



Course Outline	
Institute	Institute of Aviation Studies (IAS)
Program	BS Aviation Management
Course code	AM221
Course Title	Aviation Safety Management
Credit Hours	03
Duration	16 Weeks
Prerequisites	AM203
Resource Person	Muhammad Iqbal Khan
Counseling Hours	Monday 14:00 to 16:00 Tuesday 10:00 to 14:00 Wednesday 14:00 to 16:00 Thursday 10:00 to 16:00 Friday 10:00 to 15:00
Contact Details	Email: iqbal.khan@umt.edu.pk
Website	www.ias.umt.edu.pk

Faculty Signature _____ **Date** _____

PH/COD/HOD Signature _____ **Date** _____

Dean's Signature _____ **Date** _____

Continuous Improvement			
Major Changes	Updated By	Document No.	Date
Development of course outline	Muhammad Iqbal Khan	AM221-V1.0-F2025	30 Sep 2025

About BS Aviation Management

Mission

Education with purpose, **D**evelopment of professional skills, **G**lobal readiness, and **E**xcellence to prepare students for success in aviation.

Program Educational Objectives (PEOs)

- **PEO 1: Industry Focus**
Graduate is working in aviation industry, demonstrating competence to perform effectively in diverse professional roles while adapting to evolving industry practices.
- **PEO 2: Business Management**
Graduate is taking on professional roles in business management, applying their skills to analyze, plan, and execute organizational functions effectively.
- **PEO 3: Research and Advance Studies**
Graduate is engaging in research and advanced studies broadening their academic and professional horizons.

Program Learning Outcomes (PLOs)

- **PLO1: Analytical Thinking and Decision Making**
Ability to interpret and analyze aviation industry problems, applying critical thinking and quantitative methods to develop solutions and make effective decisions.
- **PLO2: Effective Communication Skills**
Ability to prepare, present, and convey ideas clearly through verbal and non-verbal communication effectively in professional contexts.
- **PLO3: Regulations, Compliance and Ethics**
Ability to understand and evaluate regulatory frameworks, standards and safety/security practices to ensure that the operations remain ethical and compliant with national and international regulations.
- **PLO4: Business Knowledge and Entrepreneurship**
Ability to understand the interrelated functional areas of business and use this knowledge to enhance organizational performance.
- **PLO5: Service Operations**
Ability to run, analyze, and optimize day-to-day aviation service operations and manage related infrastructure to achieve operational excellence.

- **PLO6: Technology Integration**
Ability to use digital tools, software applications, and information systems to support aviation operations and manage business processes.
- **PLO7: Corporate Social Responsibility**
Ability to understand and evaluate the impact of aviation business on economic, social, and environmental aspects of society.
- **PLO8: Organizational Behavior, Leadership and Teamwork**
Ability to evaluate organizational conflict, politics, power, and culture, while applying leadership and teamwork skills to achieve collective goals.

1. Course Description

The module of Aviation Safety Management is designed to acquaint students with the concept of safety, and its management in entire aviation both in operational & administrative, its linkage with aviation operational matters and implementation of subject procedures in aviation business.

The course will help students in learning basic concepts, theories, paradigms and methodological issues of aviation safety. Students will get to know different aspects of safety especially in operational side and get familiar with prescribed procedures reflected to the aviation safety possibilities and how to plan to overcome with work fulfilling both academic and practical endeavours. By becoming familiar with the research and exploration in possible safety issues, students should be more confident and competent in evaluating safety risks, mitigating in the areas of air safety, at the airport and in air as well.

2. Learning Methodology

The course will be delivered through a series of lectures and workshops/Practical (Activity Based). This course is unique in the sense that it incorporates special Scenario-based practical assignments. These assignments will help to develop a research insight, foster creativity and critical thinking and above all create more interest in the course. A case study alongside an embedded ethical dilemma is also included as a special topic.

3. Course Learning Outcomes (CLOs)			
Sr.	Upon successful completion of this course, the student will be able to...	PLO Mapping	Learning Domain & level
1	Explain the basic concept of Safety and its significance in aviation operations, standards and latest trends of Aviation Safety Management	3	C2
2	Analyze day-to-day safety challenges to anticipate probable safety risks & hazard.	1	C4
3	Evaluate the problems related to Aviation Safety Management with utilization of practical demonstration activities	8	C5

4. CLO – PLO Mapping								
CLOs	Program Learning Outcomes (PLOs)							
	Analytical Thinking and Decision Making	Effective Communication Skills	Regulations, Compliance and Ethics	Business Knowledge and Entrepreneurship	Service Operations	Technology Integration	Corporate Social Responsibility	Organizational Behavior, Leadership and Teamwork
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8
1			✓					
2	✓							
3								✓

