



JAE CODE C51

Diploma in
Aeronautical
& Aerospace
Technology

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Diploma in Aeronautical & Aerospace Technology

This is for you if you want to take flight in the aerospace industry and establish a career in aircraft maintenance.

Fascinated by how airplanes fly? Wonder how a jet engine works and what propels a plane to supersonic speed?

Build a strong foundation in engineering fundamentals and gain knowledge of aircraft systems in this course. You will also learn best practices in maintenance, repair and overhaul (MRO), and the aerospace manufacturing industry.

Look forward to rewarding career opportunities in the industry or pursue further education at prestigious universities worldwide.

This diploma lets you...

- Gain skills in MRO of aircraft and engines, as well as designing and manufacturing aircraft components.
- Benefit from practical, hands-on training and theoretical modules that will prepare you for university.
- Gain exclusive overseas internship experiences at advanced manufacturing companies in Germany.
- Pursue careers in sectors such as aviation, MRO and precision aerospace manufacturing.

Career Paths

- Aircraft Maintenance Engineer
- Airline Fleet Engineer
- Component Repair & Overhaul Engineer
- Defect Analysis Engineer
- Engineering Service Engineer
- Maintenance Controller
- Manufacturing/Production Engineer
- Planning Executive
- Quality Engineer
- Repair Process Engineer
- Structure/Stress Engineer

Course Curriculum

YEAR 1

- Algebra
- Calculus
- Effective Communication Skills
- Electrical Principles
- Engineering Drawing & Modelling
- Engineering Exploration Project
- Fundamentals of Innovation & Enterprise
- Fundamentals of Mechanics
- Introduction to Engineering
- Materials Technology
- Programming
- Thermofluids
- Workplace Digital Skills

YEAR 2

- Aerodynamics
- Aero-Structures
- Aero-Systems
- Aircraft Propulsion Systems
- Analogue & Digital Electronics
- Aviation Legislation & Human Factors
- Computer-Aided Manufacturing
- Differential Equation & Series
- Mechanical Design
- Mechanics-Dynamics
- Metrology & Quality Control
- Probability & Statistics

YEAR 3

ELECTIVE PROGRAMMES (CHOOSE ONE)

1. Aerospace Systems & Testing

- Aero Maintenance Practices & Projects
- Communication & Personal Branding
- Design for Additive Manufacturing
- Failure Analysis
- Non-Destructive Testing

ELECTIVE MODULES

- Computational Analysis & Simulation
- Smart Manufacturing Technology
- Unmanned Aerial Systems

2. Aerospace Manufacturing

- Advanced Metrology & Quality Management
- Aero Maintenance Practices & Projects
- Communication & Personal Branding
- Failure Analysis
- Non-Destructive Testing

ELECTIVE MODULES

- Advanced Machining Technology
- Aero Manufacturing Systems
- Smart Manufacturing Technology

In the final year, you will have the opportunity to undertake a full-time project and a local or overseas internship programme for one semester.

GENERAL STUDIES MODULES

You will complete a total of nine General Studies modules. Explore other areas of interest beyond your chosen area of specialisation.