

Department of Engineering

Undergraduate Degrees

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THE

LONDON AND EDINBURGH

PHILOSOPHICAL MAGAZINE

AND

JOURNAL OF SCIENCE.

[THIRD SERIES.]

JUL Y 1838.

I. Education of Students in Civil Engineering and Mining in the University of Durham.*

IT has long been a subject of regret that no institution existed in England in which young men might receive an education which should peculiarly fit them for the higher branches of the profession of a Civil Engineer. That profession is comparatively of recent origin. It has been formed by the exigencies of the times, and has had to struggle with great disadvantages. The names of Smeaton, Brindley, and others recall to our minds the difficulties which those men of masterly abilities had to encounter, in order to devise the means and create the instruments necessary to accomplish the purposes which their genius conceived. A portion of this difficulty still subsists; while the attainments necessary to enable the engineer to meet the emergencies which he has to encounter, have continually become more varied and extensive.





Hour access to key student working areas help our students to be flexible in the way that they study



£4.5M

has recently been

invested into the

new student work

Department of

space and

laboratories



200

Engineering Undergraduate students per year – this makes us very small by UK standards!



1838

Engineering at Durham is the oldest course of its kind in the UK



4th

Engineering at Durham
University is 4th in *The*Complete University
Guide 2025



96%

of our Engineering graduates are in graduate level paid employment or further study 15 month after graduation (The Guardian University Guide 2025)



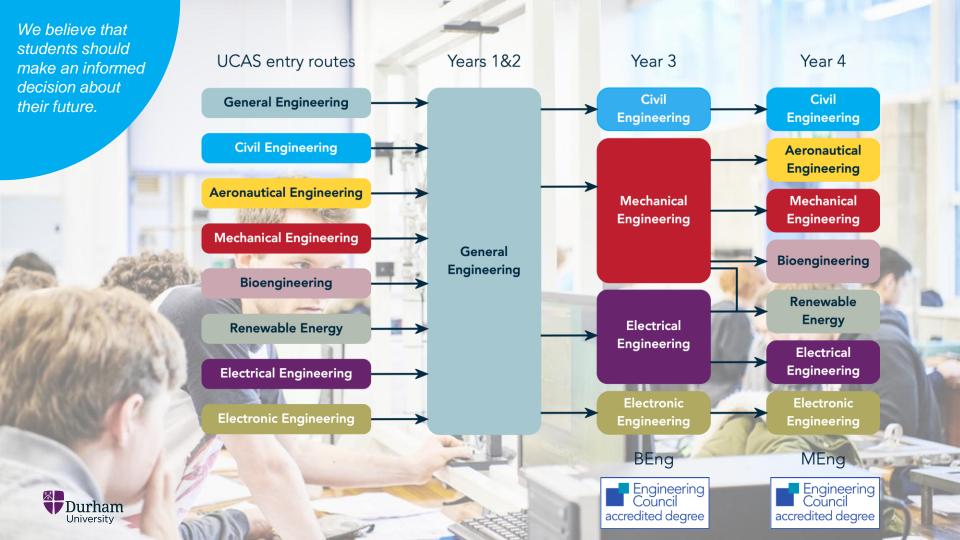
5th

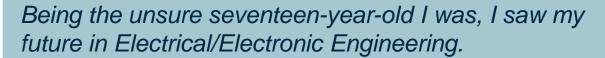
Engineering at Durham University is 5th in the UK for employability











Four years later, I'm studying the Aeronautical stream and looking for a career in racing car aerodynamics!

I don't know of many courses out there that would have allowed me to do that.

