



## **AIRCRAFT MAINTENANCE ENGINEERING**

# KNOW AIRCRAFT MAINTENANCE ENGINEERING

Aircraft maintenance is a necessary process that involves servicing, repair, modification, overhaul, and inspection of an aircraft to determine its airworthiness. Aircraft maintenance activities ensure the aircraft's safety and reliability, ability to be on schedule and reduces its technical risks.

Maintenance work conducted on an aircraft includes light and heavy maintenance. Light or line maintenance refers to supervision that is carried out before flight to ensure the aircraft is fit for the intended flight. This includes troubleshooting, defect rectification, component replacement, and scheduled inspections.

Base or heavy maintenance involves tasks that require more in-depth work and are longer lasting. This is work that is related to the deterioration and repair of the engine and airframe, which includes component maintenance, technology upgrades, and airworthiness inspections.

Increase in the demand for flights over the last decade has led to more opportunities for professionals in aircraft maintenance. Therefore, pursuing an Aircraft Maintenance Engineering programme will lay the right infrastructure for you to be a specialist that would be in high demand.

## WE OFFER

### Diploma in Aircraft Maintenance Engineering

JPT/BPP(R3/525/4/0020)09/27, (MQA/A8305)

The affordability of air travel has led to significant growth in the air carrier industry, creating a massive demand for aircraft maintenance staff. This diploma incorporates the European Aviation Safety Agency (EASA) syllabus to prepare you for the EASA Part 66 Category B1 or B2 license examinations.

### Advanced Diploma in Aircraft Engineering Technology

JPT/BPP(R2/525/5/0018)04/27, (MQA/FA1380)

The Advanced Diploma in Aircraft Engineering Technology (ADAE) is specially tailor-made to accommodate to the current industrial needs of this industry. The students would obtain an award from Kingston University, UK and another award from Nilai University. This programme gives the cutting edge in enhancing the career path in both mechanical and the aircraft engineering environment.





## PROGRAMME HIGHLIGHT

- **Aircraft Learning Facility**

The hangar at Nilai University has 2 aircraft and relevant maintenance equipment for students to utilise during their practical sessions. They will learn about airframe structures, how to manage the avionics and electrical systems, as well as practise operating on the engines.

- **On-The-Job Training With MROs and Airline**

In partnership with KLM UK Engineering for the EASA examinations, Nilai University goes to great lengths to maintain partnerships that yield beneficial results for our students. As a result, students are eligible for a 6-month on-the-job training with various companies.

# CAREER PROSPECTS

## Aircraft Maintenance Engineering and BEng (Hons) in Aircraft Engineering Career Options.

### Avionics Maintenance Technician (Electronics)

These are technicians who focus on maintaining aircraft electronics among other elements. They are responsible for the electrical and electronic systems, the wiring onboard the plane, installing and troubleshooting the navigation instrumentation and in-flight entertainment systems, ensuring they are working in optimal condition.

### Aviation Maintenance Technician (Mechanical)

The duty of an aviation maintenance technician typically includes inspecting and repairing aircraft to ensure they meet safety standards. It is their utmost priority to ensure any aircraft is in top working condition and fix any issues it might have before it leaves the ground. They work in shifts to conduct maintenance work before and after a flight.

### Aviation Machinists

They are responsible for operating a variety of machines and tools. They also work as precision instrument makers who fabricate, modify or repair mechanical devices and apply their knowledge of mechanics in machining procedures.

### Aviation Maintenance Inspector

Also known as Aviation Safety Inspectors, they use their technical skills to inspect an aircraft and confirm if it meets the regulations of the European Aviation Safety Agency (EASA) or local authorities. Their primary responsibilities include verifying the competency of the pilot and crew, issuing certificates of airworthiness and evaluating the maintenance procedures.

### Licensed Aircraft Engineer

One primary task and duties include inspections to determine the airworthiness of aircrafts, testing engines of any malfunction and verification after an abnormality has been rectified.

