

## **AMNT240e General Aeronautics and Applications**

**Level:** 2

**Credit Units:** 5 Credit Units

**Language:** ENGLISH

**Presentation Pattern:** EVERY SEMESTER

**E-Learning:** BLENDED - Learning is done MAINLY online using interactive study materials in Canvas. Students receive guidance and support from online instructors via discussion forums and emails. This is supplemented with SOME face-to-face sessions. If the course has an exam component, this will be administered on-campus.

### **Synopsis:**

This course is an introduction to general aeronautics. It includes the study of physical mathematics, weight and balance, FAA regulations, common and special tools and measuring devices, fluid lines, hardware, aircraft servicing, and documentation (FAR Part 65).

### **Topics:**

- General Aeronautics and the Importance of Aviation Maintenance
- Aviation Regulations and Aircraft Certification
- Mechanic Certifications, Privileges, and Limitations
- Physics, Weight and Balance, and Mathematics
- Ground Operation and Aircraft Servicing
- Aircraft Structures and Aircraft Inspections
- Aircraft Inspections, Non-Destructive Inspection, and Corrosion Control
- Aircraft Drawings, Aircraft Maintenance Forms and Aircraft Fluid Lines
- Aircraft Hardware, Common Tools, Special Tools, and Tool Control
- General Aeronautics, Aviation Maintenance, and Safety: Tying It All Together

### **Learning Outcome:**

- Know all the required Federal Aviation Regulations regarding aircraft maintenance and understand the certification, obligations, privileges and limitations, and career progression of the Airframe and Powerplant mechanic
- Know the inspection processes for maintaining an airworthy aircraft and be able to identify inspection criteria and implement an inspection program in accordance with aircraft manufacturer and FAA specifications.
- Prepare and use forms and aviation record keeping processes applicable to the aviation mechanic and will be able to document and update written and digital maintenance records applicable to the aviation mechanic.
- Identify ground handling and operating procedures, proper servicing, and safety practices used on the flightline and parking areas, and understand coordinated work efforts and interaction between agencies in an aviation environment.
- Demonstrate how basic mathematics is used to solve problems in an aviation maintenance environment.
- Apply basic physics to analyze engine performance and show how the laws of physics relate to aircraft maintenance dynamics.
- Interpret technical drawings used in aircraft design and aircraft maintenance.
- Perform weight and balance calculations for a given aircraft to ensure safety of flight characteristics.
- Identify the basic materials used in aircraft structures. Identify corrosion types, and be able to apply the techniques used in an aircraft corrosion preventative program.
- Non-destructive Inspection (NDI) techniques used in aircraft maintenance.
- Identify types of aircraft fluid lines and fittings for both rigid tubing and flexible fluid lines. Identify the different types of hardware and tools used in aircraft maintenance.
- Understand application of local, state, and federal regulations. Understand aviation and industrial safety requirements embedded in all aspects of general aeronautics and maintenance practices.

**Assessment Strategies (Evening Class):**

<b>Components</b>	<b>Description</b>	<b>Weightage Allocation (%)</b>
Overall Continuous Assessment	TUTOR-MARKED ASSIGNMENT 1	100
<b>Total</b>		<b>100</b>