University of Management and Technology

Course Outline

Course code: ET 438 Course title: Propeller

Program	BSc Aircraft Maintenance Engineering Technology
Credit Hours	02
Duration	16 weeks
Prerequisites	Nil
Resource Person	Kamran Asim
Counseling Timing (Room# CB1-01)	Tuesday 01:00pm to 03:00pm Wednesday 11:00pm to 01:00pm Friday 02:30pm to 04:30pm
Contact	kamran.asim@umt.edu.pk

Chairman/Director signature…….

Dean's signature…… **Date…….**

Learning Objective:

The course covers the structural and functional aspects of the flight controls, water/waste systems, pneumatic and hydraulic systems. A detailed understanding of the landing gear and the on board maintenance systems is also included. Knowledge of this subject allows the student to understand that safe and efficient structures play an important role in aircraft operational safety. Student will be equipped with relevant structural knowledge for the maintenance and repair of aircraft.

Upon successful completion of the course, the student should be able to:

CLO No	CLO Statement	PLO	Learning Domain and level
1.	***Express*** an understanding of the basics of propeller operation. construction, pitch etc.	**1**	**C2**
2.	***Demonstrate*** the ability to understand maintenance issues related to the propellers.	**2**	**C3**
3.	***List*** the environmental factors that may affect propeller operation, maintenance and preservation.	**7**	**C1**

1. CLO – PLO MAPPING:

CLOs	PLOs											
	Engineering Technology Knowledge	Problem Analysis	Design / Development of Solutions	Investigation	Modern Tool Usage	The Engineering Technologist and Society	Environment and Sustainability	Ethics	Individual and Team Work	Communication	Project Management	Life long Learning
	1	2	3	4	5	6	7	8	9	10	11	12
1	**C2**											
2		**C3**										
3.							**C1**					

Learning Methodology:

- The teaching of the course will be via a series of lectures. This will be complemented by the use of a textbook, and an extensive range of web resources plus handouts/articles and video clips.

- Participants should expect 5-6 class activities during the semester which will form the basis for evaluation (viva). 2 assignments, individual/group presentations and quizzes. These activities will be complemented by discussions and analysis to strengthen the learning.

Recommended Text Books:

1. “Propeller” by AERO-Bildung (2nd Edition) Germany [2018]

Reference Books:

1. “Propeller”-Aviation Maintenance Technician Certification Series by Aircraft Technical Book Company

Grade Evaluation Criteria

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

Theory:

Marks Evaluation	**Marks in percentage**
Quizzes (x4 - 6)	15%
Assignments (x1 - 2)	10%
Class Participation	5%
Presentation / (Viva)	5%
Mid Term Examination	25%
End Term Examination	40%
Total	100 %

Calendar of Course contents to be covered during semester

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Week	Course Contents	Reference Chapter(s)	Quiz #	Assignments	CLO No
1-2	Blade Element Theory	17.1	1	1	1
3-4	Aerodynamic Performance of Propellers	17.1.2	2		1
5-7	Propeller Construction	17.2	3		1
8	Mid Term Examination				
9-10	Propeller Pitch Control	17.3	4		1

11	Propeller Synchronization	17.4	5	2	1
12-13	Propeller Ice Protection	17.5	6		1
14-15	Propeller Maintenance	17.6			2
16	Revision				
End Term Examination					

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 email 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 an absence and will not be counted as a 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 a visa during the semester should not use any days off except for visa trips 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 a punishable offense. 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, the internet, emails, etc.

USE OF UNFAIR MEANS/ HONESTY POLICY: Any participant found using unfair means or assisting another participant during a class test/quiz, assignment 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 an "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 a student attempts to cheat Turnitin, a second "F" will be awarded which 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 an "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.

Faculty Signature ……. **Date…….**