James Marriott
Engineering Graduate



Solid
Mechanics &
Structures

Core knowledge for Mechanical and Civil Engineers

Stress/strain Material failure Structures Beams Equilibrium

Exam

Thermodynamics & Fluid Mechanics

Essential knowledge for Mechanical Engineers

1st and 2nd laws Static & dynamic fluids Dimensional Analysis

Exam

Electronic & Electrical Systems

Fundamentals for Electrical / Electronic Engineers

Digital & analogue electronics Electrostatics Electromagnetism

Exam

Mathematics for Engineers

Mathematics is a core Engineering tool

Matrices/
vectors
Complex
numbers
Differentiation
Integration
Linear Algebra

Homework & Exam

Engineering Practice

Underpinning skills and practical experience

Laboratories
Sketching
CAD
Programming
Design
Teamwork

Coursework

Free Elective

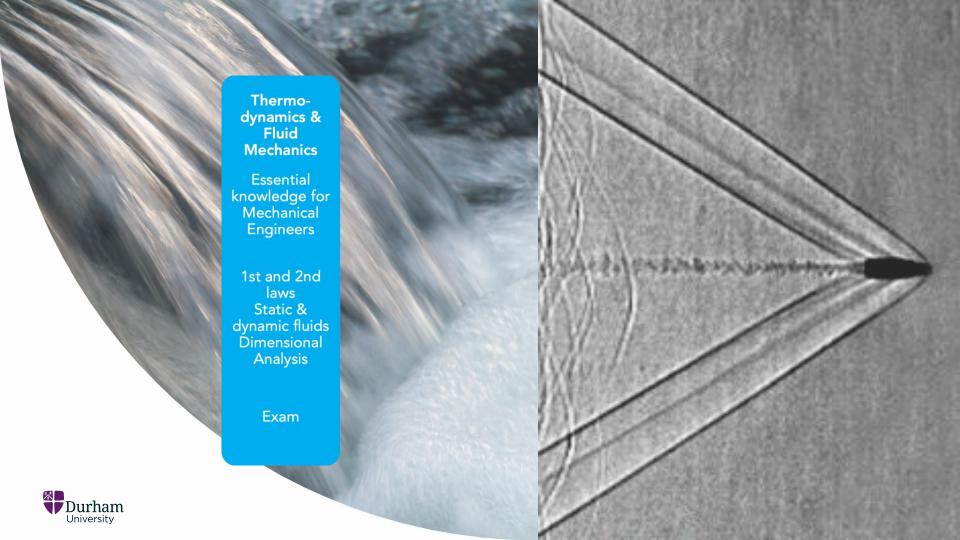
Take a subject from across the University

History?
Language?
Maths?
Physics?
Law?
Languages?
(Engineering)

