

THE ENGINEERING PROFESSION

Engineering is a broad term that covers a wide range of applications and industries. Combining mathematics, science, and technology, engineers produce creative solutions to real world problems. Engineers need to have the ability to study data, sort out important facts, solve problems, and be logical thinkers. Other helpful traits include intellectual curiosity, technical aptitude, creativity, perseverance and dedication, ability to communicate and work well with others, commitment to teamwork, and a basic understanding of the economic and environmental context in which engineering is practiced.

There are several different fields of engineering, all with specific functions. Some of these areas include:

- Agricultural Engineering
- Architectural Engineering
- Biosystems Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Environmental Engineering
- Industrial Engineering
- Materials Science and Engineering
- Mechanical Engineering
- Nuclear Engineering

ENGINEERING EDUCATION

Although Nebraska Wesleyan does not offer Engineering as a major, there are still several options for students interested in pursuing a career in engineering. Regardless of path, you build the foundation of your college education at NWU, where you study the liberal arts and sciences. Then, you continue your education at a different institution, culminating in an Engineering degree. With both a liberal arts foundation and an engineering specialization, students are aware of society's changing values and priorities, and the effects that science and technology have on our environment and quality of life. Plus, with degrees from two highly respected universities, you're sure to capture the attention of top employers.

3 + 2 Program

Nebraska Wesleyan University holds **dual degree partnerships** in engineering with two institutions: Washington University (St. Louis, MO) and the University of Nebraska-Lincoln (UNL). Students begin this program studying **physics**, **chemistry** or **biochemistry** at Nebraska Wesleyan University, then transfer to **WashU** or **UNL** for specialized study in engineering. Students earn a bachelor's degree in their science from NWU, plus a bachelor's degree in an engineering specialization from WashU or UNL. The program is designed around a course sequence that allows students to complete both degrees in just five years—three at NWU, and two at the partner institution.

Transfer

Outside of our 3 + 2 partnership programs, students can complete their first few years of college here at Nebraska Wesleyan and then transfer to another institution to continue their education in Engineering studies. Students who choose this route will be transfer students, and therefore must meet the second institution's admission/transfer requirements.

3 + 3 Program

Washington University offers a 3 + 3 program where undergraduates earn a bachelor's degree from NWU, and a bachelor's degree and a master's degree (both in Engineering) from Washington University.

NWU Physics degree + Engineering graduate degree

Other Nebraska Wesleyan students find their optimal path to engineering credentials and career through a 4-year NWU bachelor's degree in Physics, followed by a master's program in Engineering at another institution. Our students have successfully gained graduate admission to UNL and prestigious universities nationwide.

REQUIRED AND RECOMMENDED COURSES

Aside from the three undergraduate majors listed for the partnerships or transfer programs mentioned, each institution will have their own GPA requirement and a list of required pre-requisite coursework that must be completed prior to admission. Some programs accept AP/CLEP/other transfer credits, while others do not. Students should contact their desired engineering school directly for specific pre-requisite requirements, transfer equivalencies, or other questions.

BEYOND ACADEMICS

Pre-Engineering students are encouraged to participate in experiences, such as leadership activities, volunteer opportunities, research, and shadowing of professionals, which will help prepare them for further schooling and the engineering profession. Activities beyond the classroom play a significant role in a student's application to a professional school program, and later on, a job opportunity. Such experiences demonstrate a commitment to and knowledge of the profession. Relevant work experience obtained through internships, part-time jobs, or summer jobs is extremely beneficial, as is membership in related professional organizations.

Nebraska Wesleyan also has a number of student organizations that may be of interest to pre-engineering students, including MADACS (Math, Data Analytics, and Computer Science) Club, Physics Club, the American Chemical Society, or the Society of Physics Students. Additionally, consider Kappa Mu Epsilon (Mathematics Honorary) or Sigma Pi Sigma (Physics Honorary).

APPLICATION & ADMISSION

Application and admission processes and timelines differ across all engineering programs, so make sure you know early on what the requirements and deadlines are. Contact the specific program you are interested in to learn more.

ADDITIONAL RESOURCES

[Nebraska Wesleyan Engineering Pre-Professional Program Information](#)

[Washington University Dual Degree Program](#)

[Washington University Dual Degree Program – Master's](#)

[UNL College of Engineering](#)

[National Society of Professional Engineers \(NSPE\)](#)

Current students can use the [Career Assistance Network](#) to connect with NWU alumni in the engineering profession.

