

University of Management and Technology

Course Outline

Course Background Details:

Program	BS Aviation Management
Course Code	AM325
Course Title	Airport Management
Credit Hours	03
Duration	15 Weeks
Prerequisites	<ul style="list-style-type: none">• AM-113: Introduction to Aviation Business• MG-120: Principles of Management
Resource Person	Bilal Ahmad
Counseling	Days and Time: <ul style="list-style-type: none">• TBA for next semester

Description:

In a broader perspective, a typical airport is similar to a city in a sense that it is open around-the-clock; it works under certain rules and regulations; it comprises of various departments; it strives to increase its revenue to balance its expenditures and support future expansions; it has multiple stakeholders that include passengers, airlines, concessionaries, fixed based operators, communities, and government bodies; it handles and facilitates the competing demands of stakeholders for airport resources; and it even has a constant pressure to reduce its direct and indirect impact on the environment. This course is designed to equip students with knowledge and skills related to airport systems, administrative structures, operational activities, planning and regulatory influences to plan and manage an airport that is economically and environmentally sustainable.

Contact Details:

- **Course Coordinator:** TBN
- **Lecturer:** Mr. Bilal Ahmad

Course Learning Outcomes: (CLOs)

At the end of this course students will be able to:

- CLO1. **Define** various career paths in airport management with the aptitude to work as effective leaders and team members (**C1**)
- CLO2. **Define** and **classify** airports, components of airports, their administrative structures, the airspaces around them and the related regulations (**C1, C2**)
- CLO3. **Identify** major revenue sources and expenses at various airports around the world by **applying** their knowledge of the subject (**C3**)
- CLO4. **Evaluate** issues related to airport operations and **propose solutions**. (**C5, C6**)
- CLO5. **Demonstrate understanding** of airport's political, stakeholders, economic and environmental role while **presenting solutions** to the related issues (**C2, C6**)
- CLO6. **Analyze** problems related to terminal designs and airport planning process and **propose** solutions (**C4, C6**)

CLO – PLO Mapping:

CLOs	PLOs										
	Critical Thinking and Decision Making	Effective Communication Skills	Ethics	Core Business Knowledge and Competence	Effective Teamwork	Industry Focus	Global Perspective (Internationalization)	Leadership Skills	Computer-based Information	Corporate Social Responsibility	Organizational Behavior
	1	2	3	4	5	6	7	8	9	10	11
1					C1	C1		C1			C1
2				C1,C2							
3				C3		C3	C3				
4	C5,C6					C5,C6					
5	C6	C2,C6	C2,C6					C2,C6		C2,C6	
6	C4,C6					C4,C6				C4,C6	

Learning Methodology:

The course will be delivered through a series of lectures and workshops. This course is unique in the sense that it incorporates three main Assignments, one each for research, activity and ethics. These assignments should help develop a research insight, ethics awareness, foster creativity and critical thinking and above all create more interest in the course. The course will be supported/enabled by the LMS which provides a vital space for your learning.

Resources:

1. Text Books

- i. Young, S., & Wells, A. (2019). Airport Planning and Management (7th ed.). New York, N.Y: McGraw Hill Education.
 - a. **URL for E-Copy (Paid):** <https://www.amazon.com/Airport-Planning-Management-Seventh-Young/dp/1260143325>
 - b. **Pages:** 464
 - c. **ISBN:** 978-1260143324
- ii. Ashford, N. J., Coutu, P., & Beasley, J. R. (2012). Airport Operations, Third Edition. McGraw-Hill Education.
 - a. **URL for E-Copy (Paid):** <https://www.amazon.com/Airport-Operations-Third-Norman-Ashford-ebook/dp/B009POWOBU>
 - b. **Pages:** 696 pages
 - c. **ISBN:** 978-0071775847

2. Reference Material

- i. Kazda, A., & Caves, R. E. (2015). Airport Design and Operation. Emerald Group Publishing Limited.
 - a. **URL for E-Copy (Paid):** <https://www.amazon.com/Airport-Design-Operation-Antonin-Kazda/dp/1784418706>
 - b. **Pages:** 600
 - c. **ISBN:** 978-1784418700
- ii. Price, J., & Forrest, J. (2016). Practical Airport Operations, Safety, and Emergency Management: Protocols for Today and the Future. Elsevier Science.
 - a. **URL for E-Copy (Paid):** <https://www.amazon.com/Practical-Airport-Operations-Emergency-Management-ebook/dp/B01BWMIG7I>
 - b. **Pages:** 601
 - c. **ISBN:** 978-0128005156

3. Reference Journal Articles

- i. Airport Cooperative Research Program, United States. Federal Aviation Administration, Corgan Associates, Inc, Ricondo & Associates, TransSolutions, LLC., & TranSecure, LLC. (2008). Innovations for Airport Terminal Facilities (Vol. 10). Transportation Research Board.

