



GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering

Subject Code: 3150108

Semester –V

Subject Name: Airport Management

Type of course: Humanities and Social Science

Prerequisite: Fundamental Knowledge about Airport activities

Rationale: Students should know about past and present scenario of their profession, Governing bodies, and rules and regulations regarding civil and military aviation structure. This subject has been introduced for the same purpose.

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
3	0	0	3	70	30	0	0	100

Content:

Sr. No.	Content	Total Hrs	Weightage
1	INTRODUCTION TO AIR TRANSPORT AND AIRPORTS Development of Airports, Types of Airport, Aircraft Handling Methods, Aircraft Ground Handling Activities, Deplaning and Boarding, Air-Conditioning and Compressed Air, Cargo and Baggage loading, factors affecting site selection of airport	06	14%
2	PASSENGER TERMINALS Airport Terminal Design Principles, Airport Terminal Concepts, Terminal Design Airport terminal Layout, The Handling Process, Aircraft Parking Position.	05	11%
3	AERODROME AIDS Aerodrome, Taxiway, Apron, Aerodrome reference point, Parking, Runway markings, Threshold, Displaced Threshold, Take Off run available, Landing distance available, Take Off distance available, Stop way, Accelerated stop distance available, Runway end safety area, Clear way, Runway center line lights, Runway threshold lights, Runway edge lights, Runway end lights, Touchdown zone lights, Runway alignment indicator light, Runway end identifier lights/Runway threshold identification light, Runway types based on Runway center line lights and Touchdown zone, Land and hold short operations, Hot Spot.	12	27%
4	RUNWAY VISUAL AIDS VGS-I-PAPI, VASIS, PLASI, Minimum eye height over threshold, Aircraft arresting system, Engineered materials arrester system, Jet barrier, Net barrier, Categories(Types) of Lights, ICAO Standards, US/FAA Standards, Classification of Approach lights-Full approach light system, Intermediate approach light system, Basic approach light system, No approach light system, Application into Charts.	09	20%
5	AIRCRAFT APPROACHES AND ILS CATEGORIES Procedure design criteria, Aircraft categories for Procedure design, Decision Height and Runway visual range, ILS categories, IAC segments -ARR, Initial, intermediate, Final, Missed, Types of Proc –Pilot training network(PTN), Racetrack, base turn, DME Arc, Straight in, ARR and MISAP Hold, Visual and	08	18%



GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering

Subject Code: 3150108

	Circling Approach.		
6	Airport Emergency and Security Rules of the rescue and fire-fighting service, Level of protection required, Rescue and fire-fighting vehicles, Airport Fire stations, Post Emergency Operations Unlawful acts and Air Transport, The Airport system and its security, Safeguarding of Airport security, Detection of dangerous objects Drug smuggling.	05	11%

Suggested Specification table with Marks (Theory):

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
45%	45%	10%	-	-	-

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create and above Levels (Revised Bloom's Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Reference Books:

1. Airport Design and Operation- Antonin Kazda & Robert E Caves – Pergamon
2. Air Travel: How safe is it? – Laurie Taylor- Blackwell Science
3. Airport Planning & Management – Seth Young & Alexander Wells – McGraw Hill
4. Law and Regulation of Aerodromes- Ruwantissa Abeyratne – Springer
5. The Pilot's Handbook of Aeronautical Knowledge 5th Edition- Paul E. Illman, Gene E. Gailey- McGraw Hill
6. Aviation and Airport Security 2nd Edition- Kathleen M. Sweet- CRC Press

Course Outcomes:

After completion of this course students shall be able to

Sr. No.	CO statement	Marks % weightage
CO1	Interpret aircraft handling methods and Security on the airport.	20
CO2	Identify aerodrome and runway aids for aircraft landing.	40
CO3	Demonstrate different types of aircraft approaches on the different type runway.	30
CO4	Understand about airport terminal design.	10

List of Experiments: N/A-

Note: Students should be visited to nearest airports, Civil Aviation offices, Aircraft/ Aircraft components manufacturing industries and air force stations, Meteorological Departments for better exposure.

Major Equipment: N/A

List of Open Source Software/learning website: www.dgca.nic.in, https://nptel.ac.in/course.php