



# AIRCRAFT MAINTENANCE ENGINEERING

Experience the difference in aviation academy



Nilai University graduates  
will be awarded with:  
BEng (Hons) (Top-up) Aircraft Engineering  
from Kingston University

# KNOW AIRCRAFT MAINTENANCE ENGINEERING

The Diploma in Aircraft Maintenance Engineering program and Advanced Diploma in Aircraft Engineering Technology boast a myriad of strengths that position it as a premier choice for aspiring aircraft engineers. The program's cornerstone lies in its excellent training facilities, equipped with state-of-the-art hangar space and aircraft, providing students with hands-on experience essential for their professional development.

One of the program's distinctive features is its commitment to providing enhanced certifications through EASA Part-66 Examinations (B1.1 and B2), ensuring that graduates possess comprehensive and globally recognized skill sets. As an approved EASA Examination Centre under KLM UK EASA Part 147.0176, the program adheres to rigorous standards set by aviation authorities.

Furthermore, the program offers a unique pathway to a BEng (Hons) (Top-up) in Aircraft Engineering from Kingston University, UK, and is also awarded the Advanced Diploma in Aircraft Engineering from Nilai University adding an extra testimony and credentials. Graduates also attain professional status, paving the way to become an Incorporated Engineer (IEng), accredited by esteemed institutions such as the Royal Aeronautical Society, Engineering Council UK, Sydney Accord, and Licensed Aircraft Engineer from EASA part 147.

The integration of Virtual Learning Environment (VLE) training software from KLM UK EASA Engineering Limited enriches the educational experience, providing a cutting-edge and complementary approach to traditional instruction. The program's commitment to quality is evident in its production of graduates who meet rigorous educational standards, ensuring they are well-prepared for the dynamic field of aircraft engineering.

Recognizing the importance of soft skills, the program includes modules such as Outward Bound and Graduate Preparatory Course, fostering well-rounded professionals capable of excelling not only technically but also in communication and teamwork. In essence, the program's strengths lie in its holistic approach, combining cutting-edge facilities, academic excellence, industry certifications, and a focus on both technical and soft skills to produce highly qualified and versatile aircraft engineering professionals.

