

<b>Course Title</b>	<b>Course Code</b>	<b>Credit Hours</b>
Introduction to Aerospace Engineering	AE-111	2-0

**Textbook:**

- John D. Anderson, "Introduction to Flight", McGraw-Hill Education

**Reference Books/Materials:**

- Dave Newman, "Interactive Aerospace Engineering and Design", McGraw-Hill (Tx)
- Ian Moir, and Allan Seabridge, "Military Avionics Systems Aerospace Series", Wiley
- Ian Moir, and Allan Seabridge, "Aircraft Systems - Mechanical, Electrical, and Avionics Subsystems Integration", John Willey & Sons Inc
- Saeed Farokhi, "Aircraft Propulsion", Wiley
- EASA Part-66 Category B1 Maintenance License Module 7, "Maintenance Practices"

**Course Objectives:**

This course presents an overview of aerospace engineering disciplines; the history of aerospace, fundamental elements of aerodynamics and astrodynamics, aero-foils and wings, performance, stability and control, propulsion, structures and avionics leading towards the aerospace vehicle conceptual design.

**Course Outline:**

- A Brief History of Flight, Airfoils and Wings
- Introduction to Aerodynamics
- Coefficient of Pitching Moment
- Introduction to Aircraft Performance Study and Analysis
- Aircraft Performance Parameters
- Introduction to Aerospace Vehicle Design
- Aircraft Propulsion
- Aircraft Stability and Control
- Wind Tunnel Testing
- Introduction to Aircraft Avionics Systems

- Flight Instruments on an Aircraft
- Autopilot
- Aircraft Structures
- Aircraft Systems
- Aircraft Electrical System
- Aircraft Allied Systems
- Dampers
- The Space Environment, Introduction to Space Microgravity