

**AS- General Studies – Engineering/Physics to  
Bachelor of Science in Physics<sup>†</sup>  
Guided Pathway**  
Effective for the 2019-2020 Catalog

**First Year – North Central Texas College**

FIRST SEMESTER	SECOND SEMESTER
ENGL 1301 Composition I	ENGL 2311 Technical Writing
HIST 1301 US History I	HIST 1302 or 2301 US History II or Texas History
EDUC 1300 Learning Frameworks	MATH 2414 Calculus II*
CHEM 1411 General Chemistry I*	CHEM 1412 General Chemistry II*
MATH 2413 Calculus I*	MUSI 1306 or other Creative Arts Core

Total Semester Hours: 16

Total Semester Hours: 17

**Second Year – North Central Texas College**

It's best to apply to Tarleton State University a full semester before you plan to transfer.

FIRST SEMESTER	SECOND SEMESTER
GOVT 2305 American National Government	GOVT 2306 Texas Government
SPCH 1311, 1315, or 1321	MATH 2318 Linear Algebra, MATH 2320 Diff. Equations, or COSC 1436 Program Fund*
PHYS 2425 University Physics I or PHYS 1401 College Physics I*	PHIL 2306 Intro to Ethics or other Language/Philosophy/Culture Core
ANTH 2346 General Anthropology or other Social Science core	PHYS 2426 University Physics II or PHYS 1402 College Physics II*
MATH 2415 Calculus III*	

Total Semester Hours: 17

Total Semester Hours: 13

**Associates of Science – General Studies- Engineering/Physics Major**

You will need to apply for the associate's degree at your community college. Contact your advisor there for more information.

**These courses may be completed at NCTC or TSU**

Support Field Elective <sup>†</sup>	Support Field Elective <sup>†</sup>
General Elective	Support Field Elective <sup>†</sup>
Support Field Elective <sup>†</sup>	

Total Semester Hours: 15

**Third Year – Tarleton State University**

FIRST SEMESTER	SECOND SEMESTER
PHYS 3331 – Mechanics I (Fall Only)	PHYS 3334 – Modern Physics I
PHYS 3332 – Electromagnetic Field Theory (Fall Only)	PHYS 4330 – Mathematical Methods for Physics and Engineering (Spring Only)
MATH 3306 – Differential Equations	PHYS 4340 – Advanced Physics Lab (Spring Only)
MATH 3433 – Calculus III	Advanced Support Field Elective <sup>†</sup>

Total Semester Hours: 13

Total Semester Hours: 12

**Fourth Year – Tarleton State University**

FIRST SEMESTER	SECOND SEMESTER
PHYS 4335 – Quantum Physics (Fall Only)	PHYS 4337 – Nuclear Physics (Spring Only)
PHYS 4161 – Physics Research Project (Fall Only)	PHYS 4162 – Physics Research Seminar (Spring Only)
PHYS 3333 – Thermodynamics (Fall Only)	Advanced Physics Elective
Advanced Physics Elective	Advanced Support Field Elective <sup>†</sup>

Total Semester Hours: 10

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**TOTAL: 123**

**This is not an official degree plan. Check with an advisor; degree plans may change in later catalogs.**

Part-time students may also follow this sequence. Developmental coursework may be required.

\*MATH 1314 is a prerequisite to CHEM 1411, and MATH 1314 along with either MATH 1316 or 2412 are prerequisites to MATH 2413 and PHYS 1401 or 2425. Until you have completed these prerequisites you will be under a General Studies major (AA or AS degree). Some Math prerequisites may be satisfied by earning required scores on CLEP, AP, IB, ACT, SAT, or an NCTC approved Math placement exam. Please see an advisor at NCTC for details.

<sup>†</sup> Degree availability varies by campus; consult [www.tarleton.edu](http://www.tarleton.edu) for more information.