This ACRP Report 10 provides useful synopses of the latest worldwide developments in landside facilities design and discusses future trends and innovative passenger

service/processing concepts. The report describes the need for design innovation to serve and process passengers, discusses how innovation can meet many of these needs, and presents several state-of-the-industry design inventions. It explores such innovations as a process-based departure hall, self-service bag check, a drive-through processing area, elder-friendly baggage devices, alternative curbsides, and arrival lounges.

- ii. Ryerson, M. S., & Woodburn, A. (2014). Build airport capacity or manage flight demand? How regional planners can lead American aviation into a new frontier of demand management. *Journal of the American Planning Association*, 80(2), 138-152

Demand management in aviation, as in surface transportation, holds potential for cost and other savings. Strengthening the role of regional planners in the airport planning process would lead to greater consideration of demand management and may bring innovative solutions to airport congestion

- iii. Le, L., Donohue, G., Hoffman, K., & Chen, C. H. (2008). Optimum airport capacity utilization under congestion management: A case study of New York LaGuardia airport. *Transportation Planning and Technology*, 31(1), 93-112.

This case study demonstrates that at Instrument Meteorological Conditions (IMC) runway rates, the market can find profitable flight schedules that reduce substantially the average flight delay to less than 6 minutes while simultaneously satisfying virtually all of the current demand with average prices remaining unchanged. This is accomplished through significant up gauging to high-demand markets.

- iv. Pitt, M., & Smith, A. (2003). An assessment of waste management efficiency at BAA airports. *Construction Management and Economics*, 21(4), 421-431.

The purpose of this paper is to assess the efficiency of waste management operations at BAA airports, with reference to best practices within airports in continental Europe.

- v. Schaar, D., & Sherry, L. (2010, May). Analysis of airport stakeholders. In *2010 Integrated Communications, Navigation, and Surveillance Conference Proceedings* (pp. J4-1). IEEE.

This paper identifies (1) Airport stakeholders and their objectives for the airport (2) The relationships between the stakeholders (3) Conceptual boundaries around the airport at which comprehensive and comparative benchmarking could be performed (4) Reinforcing loops through the airport stakeholder relationships (5) That the airport is a complex, collaborative service environment, and that some stakeholders have objectives for the airport whose fulfillment is not fully under the control of airport management

4. Online Resources and Links:

- i. Ramp Handling at Schiphol Airport: <https://www.youtube.com/watch?v=StCkWiTFdBY>
This is the actual footage of ramp handling of a narrow body aircraft.
- ii. Airbus A380 Ramp Handling at the Frankfurt Airport: https://www.youtube.com/watch?v=Kkj0g_K6cgE
This is an actual footage of handling a wide body aircraft.
- iii. Ramp Safety at Zurich Airport: <https://www.youtube.com/watch?v=aPulKc1fDCw>
In this short documentary, you will be able to know the ramp handling process along with the safety procedures.
- iv. Ramp Safety Training Video: <https://www.youtube.com/watch?v=8KWFPNAcndQ>
This training video will help you to understand the complete process of ramp handling and safety standards regarding this.
- v. The Expanding Airport - Mobile Lounges at Washington Dulles International Airport: <https://www.youtube.com/watch?v=FL-mjc1sgX4>
This is an animation clarifying the concept of mobile lounges. This explains the benefits associated with the concept and why this idea ultimately became obsolete.
- vi. How Airports Make Money: <https://www.youtube.com/watch?v=wdU1WTBJMI0>
This is a very informative video containing the ideas to generate revenue.
- vii. <https://timesofindia.indiatimes.com/city/delhi/over-1km-long-wall-to-deflect-noise-at-igi/articleshow/69604706.cms>
This brief article describes a 1km-long wall to deflect noise at Delhi's IGI.
- viii. <https://www.youtube.com/watch?v=Wn8qogHH9bM>
This is the real time example of how the automated baggage handling of system of Terminal 5 of Heathrow Airport works.
- ix. <https://www.youtube.com/watch?v=x4WQ2mRNxsw>
In this video, the students will be able to see how self-service baggage kiosk works. This is the example of Southampton Airport in UK.

