

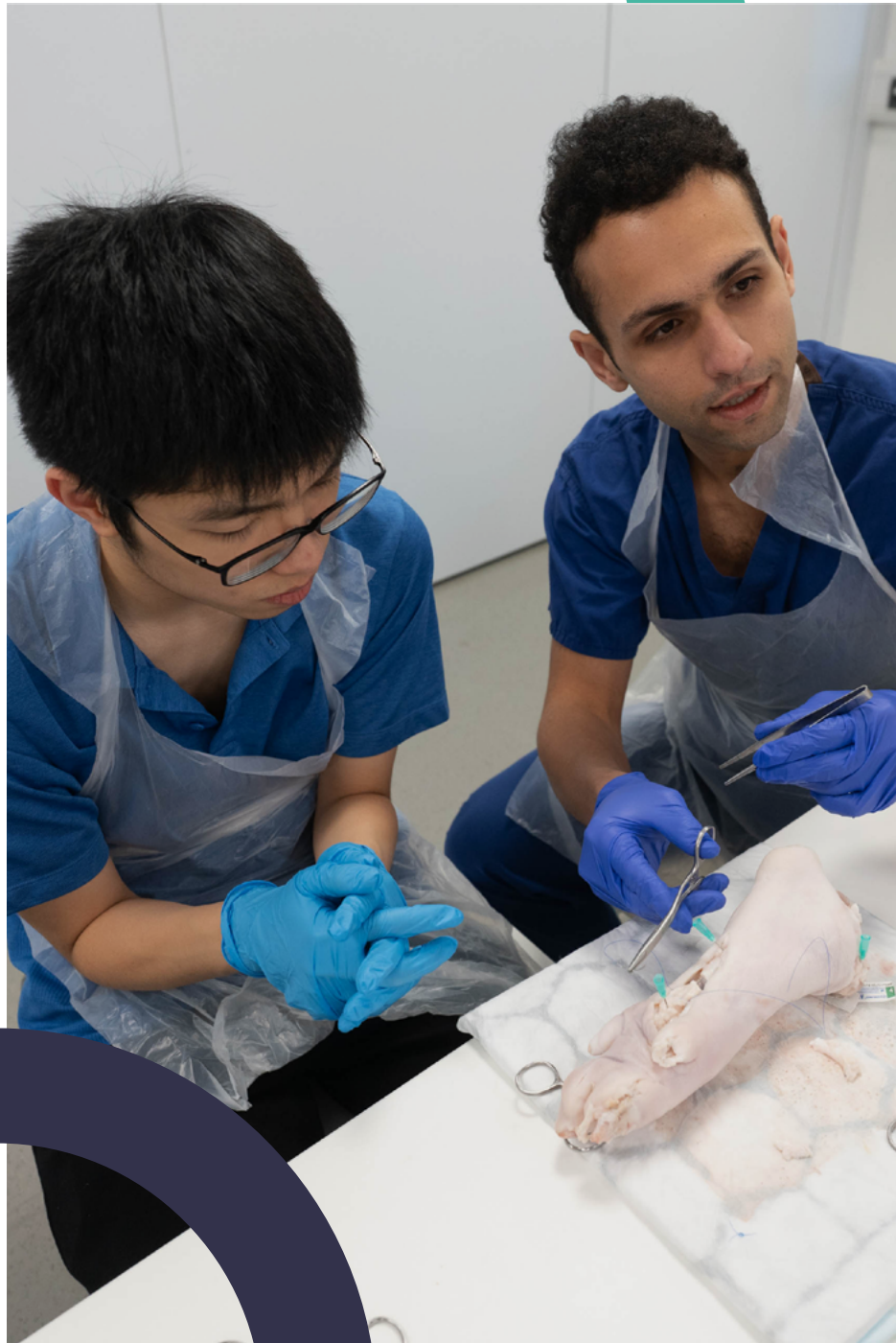
# ProEd

CAREER EXPLORATION  
PASSION-DRIVEN

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**FUTURE  
ENGINEER  
SUMMER 2025**



# The Ultimate Work Experience by ProEd

ProEd offers immersive career learning experiences for students aged 13-18 who aspire to enter competitive fields such as Computer Science, Medicine, Psychology, Law, Entrepreneurship, Banking, and Finance.

