

Camber Technics
Innovative Insight in Action
AVIATION TRAINING CENTRE

Operation Base

Hanger B, Colombo International Airport,
Rathmalana, Sri Lanka

Corporate Office

8C, Stanley Thilakarathne Mawatha,
Nugegoda, Sri Lanka

Contact Us

0094(0) 769878718 / 0094(0) 11 2816992

WhatsApp: 0769878718

Email: info@camberttechnics.com

Web: www.camberttechnics.com

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☎ +94 (0)769878718



AVIATION INDUSTRY

Introduction to the Aviation Industry

The aviation industry encompasses all aspects of air travel, including airlines, aircraft manufacturing, and airport operations.

It plays a crucial role in connecting people and goods around the world, driving economic growth and globalization.

The industry is highly regulated to ensure safety and security for passengers and crew.

What We Offer

Academic course of 2 years

6 months on the Job Training (OJT) in Sri Lanka

2 years on the Job Training (OJT) with practical in Overseas for EASA licence

ELIGIBILITY CRITERIA

Minimum requirement:

G.C.E. Ordinary Level Examination

Six (6) subject passes, including two (2) credit passes in science or mathematics and English Language.

OUR RESOURCES?

- **Highly qualified Academic staff**
- **Facility based in Colombo International Airport, Ratmalana**
- **World wide OJT opportunities & practical with overseas entities**

WHO WE ARE?



We are Camber Technics (Pvt) Ltd, 147 license approved company based in Ratmalana International Airport Colombo, Sri Lanka with the approval of Civil Aviation Authority of Sri Lanka (CAASL).

Our company is set-up with the intension of conducting an engineering training school which creates a (B1.1) licensed Aircraft Maintenance Engineer.



Key Players in the Aviation Industry

Major airlines such as Delta, United, and Emirates dominate the market with extensive route networks and fleets of aircraft.

Aircraft manufacturers like Boeing and Airbus design and produce commercial and military planes used by airlines worldwide.

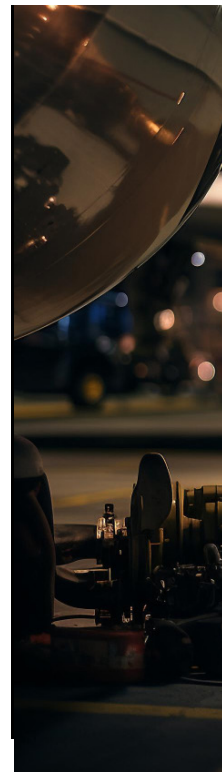
Airport operators, such as Hartsfield-Jackson Atlanta International Airport and Dubai International Airport, manage the infrastructure and services for air travel.

Trends and Challenges in the Aviation Industry

The rise of low-cost carriers has increased competition and lowered airfares, making air travel more accessible to a wider range of passengers.

Environmental concerns, such as carbon emissions and noise pollution, have led to calls for more sustainable aviation practices and technologies.

The COVID-19 pandemic has had a significant impact on the industry, leading to reduced flights, financial losses, and changes in travel behavior.



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Vision:

To be a globally recognized leader in EASA Part 147 certified aircraft maintenance training, empowering a diverse generation of aviation technicians to excel in safety, quality, and innovation.

Mission:

At Camber Technics Private Limited Aviation Training Centre, we are committed to:

- Providing exceptional EASA Part 147 approved training programs that meet the highest industry standards.
- Equipping local and international students with the theoretical knowledge, practical skills, and certifications necessary for successful careers in aircraft maintenance.
- Fostering a culture of safety, continuous learning, and ethical practices within the aviation industry
- Cultivating a diverse and inclusive learning environment that welcomes students from all backgrounds.
- Partnering with leading airlines, MRO facilities, and industry stakeholders to ensure our curriculum remains current and relevant to the evolving needs of the aviation sector.

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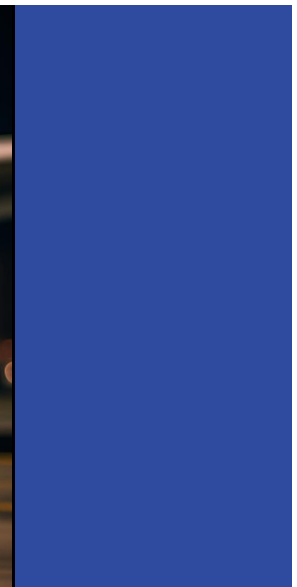


Continuing Education and Training

Continuous learning and training are essential for aircraft maintenance engineers to stay up-to-date with advancements in technology and regulations.

