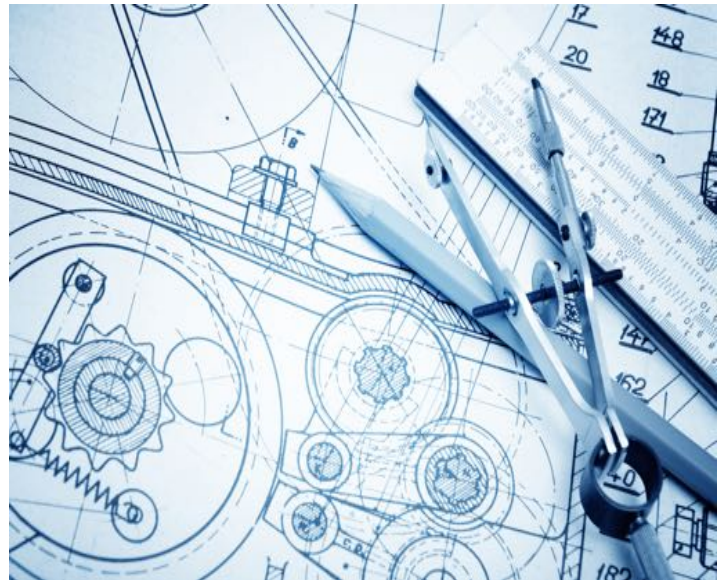
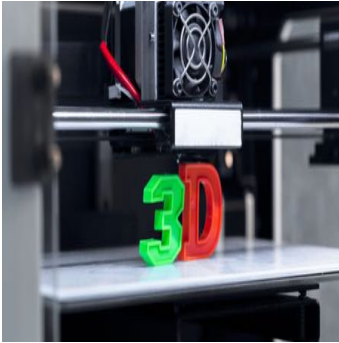
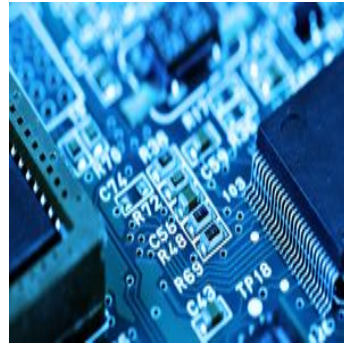
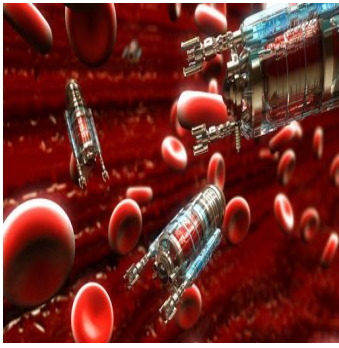


Engineering Preparation Programme 2019



Engineering Preparation Programme
Imperial College London

15th July – 19th July 2019



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 Universities of Oxford and Cambridge. Three 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.

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 15 th July	Tuesday 16 th July	Wednesday 17 th July	Thursday 18 th July	Friday 19 th July
	YOU AS AN ENGINEER	ENERGY AND ENGINES	CIVIL ENGINEERING		
09:00	09:00 Outline of the week. 09.30 What do engineers do?	Energy Around Us/ A Crash Course in Thermodynamics and Rocket Propulsion	Design for Humans	CAD Seminar	Option 1 Aspects of Medical Engineering Option 2 Aspects of Automation Engineering
10:00	The contribution of Engineers to Society via the Varied Fields of Engineering		Designing Structures		Designing Satellites - Scott Fisher Surrey Satellite
BREAK					
11:00	Your Responsibility as Engineers and the RFP	Cont'd	Designing Structures cont'd	CAD Seminar	How Engineers Work in Industry
12:00	LUNCH				
13:00	Design Project Induction	Science Museum Visit	How Engineers will build Space Settlements	Ready for Space 2050 Tony Mears UK Space Agency	What to Study and Where
14:00	Design Project Brainstorming		Coding in Engineering		What Studying Engineering Entails
BREAK					
15:00			Coding in Engineering	Presentation Skills Workshop	Design Project Presentations and feedback
16:00	The tools of an Engineer	Consolidation activity	Secret Lab Visit		
17:00	DINNER				FAREWELL DINNER
19:00		MOVIE		GUEST LECTURE	