

## Minimum required: 120 semester credit hours

### General Requirements

- The general education core curriculum courses are listed in the degree plan below along with the statewide component code number. See the General Education Core Curriculum (<http://mycatalog.txstate.edu/undergraduate/general-education-core-curriculum/>) section of this catalog for the Texas State requirements and options in the core curriculum, including Honors courses.
- In addition to the general education core curriculum requirements, the Bachelor of Arts degree (<http://mycatalog.txstate.edu/undergraduate/degree-program-information/>) (B.A.) requires three additional hours of English literature; three hours of mathematics, science, logic, or computer science courses; a minor; and six hours of 2000-level modern language courses. Most students will have to complete the 1410 and 1420 language courses as prerequisites before attempting the 2310 course.
- Nine hours of writing intensive (WI) courses are required for graduation.
- Students must select a minor from the approved list of Undergraduate Minors (<http://www.mycatalog.txstate.edu/undergraduate/minors/>). Students should consult the department advisor or the College of Science and Engineering Advising Center before choosing a minor.
- Students must complete a minimum of 36 advanced hours (3000 or 4000 level courses).
- The minimum number of hours required for this degree program is 120. The number of free elective hours a student completes depends on the number of hours a student may need to achieve the required 120 total or 36 advanced hours. Students should consult the department advisor or the College of Science and Engineering Advising Center before choosing the electives.
- Students entering Texas State with fewer than 16 credit hours completed after high school graduation will be required to take US 1100. All others will be exempt from taking this course. Students may be required to earn an additional elective to reach the 120 minimum total credit hour requirement for the awarding of a degree.

### Course Requirements

	First Semester Hours	Second Semester Hours	Freshman
US 1100	1	PHYS 2335 & PHYS 2135 (TCCN PHYS 2427)	4
MATH 2471 (Mathematics Component Code 020 [TCCN MATH 2413])	4	MATH 2472 (Component Area Option Code 090/092 [TCCN MATH 2414])	4
PHYS 2325 & PHYS 2125 (Life and Physical Sciences Component Code 030 [TCCN PHYS 2325 and 2125])	4	American History Component Code 060	3
American History Component Code 060	3	Communication Component Code 010	3

ENG 1310 (Communication Component Code 010 [TCCN ENGL 1301])	3		
	<b>15</b>		<b>14</b>

First Semester Hours		Second Semester Hours		Sophomore
CHEM 1135 (TCCN CHEM 1109)	1	PHYS 2230		2
CHEM 1335 (Life and Physical Sciences Component Code 030 [TCCN CHEM 1309]) <sup>1</sup>	3	PHYS 2150		1
PHYS 2326 & PHYS 2126 (Component Area Option Code 090/093 [TCCN PHYS 2326 and 2126])	4	PHYS 3312		3
Social and Behavioral Sciences Component Code 080	3	POSI 2310 (Government/Political Science Component Code 070 [TCCN GOVT 2306])		3
MATH 2393 (TCCN MATH 2315)	3	Modern Language 1410		4
		Language, Philosophy, and Culture Component Code 040		3
	<b>14</b>			<b>16</b>

First Semester Hours		Second Semester Hours		Junior
Modern Language 1420	4	PHYS Upper Division Lab <sup>2</sup>		4
PHYS 3320	3	PHYS Electives <sup>3</sup>		3
Electives/Minor	3	POSI 2320 (Government/Political Science Component Code 070 [TCCN GOVT 2305])		3
MATH 3323	3	Modern Language 2310		3
PHYS Electives <sup>3</sup>	3	Electives/Minor		3
	<b>16</b>			<b>16</b>

First Semester Hours		Second Semester Hours		Senior
PHYS Upper Division Lab <sup>2</sup>	4	PHYS Electives <sup>3</sup>		7
Minor	3	Electives/Minor		6
Modern Language 2320	3			
BA ENG Literature [TCCN ENGL 2322, 2323, 2332, 2333, 2327 or 2328]	3			
Creative Arts Component Code 050 [HUMA 1315]	3			
	<b>16</b>			<b>13</b>

**Total Hours: 120**

<sup>1</sup> BIO 1330/BIO 1130 or BIO 1331/BIO 1131 may be taken instead of CHEM 1335/CHEM 1135.

<sup>2</sup> Upper division laboratory courses: PHYS 3411, PHYS 3416, PHYS 3417, PHYS 3418.

<sup>3</sup> The Physics Faculty Undergraduate Advisor invites students to propose substituting PHYS 4321 for one required advanced course.

### PHYS Electives

Code	Title	Hours
PHYS 3210	Physics Cognition and Pedagogy	2
PHYS 3311	Classical Mechanics	3
PHYS 3313	Astrophysics	3
PHYS 3411	Advanced Physics Laboratory	4
PHYS 3416	Applied Electronics	4
PHYS 3417	Optics	4
PHYS 3418	Methods in Observational Astrophysics	4
PHYS 4121	Undergraduate Research	1
PHYS 4221	Undergraduate Research	2
PHYS 4305	Statistical Physics	3
PHYS 4310	Electromagnetic Field Theory I	3
PHYS 4311	Condensed Matter Physics	3
PHYS 4312	Quantum Mechanics I	3
PHYS 4315	Electromagnetic Field Theory II	3
PHYS 4320	Selected Study in Physics	3
PHYS 4321	Undergraduate Research (Students may request to substitute PHYS 4321 for one of the required advanced PHYS courses.)	3
PHYS 4330	Relativity	3
PHYS 4345	Biophysics	3
PHYS 4360	Physics Cognition and Pedagogy II	3
PHYS 4350F	Astronomical Spectroscopy	3
PHYS 4350G	Nuclear and Particle Physics	3
ENGR 3311	Mechanics of Materials	3
ENGR 3380	Fluid Mechanics	3
MATH 4306	Fourier Series and Boundary Value Problems	3

Or courses approved by the department advisor