checkbox"/>                          |   |                           |
| <b>One Independent Inquiry Flag</b>  | <input type="checkbox"/>                          |   |                           |
| <b>FOREIGN LANGUAGE</b>  |   |   |                           |
| <b>1 of the following:</b>   | <b>6–12</b>                                       |   |                           |
| a. Beginning level proficiency in a foreign language   |   |   |                           |
| b. 1 course in a foreign language & 1 three-hour course in the culture of the same language area   |   |   |                           |
| c. 2 three-hour courses from the same foreign culture area   |   |   |                           |
| <i>Foreign culture courses selected from approved lists maintained by the college. Bit.ly/19Ao6pc</i>  |   |   |                           |
| <b>INTRODUCTORY MATHEMATICS &amp; SCIENCE</b>  |   |   |                           |
| <b>M 408C &amp; 408D or 408N, 408S, &amp; 408M</b>   | <b>8–12</b>                                       |   |                           |
| <b>PHY 301 &amp; 101L*, 316 &amp; 116L*, and 315 &amp; 115L</b>  | <b>12</b>   |   |                           |
| <i>*PHY 303K &amp; 105M and 303L &amp; 105N, substitute for PHY 301 &amp; 101L and 316 &amp; 116L. However, they are not preferred preparation for PHY 315 &amp; 115L.</i> |   |   |                           |
| <b>CH 301 or 301C</b>  | <b>3</b>  |   |                           |
| <b>CH 302 or 302C</b>  | <b>3</b>  |   |                           |
| <i>Note: Introductory science is substantially different for Option 6</i>  |   |   |                           |
|  |   | <b>Additional Science:</b>  | <b>6</b>                  |
|  |   | 6 hours in BIO, GEO, or AST<br><i>Note: courses that cannot count toward major requirements in department that offers it cannot be applied.</i>   |                           |
|  |   | <b>Upper-division mathematics and statistics and data sciences:</b>   | <b>14</b>                 |
|  |   | M 427J or 427K<br>M 427L<br>6 additional hours of upper-division Mathematics or SDS<br><i>SDS 329C and M 362K are recommended</i>   |                           |
|  |   | <b>Upper-division physics:</b>  | <b>24</b>                 |
|  |   | PHY 355 Modern Physics & Thermodynamics<br>PHY 338K Electronic Techniques<br>PHY 353L Modern Physics Laboratory<br>PHY 336K Classical Dynamics<br>PHY 352K Classical Electrodynamics I<br>PHY 329 Introduction to Computational Physics<br>PHY 373 Quantum Physics I: Foundations<br>PHY 369 Thermodynamics & Statistical Mechanics (373 is prerequisite or co-requisite) |                           |
|  |   | <b>1 scientific computation specialization, 12 hours total:</b>   | <b>12</b>                 |
|  |   | A. <i>1st choice</i><br>CS 303E, and CS 313E or SDS 322<br>2 courses from 2 areas listed below:<br>Numerical methods: M 348; SDS 335; CS 323E, 323H, 367; CHE 348<br>Statistical Methods: M 358K, 378K;<br>BME 335<br>Other computing topics: M 346, 362M, 368K, 372K, 376C; CS 324E, 327E, 329E, 377; ME 367S  |                           |
|  |   | B. <i>2nd choice</i><br>12 hours from: EE 306, 312, 316, 319K, and 422C   |                           |
|  |   | <b>ELECTIVES</b><br><b>Enough elective hours to reach 126 total</b>   | <b>VARY</b>               |
|  |   | <i>(The number of elective hours needed may vary depending on course selections.)</i>   |                           |
|  |   | <b>ADDITIONAL GRADUATION REQUIREMENTS</b>   |                           |
|  |   | <input type="checkbox"/> Minimum 21 upper-division hours in residence, including 12 in Physics  |                           |
|  |   | <input type="checkbox"/> Minimum 60 hours in residence overall  |                           |
|  |   | <input type="checkbox"/> Minimum 36 upper-division hours  |                           |
|  |   | <input type="checkbox"/> 126 hours total overall  |                           |
|  |   | <input type="checkbox"/> Minimum grade of C- & minimum 2.0 GPA in all Mathematics & Natural Sciences courses  |                           |
|  |   | <input type="checkbox"/> Minimum UT-Austin Grade Point Average of 2.0   |                           |
|  |   | <input type="checkbox"/> Must apply to graduate during final semester   |                           |
|  |   | <input type="checkbox"/> 2024-26 Catalog expires August 2032  |                           |