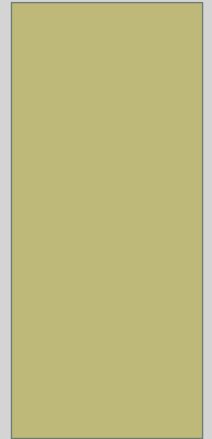




GLOBAL SPACE DESIGN CHALLENGE

# GLOBAL SPACE DESIGN CHALLENGE RESIDENTIAL PROGRAMME 2021

IMPERIAL COLLEGE LONDON  
SATURDAY 10<sup>TH</sup> JULY – WEDNESDAY 21<sup>ST</sup> JULY 2021





IMPRESS YOUR PEERS AND ENHANCE OUR UNIVERSITY APPLICATION. BE THE PRESIDENT OF YOUR OWN COMPANY, A LEAD ENGINEER OR SPACE SCIENTIST AT THIS PRESTIGIOUS STEM EVENT

THIS IS AN INTENSIVE PROGRAMME FOR THE HIGHEST ACHIEVING STUDENTS THROUGHOUT THE WORLD



GET AHEAD OF YOUR PEERS - STAND OUT FROM THE CROWD -  
GAIN A COMPETITIVE EDGE WITH YOUR APPLICATION



As a participant you will:

- Be mentored by world-class academics and industry experts
- Take your subject knowledge to the next level through an intensive academic programme of lectures, seminars and practical sessions.
- Work as a team, designing a settlement in space and experience the joys and challenges of working in a large industrial company.

The intensive 11-day competition will provide you with the opportunity to interact with professionals and students from around the world.

You will receive a valuable course certificate of achievement and other awards.

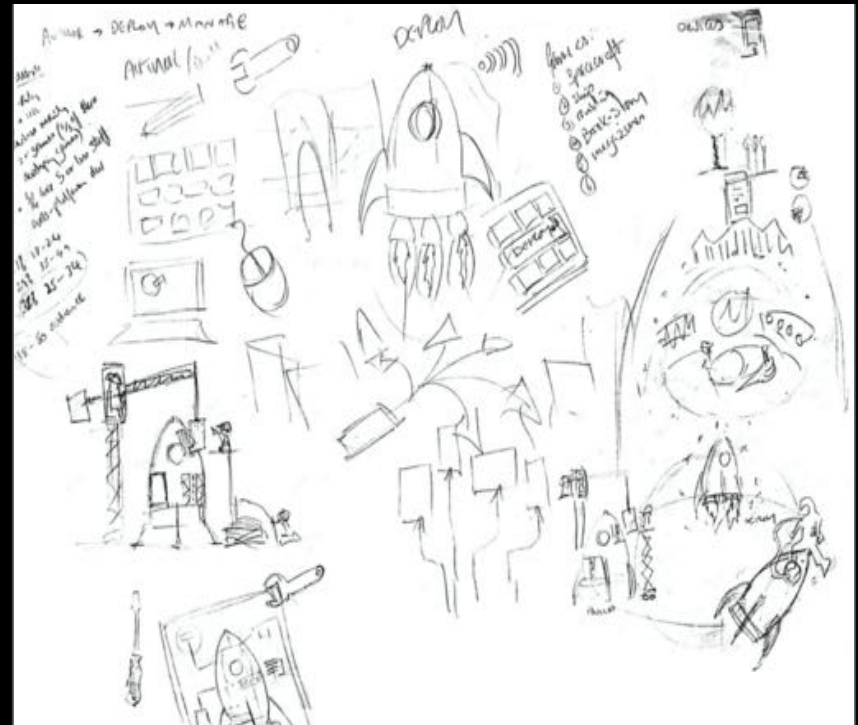
Designing a space settlement in the future requires the talents of engineers, designers, medical, financial, and Robotic and AI experts. Learn leadership and communication skills running your own company.



# THE CHALLENGE!

## THE CHALLENGE

The challenge is modeled on the work of the UK Space Design Competition which has been successfully running educational events in the UK for the past 15 years, founded by Dr RS Perry. Dr Perry has held a fellowships at University of Oxford and as an Imperial College London Royal Society Fellow. He is the Honorary Chairman of the Space Science Engineering Foundation and the founder of the UK, EU, Middle East and Africa educational charity.