- x. <https://aci.aero/data-centre/annual-traffic-data/passengers/2017-passenger-summary-annual-traffic-data/>

Students can analyze the yearly passenger traffic of top 20 airports of the world. This will help them understand the need to expand the airports.

- xi. <https://www.youtube.com/watch?v=QN5Rnu0-RhE>

This is an interesting insight about the expansion of Heathrow Airport and the impact of this expansion on the environment and surrounding communities.

5. Documentaries:

- i. <https://www.youtube.com/watch?v=f8bygjApyM0>

This is a very good and relatable documentary. It explains the problems that the planning team faced before and during the construction of Terminal 3 of Delhi's IGI Airport. The good thing how they solved those issues.

- ii. <https://www.youtube.com/watch?v=56-Ig1WRUGg>

This short documentary will help students to understand the world class cargo facilities at Hong Kong International Airport.

- iii. <https://www.youtube.com/watch?v=jje8zb8rSoU>

This is emergency drill at Indianapolis International Airport. Students will have the opportunity to understand emergency procedures in the event of any accident at the airport.

- iv. https://www.youtube.com/watch?v=h2udf1KZEdM&feature=emb_logo

This documentary highlights the social and environmental role of DFW airport.

- v. <https://www.youtube.com/watch?v=dAZT7G0HmN0>

This is a short documentary about how Toronto's Pearson Airport minimizes its environmental footprint. The focus is mainly upon water quality and waste emission management.

- vi. https://www.youtube.com/watch?v=ewRD1GEpB_0

In this documentary, Manchester Airport’s strategies to overcome the environmental issues are discussed.

6. Case Studies:

- i. Baxter, G., Wild, G., & Sabatini, R. (2014, November). A sustainable approach to airport design and operations: Case study of Munich airport. In PRCC 2014 Engineers Australia Convention (pp. 227-237).

This case study examines the sustainable aspects of airport design and operations, in the context of Munich Airport. All major aspects of this airport’s infrastructure design and operations are explored, focusing on the environmental impacts. This includes water usage and management, energy consumption, waste management, and other key aspects of pollution, including noise.

- ii. Calleam Consulting. *Denver Airport Baggage System Case Study – Why Do Projects Fail?*. [online] Available at: <http://calleam.com/WTPF/?page_id=2086> [Accessed 4 February 2021].

This case provides a good insight about the famous failure of Denver Baggage Handling System. It gives students an opportunity to know about the impact of different stakeholders and outside forces on such capital intensive and ambitious airport projects.

Schedule:

Week	Course Contents	Text Book/Article Ref. Chapter(s)	Reference of CLO
1	<ul style="list-style-type: none"> • Airport Systems, Administration and Components • Career in Airport Management 	Chapter 1,2,4 – Airport Planning and Management	CLO2, CLO1
2	Airport Operations (Part 1): <ul style="list-style-type: none"> • Ramp Handling • Baggage Handling 	(Chapter 6, 7 Airport Operations)	CLO4

3	Airport Operations (Part 2): <ul style="list-style-type: none"> • Passenger Terminal Operations • Cargo Handling (Quiz No-1)	(Chapter 8, 10 Airport Operations)	CLO4
4	Airport Terminals & Ground Access (Assignment-1)	Chapter 7 – Airport Planning and Management	CLO6
5	Airport Capacity & Delay	Chapter 12 – Airport Planning and Management	CLO4
6	Airport Emergencies <ul style="list-style-type: none"> • Airport Safety Management Systems (Quiz No-2)	<ul style="list-style-type: none"> • Chapter 12, Practical Airport Operations, Safety, and Emergency Management, • Chapter 15, Airport Operations • Chapter 6, Airport Planning and Management 	CLO4
7	Teach and Learn - Short Project (Individual)		CLO1
8	(MID TERM- Time 1:30hrs)		
9	Airport Financial Management (Assignment-2)	Chapter 9 – Airport Planning and Management	CLO3
10	Predicting Traffic	Chapter 2, Airport Design and Operations	CLO6

