



Aerospace Engineering

Overview

This course equips you with a strong foundation specialising in aerodynamics, as well as aircraft engines, structures and systems. You will have the option to embark on a 6-month practical training stint in our Lufthansa Technical Training (LTT) Centre – the only such dedicated aerospace training Centre in a local tertiary institution.

The rigorous curriculum and training, coupled with our reputation as a SAR-147 Approved Maintenance Training Organisation (AMTO), will enable you to tap into opportunities in the recovering aerospace sector, which at its peak reached an output worth S\$9 billion annually and hired about 21,000 workers spread across more than 100 local and international companies in Singapore.

If you aspire to be a pilot, you can also take flying lessons under a special arrangement with the Singapore Youth Flying Club, to earn the coveted Private Pilot Licence (PPL).



Career Opportunities

As more aircraft take to the skies, more passengers travel by air, and more cargo is flown across the globe, the aerospace and aviation sectors in Singapore will grow from strength to strength, as countries around the world continue to open their borders post-COVID-19.

There will be exciting job opportunities in various aerospace sectors such as aircraft maintenance repair & overhaul (MRO), aerospace components design & development, aircraft engine services, technical sales, and servicing of aircraft system & components, as airlines bring their aircraft back into operation.

With an aerospace diploma from Temasek Polytechnic, you will be highly sought after as:

- Aerospace Component Design Engineers
- Aero-Mechanical Systems Specialists
- Aircraft Maintenance Engineers
- Engine / Powerplant Technologists
- Structural / Composites Specialists

Entry Requirements

5 GCE 'O' Level subjects comprising:

English Language (EL1)	(Grades 1-7)
Mathematics (E or A Maths)	(Grades 1-6)
One of the following subjects *	(Grades 1-6)
Any two other subjects (except CCA)	--

* *Biology, Biotechnology, Chemistry, Combined Science, Computing / Computer Studies, Design & Technology, Electronics / Fundamentals of Electronics, Physics / Engineering Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry) / Physical Science.*

Note: : Applicants should not be suffering from mild or severe colour vision deficiency, uncontrolled epilepsy, profound hearing loss, severe vision impairment or any physical impairment, or be physically dependent on mobility equipment.

Diploma Core Subjects

Year 1:

- Circuit Analysis
- Computer Programming for Problem Solving
- Digital Fundamentals 1
- Electronic Devices & Circuits
- Engineering Drawing
- Engineering Mathematics 1 & 2
- Engineering Physics
- Statics & Strength of Materials
- Thermodynamics

Year 2:

- Aircraft Electrical Fundamentals
- Aircraft Electronics & Digital Systems
- Aviation Legislation & Human Factors
- Basic Aerodynamics
- Data Visualisation & Analytics
- Engineering Material
- Engineering Mathematics 3
- Fluid Mechanics
- Gas Turbine Engine
- Principles of Dynamics

Year 3:

Lufthansa Technical Training (LTT) Option

- Aerospace Maintenance Practices

Aerospace System Design (ASD) Option

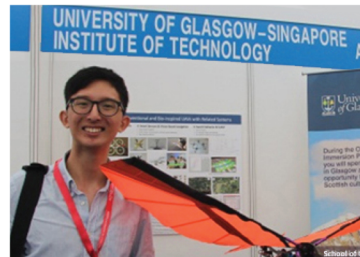
- Aircraft Structures & Composites
- Engine Maintenance & Workshop Practices
- Major Project



Further Studies

You can gain admission into a wide range of degree programmes at local and overseas universities such as those in USA, UK, Australia and New Zealand. Advance standing for specific modules or up to 2 years exemption may be given depending on the relevance of the degree programme.

Success Stories



After getting his Aerospace Engineering diploma in 2012, **Matthew Ng Rongfa** went on to obtain a Bachelor in Aerospace Systems degree from the University of Glasgow, offered under the auspices of the Singapore

Institute of Technology (SIT), graduating with First Class Honours in 2016. He then went on to pursue his doctorate (PhD) under the EDB-Industrial Post-graduate Programme, specialising in unmanned aerial vehicles (UAVs). Thankful for the training he had received at TP, the former Montfort Sec School student says, "My Aerospace Engineering diploma gave me a very strong foundation, including sound theoretical knowledge, from which I was able to branch into Aerospace Systems at university. I would not be where I am today otherwise."

Core Strengths

- We are the first polytechnic in Singapore to be certified by the Civil Aviation Authority of Singapore (CAAS) as a SAR-147 Approved Maintenance Training Organisation (AMTO), providing training aligned to the latest SAR-66 curriculum. This means that your Aerospace diploma will be more recognised by employers and universities. In addition, if you decide to pursue further professional training, you also get direct credits which will shorten your subsequent Aircraft Maintenance Licence (AML) apprenticeship by 10 months.
- You will be trained by expert Aerospace instructors certified by Lufthansa Technical Training (LTT) of Germany, our training partner, and get to use our state-of-the-art TP-LTT Training Centre located on campus.
- We have 3 genuine aircraft on campus (an A4-SU SkyHawk, an S-211 training aircraft, and a Hawker Siddeley 700A Private Jet), all with actual parts and engines, so as provide you with a more authentic learning experience with real hardware.
- You may take flying lessons at the Singapore Youth Flying Club as part of your diploma course, leading to a Private Pilot Licence (PPL). You pay only a small admin fee, compared to the market rate for such a flying course. We are the only local polytechnic with such an arrangement.



Student Life & Facilities

Your life on campus will be varied and vibrant. Sporting competitions, artistic pursuits, adventure learning programmes, team building games, student club gatherings, as well as the annual Campus Care Network Day carnival when students and staff join forces to raise funds, are some of the many exciting activities that will pepper your life as a student.

Located in a picturesque environment that is close to nature, the campus provides you with the ideal setting for work, play and recreation.



Always at the forefront of technology, the School emphasises innovation, creativity, problem-based learning and a practical, hands-on approach. With a wide range of modern and well-equipped facilities, and a rigorous and industry-relevant curriculum, we are well positioned to prepare you for a bright future.



"Certified by the Civil Aviation Authority of Singapore (CAAS) as an Approved Maintenance Training Organisation (AMTO)."

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School of Engineering

*The information in this brochure is accurate at the time of printing
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