

INTRODUCTION TO AIRCRAFT INDUSTRY

VII Semester: OPEN ELECTIVE -III								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
		L	T	P		C	CIA	SEE
A5AE66	OEC	3	0	0	3	30	70	100
COURSE OBJECTIVES								
The aim is to introduce students the overview of the Aircraft Industry. The course covers basic design process, Aircraft Stability & control and different mechanical systems.								
<ol style="list-style-type: none"> 1 Familiarize students with major types of aircraft industry. 2 Illustrate the role of regulatory bodies and its business context 3 Exemplify the organisational structure of airlines and airports 4 Illustrate the importance of air navigation services and its types. 5 Familiarize students with air safety and security as a means for ensuring passenger safety. 								
UNIT-I	AIRCRAFT INDUSTRY OVERVIEW							
Flying machine to airline alliances, Types of Aerospace Industry, Introduction to ages of engineering, Aerospace Manufacturing, Introduction to the space environment & human space exploration.								
UNIT-II	REGULATORY AND BUSINESS CONTEXT							
Regulatory bodies, Introduction to standardisation, Standards and recommended practices (SARPS), Freedoms of the air, Role of governments, Major agreements and treaties, Business side of the industry – Key performance indicators (revenue passenger kilometre, yield etc.), Industry characteristics of passenger airlines.								
UNIT-III	AIRLINES AND AIRPORTS							
Introduction to airlines, Organisational structure, Types of airline personnel, Flight crew and cabin crew, Role of training with airlines, Organisational culture of an airline Introduction to airports – Airport personnel, Processing passengers and freight, Security								
UNIT-IV	AIR NAVIGATION SERVICES							
Introduction to air navigation services, Types of navigation services, Air traffic control (ATC) services, Structure of controlled airspace, Air traffic and control services, Classifications of airspace, Flight information services and alerting services, Air navigation facilities and air navigation service (ANS) providers								
UNIT-V	AIR SAFETY AND SECURITY							
Introduction to air safety and security, Manufacturer responsibilities, Maintenance procedures, Airside safety, Safety in the air, Issues in air safety, Accident and incident investigation, Security – Response of International Civil Aviation Organization (ICAO).								
Text Books:								
<ol style="list-style-type: none"> 1. Peter Belobaba, Amedeo Odoni and Cynthia Barnhart (2015), The Global Airline Industry (Aerospace Series), John Willey & Sons, Ltd, United Kingdom. 2. Connor R Walsh, Airline Industry – Strategies, Operations and Safety, Nova Science Publishers, New York. 								
Reference Books:								

1. Andrew R Thomas (2011), Soft Landing: Airline Industry Strategy, Service and Safety, Apress, New York
2. Ahmed Abdelghany, Khaled Abdelghany (2009), Modeling Applications in the Airline Industry, Ashgate Publishing Ltd, England.

COURSE OUTCOMES:

At the end of the course the students are able to:

- 1 Discuss the types of aerospace industry and evolution of flying machine to airline alliances.
- 2 Explain standardisation and the importance of regulatory bodies.
- 3 Outline the organisational structure of airlines and airports.
- 4 Demonstrate major types of air navigation services and air traffic control services.
- 5 Illustrate the major processes involved in air safety and security.