### Flight Operations Engineer

The nature of duties, to identify, derive, develop, and maintain Mission Systems and Flight Operations requirements, including traceability and verification and validation approach, necessary to implement a design that meets objective. Define the flight plan, operations concept, and designs that enable highly effective and labour-efficient real-time spacecraft and ground system operation, systems performance assessment and inter-team communication and coordination.

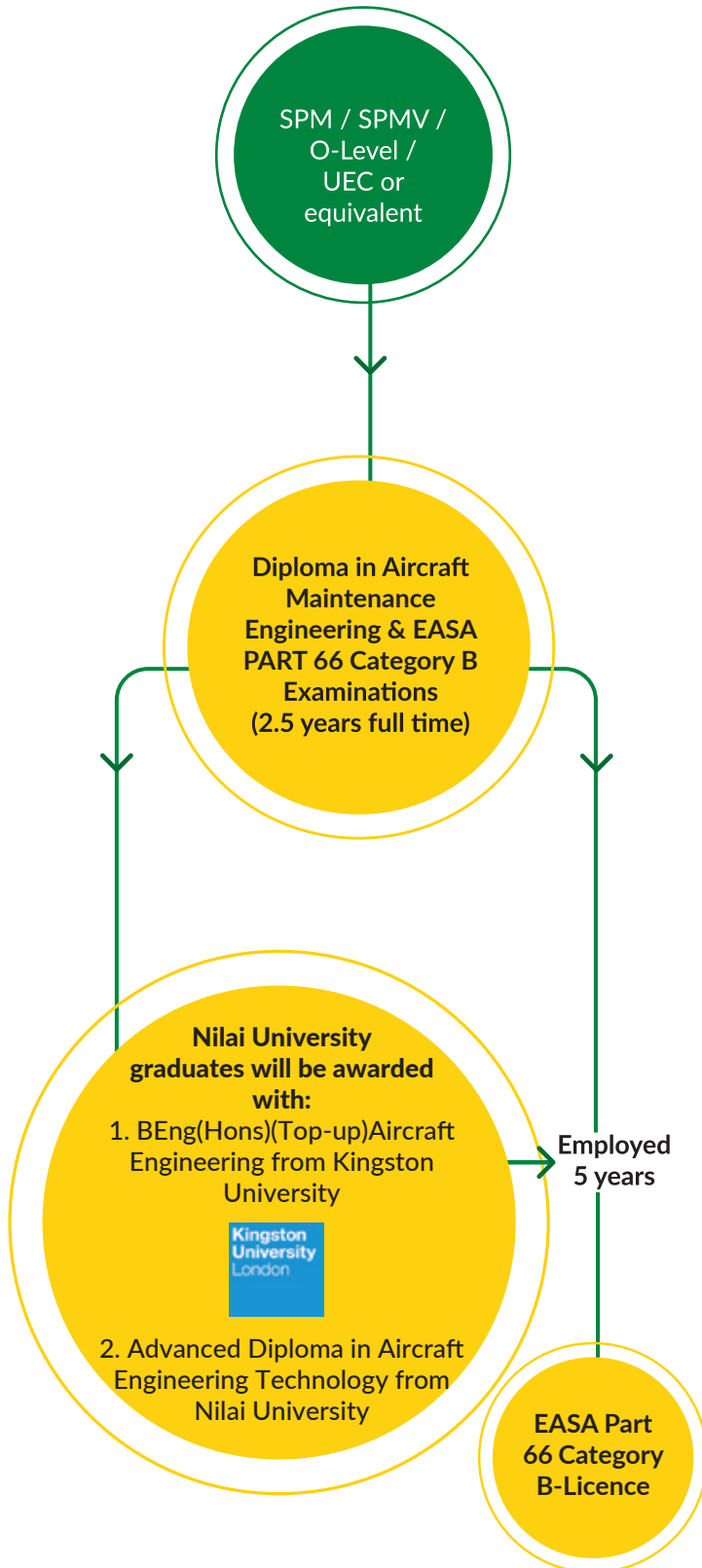
### Aircraft Project Engineer

Aircraft Project Engineers manage teams throughout the entire span of a project which is technical or involves engineering. They ensure the design, consistency and functionality of a project throughout its entire process. They prepare, schedule, coordinate and monitor all assigned projects and communicate during daily interactions with clients to interpret requirements and needs.