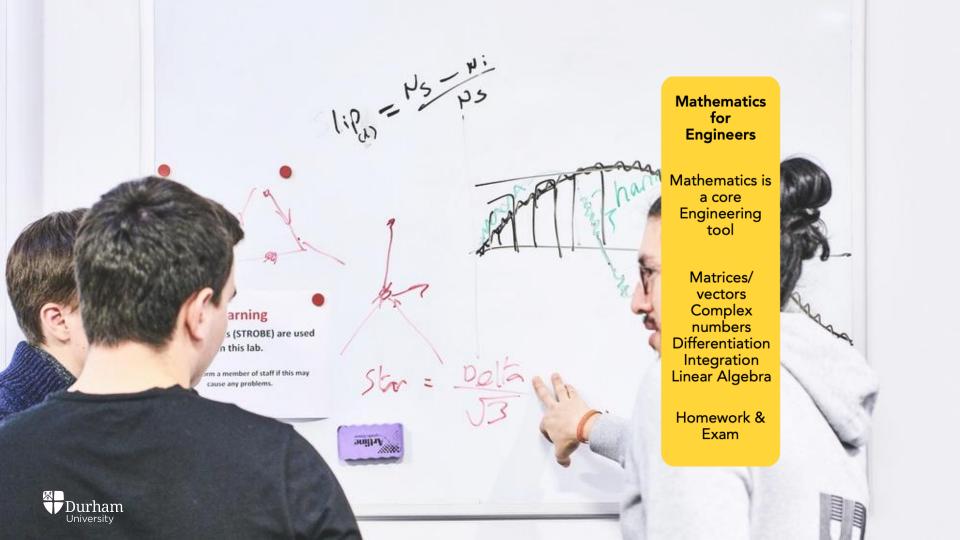
Homework & Exam



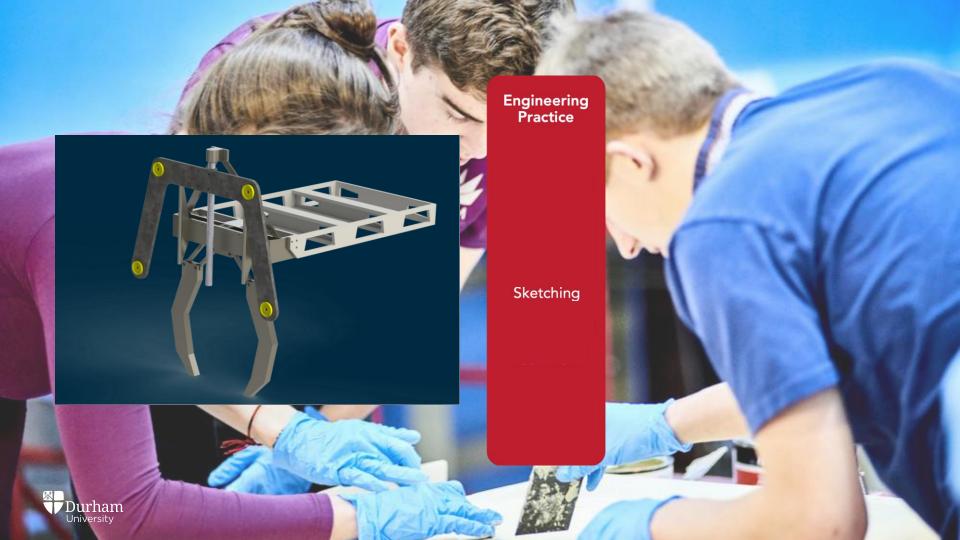
















Engineering Practice

Design Teamwork

Engineering Design

solve a challenge set by the Institution of Mechanical Engineers (IMechE)



Supervision

you will work with a Professional Engineer and an Academic who help to guide your projects



of Engineering design over the degree





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Core knowledge for Mechanical and Civil Engineers

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Material
failure
Structures
Beams
Equilibrium

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Homework & Exam

Engineering Practice

Underpinning skills and practical experience

Laboratories Sketching CAD Programming Design Teamwork

Coursework

Free Elective

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History?
Language?
Maths?
Physics?
Law?
Languages?
(Engineering)

Homework & Exam





Term 1 10 Weeks Lectures **Seminars** Laboratories CAD Sketching Coursework

Term 2 Term 3 10 Weeks 9 Weeks Revision Lectures **Seminars** Examinations Laboratories **Practical** Engineering Skills Course Engineering (post exams) Design **Programming** Coursework





20 hours

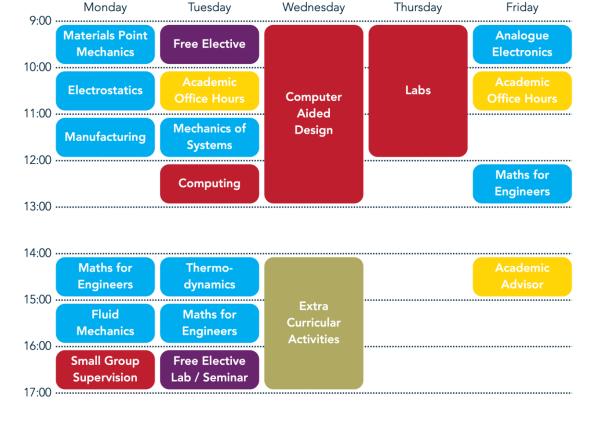
1st Year Engineers have around 20 hours per week of contact time.

5+ hours of practical activity or Engineering design per week.



module.