11	Airport Planning (Quiz No-3)	Chapter 11 – Airport Planning and Management	CLO6
12	Economic, Political and Social Role of Airports	Chapter 10 – Airport Planning and Management	CLO6
13	Airport’s Environmental Impact and Control (Assignment-3)	Chapter 2, Airport Design and Operations	CLO5
14	Presentations (Group)		
15	Revision Session (Quiz No-4)		

Assessments:

Assessment	Weightage	Detail	Due
Quiz-1	3%	Covers Topics: <ul style="list-style-type: none">• Airport Systems, Administration and Components• Career in Airport Management• Airport Operations (Part 1):<ul style="list-style-type: none">○ Ramp Handling○ Baggage Handling	3 rd session
Quiz-2	4%	Covers Topics: <ul style="list-style-type: none">• Airport Operations (Part 2):<ul style="list-style-type: none">○ Passenger Terminal Operations○ Cargo Handling• Airport Terminals & Ground Access• Airport Capacity & Delay	6 th session
Quiz-3	4%	Covers Topics: <ul style="list-style-type: none">• Airport Emergencies<ul style="list-style-type: none">○ Airport Safety Management Systems• Airport Financial Management• Predicting Traffic	11 th session
Quiz-4	4%	Covers Topics: <ul style="list-style-type: none">• Airport Planning• Airport Capacity & Delay• Economic, Political and Social Role of Airports• Airport's Environmental Impact and Control	15 th session
Quiz-5 (Unannounced)	2%	-	It may be at the end of a discussion or lecture.
Assignment-1 (Research)	5%	Any of the following topics may be assigned: <ul style="list-style-type: none">• Impact of COVID-19 on airport management• Environmental issues associated with airports.	4 th session

		See details below.	
Assignment-2 (Activity)	4%	Find an airport manager and discuss him/her with the class. See details below.	9 th session
Assignment-3 (Ethics)	4%	See movie “The Terminal” and learn to deal with the ethical dilemmas that an airport manager may face. See details below.	13 th session
Short Project (Individual)	5%	Teach and learn. See details below.	7 th session
Presentation (Group)	5%	Students will be given the selected airport cases in the form of documentaries to evaluate and present. An extensive list of such topics is listed below.	14 th session
Mid Exam (Written)	25%	All topics covered (MCQs and/or Short Essay Questions and/or Case Study)	8 th session
Final Exam (Written)	35%	All topics covered (Short Questions and/or Case Study)	As per Controller Exams

Quizzes:

There will be a total of five quizzes. The topics for each quiz are listed above.

Assignment 1 (Research):

Instructor can select the research assignment from the following topics:

- 1. Develop a report on the problems (at least 5) that are being faced by airport management worldwide due to COVID-19. How airport management is dealing with these problems? Also propose solutions to these issues.**

Purpose:

- To keep students informed about the latest issues in airport management.
- To encourage students to explore contemporary solutions to new problems.

Directions:

- Submission: Via Turitin

Structure of Report

- Use Times New Roman 12 font size with line spacing of 1.5 and justify from both sides.
- Word limit: 1500 words

2. Identify and describe the environmental impacts that are directly and indirectly associated with the airport. Present solutions for these issues?

Purpose:

- To keep students aware about the environmental impacts of airports.
- To develop a problem-solving attitude in students towards airport related issues.

Directions:

- Submission: Via Turitin

Structure of Report

- Use Times New Roman 12 font size with line spacing of 1.5 and justify from both sides.
- Word limit: 1500 words

Marking Guide/Rubric: Attached

Assignment 2 (Activity):

1. Search online and find at least one person in the position of Airport Manager (head of an airport) and share his/her professional experience and educational background with class.

(You may use LinkedIn or other professional websites for assistance and to find interesting facts about the manager of your choice.)

Purpose

- To polish communication skills of students.
- To enable students to find many possible paths to reach the position of Airport Manager.
- To motivate students to excel in this industry.