Our residential programmes offer the 'ultimate work experience' through interactive simulations, site visits, seminars, networking sessions, and career coaching.

We have partnered with industry-leading organisations and experts to give students a unique insight into their chosen career path. The programme content has been designed by industry experts, providing a truly unique vocational insight into your chosen career.

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## **FUTURE ENGINEER COURSE OVERVIEW**

For future engineers eager to innovate. Explore our timetable & course overview!

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## **INDUSTRY-LEADING PROFESSIONALS**

To provide our students a unique insight into their chosen career path

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## **TAKE PLACE IN A TOP-10 UK UNIVERSITY**

One of the London's world-class universities

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# Future Engineer

The programme provides an interactive experience that gives students a fully immersive insight into the life of a professional working in the engineering industry. Over the course of the programme, participants will explore a broad range of concepts including structures, electronics, manufacturing, artificial engineering, robotics, and space. The programme also includes an industrial visit to an engineering company and offers the opportunity to learn about the daily life of an engineer. Participants will work as part of a dynamic team to create an engineering solution for a business, which will be presented to a panel of industry professionals.



“ I enjoyed the lectures that delved into technical knowledge, allowing me to gain a deeper understanding of engineering. The day spent in the industry was very helpful in learning how an engine works and operates, and everything was incredibly interesting and intriguing.   
**Edith**, Future Engineer ”



## CURRICULUM OVERVIEW

### WEEK 1

- Your Start in Engineering
- Aerospace Engineering
- Robotics & AI
- Sustainable Energy
- Manufacturing

### WEEK 2

- Space Engineering
- Immersive Day in Industry
- Your University Application
- Interview & Admissions Tests
- Global Space Design Challenge

## PROGRAMME DATES

- 29<sup>th</sup> June - 4<sup>th</sup> July
- 21<sup>st</sup> July - 2<sup>nd</sup> August
- 17<sup>th</sup> August - 22<sup>nd</sup> August

## GRADUATE DESTINATIONS

### UNIVERSITY OF OXFORD

Physics Sharon

### IMPERIAL COLLEGE LONDON

Aeronautical Engineering Zemin  
 Electronic and Information Engineering Jason  
 Mechanical Engineering Jasmin Leo Marius  
 Physics Bella

### UNIVERSITY COLLEGE LONDON (UCL)

Chemical Engineering Vanness  
 Mechanical Engineering Stephanie  
 Physics Yifan

### UNIVERSITY OF MANCHESTER

Electrical and Electronic Engineering Gary  
 Physics Oscar

# Sample Timetable

## WEEK 1

	MON	TUE	WED	THU	FRI	SAT	SUN		
08:00									
09:00	Breakfast								
10:00		Academic Enrichment Seminar/Lecturer	Academic Enrichment Seminar/Lecturer	Academic Enrichment Seminar/Lecturer	Immersive Day in Industry	Science Museum	Oxford Excursion		
11:00									
12:00									
13:00									
14:00	Arrivals	Practical Workshop/Simulation Activities	Practical Workshop/Simulation Activities	Practical Workshop/Simulation Activities	National History Museum	Oxford Excursion			
15:00									
16:00									
17:00									
18:00									
19:00	Dinner								
20:00	Ice breaker	Shopping	Guest Speaker	London Excursion	Quiz Night	Free Time	Free Time		
21:00									
22:00	Evening Sign In								