## 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.

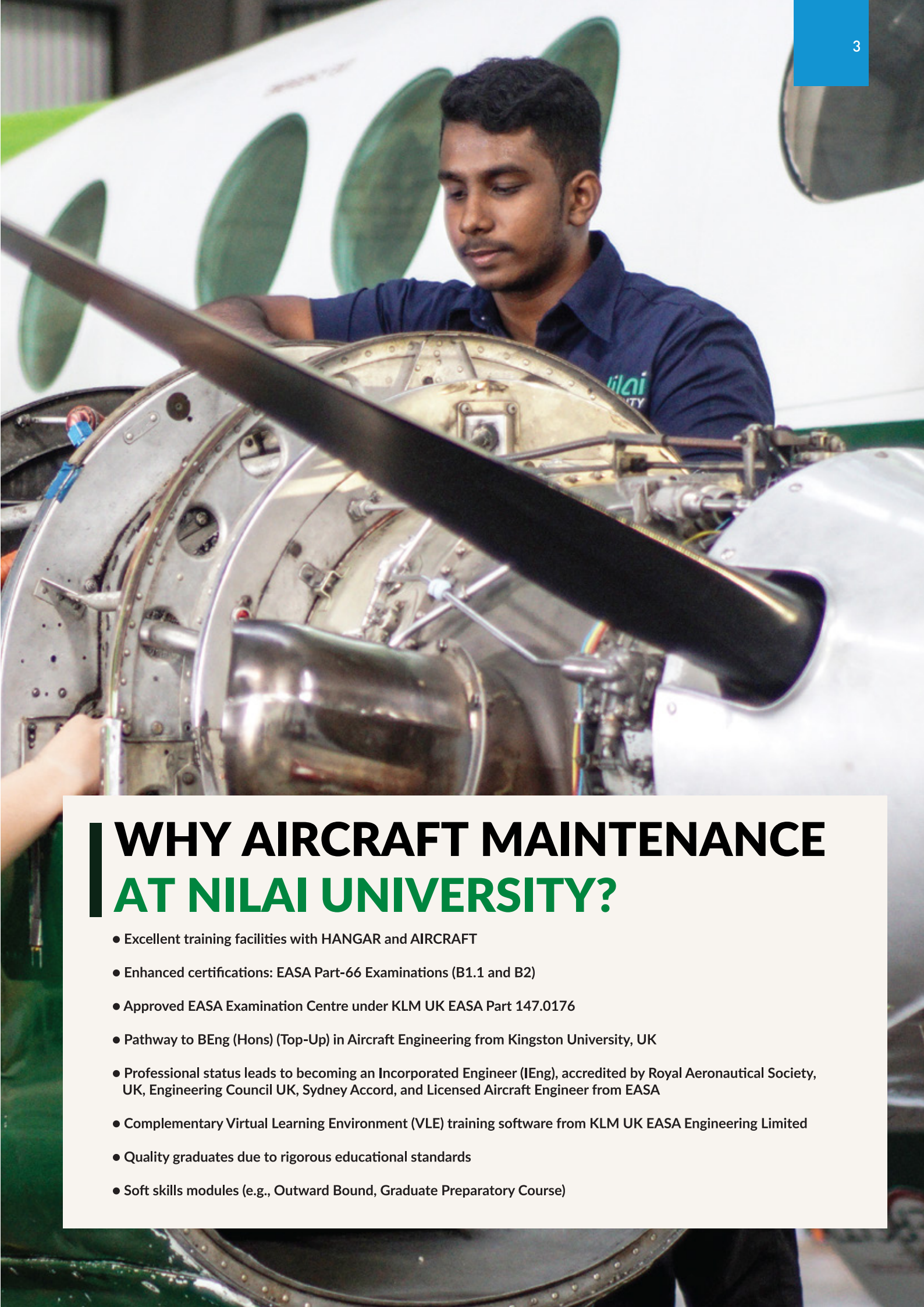


### Advanced Diploma in Aircraft Engineering Technology

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.





# WHY AIRCRAFT MAINTENANCE AT NILAI UNIVERSITY?

- Excellent training facilities with HANGAR and AIRCRAFT
- Enhanced certifications: EASA Part-66 Examinations (B1.1 and B2)
- Approved EASA Examination Centre under KLM UK EASA Part 147.0176
- Pathway to BEng (Hons) (Top-Up) in Aircraft Engineering from Kingston University, UK
- Professional status leads to becoming an Incorporated Engineer (IEng), accredited by Royal Aeronautical Society, UK, Engineering Council UK, Sydney Accord, and Licensed Aircraft Engineer from EASA
- Complementary Virtual Learning Environment (VLE) training software from KLM UK EASA Engineering Limited
- Quality graduates due to rigorous educational standards
- Soft skills modules (e.g., Outward Bound, Graduate Preparatory Course)



