

AE8002 AIRCRAFT GENERAL ENGINEERING AND MAINTENANCE
PRACTICES

DETAILED SYLLABUS

OBJECTIVE

- To teach the students about the basic concepts of aircraft general engineering and maintenance practices.

UNIT I AIRCRAFT GROUND HANDLING AND SUPPORT EQUIPMENT

Mooring, jacking, leveling and towing operations – Preparation – Equipment – precautions – Engine starting procedures – Piston engine, turboprops and turbojets – Engine fire extinguishing – Ground power unit.

UNIT II GROUND SERVICING OF VARIOUS SUB SYSTEMS

Air conditioning and pressurization – Oxygen and oil systems – Ground units and their maintenance.

UNIT III MAINTENANCE OF SAFETY AND AIRCRAFT SYSTEM PROCESSES

Shop safety – Environmental cleanliness – Precautions- Hand tools – Precision instruments – Special tools and equipments in an airplane maintenance shop – Identification terminology

UNIT IV INSPECTION

Process – Purpose – Types – Inspection intervals – Techniques – Checklist – Special inspection – Publications, bulletins, various manuals – FAR Air worthiness directives – Type certificate Data sheets – ATA Specifications

UNIT V AIRCRAFT HARDWARE, MATERIALS, SYSTEM PROCESSES

Specification and correct use of various aircraft hardware (i.e. nuts, bolts, rivets, screws) – American and British systems of specifications – Threads, gears, bearings, – Drills, tapes and reamers – Identification of all types of fluid line fittings. Materials, metallic and non-metallic Plumbing connectors – Cables – Swaging procedures, tests, Advantages of swaging over splicing.

TEXT BOOK

1. Kroes Watkins Delp, "Aircraft Maintenance and Repair", McGraw Hill, New York, 1993

REFERENCES

1. A&P Mechanics, "Aircraft Hand Book", F A A Himalayan Book House, New Delhi, 1996
2. A&P Mechanics, " General Hand Book", F A A Himalayan Bok House, New Delhi, 1996