Start times	Saturday 10 <sup>th</sup> July	Sunday 11 <sup>th</sup> July	Monday 12 <sup>th</sup> July	Tuesday 13 <sup>th</sup> July	Wednesday 14 <sup>th</sup> July	
07:00					BREAKFAST	
07:30					DEPART FOR OXFORD	
08:00		BREAKFAST	BREAKFAST	BREAKFAST		
09:00	ARRIVAL MEET & GREET (Heathrow or Gatwick Airports)	Introduction to GSDC	Origins – Universe, Galaxy, Solar Systems, Planetary Bodies	Surface Structures and Architecture	09:30 Walking and College Tour of the Oldest College in Oxford and Pitt River Museum  11:30 Mathematics Workshop  LUNCH AT CHRISTCHURCH COLLEGE  13:15 Masterclass by Oxford University Professors  15:15 Tour of Oxford Museums	
10:00			Importance of Planetary Impacts and Mass Extinctions	Space Structures		
11:00		BREAK				
		GSDC TOPICS	Defining Life Astrobiology and The Search For Life In The Solar System and Universe	Electrical and Electronics Engineering		
12:00		Optional	LUNCH			
12:30		12:00 Victoria and Albert Museum				
13:00		Natural History Museum	Space Now And Space In The Future	Exploring Earth's Inner Space Deep Submersibles and Black Smokers		University Admissions
14:00		16:00 Victoria and Albert Museum	Geophysics	WORKSHOP  CAD Computer Workshop		WORKSHOP  Personal Statement
15:00		Natural History Museum	Astrophysics			
16:00		Natural History Museum	The Human Body in Space			
17:30	DINNER	DINNER	DINNER	DINNER		
18:00			DINNER		DINNER	
18:30		Ice Breaker Karaoke		Football Park activities	DEPART FOR LONDON	
19:00						

Start Times	Thursday 15 <sup>th</sup> July	Friday 16 <sup>th</sup> July	Saturday 17 <sup>th</sup> July	Sunday 18 <sup>th</sup> July
07:45		BREAKFAST		
08:00	BREAKFAST		BREAKFAST	BREAKFAST
08:30		08:30		
09:00	Satellites and Remote Sensing	DEPART FOR CAMBRIDGE UNIVERSITY	RFP	09:00
09:30				Introduction to the Space Design Competition
10:00	Systems and Security Engineering	10:30 Tour Cambridge University	Company Organisation	10:30 Company Officer Selection
10:30	BREAK		BREAK	11:00 Department Presentations
11:00	Robotics		Managing Companies	
12:00		LUNCH	LUNCH	LUNCH
12:30	LUNCH			
13:00		WORKSHOP	WORKSHOPS	Space Design Challenge
13:30	Laboratory Workshop High Performance Liquid Chromatography and Mass Spectrophotometry on Organic Chemicals from Space	Computing Workshop	Presenting Skills Writing Skills Leadership and Communication	
14:00				Space Design Challenge
15:00				
17:00	DINNER	DINNER	DINNER	
18:00				DINNER
19:00	MOVIE	DEPART FOR LONDON		Space Design Challenge



	Monday 19 <sup>th</sup> July	Tuesday 20 <sup>th</sup> July	Wednesday 21 <sup>st</sup> July
08:00	08:00 BREAKFAST		
09:00	<p>09:00 Turn in Designs</p> <p>10:00 COMPANY PRESENTATIONS</p> <p>Each Company will have 20 minutes plus 10 minutes judges questions</p> <p>11:30 Post It's with Jenny Lyons</p>	<p>10:00</p> <p>Open Top Bus Tour of London London Embankment Buckingham Palace London Bridges Tower of London</p>	<p>FAREWELLS AND DEPARTURES FOR HOME</p>
10:00			
10:30			
11:00			
11:30			
12:00	12:00 LUNCH		
13:00	Judges Presentation and Winning Company Announcement		
14:00	14:00 FREE TIME		
15:00			
15:45			
16:00	16:00 AWARDS	River Dinner Cruise on Thames and Fun Presentation Awards	
17:00			
18:00	18:00 DINNER		



**Dr Randall Perry**

SSEF & SDC Founder, He has held a Royal Society Fellowship at Imperial College London and University of Oxford.



**Marcus du Sautoy**  
**FRS, OBE**

Simonyi Professor for the Public Understanding of Science and a Professor of Mathematics at the University of Oxford.



**Dr Richard Ghail**

SSEF Trustee Chair He is a professor of Engineering at Royal Holloway University London. And a lead ESA investigator for the mission to Venus.



**Trisha Saxena**

Alumni of the Space Design Competition. Imperial College physics major and currently works for a major Bank



**Alison Ahearn**

Director Galactic Challenge, a Principal Teaching Fellow at Imperial College London and course leader for the GSDC with Dyson School of Design.



**Jeremy Curtis**

Head of Education and Skills, UK Space Agency



**Professor Mark Sephton**

Head of the Department of Earth Science and Engineering, Imperial College London



**Scot Fisher**

Scott Fisher is an Opto-Mechanical Engineer Surrey Satellite Technology Ltd



**Dr Helen Oliver**

PhD from the University of Cambridge and a specialist in wearable technology.



**Jenny Lyons**

Director of Education Outreach UK Space Science Engineering Foundation



For more information – <https://gspacedc.com>

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