

COURSE CODE	COURSE TITLE	L	T	P	C
1152AE109	Aviation safety management	3	0	0	3

Course Category:

Programme Elective

a. Preamble :

This course gives fundamental knowledge on boundary layer theory.

b. Prerequisite Courses:

Fluid Mechanics

c. Related Courses:

Nil

d. Course Educational Objectives :

- To make the students understand the importance of viscosity and boundary layer in fluid flow.
- To introduce the theory behind laminar and turbulent boundary layers.

e. Course Outcomes :

Upon the successful completion of the course, students will be able to:

CO Nos.	Course Outcomes	Knowledge Level (Based on revised Bloom's Taxonomy)
CO1	Explain the Aviation Safety	K2
CO2	Explain the Human Factors in Safety	K2
CO3	Discuss the Elements of Safety	K2
CO4	Describe the Maintenance Safety	K2
CO5	Explain the Functions of Airports and Heliports	K2

f. Correlation of COs with POs:

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	H		M			H	M	H				H
CO2	H		M			H	M	H				H
CO3	H		M			H	M	H				H
CO4	H		M			H	M	H				H
CO5	H		M			H	M	H				H

H- High; M-Medium; L-Low

e. Course Content :

UNIT I INTRODUCTION 12

Aviation Safety – Meaning – Need – Economic of Aviation Safety – Safety Vs Mission – Randomness of Damage and Injury – Zero Accident Rate – Accident Causes – Multiple Vs Single Cause – Aircraft Accident – Aircraft Mishap – Building Aviation Safety Program – Prevention Methodology – Risk Management

UNIT II HUMAN FACTORS IN AVIATION SAETY 8

Theory of Risk – Changing the Behaviour of the risk takers – Attitudes – Discipline – Punishment – Protection of Safety – Motivating Safe Behaviour – Human factors difficulties – Training Involving Human Factors – Human Performance Concerns – Human Performance Factors

UNIT III AVIATION SAFETY PROGRAM ELEMENTS 10

Internal Reporting Systems – Infomation Distribution Systems – Aviation Safety Committees – Aviation Safety Inspection Programs – Aviation Safety Program Evaluation – Flight Operation Safety Inspection – Safety Inspection Report Format – Aviation Safety Education and Training – Aviation Safety Awards Programs – Accident Preparation and Investigation

UNIT IV AIRCRAFT MAINTENANCE SAFETY 8

Aircraft Discrepancies – Delayed and Deferred Descrepancies – Training – Configuration Control – Maintenance Engine Runs and Taxiing – Maintenance Test Flights – Maintenance Analysis – Tool Control – Hazardous Waste Disposal – Bogus Parts – Technical Data – Maintenance Inspections – Flight Line Practices – Maintenance Safety Programs – Maintenance Safety Inspections

UNIT V AIRPORTS AND HELIPORTS 7

Airport Certification Manual – Airport Emergency Plan – Airports / Heliports Criteria – Airfield Criteria – Airspace Criteria – Foreign Object Control – Bird Hazards – Snow and Ice Removal – Fuel Handling – Vehicle Control – Airport and Heliport Safety Inspections

Learning Resources

i. Text Books:

1. “Aviation Safety Programs – A Management Handbook” – Richard H.Wood