Bachelor of Engineering (Honours)/Bachelor of Data Science (Domestic students)

Program code
1636

Available at
Nathan Campus

Duration
5 years full-time
10 years part-time

Credit points
400

Indicative fee
$9,000.00* per year (more)
* 2024 indicative annual CSP fee

Entry requirements
70.00
ATAR/RANK 2024
(more)

Commencing in
Trimester 1 and Trimester 2

Prerequisites
NIL

Assumed knowledge
Any General or Applied English subject (Units 3 and 4, C)
Mathematical Methods (Units 3 and 4, C)

About this program

As factories and other engineering environments transform into an industrial Internet of Things, the ability to analyse vast quantities of data to extract relevant intelligence is an increasingly and highly sought-after skill.

Data science provides a broad knowledge of the exploration, gathering, manipulation, visualisation, automation and interpretation of data using digital platforms and can be applied to enable real-time performance optimisation.

This double degree will enable you to provide data-based insights based on your specific expertise in engineering, to improve decision-making, reduce costs and increase efficiencies.

You'll gain knowledge in your chosen engineering major and skills to access the insights large data sets provide and lead the way in translating data into actionable information, including manipulation, modelling, interpretation and visualisation, using a range of digital platforms and tools.

In your final year, you can enhance your employability through an industry placement to gain practical experience and valuable industry networks.

You'll also graduate with a degree accredited by the national engineering body (Engineers Australia) and be fully equipped to work in local, national and international sectors.

Engineering majors (offered at Nathan)

- Civil Engineering
- Electronic Engineering
- Environmental Engineering
- Mechanical Engineering
- Software Engineering

My attendance during the program

Attendance information

The Bachelor of Engineering (Honours)/Bachelor of Data Science is available full-time and part time on-campus at the Nathan and Gold Coast campuses. The program includes some Trimester 3 core courses.

Student Income Support

To be classed as a full-time student, you are required to enrol in a minimum number of credit points each standard study period. The minimum credit points for full-time enrolment in this program is 30 credit points.

Trimester 1 and Trimester 2 are deemed standard study periods. As Trimester 3 is a non-standard study period, continuing

students moving from one year to the next will not be required to study during this trimester to be eligible for student income support.

Domestic students who commence in Trimester 3 may be eligible for student income support from the onset of study provided they are enrolled full-time in this study period.

Please refer to the Australian Government website for more details.

My career opportunities

My career opportunities

Civil Engineering
Civil engineers provide a major contribution to society by supporting the design and development of essential services, and by managing and improving the built environment. Demand for civil engineering professionals has grown and is expected to continue be an area of high demand. You could find employment in jobs such as chief civil engineer, construction engineer, municipal engineer, structural engineer, transport engineer, water supply distribution engineer, project manager and consulting engineer.

Electronic Engineering
Our graduates find opportunities in Australia and overseas undertaking the research, design, development and manufacture of electronic systems. You may also find work with employers who specialise in computer-based hardware and software systems. You will be equipped for a career in areas such as communications, including satellite navigation, broadband services and telecommunications, energy production, and transport control systems development. If you specialise in microelectronics you can also look to work in microelectronics design and fabrication. You could find employment in many multinational companies, as well as in specialist technology companies.

Environmental Engineering
Environmental professionals with strong ecological social science backgrounds are in demand both in Australia and internationally. You may find opportunities in government departments such as Transport and Main Roads, Natural Resources and Mines, Department of Science, IT and the Arts (DSITIA) and Environment and Resource Management. You could also find opportunities with consulting firms in the construction, mining, oil, smelting and manufacturing industries, as well as with local government and research organisations.

Mechanical Engineering
Mechanical engineering is the most diverse of all the engineering disciplines, which means you will be able to use your skills in a variety of avenues including design, research, development or production. As a graduate, you will be qualified for a career in medical, automotive, aerospace, renewable energy, marine and sports-related sectors.

Software Engineering
As a graduate, you will be prepared for a career in software development and be equipped to meet the demands of the rapidly changing software industry. You will find employment as a software architect, software developer, software engineer, software tester, IT project manager, systems analyst, security specialist, computational scientist, programmer, networking and communications specialist, and in research and development. Not all engineering graduates work as engineers - the transferrable skills and methodology developed through your degree provide a springboard to any career where critical thinking, the ability to analyse and investigate new information and evidenced-based decision making are valued.

Data Science
Never have we collected so much data about absolutely everything. From things that happen naturally, like climate change or the birth of galaxies, to all the social businesses, individual movements, corporate decisions and human activities. The data is there for its exploitation by machine learning technology, big data, data mining and other artificial intelligence technologies that coupled with traditional statistical analysis enable to produce insights into the future. Nothing is more valuable than anticipation. Thus, data scientist are finding jobs in multiple disciplines.

What are the fees?

Commonwealth supported students

- The indicative fee represents the expected average fee for an annual full-time study load (80 credit points). This is based on average study patterns across courses and the Australian Government's broad discipline areas (student contribution bands). A student's actual annual fee may vary in accordance with his or her choice of majors and electives. The Australian Government sets student contribution amounts on an annual basis.
- Find out more...

Fee-paying undergraduate (domestic) students

These fees are only applicable to domestic students who are not Commonwealth supported including:

- Full-fee paying domestic students who commenced their program prior to 2009.
- International students who have been approved to pay domestic tuition fees after obtaining Australian or New Zealand citizenship or permanent residency or a permanent humanitarian visa and who have not obtained a Commonwealth supported place.

Tuition fees

- A fee-paying undergraduate student pays tuition fees.
- Students are liable for tuition fees for the courses they are enrolled in as at the census date.
- The tuition fee is charged according to the approved program fee for the trimester in which the student is enrolled.
- Find out more...

FEE-HELP

Eligible undergraduate fee-paying students may defer their tuition fees by taking out a FEE-HELP loan which is part of the Higher Education Loan Program (HELP). Payment of the loan is via the taxation system when income reaches a specified level.

- Higher Education Loan Program (HELP)

Further information

- Calculating tuition fees
- Calculating your EFTSL
- Fees and Charges Procedure
  - 3.2 - Fees for Undergraduate Students (Non-international)
  - Fees and Charges Schedules
- Financial help and support

Additional fee information

Additional costs

Throughout your program you may be required to pay for the following items:

- personal protective equipment; steel-cap boots required for some site visits