Engineers often participate in workshops, courses, and seminars to enhance their skills and knowledge.

Ongoing education ensures that engineers can adapt to changes in the aviation industry and maintain high standards of safety.



Technological Innovations in the Aviation Industry

Advancements in aircraft design, such as composite materials and fuel-efficient engines, have improved the performance and sustainability of modern planes.

Digital technologies, including online booking systems, in-flight entertainment, and automated baggage handling, enhance the passenger experience and streamline operations.

The development of electric and hybrid-electric aircraft offers potential solutions to reduce emissions and noise in the future of aviation.





Future Prospects for the Aviation Industry

Despite current challenges, the aviation industry is expected to recover and continue growing in the long term as global travel demand rebounds.

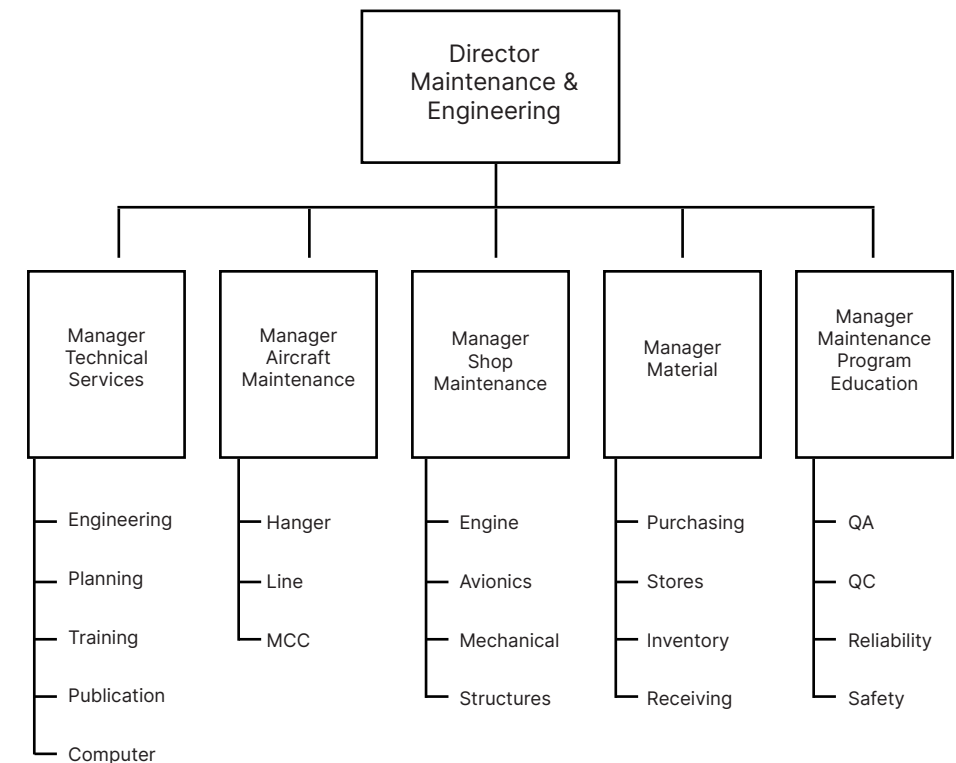
Investments in research and development, infrastructure improvements, and sustainable practices will drive innovation and competitiveness in the industry.

Collaboration between stakeholders, governments, and international organizations will be key to addressing the complex issues facing the aviation industry and ensuring its long-term success.



What
Would be
the Future
Growth &
Scope of
Aviation
Industry
in this
Decade?

Recency of Experience Requirements



To maintain their licenses, aircraft maintenance engineers must meet recency of experience requirements.

This involves completing a specified number of maintenance tasks or training hours within a certain period.

Compliance with recency requirements ensures that engineers stay current and competent in their field.



	Description	Vehicle Examples
Class A CDL (CDL Manual Sections 1, 2, 3, 5, 6)	Required to operate a combination of vehicles with a GVWR of 26,001 or more lbs. and if the GVWR of the vehicle being towed is in excess of 10,000 lbs.	Tractor-trailers, truck and trailer combinations, tanker trailers, box trailers, flatbeds. <i>Endorsements may be required for some vehicle configurations – see below.</i>
Class B CDL (CDL Manual Sections 1, 2, 3, 5)	Required to operate a single unit vehicle with a GVWR or registered weight of 26,001 lbs or such vehicle towing a vehicle with a GVWR not in excess of 10,000 lbs.	Straight trucks, dump trucks, box trucks and likely any of the above towing a trailer. <i>Endorsements may be required for some vehicle configurations – see below.</i>

	Endorsement List	Note
CDL Endorsements (CDL Manual Sections 4, 7, 8, 9, 10)	H: Hazardous Materials N: Tank Vehicle P: Passenger (Bus) Vehicle S: School bus carrying over 15 passengers T: Double/Triple Trailer X: Comb. Tank Hazardous Materials	Contact our INDUSTRY INSIDERS for specific questions about CDL endorsements.

