



Engineering Professor

JOB OUTLOOK ¹

Based on projections for all postsecondary teachers, overall employment of engineering professors is projected to grow faster than the average rate for all occupations. Position openings are expected as current professors who are near retirement age leave the labor force.

SALARY RANGE ²

\$60,380–\$182,950

WHO ARE THEY? ^{1,2}

Engineering professors are highly communicative and interpersonal professionals who have expert knowledge of one or more fields of engineering. Engineering involves applying scientific concepts and mathematics in the development and improvement of machines, materials, and processes that are used in a variety of industries. Engineering professors work at postsecondary educational institutions such as the University of Sydney, instructing students enrolled in engineering courses and degree programs. They also conduct research on engineering topics and publish scholarly writings. Engineering professors have an advanced academic degree in at least one field of engineering, such as chemical, civil, electrical, industrial, or mechanical engineering. They are proficient in several areas of science and mathematics, particularly in calculus, physics, and computer science. They can present highly technical and complex concepts in a way that their students will understand and adapt to the needs of diverse learners in postsecondary education environments. They can design and carry out research projects and experiments, and then explain their findings clearly in writing. Successful engineering professors are responsible for teaching and training future engineers who will improve industrial processes in the decades to come.

WHAT DO THEY DO? ^{1,2}

Engineering professors design courses and degree programs that meet both academic and industry standards. They plan and implement lessons and assignments and teach engineering courses. They evaluate their students' mastery of a topic by grading exams, papers, projects, and other assignments. They provide students with a wide variety of assistance, ranging from helping struggling students to giving career advice and direction. In addition to conducting their own research, they stay up to date on the latest developments and innovations in the engineering world. Engineering professors may serve on academic committees and as experts on advisory boards outside of academic settings.



Engineering Professor

EDUCATION/ TRAINING

- Doctoral degree in an engineering field

HOW DO I BECOME ONE? ¹

High school students interested in the field should take advanced coursework in physics, algebra, trigonometry, and calculus. Colleges and universities such as the University of Sydney require professors to hold a doctorate in their chosen field, including engineering. These degrees often take several years to complete and require a dissertation—paper that presents original research in a field of study. Engineering professors have a passion for seeing students succeed in their field of study. They need communications skills for teaching and working directly with students. They also possess critical thinking skills for designing, implementing, and interpreting engineering research projects.

RESOURCES

1. “Postsecondary Teacher,” Occupational Outlook Handbook, Bureau of Labor Statistics. <https://www.bls.gov/ooh/education-training-and-library/postsecondary-teachers.htm>.
2. “Engineering Teachers, Postsecondary, Occupational Employment and Wages. <https://www.bls.gov/oes/current/oes251032.htm>.
3. “Faculty of Engineering,” University of Sydney. <https://www.sydney.edu.au/engineering/about/our-people.html#:~:text=Professor%20Willy%20Zwaenepoel%20Dean%20Professor%20Willy%20Zwaenepoel%2C%20an,joined%20the%20Faculty%20of%20Engineering%20in%20July%202018>.
4. “University Lecturers,” Job Outlook, Australian Government. <https://joboutlook.gov.au/occupations/university-lecturers?occupationCode=24211>.