Solid Mechanics & Structures 2

Dynamics, Vibrations, Mechanics of static systems, Shear & torsion, Trusses and frames, Stresses in solids

Exam & Coursework

Thermodynamics & Fluid Mechanics 2

Steam cycles, Refrigeration, Gas mixtures & combustion, Viscous fluid flow, Heat transfer & heat exchangers

Exam & Coursework

Electronics 2

Analogue
circuits,
Digital
electronics,
Logic &
microprocessor
design,
Measurements
and signal
processing

Exam & Coursework

Electrical Engineering 2

System stability & control, Electromagnetism, AC circuit analysis, Electrical Machines

Exam & Coursework

Engineering Design 2

Concept generation, Embodiment & detailed design

Sustainability

Risk & contingency

Teamwork

Coursework

Engineering Mathematics

Probability & statistics

Data analysis

Numerical methods for Engineering problems

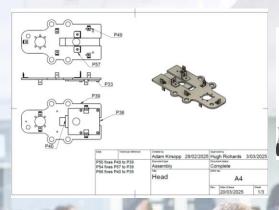
Exam & Coursework

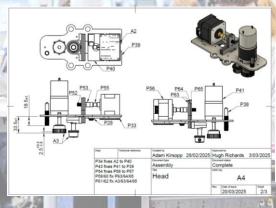


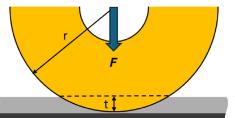
Module content can change year to year

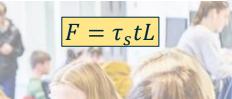














Engineering Design 2

Concept generation, Embodiment & detailed design

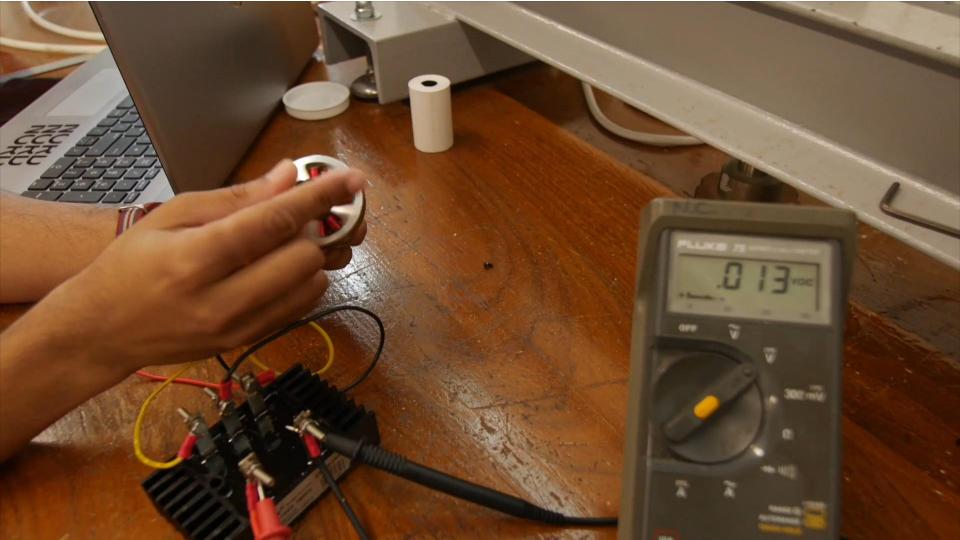
Sustainability

Risk & contingency

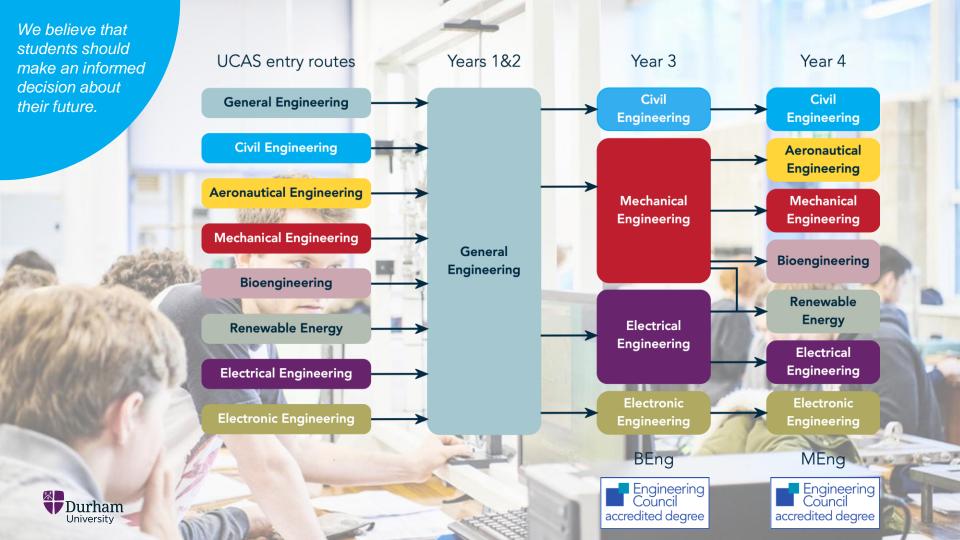
Teamwork

Coursework









BGA Masters Dissertation Prize

The Masters Dissertation Prize is awarded annually by the BGA for the best Masters degree dissertation on a geotechnical topic.

The competition is open to student members of the BGA who will be completing a dissertation in 2023, either as part of a taught course MEng or a coursework-based MSc at a British University. There is a prize of £500.

2024 BGA Masters Prize goes to Durham University's Michael Dixon

⊙ 09 JUNE, 2025 BY THAMES MENTETH



Capstone Project

work one-toone with a world-leading academic on a real, unsolved engineering problem

contribute to our outstanding research

