

## AIRPORT PLANNING AND OPERATION

<b>III Semester: AE</b>								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
BAEB24	Core	L	T	P	C	CIA	SEE	Total
		3	-	-	3	30	70	100
<b>Contact Classes: 45</b>		<b>Tutorial Classes: Nil</b>		<b>Practical Classes: Nil</b>			<b>Total Classes: 45</b>	
<b>I. COURSE OVERVIEW:</b>								
<p>The aim is to understanding of relevant international and national regulations and the ability to explain their effects on airport business, planning, design, operations and safety management decisions. A critical awareness of the key issues that affect users of airport facilities. And to identify, analyse and design solutions in order to address a given research problem within the context of airport planning and management, having regard to regulatory constraints and commercial and environmental imperatives.</p>								
<b>II. COURSE OBJECTIVES:</b>								
<b>The course should enable the students to:</b>								
<p>I. Understand complexity and functioning of airport operation systems.</p> <p>II. Understand many operational issues involved in handling passengers, freight and aircraft at airports.</p>								
<b>III. COURSE OUTCOMES:</b>								
<b>After successful completion of the course, students will be able to:</b>								
CO 1	Identify the airport management systems by using modern tools for assessing airport performance and safety.						Understand	
CO 2	Develop the ground handling system by using organizational and managerial skills for the efficient flow of passengers and goods in an airport.						Apply	
CO 3	Model the philosophies of terminal management of airline passenger services by using Hubbind's theory for ascertaining optimum flow pattern.						Understand	
CO 4	Organize the cargo handling, operations, and marketing by using modern cargo terminal design concepts for expediting the movement in the airport terminal.						Understand	
CO 5	Make use of airport technical services by the passengers and stake holders for the effective utilization of facilities.						Apply	
CO 6	Examine the operational and administrative performance of an airport using the management techniques for effective utilization of human resources.						Understand	
<b>IV. SYLLABUS:</b>								
<b>UNIT- I</b>	<b>THE AIRPORT AS AN OPERATIONAL SYSTEM</b>						<b>Classes: 08</b>	
<p>The airport as a system; National airport systems; The function of the Airport; Centralized and decentralized passenger terminal systems; The complexity of the airport operation; Management and operational structures; Airport influences on aircraft performance characteristics: Aircraft departure performance; Approach and landing performance; Safety considerations; Automatic landing; Operations in inclement weather; Specific implications of the Airbus A380; Operational Readiness: Aerodrome certification; Operating constraints; Operational areas; Airfield Inspections; Maintaining readiness.</p>								

<b>UNIT-II</b>	<b>GROUND HANDLING AND BAGGAGE HANDLING</b>	<b>Classes: 10</b>
Ground handling: Passenger handling; Ramp handling; Aircraft ramp servicing; Ramp layout; Departure control; Division of ground handling responsibilities; Control of ground handling efficiency; Baggage handling: Context, history and trends; Baggage handling processes; Equipment, systems and technologies, process and system design drivers; Organization; Management and performance metrics.		
<b>UNIT-III</b>	<b>PASSENGER TERMINAL AND CARGO OPERATIONS</b>	<b>Classes: 10</b>
Passenger terminal operations: Functions of the passenger terminal; Terminal functions; Philosophies of terminal management; Direct passenger services; Airline related passenger services; Airline related operational functions; Government requirements; Non-passenger related airport authority functions; processing very important persons; Passenger information systems; Space components and adjacencies. Aids to circulation; Hubbind considerations; Cargo operations: The cargo market; Expediting the movement; Flow through the terminal; unit load devices; Handling within the terminal; Cargo apron operation; Facilitation; Examples of modern cargo terminal design and operation; Cargo operations by the integrated carriers.		
<b>UNIT-IV</b>	<b>AIRPORT TECHNICAL SERVICES AND ACCESS</b>	<b>Classes: 09</b>
Airport technical services: The scope of technical services; Safety management system; Air traffic control; Tele communications; Meteorology; Aeronautical information; Airport access: Access as part of the airport system; access users and modal choice; access interaction with passenger; access modes; In town and other off; airport terminals; Factors affecting access; mode choice.		
<b>UNIT-V</b>	<b>OPERATIONAL ADMINISTRATION AND PERFORMANCE</b>	<b>Classes: 08</b>
Operational administration and performance: Strategic context; Tactical approach to administration of airport operations; Managing operational performance; Key success factors for high; performance; airport operations control centers: The concept of airport operations; airport operations control system; the airport operations consideration; airport performance monitoring; design and equipment considerations; organizational and human resources considerations; leading AOCCSs; best practices in airport operations.		
<b>Text Books :</b>		
<ol style="list-style-type: none"> <li>1. Norman J. Ashford, H. P. Martin Stanton, Clifton A. Moore, Pierre Coutu, "Airport Operations", McGraw Hill, 3<sup>rd</sup> Edition, 2013.</li> <li>2. R. Horonjeff, F. X. McKelvey, W. J. Sproule, S. B. Young, "Planning and Design of Airports", McGraw Hill, 5<sup>th</sup> Edition, 2010.</li> </ol>		
<b>Reference Books:</b>		
<ol style="list-style-type: none"> <li>1. A. Kazda, R. E. Caves, "Airport Design and Operation", Elsevier, 2<sup>nd</sup> Edition, 2007.</li> <li>2. A. T. Wells, S. B. Young, "Airport Planning and Management", McGraw Hill, 6<sup>th</sup> Edition, 2011.</li> </ol>		
<b>Web References:</b>		
<ol style="list-style-type: none"> <li>1. <a href="http://memberfiles.freewebs.com/94/47/55224794/documents/airport%20planning%20and%20managemnt.pdf">http://memberfiles.freewebs.com/94/47/55224794/documents/airport%20planning%20and%20managemnt.pdf</a></li> <li>2. <a href="https://books.google.co.in/books?id=RYS6cu4YSBcC&amp;dq=Planning%20and%20Design%20of%20Airports&amp;source=gbs_similar+books">https://books.google.co.in/books?id=RYS6cu4YSBcC&amp;dq=Planning%20and%20Design%20of%20Airports&amp;source=gbs_similar+books</a></li> </ol>		
<b>E-Text Books:</b>		
<ol style="list-style-type: none"> <li>1. <a href="https://accessengineeringlibrary.com/browse/airport-planning-and-management-sixth-edition">https://accessengineeringlibrary.com/browse/airport-planning-and-management-sixth-edition</a></li> <li>2. <a href="http://www.only4engineer.com/2014/10/planning-and-design-of-airports-by.html">http://www.only4engineer.com/2014/10/planning-and-design-of-airports-by.html</a></li> </ol>		