## WEEK 2

	MON	TUE	WED	THU	FRI	SAT	SUN					
08:00												
09:00	Breakfast											
10:00	Academic Enrichment Seminar/Lecturer	Academic Enrichment Seminar/Lecturer	Academic Enrichment Seminar/Lecturer	Global Space Design Challenge (GSDC)	University Application Preparation							
11:00												
12:00												
13:00												
14:00	Practical Workshop/Simulation Activities	Practical Workshop/Simulation Activities	Final Project Presentations & Feedback	Global Space Design Challenge (GSDC)	University Application Preparation	Departures						
15:00												
16:00												
17:00												
18:00												
19:00	Dinner											
20:00	London Excursion	Final Project Preparation	GSDC Preparation	Free Time	Awards Ceremony							
21:00												
22:00	Evening Sign In											

Note: This sample timetable is for reference only and is subject to change.



## DAY 1 Your Start in Engineering

1. Scoping – the start of any engineering solution
2. Introduction to Engineering Materials
3. Technical Engineering Sketching workshop with leading industry professional
4. Understanding structures

## DAY 2 Aerospace Engineering

1. Experimental and computational fluid dynamics
2. Thermodynamics – the flow of heat in systems
3. Unmanned air vehicles (UAV's) – the future of Aerospace?
4. Control and systems engineering

## DAY 3 Robotics & AI

1. The importance of robotics and AI in engineering
2. Introduction to robotics
3. Introduction to AI for engineers

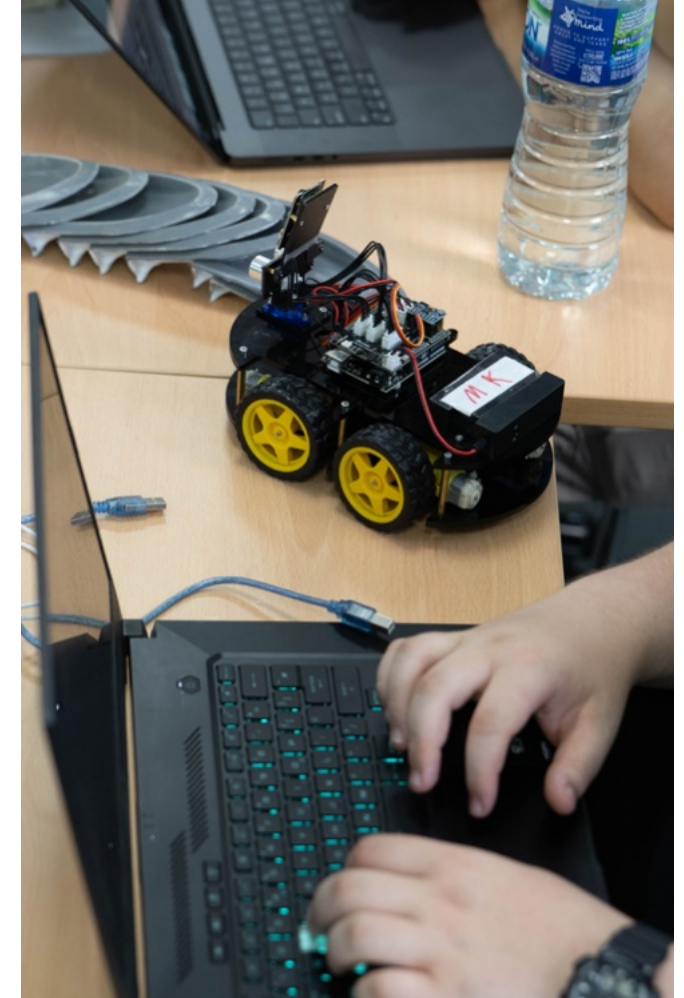
## DAY 4 Immersive Day in Industry

1. Industrial site visit to local airfield – experience life as a working aerospace engineer, working and maintaining a classic aircraft collection.