5. Resources

A. Text Books

- Aviation Safety Manual Vol: 1&2
- Safety Management System in Aviation by Alan J. Stolzer
- ICAO Annex on Aviation Safety Management
- ICAO Safety Oversight Manual
- ICAO Safety Oversight Audit Manual
- ICAO Runway Safety Manual
- FAA Runway Incursion Avoidance Manual
- Pilot's Guide to Runway Safety
- FAA Guide to Ground Vehicle Operation
- CAA Aerodrome Standard Manual

B. Online Resources and Links

- The history of aviation safety: Putting passengers' safety first along with time line.
<https://www.youtube.com/watch?v=teO37fLsgel>
- Safety Management System
<https://www.youtube.com/watch?v=pfAjb2gCvJs&t=182s>
- Aviation Safety Management Systems
<https://www.youtube.com/watch?v=zJCkMzSRRTc>
- Safety Risk Management: Example
<https://www.youtube.com/watch?v=PHEj8FaP5L8>
- Accident Case Study: Emergency Management
https://www.youtube.com/watch?v=kF_x4IU8Ig4
- www.icao.int
- www.iata.org
- www.caapakistan.com.pk
- www.easa.europa.eu
- www.faa.gov

6. Schedule				
Weeks	Course Content	Reference Book	Chpt.	Ref. CLO
1	<ul style="list-style-type: none"> • Basic safety concepts 	Book.1	2	1
2	<ul style="list-style-type: none"> • Basic safety concepts • Exercise 01 – 	Book.1	2	1
3	<ul style="list-style-type: none"> • The Bhoja Air Boeing 737-accident • Assignment-1 • (Quiz No-1) 	Book.1	2	1
4	<ul style="list-style-type: none"> • Introduction to safety management 	Book.1	3	3
5	<ul style="list-style-type: none"> • Exercise 02 – FLIGHT – 201, BEECHCRAFT Accident • Assignment-2 	Book.1	3	2
6	<ul style="list-style-type: none"> • Hazards • (Quiz 2)) 	Book.2	6	1,2,3
7	<ul style="list-style-type: none"> • Exercise 03 – International airport construction project • (Assignment 3) 	Book.2	6	1,2
8	<ul style="list-style-type: none"> • Safety risks 	Book.2-	7	1,2
9	<ul style="list-style-type: none"> • (MID TERM) 			1,2,3
10	<ul style="list-style-type: none"> • Exercise 04 – • Accident Boeing B-747 at Taipei International Airport • Assignment 4 • (Quiz 3) 	Book.1	7	1,2,3
11	<ul style="list-style-type: none"> • ICAO Safety management Requirements • SMS Regulation 	Book.1	6	1,2,3
12	<ul style="list-style-type: none"> • Introduction to safety management systems (SMS) • ICAO requirements • Introductory concepts, SMS features • Presentation (Activity): • Discussion (individual) 	Book.1	7	1,2,3
13	<ul style="list-style-type: none"> • Introduction to safety management systems (SMS) • System description, Gap analysis • SMS and QMS 	Book.1	7	1,2,3

	<ul style="list-style-type: none"> • (Quiz 4) 			
14	<ul style="list-style-type: none"> • STATE SAFETY PROGRAMME 	Book.1	11	1,2,3
15	<ul style="list-style-type: none"> • SMS planning • Presentation (Group) • (Quiz 5) 	Book.1	13	2,3
16	<ul style="list-style-type: none"> • SMS planning • components of SMS • elements of SMS 	Book.1-	8	1,2,3
-	<ul style="list-style-type: none"> • Final Exam 	-		1,2,3

7. Evaluation Criteria and Weightages			
Assessments	Assessments	Weightages (%)	Details
Quizzes	5	15	Topic/s for each quiz will be announced.
Class Activities	3	5	Relevant to the ongoing lecture, activities, assignments and projects.
Assignments	4	20	Assignment topics will be announced.
Project/Presentation/Viva	1	5	Will be announced.
Mid Exam (Written)	1	20	Syllabus for mid-term exam will be announced in 6 th week.
Final Exam (Written)	1	35	Syllabus for final-term exam will be announced in 14 th week.

8. Course Assessments	
Assessment Details	Target CLOs
A. Activities	
Intentionally left blank. Contact resource person for this section.	
B. Assignments (Rubric is attached in Appendix B)	
Intentionally left blank. Contact resource person for this section.	
C. Project/Presentation (Rubric is attached in Appendix C)	
Intentionally left blank. Contact resource person for this section.	