Additional Ratings and Endorsements

In addition to the main license categories, engineers can obtain additional ratings or endorsements for specific aircraft types or systems.

These endorsements expand the scope of work the engineer can perform and increase their expertise in specialized areas.

Ratings and endorsements demonstrate proficiency in particular aspects of aircraft maintenance.



THE FUTURE IN YOUR HANDS

AIRCRAFT MAINTENANCE ENGINEERING



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Introduction to Aircraft Maintenance Engineering

Aircraft Maintenance Engineering involves the inspection, repair, and maintenance of aircraft to ensure their safe operation.

AME professionals play a crucial role in ensuring the airworthiness of aircraft.

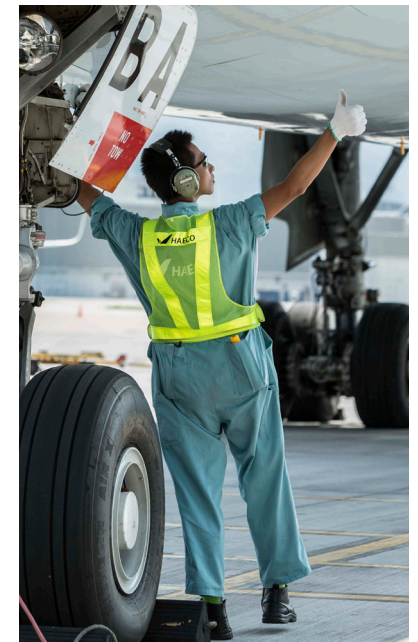
The field requires a deep understanding of aircraft systems, regulations, and safety protocols.

Category C Licence

Category C license holders are responsible for carrying out base maintenance tasks and major repairs on aircraft.

Scope includes tasks like structural repairs, major component replacements, and extensive maintenance checks.

Engineers with this license work on a wide variety of aircraft types and systems.



Category D Licence

Category D license holders are authorized to certify the airworthiness of aircraft after major maintenance or modification work.

Scope includes final inspections, issuing airworthiness certificates, and signing off on maintenance tasks.

Engineers with this license play a crucial role in ensuring the safety and compliance of aircraft.



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Category B1 Licence

Category B1 license holders are qualified to work on mechanical systems of aircraft, including powerplants and associated components.

Scope covers tasks such as engine changes, troubleshooting, and maintenance of hydraulic and pneumatic systems.

Engineers with this license can work independently on various types of aircraft within their approved scope.

Category B2 Licence

Category B2 license holders specialize in avionics systems, including communication, navigation, and electrical systems.

Scope includes tasks like installation, testing, and troubleshooting of avionics components.

Engineers with this license can work on avionics systems on a wide range of aircraft.

Importance of Aircraft Maintenance

Regular maintenance is essential to prevent mechanical failures and ensure the safety of passengers and crew.

Proper maintenance helps extend the lifespan of aircraft and reduce

operational costs.

Compliance with maintenance schedules is mandated by regulatory authorities to maintain airworthiness.

Types of Aircraft Maintenance

Line Maintenance

involves routine checks, servicing, and minor repairs between flights

Base Maintenance

includes more extensive inspections and repairs that require the aircraft to be out of service for a longer period.

Overhaul Maintenance

involves a complete disassembly, inspection, and rebuild of the aircraft at specified intervals.





Responsibilities of Aircraft Maintenance Engineers

- Conducting pre-flight checks to ensure the aircraft is airworthy.
- Troubleshooting and diagnosing mechanical issues.
- Performing scheduled maintenance tasks according to manufacturer's guidelines.

Safety Aspects in Aircraft Maintenance Engineering

- Following strict safety protocols and guidelines to prevent accidents.
- Using specialized tools and equipment correctly to avoid injury or damage.
- Conducting regular safety audits and inspections to maintain a safe working environment.

Introduction to Aircraft Maintenance Engineering Licences and Scopes

Aircraft Maintenance Engineering (AME) licenses are categorized based on the type of aircraft and work scope.

Different licenses allow engineers to work on specific aircraft systems or components.

