

CORE CURRICULUM	Minimum Hours Required	OPTION 5: TEACHING	Minimum Hours Required
<p>Core courses must be chosen from approved lists. bit.ly/1d6oP6I</p> <p>First Year Signature Course 3</p> <p>English Composition 3</p> <p>Humanities 3</p> <p>American & Texas Government 6</p> <p>American History 6</p> <p>Social & Behavioral Science 3</p> <p>Mathematics (Fulfilled by course in major) 0</p> <p>Science & Technology-I (Fulfilled by courses in major) 0</p> <p>Science & Technology-II (Fulfilled by courses in major) 0</p> <p>Visual & Performing Arts 3</p>		<p>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.</p> <p>Upper-division mathematics: 8</p> <p>M 427J or 427K M 427L</p> <p>Upper-division physics common to all certifications: 6</p> <p>PHY 355 Modern Physics & Thermodynamics PHY 353L Modern Physics Laboratory</p> <p>3 of the following (common to all certifications): 9</p> <p>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</p>	
<p>SKILLS & EXPERIENCE FLAGS</p> <p>Flags attached to courses are displayed in the online Course Schedule.</p> <p>Two Writing Flags: <input type="checkbox"/> <input type="checkbox"/></p> <p>1. Core Writing Flag (cannot also fulfill another core curriculum requirement)</p> <p>2. Additional Writing Flag Note: One of the two writing flags must be upper-division.</p> <p>One Quantitative Reasoning Flag <input type="checkbox"/></p> <p>One Global Cultures Flag <input type="checkbox"/></p> <p>One Cultural Diversity in the U.S. Flag <input type="checkbox"/></p> <p>One Ethics and Leadership Flag <input type="checkbox"/></p> <p>One Independent Inquiry Flag <input type="checkbox"/></p>		<p>INTRODUCTORY MATHEMATICS & SCIENCE</p> <p>M 408C & 408D or 408N, 408S, & 408M 8–12</p> <p>M 427J or 427K 4</p> <p>M 427L 4</p> <p>PHY 301 & 101L*, 316 & 116L*, and 315 & 115L 12</p> <p><i>* PHY 303K & 103M and 303L & 103N, substitute for PHY 301 & 101L and 316 & 116L. However, they are not preferred preparation for PHY 315 & 115L.</i></p> <p><i>Note: Introductory science is substantially different for Option 6</i></p>	
<p>TEACHING INSTRUCTION COURSEWORK</p> <p>HIS 329U or PHL 329U 3</p> <p>Research methods course: PHY 341 (Topic 7: Research Methods: UTeach) Note: if research methods is taken outside of PHY, must complete 3 hours of additional upper-division PHY 3</p> <p>UTS 101, 110 2</p> <p>EDC 365C or UTS 350 3</p> <p>EDC 365D or UTS 355 3</p> <p>EDC 365E or UTS 360 3</p> <p>EDC 651S (Topic 4: Secondary School Teaching Practicum: Science) and UTS 170 Grades of at least C- are required in all courses in this section 7</p> <p>Middle Grade Certification (Optional) 6–9</p> <p>EDP 363M (Topic 3: Adolescent Development) or PSY 301 and 304 EDC 339E Grades of at least C- are required in all courses in this section</p>		<p>ADDITIONAL GRADUATION REQUIREMENTS</p> <ul style="list-style-type: none"> <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"/> 2016–18 Catalog expires August 2024 	
<p>ELECTIVES</p> <p>Enough elective hours to reach 126 total VARY</p> <p>(The number of elective hours needed may vary depending on course selections.)</p>			

See page 2 for Option 5
Teaching Certifications

OPTION 5: TEACHING	Minimum Hours Required	For mathematics, physical science, and engineering certification:	Minimum Hours Required
Complete all coursework in 1 of the following certifications:			
Composite Science Certification:			
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	General CH lab: CH 204	2
6 hours of coursework in GEO <i>Note: courses intended for non-science majors may not be counted toward this requirement</i>	6	Secondary school math: M 315C and 333L	6
6 additional hours in BIO, CH, or GEO to complete 12 hours in a 2nd field	6	Discrete math: M 325K	3
Physical Sciences Certification		Probability: M 362K	3
3 additional hours of upper-division PHY	3	Applied statistics: M 358K	3
CH 301 or 301H	3	Engineering coursework: CHE 379 (Topic: Fundamentals of Engineering and Design) CHE 379 (Topic: Engineering Energy Systems) ME 379M (Topic: Design of Machines and Systems)	9
CH 302 or 302H	3		
General CH lab: CH 204 or 317	2–3		
Physical chemistry: CH 353 & 153K CH 354L & 154K	8		
Analytical Chemistry: CH 455 or 456	4		
For physics/mathematics certification:			
Secondary school math: M 315C and 333L	6		
Linear algebra: M 341 or 340L	3		
Discrete math: M 325K	3		
Probability: M 362K	3		
Applied statistics: M 358K	3		
Problem solving or discovery: M 360M or 375D	3		