### Aircraft Planning Engineer

Responsible for the profitable operation of large, mega projects. Coordinate with project managers to successfully deliver projects to clients, and to ensure project management systems are maintained up-to-date and accurate, perform design, development, and/or analysis to support assigned projects.

## ACADEMIC PROGRESSION



## OTHER CAREERS OPTIONS

### Materials Planning Engineer

This role involves working for aircraft manufacturers where you would procure parts, equipment, tools and consumables required for operations and support activities. You would also be involved in ensuring good quality, pricing and overall service.

### Technical Sales Engineer

With knowledge in aircraft maintenance, aircraft manufacturers and airlines would look for individuals to be involved in their sales and marketing activities. Graduates would be able to bring their technical knowledge into the role.



# ENTRY REQUIREMENTS

## Diploma in Aircraft Maintenance Engineering

JPT/BPP(R3/525/4/0020)09/27, (MQA/A8305)

SPM/SPMV/O-Level	3Cs including Maths and 1 Science/Technical/Vocational subject AND pass English
UEC	3Bs including Maths and 1 Science/Technical/Vocational subject AND pass English
Vocational/Technical Certificate (MQF Level 3)	CGPA 2.00 AND 1 year's working experience in a related filed or completed 1 semester of academic enhancement programme
Certificate in Engineering Technology (MQF Level 3)	CGPA 2.00

### English Requirements\* (For International Students)

MUET	3
IELTS	5.0
TOEFL	500 (PBT) / 61 (iBT)
Pearson	36

\*International students with qualifications from educational systems where the English language is the primary medium of instruction are exempted from this requirement.

International students who do not fulfil the English Language Requirements may join the Intensive English Programme at Nilai University which builds their skills in the language and prepares them for the IELTS examination.

### Programme Module

<b>Core Modules (Common Core)</b>
Mathematics
Physics
Basic Aerodynamics
Aviation Legislation
Materials and Hardware
Human Factors
<b>Core Modules (Discipline Core)</b>
Electrical Fundamentals I
Electrical Fundamentals II
Electronic Fundamentals
Maintenance Practices I
Theory of Flight and Flight Controls
Airframe Structures
Air Conditioning, Cabin Pressurisation and Oxygen Systems
Aircraft Hydraulics and Pneumatics
Turbine Engine and APU
Digital Techniques and Electronic Instrument System
Maintenance Practices II
Aircraft Landing Gears and Brakes
Instrument and Avionics Systems
Aircraft Electrical Systems

<b>Summative</b>
Final Year Project
<b>Industrial Training</b>
On Job Training
<b>Elective Modules</b>
Engine Lubrication, Fuel and Air Systems
Propeller
Engine Operation and Maintenance
Aircraft Communication System
Aircraft Autoflight System
Aircraft Navigation System
<b>Mata Pelajaran Umum</b>
Penghayatan Etika Dan Peradaban (Malaysians) OR Bahasa Melayu Komunikasi I (International Students)
Food and Culture OR Environment and Development in Malaysia
Co-Curriculum
Graduate Preparatory Course
Academic English with Research
<b>Malay Language ( only for Malaysian studHents without a credit in SPM BM)</b>
Bahasa Kebangsaan A

# ENTRY REQUIREMENTS

## Advanced Diploma in Aircraft Engineering Technology (ADAE)

JPT/BPP(R2/525/5/0018)04/27, (MQA/FA1380)

Diploma (Level 4, MOF) in related field	Graduate in Aircraft Maintenance Engineering or the related field with min GCPA 2.00
	Pass SPM or equivalent
	A pass in English

### English Requirements\* (For International Students)

MUET	3
IELTS	5.0
TOEFL	500 (PBT) / 61 (iBT)
Pearson	36

\*International students with qualifications from educational systems where the English language is the primary medium of instruction are exempted from this requirement.

