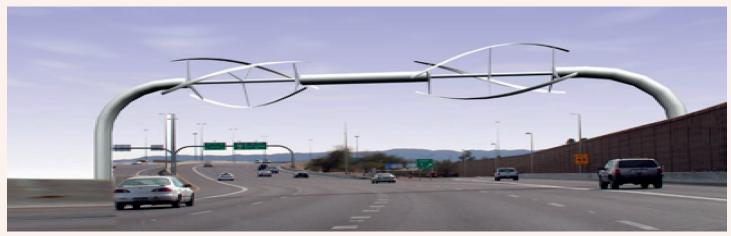


Energy From Moving Traffic



Today a lot of research work is being done on alternative sources of energy. In 2021 Istanbul University designed and installed wind turbines in the streets of Istanbul to generate electricity from moving traffic. This is done by placing rotating turbines that can rotate from the wind generated by the traffic on the streets. This device is installed and tested on the streets of Istanbul turkey. This is system is known as ENLIL. Istanbul University collaborated with the company, Devecitech to produce this system.

This idea of generating traffic from passing vehicles was developed by an entrepreneur Kerem from Istabul. Kerem noticed during a journey on Istanbul's Metrobus network that the vehicle he was travelling on was susceptible to wind influences.

Wind turbines are generally placed in large open areas and requires a constant flow of wind to operate. In many countries this constant flow of wind is seasonal. Operating the turbine from the wind generated from traffic will be consistent as long as the traffic flow is consistent. On the days where there is less traffic a solar panel is also placed as a backup Each of this system can generate enough energy for about two households.

This device along with the wind turbines, several other sensors are also placed in this device. These sensors will measure CO2 emissions earthquake intensity, wind strength and direction

This is still in the testing phase. Once the testing phase is comple will be released to the market







Expanding minds... extending horizons

Faculty of Engineering Science and Technology

Career paths for engineers

As one of the oldest engineering disciplines, civil engineering is responsible for maintaining society's infrastructure. Civil engineers ensure safe construction, operation and maintenance of structures, such as roads, bridges, buildings and dams. Due to the importance of their duties, civil engineering has particular educational and skill requirements. This guide will explain in detail what it takes to become an engineer, what civil engineering degrees are available and what prospective students can expect when getting a civil engineering degree.

What is the job of a civil engineer?

Working with both natural and built environments, civil engineers are responsible for designing and implementing plans for myriad structures and roadways used by billions of people across the world. Frequently working in tandem with architects, city planners and landscape designers, these creative professionals are responsible for countless aspects of everyday life. It would be difficult to imagine any scene where a civil engineer had not been at work: they design schools, help city traffic flow better, craft structures to hold priceless treasures and devise iconic monuments recognized the world over.

Salaries for civil engineers

Regardless of the specific area where civil engineers choose to work, the field is brimming with opportunities and well-paid positions. The careers below represent some of the paths a civil engineer may take; while the salaries given herein represent the middle 50 percent of earners, those at the top of their game in the top 10th percentile make even more. In general a civil engineer will get a salary of 82,000 USD per year and seneor engineers can get a salary fo 85,000 USD in the countries like USA, UK, Australia, and Canada.





Steps in becoming a civil engineer

Obtaining a Bachelors degree is the first step in becomming a civil engeer. Bachelor's degrees in civil engineering are commonly offered, and serve as the base level of education required to begin working.

Within these programs, students undertake a variety of courses in math, engineering, statistics, fluid dynamics, and architectural design. They learn through a variety of mediums, including class lectures, internships or co-ops, and onsite field work.

Complete an internship

Almost all programs mandate at least one semester or summerlong internship to satisfy degree requirements. Students use these experiences to apply theories they've studied in the classroom, learn practical skills, and gain insight on a particular area of the field they may be interested in pursuing. These opportunities also serve students well for future employment, allowing them to network with other professionals, receive mentorship from an established civil engineer, and possibly leverage their experience into a job after graduation. The majority of internships are completed in the junior or senior year of study.