## DAY 5 Sustainable Energy

1. Introduction to sustainable power technology
2. Engage in an applied workshop simulation to understand the relationship between consumer power needs and power production



## DAY 6 Manufacturing

1. Create your own composite part in a real workshop environment
2. The interplay of theory and reality from design to manufacturing
3. Introduction to additive manufacturing – test the properties of printed systems in an interactive workshop environment

## DAY 7 Space Engineering

1. Understand the principles that govern rocketry and spacecraft design
2. Witness theory in action with our interactive rocketry demonstration delivered by aeronautical engineers
3. The future of space technology



## Discover London

London, with over 2000 years of history, stands as one of the world's most dynamic and welcoming cities.

From vibrant street food markets to Michelin-star restaurants, it offers a rich cultural experience for every interest and taste. Its stunning architecture, vast green spaces, and bustling social scene are easy to explore.

Imperial College is located in London's prestigious museum district, just steps from top attractions and the city's lively heart.

### Did you know...

- London is home to the iconic Natural History Museum, housing over 80 million specimens and stunning architecture.
- The Shard offers breathtaking panoramic views of the city from its towering 72 floors.
- Imperial College London, ranked 2nd globally (QS 2025), is a beacon of academic excellence.
- London's landmarks include Buckingham Palace, the Tower of London, and Westminster Abbey.
- With over 300 languages spoken, London is one of the most diverse cities in the world.

## Explore the City

Whilst attending ProEd's London Summer Programme, students will have the opportunity to explore many of the iconic landmarks of the vibrant capital city.



### Central London

Explore Trafalgar Square, shop on Regent Street, and enjoy the excitement of London's West End theatre district.



### Westminster

Discover the Palace of Westminster, home to Big Ben and the Houses of Parliament. Visit Westminster Abbey and Buckingham Palace, the King's official residence.



### Southbank

Stroll along the River Thames and enjoy the London Eye, explore the Tate Modern, catch a play at Shakespeare's Globe, or take in breathtaking views from The Shard.



### Iconic Shopping Districts

London is a shopping paradise, from high end boutiques on Oxford Street and the iconic Harrods to the eclectic charm of Portobello Road and Camden Market.



# Imperial College London

Imperial College London, ranked #2 in the world and the top university outside the USA for 2024/25, is the perfect setting for an inspiring academic experience.

Located in South Kensington, one of London's most vibrant areas, it offers a blend of academic prestige and urban charm. Students will reside in modern, accommodation on Imperial's South Kensington campus, surrounded by state-of-the-art facilities.

Founded by Prince Albert to drive cultural and scientific innovation, Imperial has become synonymous with excellence in science, engineering, and medicine. Its alumni include notable figures such as, Alexander Fleming,

the Nobel Prize-winning discoverer of penicillin, Brian May, legendary musician and astrophysicist and H.G. Wells, acclaimed author and pioneer of science fiction.

While staying on campus, participants will enjoy the buzz of London life alongside the tranquil beauty of nearby green spaces such as Hyde Park and Kensington Palace Gardens, offering the best of both worlds in one of the world's most exciting cities.



## Workshops

Interactive, hands-on classes that focus on collaboration and real-world skills.



## Masterclasses

An engaging forum led by an expert, offering students valuable insights into their field and new perspectives.



## Guest Speakers

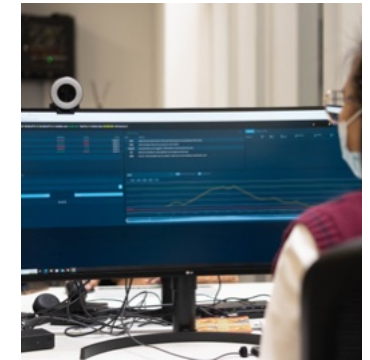
Esteemed guest speakers answer students' key questions and share valuable insights.



## Debates

Crucial for building strong reasoning and confident public speaking skills.