9. Mapping of Assessments with CLOs													
CLOs	Assessments												
	Quiz 1	Quiz 2	Quiz 3	Class Activity 1	Class Activity 2	Class Activity 3	Assignment 1	Assignment 2	Assignment 3	Project/ Presentation	Mid Term	Final Term	
1	✓			✓			✓				✓	✓	✓
2		✓			✓			✓			✓	✓	✓
3			✓			✓			✓		✓	✓	✓

10. 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. After **10 minutes** past the assigned time, the students will be marked absent.

Turn-off Mobile Phone: It is unprofessional and unethical to be texting or calling during the class.

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 **75% attendance** is required for a participant to be eligible to sit in the final examination. 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.

UMT–LMS: Participants should regularly visit the LMS and fully benefit from its capabilities. If you face any issue regarding this, contact the resource person or email your query to lms.support@umt.edu.pk for assistance.

Anti-harassment Policy: Sexual or any other harassment is prohibited and is constituted as punishable offence. All actions categorized under this policy when done physically or verbally would also be considered as harassment even by 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: Similarity report on every assignment either big or small will be checked and only 19% overall and 5% from a single source is allowed. Any student who attempts to bypass this will receive negative marking which will count towards the CGPA.

Use of Generative AI Policy: Use of Generative AI tools is permitted up to 5% for language enhancement only. Each report must include the following declaration:

“During the preparation of this work, the author(s) used [Gen AI Tool Name] to [purpose: e.g., improve language, format references, generate ideas]. The content has been reviewed, edited, and verified by the author(s), who take full responsibility for the submitted material.”

In case of violation, penalties include (1) First-time failure to disclose Gen AI usage: verbal warning and resubmission, (2) Full AI-generated submissions may face grade penalty and/or disciplinary hearing, (3) Repeated misconduct may lead to the suspension from academic activities for one or more semesters, revocation of degree (after investigation), or listing of student name on the HEC/UMT academic misconduct records page.

Course Withdrawal Policy: Students may withdraw from a course till the end of the 15th 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.

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 participants about their performance in a particular assessment within a week of conducting that assessment.

Appendix A

Cover Page for Assignment

Assignment Title

Assignment Number

Student Names:

Students IDs:

Subject Name:

Section:

Name of Resource Person:

Due Date:

BS. Aviation Management

Institute of Aviation Studies (IAS)

University of Management & Technology (UMT), Lahore

Appendix B

Rubric for Assignment

Dimensions/ Weight	Does Not Meet Expectations (0-1 points)	Meets Expectations (2-3 points)	Exceeds Expectations (4-5 points)	Score
1. Understanding of Core Concepts	Demonstrates minimal understanding of airport planning and management principles; major inaccuracies present.	Demonstrates adequate understanding; some minor inaccuracies or incomplete explanations.	Demonstrates strong conceptual clarity and critical understanding with relevant and accurate examples.	/5
2. Application and Analysis	Limited or no application of course concepts; analysis lacks depth or logical flow.	Applies course concepts correctly to some extent; analysis is sound but lacks depth or innovation.	Effectively applies and analyzes airport management principles in a clear, logical, and insightful manner.	/5
3. Organization, Structure, and Clarity	Disorganized, lacks logical flow, poor formatting, and unclear writing.	Organized and generally coherent; writing is mostly clear with some structural issues.	Well-organized, coherent, and polished writing; excellent flow and logical argumentation.	/5
4. Research and Referencing	Few or no credible sources; referencing is incomplete or inconsistent; lacks citation format.	Adequate use of credible sources; mostly consistent referencing in acceptable format (APA or Harvard).	Extensive use of credible and current sources; accurate and consistent referencing throughout.	/5
5. Originality and Compliance with Academic Integrity	Similarity >19% overall or >5% from a single source; evidence of plagiarism or attempts to bypass similarity check.	Similarity ≤19% overall and ≤5% per source; properly paraphrased and referenced.	Similarity ≤10% overall; clear originality and paraphrasing; reflects authentic independent work.	/5
6. Responsible Use of Generative AI	AI use exceeds 5% or declaration missing; evidence of full AI-generated work.	AI use ≤5% for language enhancement only; declaration included.	Minimal or no AI use; clear evidence of student-authored content; declaration properly added.	/5
Total 100%	Content Criteria			30

Appendix C

Rubric for Presentation

Dimensions	Requirement	Individual Score					Average Score
		1	2	3	4	5	
Delivery	Speed, eye contact, clarity, audibility, tone	/10	/10	/10	/10	/10	
Content	Sets out relevant topics, confident with material, aids understanding	/10	/10	/10	/10	/10	
Structure	Logical, easy to follow, provides headings, each section relates to overall purpose	/10	/10	/10	/10	/10	
Use of visual aids	Uses of other visual aids, relevant to content.	/10	/10	/10	/10	/10	
Individual Viva	Answer to the questions	/10	/10	/10	/10	/10	
Total Score		/50	/50	/50	/50	/50	