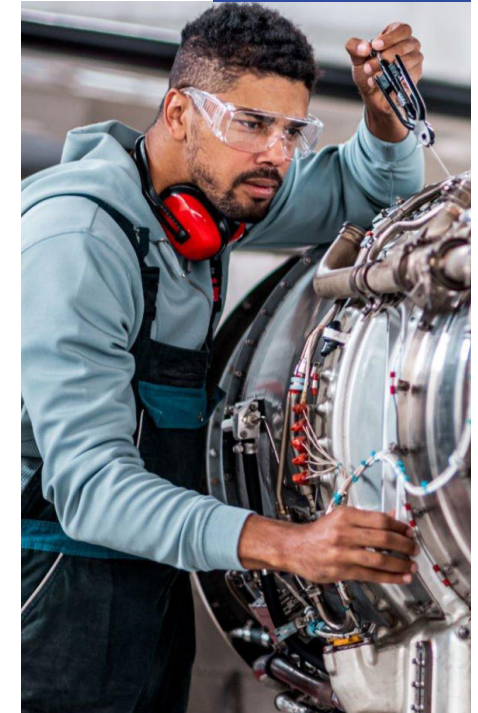
Each license comes with defined privileges and limitations for maintenance tasks.

Category A Licence

Category A license holders are authorized to perform maintenance tasks on non-pressurized aircraft structures, powerplants, and mechanical systems.

Scope includes tasks like engine replacement, landing gear checks, and minor repairs on small aircraft.

License holders must work under supervision for certain high-level tasks on larger aircraft.



TYPES OF AIRCRAFT MAINTENANCE ENGINEERING LICENCES AND SCOPES



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Training and Certification for Aircraft Maintenance Engineers

AME professionals undergo rigorous training programs to obtain licenses from aviation authorities.

Continuous education and training are necessary to stay updated on new technologies and regulations.

Specialized certifications may be required for specific aircraft types or systems.

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Tools and Equipment Used in Aircraft Maintenance

Aircraft maintenance engineers use a variety of tools such as wrenches, screwdrivers, and diagnostic equipment.

Specialized equipment like borescopes and pressure gauges are used for detailed inspections.

Computerized maintenance management systems (CMMS) help track maintenance activities and schedules.