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### Programme Module

<b>Core</b>
Research Methods and Design
Aerospace Technology I
Aerospace Technology II
Air Transport Economics I
Air Transport Economics II
Aircraft Maintenance Operations I
Aircraft Maintenance Operations II
Aircraft Engineering Individual Project I
Aircraft Engineering Individual Project II
<b>Electives Module</b>
Aviation Safety
Airline and Airport Operations
Air Traffic Management
<b>Mata Pelajaran Umum</b>
Environment and Development in Malaysia OR Food and Culture
Graduate Preparatory Course
Bahasa Melayu Komunikasi or Pengajian Malaysia 2
Bahasa Kebangsaan A
Co-Curriculum

## HEALTH REQUIREMENTS

All offers are subject to the students being certified by a medical practitioner as fit to be accepted into the programme within a month from commencement of the nursing programme and not having any of the following medical/physical conditions:

- COLOUR BLINDNESS • HEARING DEFECTS • ASTHMA

## GAIN QUALITY EDUCATION AT NILAI UNIVERSITY

All programmes offered at Nilai University observe the strict guidelines of the Malaysian Qualifications Agency (MQA) and Ministry of Higher Education (MOHE). The university, established in 1997 emphasises excellence and thus strives to provide quality education.

### Quality Education

Programmes are affordable for students from all walks of life. Lectures are conducted in small groups so that each student can have personalised attention.

### Exposure to Diverse Cultures

International students from different countries across the world choose to study at Nilai University. With a student community of diverse backgrounds, the interaction between international and local students encourages sharing, understanding, and acceptance of various cultures.

### Co-curricular Activities for Personal Development

Nilai University provides a 'Total Student Experience' with engaging clubs to encourage creativity, networking and active participation in various events. The experience gained can be included in students' portfolio to increase employment opportunities. There are initiatives such as the Mentor-Mentee programme to help new students feel at home and blend in.

### Master the English Language

As the university has a multicultural community, students and staff are encouraged to communicate in English with intensive English classes available for those who need it.

## SETARA Ranking

In the SETARA 2017 survey conducted by the Malaysian Ministry of Higher Education, Nilai University obtained a score of 89% under the Teaching and Learning criterion.

This excellent score demonstrates our commitment to providing students with quality teaching and learning experiences.

## Professional Recognition/Industry & Academic Partners





# NILAI UNIVERSITY

## Enrichment For Life



### Lush Campus

Nilai University has a charming campus with lush greenery surrounding the hostels and lecture halls for an open and relaxed learning environment. Away from the bustling city, you will enjoy a refreshed outlook studying here with your peers.



### Peaceful Environment

As a university town, Nilai University knows the importance of a peaceful atmosphere for students to be able to focus on their studies. The university has a spacious layout ideal for students to have an individual study session.



### Strategic Location

Nilai University is located in the township of Putra Nilai. Nilai town has all the necessary amenities such as banks, hospitals, malls, eateries and more. The university is easily accessible via the national highway. We are only a 35-minute drive away from the city centre of Kuala Lumpur and 20 minutes drive away from the Kuala Lumpur International Airports. (KLIA 1 & KLIA 2).












## Full Campus Facilities

We have facilities catering to recreation and hands-on training to ensure students are well-rounded individuals prepared to enter the professional workforce.

### Recreation

-  Football/Rugby Field
-  Golf Course\*
-  Swimming Pools\*
-  Gymnasium
-  Basketball Courts
-  Sports Focus Centre For Fencing
-  Indoor Badminton Court
-  Indoor Sports Centre
-  Lakeside Recreation Park & Jogging Track
-  Table Tennis
-  Tennis Courts
-  Volleyball Courts

### Amenities

-  International Student Visa Application
-  Accommodation
-  Canteen
-  Shuttle Bus Service
-  WiFi-enabled campus
-  Laundrette
-  Minimart
-  Muslim Prayer Rooms
-  ATM
-  Bookshop
-  International Student Airport Pick-Up

### Learning

-  Aircraft Hangar
-  Demonstration Kitchen
-  Formal Dining Restaurant
-  Hospitality Training Facilities
-  Laboratories
  - Avionics
  - Fluid Mechanics
  - Materials and Mechanics
  - CAD and Simulation
  - Electrical and Electronics
  - Biology
  - Chemistry
  - Analytical
  - Biotechnology
  - Physics
-  Engineering and Aircraft Maintenance Engineering Workshop
-  Nursing Skill & Simulation Laboratories
-  Learning Resource Centre

\*At the nearby Nilai Springs Golf and Country Club.