Directions:

- Time limit: 2 minutes

Marking Guide/Rubric: Attached

Assignment 3 (Ethics):

1. Ethical Case Analysis of Movie “The Terminal (2004)”

Watch Related Movie Here:

https://drive.google.com/file/d/11CGLXHrCHzvBobAY1OVW3_agW-IzWPnb/view?usp=sharing

Important Note: Consider the Director of Custom & Border Protection at JFK and later the (Acting) Field Commissioner in this movie as Airport Manager.

Following points “Must” be covered in analysis (make separate heading for each):

- Identify and briefly describe all the issues (minor or major) that were faced by airport manager in this movie
- Briefly describe, how the Airport Manager handled each issue?
- What better thing/s you could have done as the Airport Manager to avoid each issue?
- Referring to this movie, what is the most important “personal skill” (not the technical skill) to focus on while managing an airport?
- Any other issue/s that you found at JFK airport in this movie?
- Identify, if there is any good decision made by the Airport Manager in this movie.

Directions:

- Word limit: 1500 words
- Submission: Via Turitin
- Marking will be based on how well you covered the above mentioned seven points.

Structure of Report

- Use Times New Roman 12 font size with line spacing of 1.5 and justify from both sides.

Short Project – (Individual)

Topic: Teach and learn

Instructions:

- Students are assigned one random topic or sub-topic from the outline of AM-325 by the end of third session.
- Student will have to teach the assess topic to at least two of his/her family members (They may be his/her parents or siblings)
- Student will also prepare and take a short quiz from them (Quiz will contain 10 objective type questions).

- Students will have to prepare a brief report for this project.
- Students will have to (briefly) share their experiences with the class. Time allowed for this is 5 minutes)

Directions for Report:

- Include your lesson plan.
- Add the quiz that you took from them (along with the results).
- List down the resources you used to teach the assigned topic/s
- Must include your relation with the pupils.
- Write your comments about the strengths and weaknesses of your students.
- Write about your own learning while doing this project.
- Write about any change in your family which is due to this project.

Purpose:

- To increase students' understanding of the topic/s
- To develop teaching skills in students.
- To focus on family orientation – an important concept in Islam.
- To strengthen the bond between a student and his/her family - an important concept in Islam

Structure of Report

- Use Times New Roman 12 font size with line spacing of 1.5 and justify from both sides.
- Word Limit: 1500

Presentations

1. Airport Case Studies

The instructor can make groups as required and can chose from any of the following topics:

- Aviation Documentaries Hartsfield Jackson Atlanta Airport 2016 Busiest Airport in the world document (<https://www.youtube.com/watch?v=7k0vNqLzah0>)
- What Does It Take To Run Heathrow Airport? | Heathrow: Britain's Busiest Airport | Spark (<https://www.youtube.com/watch?v=CptO-YZHFig>)
- The Airport, series 1 episode 1 - Cardiff Airport (<https://www.youtube.com/watch?v=mMjEeq5WH9s>)
- The Airport, series 1 episode 2 - Cardiff Airport (<https://www.youtube.com/watch?v=2RfoyBivNKg>)
- Manchester Airport Uncovered (<https://www.youtube.com/watch?v=Xm1ILF5RKS0>)

- Ultimate Airport Dubai S03E02 Full Episode HD(<https://www.youtube.com/watch?v=51mcRMgAvHo>)
- Inside Gatwick Series 1 - Ep 3 Baggage Pt1 (<https://www.youtube.com/watch?v=D84FYufHt1I>)
- Inside Gatwick Series 1 - Ep1 Keep It Safe Part 1 (<https://www.youtube.com/watch?v=j1FCbIqzBqE>)
- Inside Gatwick Series 1 - Ep 5 Runway Pt1 (<https://www.youtube.com/watch?v=qq3WpseqXHE>)
- Inside Gatwick Series 1 - Ep 2 Terminal Life Part 1 (<https://www.youtube.com/watch?v=PZdzkAnjY2k>)

Points that “Must” be Covered in Your Presentation

- Briefly introduce the airport in your assigned documentary.
- Identify and briefly describe all the issues highlighted in this documentary
- How the issues had been resolved by the concerned in this documentary
- Is there any better way to resolve these issues? If yes, please justify. (Important)
- Identify all the concessionaries/tenants that you saw in this documentary
- Identify and briefly describe the working of all the different airport departments that you saw in this documentary e.g. ATC, Customer Services, Security, Safety, Horticulture etc.
- Identify and briefly describe any innovative idea that the airport is using in this documentary
- Identify any new technology that the airport is using to effectively manage its operation/s.
- Highlight anything in this documentary that you liked the most from airport management’s perspective.