Coursework and Oral exam

Industrial Placement Year Boost your employability prospects and experience the life of a professional

engineer







The 12 months work experience I gained during the placement year put me ahead of others applying for graduate roles.

It allowed me to develop several key skillsets such as time management, and effective writing as well as technical skills learnt specific to the industry in which I worked.

I was also able to apply these skills to my final year of dissertation project, resulting in a very positive outcome.

William Greenway
Recent graduate

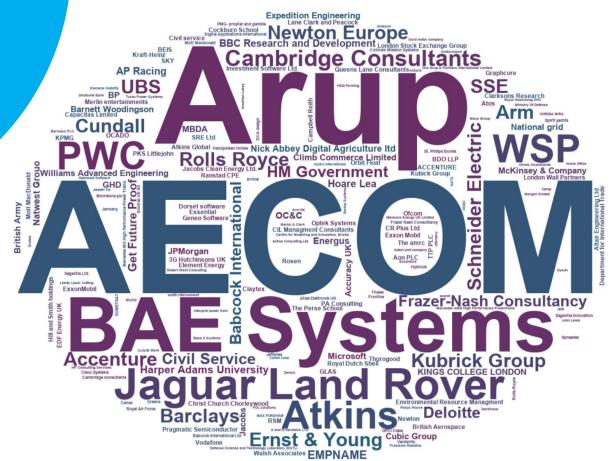






Leavers destinations

Over 96% of our graduates are in graduate level paying jobs within 15 months





Applying

- All applications via UCAS
- Selection is based on the UCAS form,
- Durham's policy is not to interview

We believe that selecting based on the UCAS form is the fairest and most consistent approach

A*AA

WWW.ucas.com

including Maths and one of the list: Biology, Chemistry, Geology or Physics

Equivalencies online*

Access

We are committed to increasing the diversity of our student population through widening participation



What our selectors consider

- Prior and predicted grades
- Personal statement
- Teachers/Academic reference
- Contextual evidence of merit and potential
- Motivation for the degree programme
- Study & other skills



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Find out more by attending 'Applying to Durham' session at the Learning and Teaching Centre, TLC 042

WWW.Ucas.co





Even though sometimes the course was demanding, the experience of being at Durham has been amazing.

I know that my time at Durham has fully prepared me for whatever the future may hold in my engineering career.

Samantha Brizuela Graduate at Jaguar Land Rover





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