# CAREER PROSPECTS

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

### Avionics Maintenance Technician (Electronics)

These are the 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

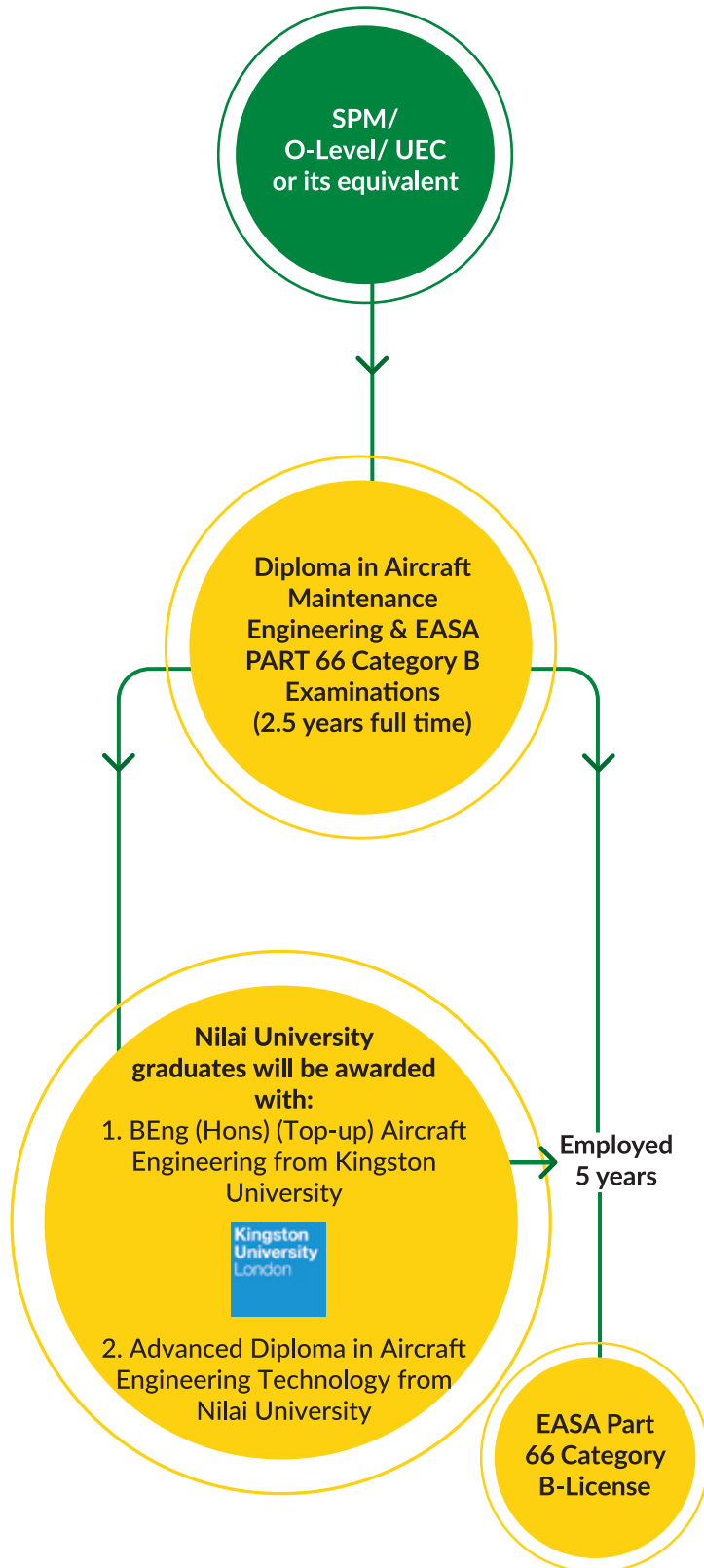
Responsible for the profitable operation of large, mega projects. Coordinate with project managers to successfully deliver projects to clients, and to ensure project management systems are maintained up-to-date and accurate, perform design, development, and/or analysis to support assigned projects.

### Aviation Industry Partners for On-Job Training Placement

- KLM Royal Dutch Airlines
- Asia Digital Engineering (ADE)
- AAR Landing Gear Services Sdn Bhd
- Airbus Helicopters Malaysia Sdn Bhd
- Hornbill Skyways Sdn Bhd
- Systematic Aviation Services Sdn Bhd
- Delta Aerospace Sdn Bhd
- Aero Handlers
- Awan Inspirasi
- Leonardo Agusta Westland (M) Sdn Bhd
- CTRM Aviation Sdn Bhd
- SR Aviation Sdn Bhd
- Beyond Horizon- Aerial Solutions Company
- Aviation Australia
- Pos Aviation
- AAR Landing Gear Services Sdn Bhd
- Sepang Aircraft Engineering Sdn Bhd
- GE Engine Services Malaysia Sdn Bhd
- Redland Aviation Services Sdn Bhd
- Aviatech Solutions- A320 Aircraft Flight Simulator



## ACADEMIC PROGRESSION



Nilai University graduates will be awarded with:  
 1. BEng (Hons) (Top-up) Aircraft Engineering from Kingston University  
 2. Advanced Diploma in Aircraft Engineering Technology from Nilai University

## 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.

## ACHIEVE EXCELLENCE LED BY OUR THRIVING FACULTY MEMBERS

Dedicated to enhancing teaching and learning excellence, each member of the teaching faculty is a member of the Board Engineers of Malaysia (BEM) and Malaysia Board Technologist (MBOT) with more than 10 years of experience in the field of aviation.

- 8 staff members with **Engineering Technologist** certification
- 8 staff members with **Graduate Technology/Qualified Technician** certification
- 3 staff members with **Inspector of Works**, Board of Engineers Malaysia (BEM) certification
- 2 staff members with **Professional Technologists** certification



# PROGRAMME MODULE

## Diploma in Aircraft Maintenance Engineering

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

The Diploma in Aircraft Maintenance Engineering programme boasts a myriad of strengths that position it as a premier choice for aspiring aircraft engineers. The programme's cornerstone lies in its excellent training facilities, equipped with state-of-the-art hangar space and aircraft, providing students with hands-on experience essential for their professional development. One of the programme's distinctive features is its commitment to providing enhanced certifications through EASA Part-66 Examinations (B1.1 and B2), ensuring that graduates possess a comprehensive and globally recognised skill set. As an approved EASA Examination Centre under KLM UK EASA Part 147.0176, the programme adheres to rigorous standards set by aviation authorities. Recognising the importance of soft skills, the programme includes modules such as Outward Bound and the Graduate Preparatory Course, fostering well-rounded professionals capable of excelling not only technically but also in communication and teamwork. In essence, the programme's strengths lie in its holistic approach, combining cutting-edge facilities, academic excellence, industry certifications, and a focus on both technical and soft skills to produce highly qualified and versatile aircraft engineering professionals.

