

<b>CORE CURRICULUM</b>	Minimum Hours Required
Core courses must be chosen from approved lists. <a href="http://bit.ly/1d6oP6l">bit.ly/1d6oP6l</a>	
<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>	Minimum Hours Required
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 <i>Note: One of the two writing flags must be upper-division.</i>	
<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>TEACHING INSTRUCTION COURSEWORK</b>	Minimum Hours Required
<b>HIS 329U or PHL 329U</b>	<b>3</b>
<b>Research methods course:</b> PHY 341 (Topic 7: Research Methods: UTeach) <i>Note: if research methods is taken outside of PHY, must complete 3 hours of additional upper-division PHY</i>	<b>3</b>
<b>UTS 101, 110</b>	<b>2</b>
<b>EDC 365C or UTS 350</b>	<b>3</b>
<b>EDC 365D or UTS 355</b>	<b>3</b>
<b>EDC 365E or UTS 360</b>	<b>3</b>
<b>EDC 651S (Topic 4: Secondary School Teaching Practicum: Science) and UTS 170</b> <i>Grades of at least C- are required in all courses in this section</i>	<b>7</b>
<b>Middle Grade Certification (Optional)</b> EDP 363M (Topic 3: Adolescent Development) or PSY 301 and 304 EDC 339E <i>Grades of at least C- are required in all courses in this section</i>	<b>6–9</b>

<b>ELECTIVES</b>	Minimum Hours Required
<b>Enough elective hours to reach 126 total</b> <i>(The number of elective hours needed may vary depending on course selections.)</i>	<b>VARY</b>

<b>OPTION 5: TEACHING</b>	Minimum Hours Required
Designed to fulfill the course requirements for certification as a middle grades or secondary school science teacher in Texas. Students choose 1 of 4 certification options: composite science certification, physical sciences certification, physics/mathematics certification, or mathematics, physical science, and engineering certification. Completion of the course requirements does not guarantee teaching certification. Contact the UTeach-Natural Sciences academic adviser for more information.	
<b>Upper-division mathematics:</b> M 427J or 427K M 427L	<b>8</b>
<b>Upper-division physics common to all certifications:</b> PHY 355 Modern Physics & Thermodynamics PHY 353L Modern Physics Laboratory	<b>6</b>
<b>3 of the following (common to all certifications):</b> PHY 329 Introduction to Computational Physics PHY 333 Modern Optics PHY 336K Classical Dynamics PHY 338K Electronic Techniques PHY 352K Classical Electrodynamics I PHY 373 Quantum Physics I: Foundations SCI 365 Physics by Inquiry	<b>9</b>

<b>INTRODUCTORY MATHEMATICS &amp; SCIENCE</b>	Minimum Hours Required
<b>M 408C &amp; 408D or 408N, 408S, &amp; 408M</b>	<b>8–12</b>
<b>M 427J or 427K</b>	<b>4</b>
<b>M 427L</b>	<b>4</b>
<b>PHY 301 &amp; 101L*, 316 &amp; 116L*, and 315 &amp; 115L</b>	<b>12</b>
<i>* PHY 303K &amp; 103M and 303L &amp; 103N, substitute for PHY 301 &amp; 101L and 316 &amp; 116L. However, they are not preferred preparation for PHY 315 &amp; 115L.</i>	
<i>Note: Introductory science is substantially different for Option 6</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 2.5
<input type="checkbox"/> Must pass the final teaching portfolio review
<input type="checkbox"/> Must apply to graduate during final semester
<input type="checkbox"/> 2018–20 Catalog expires August 2026

See page 2 for Option 5  
Teaching Certifications

<b>OPTION 5: TEACHING</b>	Minimum Hours Required	<b>For mathematics, physical science, and engineering certification:</b>	Minimum Hours Required
Complete all coursework in 1 of the following certifications:			
<b>Composite Science Certification:</b>			
BIO 311C and 311D	6	CH 301 or 301H	3
CH 301 or 301H	3	CH 302 or 302H	3
CH 302 or 302H	3	<b>General CH lab:</b> CH 204	2
<b>6 hours of coursework in GEO</b> <i>Note: courses intended for non-science majors may not be counted toward this requirement</i>	6	<b>Secondary school math:</b> M 315C and 333L	6
<b>6 additional hours in BIO, CH, or GEO to complete 12 hours in a 2nd field</b>	6	<b>Discrete math:</b> M 325K	3
<b>Physical Sciences Certification</b>		<b>Probability:</b> M 362K	3
<b>3 additional hours of upper-division PHY</b>	3	<b>Applied statistics:</b> M 358K	3
CH 301 or 301H	3	<b>Engineering coursework:</b> ES 301 Engineering Design and Problem Solving ME 377K Projects in Mechanical Engineering*	6
CH 302 or 302H	3	*upon approval by the UTeach Program	
<b>General CH lab:</b> CH 204 or 317	2–3		
<b>Physical chemistry:</b> CH 353 & 153K CH 354L & 154K	8		
<b>Analytical Chemistry:</b> CH 455 or 456	4		
<b>For physics/mathematics certification:</b>			
<b>Secondary school math:</b> M 315C and 333L	6		
<b>Linear algebra:</b> M 341 or 340L	3		
<b>Discrete math:</b> M 325K	3		
<b>Probability:</b> M 362K	3		
<b>Applied statistics:</b> M 358K	3		
<b>Problem solving or discovery:</b> M 360M or 375D	3		