# WHAT OUR STUDENTS SAY

“I loved getting my hands dirty as I have been helping out my dad in his workshop. I am always curious to know how things work and the function of each button, lever, plug, rod, nut and bolt. The close links that Nilai University has with major aviation players was also a factor in me choosing to come here. It is vital that students get a chance to learn in real working environments, and I know that promising students get retained. So I intend to seize the opportunity!”

Koh Siew Wern,  
Diploma in Aircraft Maintenance  
Engineering

“Although girls are still a minority in this field, that shouldn’t stop anyone with the inclination and the right attitude from applying. To the lecturers’ credit, they do not discriminate and always pick students for projects and class leaders based on their abilities.”

Hemammalini Murugan,  
Diploma in Aircraft Maintenance  
Engineering

“I want to show that the girls can be just as good, if not better than the guys. Though unable to be a pilot, I still wanted to work with aeroplanes. This programme allows me to do so and carve a lucrative career in the aviation field. Everyone in my estate is very proud of me for trying to become an aeroplanes maintenance engineer.”

Nency Philip Selvaraju,  
Diploma in Aircraft Maintenance  
Engineering

## HOW TO APPLY?

- Choose your programme
- Fill in the online application form ONLY if you want to apply for admission into a programme offered at Nilai University. Confirm your accommodation type in the application (if needed).
- Once we receive your online application form, our educational counsellor will contact you for arrangements to pay the first semester's fees and confirm your accommodation booking (if necessary).
- You may pay for Application Fee, Accommodation Fee and the first semester's fees via our fee payment channels as listed.

### Payment method:

Payment at the counter, Ground Floor, Resource Centre, Nilai University Campus

### Operating hours:

Monday to Friday from 8:00 am to 4:00 pm

### Mode of payment:

- Cash
- Credit Card: Visa, Mastercard and Union Pay only
- Debit Card: MyDebit, Visa/ Mastercard Debit Cards
- Cheque-Payable to "NILAI EDUCATION SDN BHD"
- Online Banking

### Payee Name:

Nilai Education Sdn Bhd

### Bank Details:

Account No: 2050-5110-000-979 | RHB Bank Berhad





## THE OFFER LETTER

Once the administration office receives the receipt of your Application Fee, an offer letter will be emailed to you while the original will be posted to the address stated in the application form.

You should expect to receive the following:

**Letter of Offer:**

Admission/registration information, intake date and details for the programme that you have applied for will all be stated in the letter.

**Receipt:**

A receipt of your initial payments will be included. Please contact us immediately if you do not receive a copy of the receipt.

Register personally and check into the rooms on the date stated in your Letter of Offer.

If you are unable to register personally, please call the Office of Admissions and Records (OAR) at **+606 8502338** to indicate the date you will arrive to register and check into your accommodation.

Airport pick-up (for East Malaysia & international students arriving by flight) can be arranged for new students. Call **+606 8502308** to speak to our educational counsellors to arrange for the transportation.

### Confirmation of acceptance

Once you have registered, it's time to start your classes and enjoy university life! If you require information on a programme, financing options or need to clear any doubts, please use the online enquiry form OR call to speak to an education counsellor at **+606 8502308**.



**FIND US ON:**



[www.nilai.edu.my](http://www.nilai.edu.my)

We are open daily  
(9:00 am - 5:00 pm)  
Closed on Public Holidays

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Nilai Education Sdn Bhd  
Registration No: 199401021536 (307215-P)

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**Watch the video**  
Aircraft Maintenance

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