2026 Engineering Subject Guide

Study Abroad and Exchange

Study Abroad and Exchange students may choose subjects from more than one faculty at UTS.

This guide highlights our most popular Engineering subjects. You can also search for other subjects and majors using the UTS Handbook and UTS Engineering website.

Subjects offered in other faculties may carry different credit point values. Be mindful of this when choosing your subjects. Final enrolment into subjects is conditional upon class availabilities and completion of the online enrolment process.

When can I study?

Study Abroad and Exchange is available:

Period	Category
February – June	**A**: Autumn Session

Period	Category
July – November	**S**: Spring Session

Please note: Some of the subjects you want to undertake from the list may not be available in your intake session. To confirm subject availability, please search the relevant subject codes in the UTS Timetable Planner.

In the Timetable Planner, "AUT" refers to Autumn Session, and "SPR" refers to Spring session.

What can I study?

Pre-approved subject list

This is a great place to start! All subjects in this list are:

- **Pre-approved** and automatically added in your study plan
- You can **self-enrol** once you activate your student account
- No need to include them in your application
- **No additional subject assessments** required
- You can even choose subjects **outside your study area**, as long as it's permitted by your home university

Faculty assessed subjects

All subjects from this list require prior knowledge. You will need to:

- List the subjects in your application
- Check prerequisites in the UTS Handbook
- Demonstrate that you have the prior skills and knowledge necessary to undertake the subject (academic transcript and subject outline)

Note: Each subject will be individually assessed by the faculty for approval, which can take up to 6 weeks.

Faculty assessed subjects

Key: (Information included: Subject Number, Subject Name, Level and Session offered)

- **L1** (Level 1) usually undertaken in first year (similar to 100 level, introductory level)
- **L2** (Level 2) usually undertaken in second year (similar to 200 level, prior knowledge is required)
- **L3** (Level 3) usually undertaken in third year (similar to 300 level, advanced level)
- **L4** (Level 4) Usually undertaken in fourth year (similar to 400 level, advanced level)

Undergraduate subjects

- Students with no prior Communication background should start with the pre-approved subject list.
- Undergraduate students are not permitted to study postgraduate subjects.
- All subjects have prerequisites.

Engineering core subjects

41200	Engineering Project Appraisal	L2	A or S
41201	Designing Sustainable Engineering Projects	L3	A or S
41202	Professional Engineering Communication	L3	A or S
48210	Interrogating Technology: Sustainability, Environment and Social Change	L3	A
48260	Engineering Project Management	L3	A
41203	Collaboration in Complex Projects	L4	A or S
48270	Entrepreneurship and Commercialisation	L4	A or S

Biomedical Engineering

41160	Introduction to Biomedical Engineering	L1	A or S

Civil and Environmental Engineering

48221	Engineering Computations	L1	A or S
48321	Engineering Mechanics	L1	A or S
48340	Construction	L2	A or S
48352	Construction Materials	L2	A or S
48331	Mechanics of Solids	L2	A or S
48330	Soil Behaviour	L2	A or S
48349	Structural Analysis	L2	A or S
48821	Principles of Environmental Engineering	L2	S
48641	Fluid Mechanics	L3	A or S
48350	Environmental and Sanitation Engineering	L3	A or S
48362	Hydraulics and Hydrology	L3	A or S
48370	Road and Transport Engineering	L3	A or S
48360	Geotechnical Engineering	L3	A or S
48353	Concrete Design	L3	A or S
48860	Pollution Control and Waste Management	L3	A
48366	Steel and Timber Design	L4	A or S
48389	Computer Modelling and Design	L4	A or S
48881	Water and Environmental Design	L4	S
48371	Advanced Engineering Computing	L4	S

Electrical Engineering

48510	Introduction to Electrical and Electronic Engineering	L1	A or S
48530	Circuit Analysis and Design	L2	A or S
48531	Electromechanical Automation	L2	A or S
48540	Signals and Systems	L2	A
48571	Electrical Machines	L3	A
48560	Automation Studio	L3	S
43124	Renewable Energy Technology	L3	S
48580	Intelligent Control Studio	L4	A
48561	Renewable Energy Systems Studio A	L4	A
48582	Power Systems Studio A	L4	A
48583	Power Systems Studio B	L4	S
48550	Renewable Energy Systems Studio B	L4	S
41125	Sustainable Energy Studio	L4	S

43123	Energy Storage Technologies	L2	A
42057	Introduction to Space Communications and Sensing	L4	S

Data and Software Engineering

48024	Programming 2	L2	A or S
48441	Introductory Digital Systems	L2	A
31269	Business Requirements Modelling	L1	A or S
48450	Real-time Operating Systems	L2	A
31251	Data Structures and Algorithms	L2	A or S
31257	Information System Development Methodologies	L2	A
48033	Internet of Things	L2	S
48730	Cybersecurity	L3	A or S
48433	Software Architecture	L3	S
48436	Digital Forensics	L3	S
31256	Image Processing and Pattern Recognition	L2	S

Mechanical and Mechatronic Engineering

48531	Electromechanical Automation	L2	A or S
48622	Embedded Mechatronics Systems	L2	A
41054	Applied Mechanics and Machines A	L2	S
41053	Materials and Manufacturing A	L2	S
41056	Machines and Mechanisms A	L3	A
41059	Mechanical Design Fundamentals Studio 1	L2	A or S
41057	Thermofluids A	L2	A or S
43015	Thermofluids B	L3	A
41058	Dynamic Systems and Control A	L3	A
43019	Design in Mechanical and Mechatronic Systems	L4	A
43017	Machines and Mechanisms B	L3	A
43018	Dynamic Systems and Control B	L3	A

Postgraduate subjects

Undergraduate/bachelors-level students are generally not permitted to undertake postgraduate subjects; however, an exception to study the following postgraduate subjects may be made if equivalent/relevant engineering studies (approximately 2.5 years of a 4-year degree) have been completed.

Engineering Management

49006	Risk Management in Engineering	A or S
49016	Technology and Innovation Management	A

Biomedical Engineering

49275	Neural Networks and Fuzzy Logic	A
49261	Biomedical Instrumentation	S

Civil and Environmental Engineering

42991	Advanced Water and Wastewater Treatment	A
49123	Waste and Pollution Management	A
49115	Façade Engineering	S
49136	Application of Timber in Engineering Structures	A
49150	Prestressed Concrete Design	A
49151	Concrete Technology and Practice	A
49106	Road Engineering Practice	A
49047	Finite Element Analysis	S
49117	Floodplain Risk Management	S
49118	Applied Geotechnics	S
49127	Decentralised Environmental Systems*	S
49134	Structural Dynamics and Earthquake Engineering	S
49254	Advanced Soil Mechanics and Foundation Design	S
49255	Catchment Modelling	S

Data and Software Engineering

32555	Fundamentals of Software Development	A or S
49202	Communication Protocols	A
42890	4G/5G Mobile Technologies	S

Electrical, Mechanical and Mechatronic Engineering

49928	Design Optimisation for Manufacturing	S
49325	Computer-aided Mechanical Design	A
42907	Design for Durability	S
49274	Space Robotics	S
49329	Control of Mechatronic Systems	S