### Assessments

Coursework = 50%

Final Examination = 50%

Passing Marks = 75%

### Enhanced Certifications

Certificate	Industry Partners
EASA Part-66 Certificate (B1.1 and B2)	KLM UK Engineering Ltd
Engineering Technology	Royal Aeronautical Society, UK; Engineering Council UK; Sydney Accord

Additional Certifications	Course Provider
Certificate of Achievement	Outward Bound
Dean's List Certificate	Nilai University
On Job Training Certificate	Industry Partners

### Duration:

Full Time: 2.5 years

Part Time: none

### Key Courses

#### Year 1:

##### Core Modules

- Mathematics
- Physics
- Basic Aerodynamics
- Electrical Fundamentals I
- Electrical Fundamentals II
- Materials and Hardware
- Electronic Fundamentals
- Maintenance Practices I
- Maintenance Practices II
- Aviation Legislation
- Airframe Structures

##### Compulsory Modules

- Academic English with Research
- Co-Curriculum
- Penghayatan Etika Dan Peradaban (Malaysian) OR Bahasa Melayu Komunikasi I (International Student)
- Integrity and Anti-Corruption

#### Year 2:

##### Core Modules

- Human Factors
- Theory of Flight and Flight Controls
- Air Conditioning, Cabin Pressurisation and Oxygen Systems
- Turbine Engine and APU
- Digital Techniques and Electronic Instrument System
- Aircraft Hydraulics and Pneumatics
- Aircraft Landing Gears and Brakes
- Instrument and Avionics Systems
- Aircraft Electrical Systems
- Final Year Project

##### Compulsory Modules

- Graduate Preparatory Course
- Bahasa Kebangsaan A

##### Elective Modules (Choose one set)

##### Set 1

- Engine Lubrication, Fuel and Air Systems
- Propeller
- Engine Operation and Maintenance

##### Set 2

- Aircraft Communication System
- Aircraft Autoflight System
- Aircraft Navigation System

#### Year 3: (6 months)

On Job Training

\*Periodic changes are made as part of continuous improvements.



# PROGRAMME MODULE

## Advanced Diploma in Aircraft Engineering Technology (ADAE)

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

The Advanced Diploma in Aircraft Engineering Technology programme offers a unique pathway to a BEng (Hons) (Top-up) in Aircraft Engineering from Kingston University, UK, and also awards the Advanced Diploma in Aircraft Engineering fromh Nilai University. Graduates also attain professional status, paving the way to become an Incorporated Engineer (IEng), accredited by esteemed institutions such as the Royal Aeronautical Society, Engineering Council UK, Sydney Accord, and Licensed Aircraft Engineer from EASA Part 147. The integration of Virtual Learning Environment (VLE) training software from KLM UK EASA Engineering Limited enriches the educational experience, providing a cutting-edge and complementary approach to traditional instruction. The programme's commitment to quality is evident in its production of graduates who meet rigorous educational standards, ensuring they are well-prepared for the dynamic field of aircraft engineering.

### Assessments

Subjects with Final Examination

Coursework = 70%

Final Examination = 30%

Subjects with no Final Examination

Coursework = 100%

Passing Marks = 50%

### Enhanced Certifications

Certificate	Partner
BEng (Hons) (Top-up) in Aircraft Engineering	Kingston University, UK
Incorporated Engineer	Royal Aeronautical Society, UK

### \*Duration:

Full Time:

- 1 year for Nilai University Graduates
- \*1 year and 1 semester for other Institution Graduates

### Key Courses

Year 1:

Core Modules

- Research Methods and Design
- Aerospace Technology I
- Air Transport Economics I
- Aircraft Maintenance Operations I
- Aircraft Engineering Individual Project I
- Aerospace Technology II
- Air Transport Economics II
- Aircraft Maintenance Operations II
- Aircraft Engineering Individual Project II
- Unmanned Aerial Vehicle Operations

Elective Module (Choose one set)