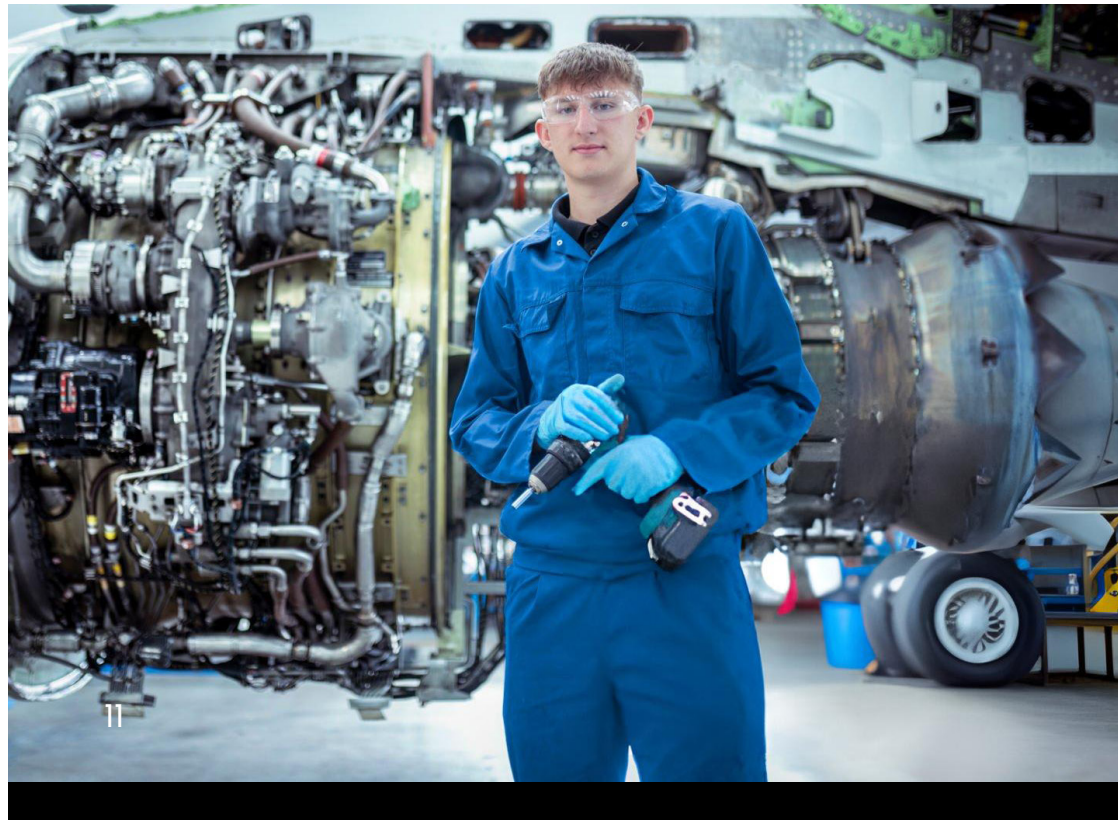


Conclusion - The Future of Aircraft Maintenance Engineering

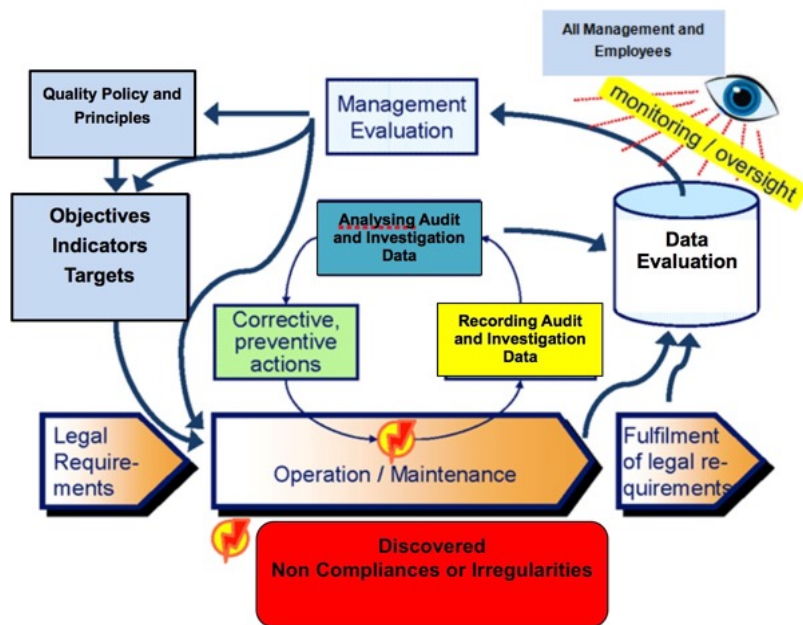
As technology advances and air travel continues to grow, the role of aircraft maintenance engineers will become increasingly critical.

Embracing innovation, safety, and sustainability will be key priorities for the future of aircraft maintenance.

Aircraft Maintenance Engineering offers a rewarding career for individuals passionate about aviation and ensuring the safety of aircraft and passengers.



Continuous Improvement and Quality Assurance in Aircraft Maintenance



Implementing quality management systems to ensure high standards of maintenance.

Conducting regular audits and inspections to identify areas for improvement.

Encouraging a culture of continuous learning and improvement among maintenance personnel.

Challenges in Aircraft Maintenance Engineering

Balancing the need for quick turnarounds with thorough maintenance procedures.

Adapting to new aircraft technologies and systems.

Working in challenging environments such as extreme weather conditions or remote locations.

Future Trends in Aircraft Maintenance Engineering

Increasing use of predictive maintenance technologies to anticipate and prevent failures.

Adoption of augmented reality and virtual reality for training and maintenance tasks.

Integration of artificial intelligence for data analysis and decision-making in maintenance processes.



Environmental Considerations in Aircraft Maintenance

Implementing sustainable practices to reduce environmental impact.

Proper disposal of hazardous materials and recycling of aircraft components.

Developing eco-friendly maintenance solutions to minimize carbon footprint.



Career Opportunities in Aircraft Maintenance Engineering

AME professionals can work for airlines, maintenance repair organizations (MROs), or aircraft manufacturers.

Opportunities for specialization in areas such as avionics, structures, or engines.

Job prospects are expected to be strong due to the increasing demand for air travel.

Case Studies in Aircraft Maintenance Engineering

Highlighting successful maintenance projects that improved safety and efficiency.

Showcasing innovative solutions to complex maintenance challenges.

Sharing lessons learned from maintenance incidents to prevent future issues.



International Regulations & Standards in Aircraft Maintenance

Compliance with regulations such as the Federal Aviation Administration (FAA) or the European Aviation Safety Agency (EASA).

Following industry standards like the International Civil Aviation Organization (ICAO) requirements.

Adhering to maintenance programs outlined by aircraft manufacturers.