Directions

- Time Allowed: 15-20 minutes
- Group: Each group may have 04 members

Mid Exam:

Mid Exam will comprise of MCQs and/or Short Essay type questions

Final Exam:

Final Exam will comprise of MCQs and/or Essay type questions and/or case study with associated questions. If the case study approach is selected, the case will be distributed one week before the exam along with some practice questions from the case.

Final Grade:

Students need to obtain an overall 50% mark to pass this course.

Academic Integrity:

All students are required to uphold the highest levels of academic integrity while participating in this course.

Academic integrity is about: honesty, trust, fairness, respect and responsibility in all work and is vital for any research/scholarship. We need to give proper credit to those who do the work and acknowledge their intellectual contribution. All students enrolled in IAS are to adhere to academic integrity while completing each assessment task.

Dishonesty in assessment can lead to a requirement to undertake additional work, failure in a unit or in a part of it, suspension from the University or even permanent expulsion from the University.

Plagiarism (a form of dishonesty) constitutes using the work of another without indicating by referencing (and by quotation marks when exact phrases or passages are borrowed) that the ideas expressed are not one's own.

CLASS POLICY

STUDENTS ARE REQUIRED TO READ AND UNDERSTAND ALL ITEMS OUTLINED IN THE PARTICIPANT HANDBOOK

CLASS ATTENDANCE: Students need to be in class at the assigned time.

TURN OFF MOBILE PHONE: It is unprofessional to be texting or otherwise.

READ EMAILS: Participants should regularly check their university emails accounts regularly and respond accordingly. Students would be responsible if they miss a deadline because of not reading the emails.

CLASS ATTENDANCE POLICY: A minimum of 80% attendance is required for a participant to be eligible to sit in the final examination. Being sick and going to weddings is absence and will not be counted as present. Participants with less than 80% of attendance in a course will not be allowed to take end term exams. International students who will be leaving for visa during semester should not use any days off except for visa trip to avoid reaching short attendance.

MOODLE: UMT –LMS (Moodle) is an Open Source Course Management System (CMS), also known as a learning Management System (LMS). Participants should regularly visit the

course website on MOODLE Course Management system, and fully benefit from its capabilities. In case of any problem while using MOODLE, visit <http://oit.umt.edu.pk/moodle>. For queries email moodle@umt.edu.pk

HARASSMENT POLICY: Sexual or any other harassment is prohibited and is constituted as punishable offence. Sexual or any other harassment of any participant will not be tolerated. All actions categorized as sexual or any other harassment when done physically or verbally would also be considered as sexual harassment when done using electronic media such as computers, mobiles, internet, emails etc.

USE OF UNFAIR MEANS/ HONESTY POLICY: Any participant found using unfair means or assisting another participant during a class test/quiz, assignments or examination would be liable to disciplinary action.

PLAGIARISM POLICY: All students are required to attach a “Turnitin” report on every assignment, big or small. Any student who attempts to bypass “Turnitin” will receive “F” grade which will count towards the CGPA. The participants submit the plagiarism report to the resource person with every assignment, report, project, thesis etc. If student attempts to cheat Turnitin, a second “F” will be awarded that will count towards the CGPA. There are special rules on plagiarism for final reports etc. all outlined in your handbook.

COURSE WITHDRAWAL POLICY: Students may withdraw from a course till the end of the 12th week of the semester. Consequently, grade ‘W’ will be awarded to the student which shall have no impact on the calculation of the GPA of the student. A Student withdrawing after the 12th week shall be automatically awarded “F” grade which shall count in the GPA.

COMMUNICATION OF RESULTS: The results of quizzes and assignments are communicated to the participants during the semester and answer books are returned. It is the responsibility of the course instructor to keep the participants informed about his/her progress during the semester. The course instructor will inform a participant at least one week before the final examination related to his or her performance in the course.