

Summer Programme (9 – 20 July 2018)

Exploring New Space Technologies and Applications

@ National University of Singapore

Programme Outline

In this programme, we will cover some basic knowledge of satellite applications, satellite motions in space, different types of satellite orbits, mission simulations, functions of satellite systems and subsystems, and design qualifications and philosophies. You will work in groups to discuss mission planning and satellite design. You will have the opportunity to construct the mockup of your own satellite using 3D printing and other construction materials.

Besides the technical programme, we will also conduct a campus tour, visit to Satellite Technology and Research Centre (STAR) and Center for Remote Imaging, Sensing and Processing (CRISP). A Singapore city tour will also be arranged.

Who Should Attend?

This programme is suitable for any budding engineer or scientist who may be interested to discover space technologies. No pre-requisite knowledge is expected other than some high school science.

When will this Programme be Conducted?

Time: 2 weeks, from 9-20 July 2018

Venue: Engineering Design and Innovation Centre,
Block E2A, 5 Engineering Drive 2,
National University of Singapore, 117579

Accommodation: University Town, NUS

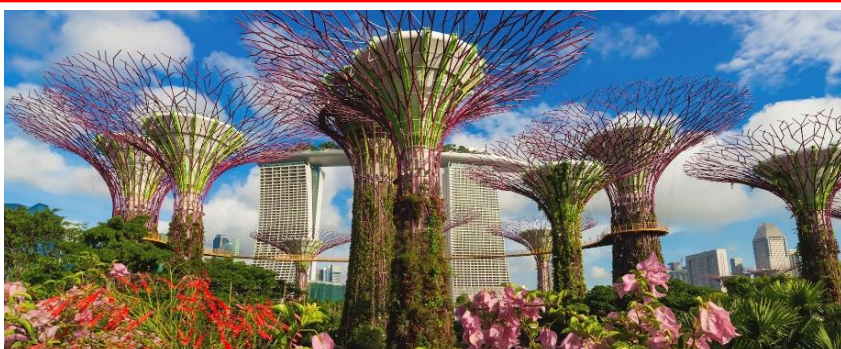
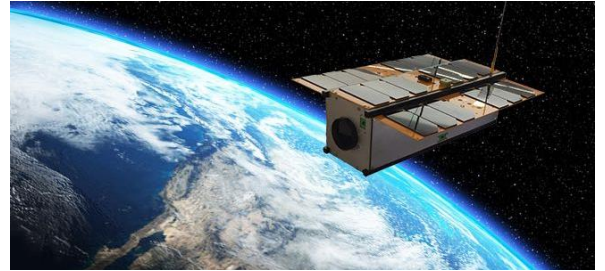
Cost: SGD 1200 excl travel costs, incl accommodation
SGD 1100 (Early bird before 1 June 2018)
The above cost is for non-air conditioned rooms.
Air conditioned rooms may be arranged for SGD100 more.

Contact: Ms Rosanna engrsmu@nus.edu.sg

Register via

<https://mysurvey.nus.edu.sg/EFM/se/543BE5C24ADD9B15>

Or use the softcopy attached below





***Summer Programme: Exploring New
Space Technologies and Applications 2018***
9 -20 July 2018

National University of Singapore, Singapore

Registration Form (International Participants)

Personal Particulars

(Please fill in all fields)

Title : Mr ☐ Miss ☐

Family name (Last Name) : _____

First Name : _____

Nationality : _____

Name to appear on badge : _____

University/Company : _____

Department/Position : _____

Email address : _____
(any correspondences will be sent to this address. Please ensure the accuracy of the input)

Mobile (incl country code) : _____

Fee : ☐ With 12 Nights accommodation - SGD1100 (Early Bird till 1st June 2018)

☐ With 12 Nights accommodation - SGD1200 (non-early bird)

Payment : ☐ Invoice (only for University / Corporate Payment)

☐ Bank Transfer

Beneficiary's Name : National University of Singapore
Beneficiary's Account No.: 032-000313-3
Beneficiary's Bank : DBS Bank Ltd, Singapore
Bank Address : 12 Marina Boulevard, DBS Asia Central, Marina
Bay Financial Tower 3, Singapore 018982
Swift Code : DBSSSGSG

For payment via Bank Transfer, email engrsmu@nus.edu.sg for instructions and details.

Signature _____

Date _____

You may register by completing this form and email to engrsmu@nus.edu.sg by: 15th June 2018.
Or register via the online form here: <https://mysurvey.nus.edu.sg/EFM/se/543BE5C24ADD9B15>

*Students are required to attach a copy of individual valid student matriculation card for verification.

*All successful applicants will be informed via email by 20th June 2018 (or earlier).

Detailed Programme : Exploring New Space Technologies and Applications

Week 1	Programme and Activities
Day 1	<p><u>Morning</u></p> <ul style="list-style-type: none"> • Opening Address • Ice-breaking session • Brief introduction of Global Satellite Agencies and their Roles <p><u>Afternoon</u></p> <ul style="list-style-type: none"> • NUS Campus Tour • Different satellite configurations eg nanosats, cubesats, microsats, etc • Case studies or examples of some student projects from other institutions
Day 2	<p><u>Morning</u></p> <ul style="list-style-type: none"> • Space Environments and Orbits • Subsystems in a satellite <p><u>Afternoon</u></p> <ul style="list-style-type: none"> • System Tool Kit (STK) Simulation Environment • Company Visit
Day 3	<p><u>Morning</u></p> <ul style="list-style-type: none"> • Orbital Mechanics • Orbital Mechanics Simulations <p><u>Afternoon</u></p> <ul style="list-style-type: none"> • Attitude Determination and Control Subsystem (ADCS) • Free & Easy – Bonding time
Day 4	<p><u>Morning</u></p> <ul style="list-style-type: none"> • Electrical Power Subsystem (EPS) • Thermal Subsystem <p><u>Afternoon</u></p> <ul style="list-style-type: none"> • Visit to the Center for Remote Imaging, Sensing and Processing (CRISP) • Tracking, Telemetry and Command (TT&C)
Day 5	<p><u>Morning</u></p> <ul style="list-style-type: none"> • On-Board Computer (OBC) • Satellite Launch & Operations <p><u>Afternoon</u></p> <ul style="list-style-type: none"> • Visit to the Satellite Technology and Research Centre (STAR) • Testing of Satellites

Week 2	Programme and Activities
Day 1	<u>Morning</u> <ul style="list-style-type: none"> • Structure & Mechanisms • Power Budgets <u>Afternoon</u> <ul style="list-style-type: none"> • Re-cap of theory • Creative Activity on Satellite Design
Day 2	Singapore Tour Evening : BBQ
Day 3	<u>Morning</u> Introduction to 3D Printing <u>Afternoon</u> Brainstorming & Prototyping
Day 4	Brainstorming & Prototyping (Cardboard / 3D Printing / Laser Cut)
Day 5	<u>Morning</u> Final Project Presentation End of Programme

You may register by completing the form attached and email to engrsmu@nus.edu.sg by 15th June 2018.

**Or register via the online form by 15th June 2018
<https://mysurvey.nus.edu.sg/EFM/se/543BE5C24ADD9B15>**

Register early to avoid disappointment!

Register early to get the early bird discount!