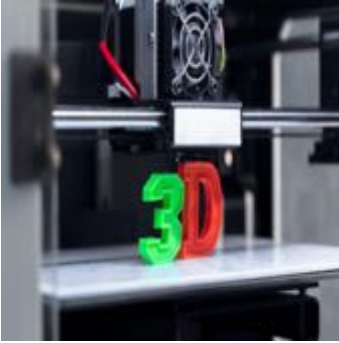


# Engineering Preparation Programme 2021



Engineering Preparation Programme  
Imperial College London

12<sup>th</sup> July – 16<sup>th</sup> July 2021



## What is Engineering all about?

How do scientists engineer the world?  
What affects will engineers have on the future?

Considering engineering opens up a diversity of career choices. Chemical, electrical and structural engineering are aspects of the industry that are logical to envisage, and Artificial Intelligence, space and exploration and automation are all hot topics we see in the news all the time. However, there are myriad niche areas: bio engineering, medical technology, nanorobotics, artificial intelligence, 3d printing, the future of Isaac Asminov's 'Positronic Man", and space habitats to name a few. We will explore some of these topics along with the less well-known

aspects of human and operations engineering. The future of societies will depend on scientists and engineers working together, and in this course, we will emphasize space settlement design to explore future engineering careers within the industry. Space settlement requires advanced engineering solutions for a future society to survive and prosper and allows those participating in this course to extend their scientific knowledge and see how relevant their current studies are to their future career trajectories.



# Engineering Preparation Programme

This course asks two basic questions of you...

First should you consider engineering and second what areas of engineering would most interest you.

You can answer all your engineering questions at one of the few top-rated large universities in the world that focuses on Technology, Science, Management and Medicine. Listen and talk to professionals from academia and industry from not only Imperial College London, but also other top UK Universities. Universities, which are always rated in the top ten in the world rankings.

Imperial College London is home to the Space Science Engineering Foundation, which runs space settlement design competitions sending students to NASA's Kennedy Space Center. The staff are experts in all area of space settlements, engineering and education. You will participate in a unique industry simulation, designing a space settlement on an asteroid.

While you are here to answer your questions about your future relationship with engineers you will be in the centre of London, next to Hyde Park, Harrods, the Natural History and Science Museums and only a short distance to Bond Street, Buckingham Palace and the Thames River front.

Start Times	MONDAY 12TH	TUESDAY 13TH	WEDNESDAY 14TH	THURSDAY 15TH	FRIDAY 16TH
09:00	<b>09:00</b> Dr Jun Lee Computer Design Tools	<b>09:00</b> <b>FIELD TRIP TO ROLLS ROYCE</b>	<b>09:00</b> Shayne Beegadhur Rocket Engineering	<b>09:00</b> Introduction to Space Design Competition	<b>09:00</b> Red Team
09:30				<b>09:30</b>	
10:00	<b>10:00</b>			<b>10:00</b>	Structural Engineering
10:15	Sophia Roberts Philosophy of Engineers and Society		Brian Kong Presentation Skills and Teamwork Workshop	<b>10:15</b> Operations Engineering	
	<b>BREAK</b>				
11:00	<b>11:00</b> Professor Mark Sefton	<b>FIELD TRIP TO ROLLS ROYCE</b>	<b>11:00</b> Neelesh Ravichandran		<b>11:00</b> Continue Designs  12:00 Turn in Design Powerpoint on USK
11:30	Space and Planetary Bodies		Artificial Intelligence in Engineering	<b>11:30</b> Automation Engineering	
12:00	<b>LUNCH</b>				
13:00	<b>13:00</b>	<b>FIELD TRIP TO ROLLS ROYCE</b>	<b>13:00</b>	<b>13:00</b>	<b>13:00</b>
13:30	Dr Aleksandra Gentry-Maharaj		Jian Heseri	Human Engineering	First Company Presentation
13:40	Medical Engineering		Energy Engineering		<b>13:40</b> Second Company Presentation
13:45				<b>13:45</b> Managing an Engineering Company	
14:00	<b>14:00</b> Dr Richard Ghail	<b>UNIVERSITY LOUGHBOROUGH TOUR</b>	<b>14:00</b> Dr Elizabeth Day	<b>14:00</b> Elect Company Officers	
14:30	What Civil Engineers Do?		Geophysics and Building on Unstable Surfaces	<b>14:30</b> Begin Designs	<b>14:30</b> Judges Deliberate
	<b>BREAK</b>				
15:00	<b>15:00</b> Victoria Murphy Imperial and ESE Admissions	<b>UNIVERSITY LOUGHBOROUGH TOUR</b>	<b>15:00</b> Dr Elizabeth Day Admissions		
15:30	<b>15:30</b> Dr Randall S Perry UK G5 and US Admissions		Alison Ahearn Industry Request for Proposals		<b>16:00</b> Design Project Presentations and Feedback AWARDS AND CERTIFICATES
17:00	<b>FINISH</b>				