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UNSW School of Computer Science & Engineering - Degree Comparison Table

| PROGRAM (DEGREE) | COMPUTER ENGINEERING | SOFTWARE ENGINEERING | COMPUTER SCIENCE | INFORMATION Technology/systems |
|-------------------------------|--|--|---|---|
| 2007 Average Starting Salary* | \$59,750 | \$71,385 | \$58,585 | |
| UNSW School | Computer Science and Engineering | Computer Science and Engineering | Computer Science and Engineering | Information Systems, Technology and Management |
| Program emphasis | Efficient design of software and hardware together | Design and management of large software projects | Flexibility - core computing is covered with emphasis chosen by student | Installation of hardware and software into a business environment |
| Employing industries | IT Companies; telecommunication companies; engineering firms; smaller companies employing versatile graduates | IT companies; all industries, especially: telecommunication companies; defence; security; business and financial institutions | IT companies and all industries | IT Companies and large companies, especially financial institutions |
| 2008 entry | UAI: 88.00 (See page 24 for paths) | UAI: 88.00 (See page 24 for paths) | UAI: 88.00 (See page 24 for paths) | UAI: 85.00 |
| Assumed knowledge | Mathematics Extension 1; Physics | Mathematics Extension 1; English | Mathematics Extension 1 | Mathematics Extension 1; English |
| Other courses | Engineering Science;Computing Studies | Computing Studies; Business Studies | Computing Studies | Business Studies; Economics |
| Course content over program | Computing 40% | 50% | 42% - 67% | 10% + electives |
| | Mathematics 15% | 10% | 15% + electives | 10% |
| | Information Sys none | 30% | electives to 20% | 35% + electives |
| | Electrical 30% | none | electives to 10% | none |
| | Bio infomratics none | none | none | none |
| | Physics 15% | SENG workshops 10% | Most from science, arts to 10% | Economics; accounting to 45% |
| Postgraduate study options | Research: PhD, ME, MPhil, MSc Coursework: Master of Information Technology, Master of Engineering Science(Information Technology) | Research: PhD, ME, MPhil, MSc Coursework: Master of Information Technology, Master of Engineering Science(Information Technology) | Research: PhD, ME, MPhil, MSc Coursework: Master of Information Technology, Master of Engineering Science(Information Technology) | Research: PhD , MPhil Coursework: Master of Information Systems, MCom in Information Systems |

בת תוצב המכל כצישל הק. יש.

COSC262 Algorithms

PHIL240 Bioethics: Life, Death and Medicine STAT201 Applied Statistics OR STAT202 Regression Modelling Plus complete the required 200-level courses from your chosen major.

300-level

DATA301 Big Data Computing and Systems
DATA303 Computational Data Methods
STAT315 Multivariate Statistical Methods OR STAT318 Data Mining

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16 2 10 21 00 01 01 C20 151 4152 1454 454 1515 CC1000 CC 11 0 CO 11 10 CO 11 10 CO 0 / 1/7 c 0/7 0 7/0 cc cc/2/0/2 שלע מעשפי מת ייעער יין א מציע מעלפאל (CC 11101) CCC1101 21 011 10 120 CE CREQUAVE. C CREQU WALLED OF STREET 01101 7 (1)7 0 C 01 0X 0 0 0 C 18,517 7 V17X1 204 18,5 3E VE CCC 42 0111 771 7 17 117 C 9AM9M YUU SJONA Y 25A95YA קני 200 ו ני דני CO 000 ני02000 ארפתע מביע חייכר צחבק עמיע ע־ימרי מחפתע (C) X 77 coursera Asia Pacific Top countries by skill proficiency A country that is at 100% ranks at the top of the 100 countries featured, while a country at 0% is at the bottom Switzerland Technology Business **Data Science** Spain Business Technology **Data Science** 100% Germany Business **Data Science** Technology 92% 84% Luxembourg Business **Data Science** Technology Japan Business **Data Science** Technology

2000 - 20

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100-level

DATA101 Introduction to Data Science
COSC121 Introduction to Computer Programming
COSC122 Introduction to Computer Science
MATH102 Mathematics 1A
SCIE101 Science, Society and Me
Plus complete the required 100-level courses

200-level

from your chosen major.

DATA201 Data Wrangling
DATA203 Data Science Multivariable Methods