- Aviation Safety OR
- Airline and Airport Operations OR
- Air Traffic Management

### Compulsory Modules

- Co-Curriculum
- Penghayatan Etika Dan Peradaban (Malaysian) OR
- Integrity and Anti-Corruption

Year 2: (1 Semester)

Compulsory Modules

- Graduate Preparatory Course
- \*\*\*Bahasa Kebangsaan A

\*For students who have not taken MPU subjects and other Institution Graduates (1 year and 1 semester)

\*\*For students who have already taken the MPU subjects in the Diploma at Nilai University is not required to take the MPU subjects (1 year)

\*\*\*Students who do not have credit in Bahasa Melayu at SPM level, must take Bahasa Kebangsaan A course as MPU course.

\*Periodic changes are made as part of continuous improvements.

# ENTRY REQUIREMENTS

## Diploma in Aircraft Maintenance Engineering

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

SPM/O-Level	A pass with at least credits in three (3) subjects including Mathematics and one (1) Science/Technical/Vocational subject AND pass English; or
UEC	A pass with at least Grade B in three (3) subjects including Mathematics and one (1) Science/Technical/Vocational subject AND pass English; or
Vocational/Technical Certificate (MQF Level 3)	A pass with a minimum CGPA 2.00 and one (1) year of relevant work experience or a minimum of one (1) semester of an academic enhancement programme; or
Certificate in Engineering Technology (MQF Level 3)	A pass with a minimum CGPA 2.00; or its equivalent

## Advanced Diploma in Aircraft Engineering Technology (ADAE)

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

Diploma (Level 4, MQF) in related field	Graduated with Diploma in Aircraft Maintenance Engineering or related field with minimum GCPA 2.00; or
	A pass in SPM or equivalent; or
	A pass in SPM English; or its equivalent

## English Requirements\* (For International Students)

Linguaskill OL	154
MUET	3.5
IELTS	5.0
TOEFL	7.5 Ess (OL) / 40 (iBT)
Pearson	47
ELS	107

\*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 Linguaskill examination.



The program's cornerstone lies in its excellent training facilities, equipped with state-of-the-art hangar space and aircraft, providing students with hands-on experience essential for their professional development

#### **Aircraft at the Hangar**

Teaching, actual aircraft maintenance practices

#### **Aircraft Maintenance Workshop (Hangar)**

Teaching, actual aircraft maintenance practices

#### **Avionics Lab (S106)**

Teaching, R&D, Basic/Intermediate avionics lab practises

#### **Airframe and Engine Bay (Hangar)**

Teaching, R&D, Basic/Intermediate airframe lab practices

#### **Avionics, Electrical and Instrument Bay (Hangar)**

Teaching, R&D, Basic/Intermediate avionics, electrical and instrument lab practices

#### **Electronics Lab (S103)**

Teaching, R&D, Basic/Intermediate electronics lab practices Electronics

#### **Composite Lab (Mechanical Workshop)**

Teaching Composite Materials Aircraft

#### **Drone Lab / Project**

Teaching, research project - Drone

#### **Aircraft Simulator (E201)**

Teaching, research, navigation, instrument, simulation system - Aircraft





## 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 aircraft maintenance 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 1998 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.



Our drive for excellence is globally endorsed by **QS Rating with 5 Stars** in the following categories



**TEACHING**



**ACADEMIC DEVELOPMENT**



**FACILITIES**



**EMPLOYABILITY**



**SPECIAL CRITERIA:**  
Masters of Business Administration



**INCLUSIVENESS**

### SETARA Ranking

Nilai University has been awarded the prestigious "Competitive" rating from the Malaysian Integrated Rating of Higher Education Institutions (SETARA) 2022.

This recognition is a result of outstanding performance in various evaluation areas, particularly in General and Teaching and Learning.

This achievement highlights our ability to compete at a higher level and demonstrates our commitment to providing education beyond borders.

### 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
-  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





## EXCELLENCE BEYOND CLASSROOM

Leadership and people-relational skills are uniquely developed through the robust Aviation Society and UAV Club activities. Through every event, trip, and conference, students will not only get to gain practical application but also experience an enriched varsity life along with their peers.







# TRAIN ROUTE







## 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)

All information is correct at the time of printing. Nilai University issues its brochures and other literature only as a general guide to the university's programmes and facilities; they form no part of a contract. The university reserves the right to modify or withdraw any of the content described without notice.



**Watch the video**  
Aircraft Maintenance