# YOUR LEARNING JOURNEY



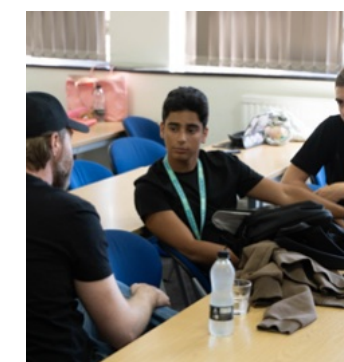
## Interactive Lectures

Engaging lectures by passionate teachers, filled with insights and perspectives.



## Group Projects

A chance to collaborate and learn from diverse perspectives, broadening your understanding.



## Seminars

Students engage in discussion and debate through pair and small group work.



## Educational Trips

Our trips offer real-world examples of the course subjects, bringing students' learning to life.

# Meet Our Professionals



Our tutors are industry-leading professionals dedicated to providing students with unique insights into their chosen career paths. With extensive experience and expertise, they are committed to guiding the next generation towards success in their fields.



## OLEG, BANKER

Oleg earned an MBA from the London Business School and has extensive experience in business development, project management, and strategy development. He has worked in various sectors, including Metals and Mining, Infrastructure, Chemicals, as well as Restructuring and late-stage Venture Capital/growth investments.

## KRISTIAN, ENTREPRENEUR

Kristian has been a key figure in the entrepreneurial ecosystem for the past 15 years, nurturing and growing startups. His expertise has supported numerous entrepreneurs to achieve significant 8-figure exits. Kristian has also made substantial contributions to entrepreneurship education and is known for his specialisation in new technology development and product innovation.



## GAVIN, LAWYER

Gavin studied law at Magdalen College, Oxford. After graduating, he obtained several master's degrees in law-related areas, including criminal psychology, international human rights, social policy, and animal welfare law. He was called as a barrister in 2007, and since then, he has worked as a legal representative in immigration and human rights law.



## SARA, COMPUTER SCIENTIST

Sara is a highly accomplished PhD candidate in her final year of study, focusing on the instruments aboard the ExoMars 2022 Rosalind Franklin Rover to understand the interaction between light and matter on the surface of Mars. She aims to identify areas that may contain evidence of life and is developing software tools for data analysis.

## SHAYNE, ENGINEER

Shayne is the Director and Head of Mechanical Systems at Conex Research, with expertise in aerospace and mechanical systems. His work on the Arcanum Mission to Neptune resulted in a notable white paper. As the Subject Lead for Engineering at ProEd, he develops coursework bridging theory and practice.



## DR AHMED, DOCTOR

Dr Ahmed is an academic general surgery registrar. He has extensive experience in undergraduate medical education, having founded Med-Saint, a medical journal, while studying at St Andrews University. While at Guy's and St Thomas' Hospital in London, he designed peer-assisted simulated patient clinical vivas.

## DR PRIOR, PSYCHOLOGIST

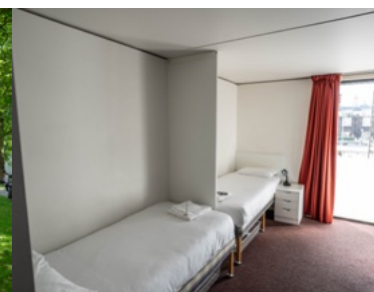
Dr Prior is a Chartered Psychologist, Senior Lecturer, and Programme Director for the BSc Psychology programme at Cardiff Metropolitan University. With over 12 years of experience, she focuses on enhancing student experience and wellbeing. Her research includes family meals, adolescent wellbeing, and support services for eating disorders, as well as contributing to projects for people with late-stage dementia.





# World-Class Learning Environment

Immerse yourself in the vibrant academic atmosphere of one of London's world-class universities with ProEd's residential career experiences. Hosted at top-ranked institutions, these programmes are known for their cutting-edge research, exceptional faculty, and dynamic campus life. Set in the heart of central London, you'll experience an inspiring summer of learning, personal growth, and a firsthand glimpse into the life of a university student at one of the UK's most prestigious educational institutions.



# ProEd

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 ProEd et al

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