**MET 3205 Aviation Meteorology (3CU)**

**Description**

This course describes the use of meteorology in the aviation industry. It explains the different weather phenomena that affect air crafts in air.

**Objectives**

The course will help the students to achieve the following objectives

* