

ENGINEERING AND PHYSICS

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The Department of Engineering and Physics provides degrees in Engineering Physics, Environmental Engineering, Computer Science, Hydrology, and Physics as well as providing the first two years of engineering course work required for transfer to other engineering programs. The departmental also provides paths of study for students interested in advanced study in medicine, dentistry, medical physics and nuclear engineering. The department offers undergraduate research opportunities with state of the art facilities including a 32" robotic telescope, 1 MV tandem particle accelerator, and hydrology research lab.

ENGINEERING PROGRAM

The Engineering Program at Tarleton State University prepares the student for further studies in specific engineering disciplines either at Tarleton State University or other colleges and universities. The Engineering Program comprises approximately one half of the course work required for a Bachelor of Science degree in Engineering and is the entry point for all students wishing to major in engineering. Entry into the Engineering Program requires registration in Trigonometry, Pre-calculus or higher. Once the designated Engineering courses in the table below have been completed with a "C" or better, the student may apply for admission into the upper level programs leading to a degree in an engineering discipline at Tarleton.

The student may instead choose to transfer to another engineering degree-granting college or university to complete the requirements for an engineering degree. For example, the Engineering Program is aligned with the current program at Texas A&M University for seamless transfer. Students wishing to transfer are encouraged to keep their advisor informed of their intentions, as requirements for different schools of engineering vary considerably.

Entering freshman Engineering students are evaluated for mathematics preparedness. The normal course progression calls for taking Mathematics 120 (Calculus I) as the first mathematics course. If the student is not prepared to take Calculus I as the first course, then he or she may be required to take MATH 107 (College Algebra), MATH 109 (Plane Trigonometry) or MATH 118 (Pre-Calculus) instead. It is strongly recommended that students who are not certain that they are well grounded in algebra and trigonometry come to Tarleton and take the placement tests early enough in the summer prior to first enrollment so they can take any necessary calculus preparatory courses in summer school if they wish.

SUGGESTED CURRICULUM FOR ENGINEERING:

ENGL 111, 112	6
PHYS 122 ¹ , 242 ¹	8
MATH 120 ¹	4
HIST 201, 202	6
POLS 201, 202	6
HLTH 101	3
CHEM 108	4
MATH 209 ¹ , 306, 333	11
ENGR 111 ¹ , 112 ¹ , 221 ¹ , 222 ¹ , 223	15

¹These courses must be completed with a grade of "C" or better before the student can make application to the upper level engineering programs at Tarleton State University.

ENGINEERING PHYSICS

The Engineering Physics program at Tarleton State University is an ABET accredited B.S. engineering degree program with emphases in selected areas of Electrical Engineering, Computer Engineering, and Materials Physics. Students are prepared for employment as an engineer and for engineering licensure, as well as for graduate studies in selected areas of Electrical Engineering, Computer Engineering or Physics. Extensive study in mathematics, engineering, and physics gives the Engineering Physics graduate the ability to design components, processes, and systems to meet specifications and the ability to work and communicate effectively in team-oriented, project-management-driven environments. Computer simulation and modern analytical tools are used to solve physical and electrical problems. Software development, hardware integration, and testing of microcomputers, microcontrollers, and design of microelectronic circuitry provide the graduate with the tools to apply computer and software-based solutions. Additional studies in ethics assure that the graduate understands engineers' special responsibilities to protect the health and well being of the general public. See more details at: <http://www.tarleton.edu/~Engineering>

The first two years of the Engineering Physics program consist of the courses in the Engineering Program. In order to ensure that students have the solid foundation needed for success in upper level coursework, the student must complete designated courses in the Engineering Program with a grade of "C" or better before being admitted into upper level Engineering Physics coursework.

