

# University of Management and Technology

## Course Outline

Course code: PT 101

Course title: Principle of Flight

<b>Program</b>	<b>BS Aviation Professional Pilot</b>
Credit Hours	3-0
Duration	01 Semester
Prerequisites	Nil
Resource Person	Muhammad Usama Siddiqi
Counseling Timing (Room# )	TBD
Contact	TBD

Chairman/Director signature.....

Dean's signature.....

Date.....

Course Learning Objective:

## Course Learning Outcomes: (CLOs)

S No	CLO Statement	Learning Domain and level
1	Understand how airflow behaves around aircraft at both low and high speeds, and how this affects lift, drag, and overall performance.	C1
2.	Analyze aircraft stability, control, and stall behavior, along with the role of aerodynamic devices such as speed brakes, vortex generators, and leading-edge devices during various flight phases.	C2
3.	Recognize the operational limits of aircraft and apply basic principles to explain how aircraft behave in different flight situations.	C3

## CLO – PLO Mapping:

<u>CLOs</u>	<u>PLO 1</u> Aeronautical Knowledge	<u>PLO 2</u> Flight Proficiency	<u>PLO 3</u> Regulatory Awareness	<u>PLO 4</u> Safety & Risk Management	<u>PLO 5</u> Communication Skills	<u>PLO 6</u> Ethical Responsibility	<u>PLO 7</u> Technological Adaptability	<u>PLO 8</u> Teamwork & Leadership	<u>PLO 9</u> Critical Thinking & Problem Solving	<u>PLO 10</u> Lifelong Learning
1	★									
2	★	★								
3	★			★						

## Learning Methodology:

1. Learning methodology will include interactive class sessions followed by Power Point Slides containing Flight videos.
2. Students would be regularly evaluated through quizzes to keep them in pace with the course flow.

## Grade Evaluation Criteria

Following is the criteria for the distribution of marks to evaluate final grade in a semester.

Marks Evaluation	Marks in percentage	Details
Quizzes (x 4)	15%	QUIZ 1: CLO 1
		QUIZ 2: CLO 2
		QUIZ 3: CLO 2
		QUIZ 4: CLO 3
Assignments (x3)	10%	Assignment 1: CLO 1
		Assignment 2: CLO 2
		Assignment 3: CLO 3
Mid Term Examination		35%
End Term Examination		40%
<b>Total</b>		<b>100%</b>

**Recommended Text Books:**

EASA textbook for the principle of flight. Soft copies will be provided

**Reference Books:**

EASA Oxford

**Course Curriculum Reference:**

Please Visit Pakistan Civil Aviation Authority (PCAA), Learning Objectives (LOs) for Personnel Licenses – ATPL, MPL, CPL (Aero plane And Helicopter).

**Calendar of Course contents to be covered during the semester**

Course code PT 101

Course title: Principal of Flight

Week	Course Contents	Reference Chapter(s) as per PCAA Learning Objectives	Course Learning Objective (CLO)
1.	SUBSONIC AERODYNAMICS	081 01 00 00 to 081 01 06 04	<b>C1</b>

2.	SUBSONIC AERODYNAMICS	081 01 07 00 to 081 01 12 02	<b>C1</b>
3.	HIGH SPEED AERODYNAMICS Quiz 1	081 02 01 01 to 081 02 03 04	
4.	HIGH SPEED AERODYNAMICS	081 02 03 04 to 081 02 05 04	
5.	STABILITY , Assignment 1	081 04 01 01 to 081 04 03 04	<b>C2</b>
6.	STABILITY	081 04 03 01 to 081 04 06 04	
7.	Speed brakes and the reasons for use in the different phases of flight, Quiz 2	081 01 10 02 to 081 01 12 02 -	
8.	CONTROL. Assignment 2	081 05 01 01 to 081 05 04 03	
9.	CONTROL, <b>MID TERM EXAM</b>	081 05 05 01 to 081 05 08 03	
10.	Induced drag	081 01 04 02	<b>C1</b>
11.	he relationship between lift coefficient and speed in steady, straight and level flight	081 01 07 00	
12.	The stall, Quiz 3	081 01 08 00 to 081 01 08 05	<b>C2</b>
13.	Induced drag, Leading-edge devices and the reasons for their use in take-off and landing	081 01 09 02	
14.	Vortex generators, LIMITATIONS	081 01 09 03 , 081 06 01 01 to 081 06 03 02	<b>C3</b>
15.	PROPELLERS, Quiz 4 , Assignment 3	081 07 01 00 to 081 07 04 04	
16.	FLIGHT MECHANICS	081 08 01 01 to 081 08 03 00	

## 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 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 75% 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 75% 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 <https://lms.ugt.edu.pk/login/index.php>.

**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.

Date.....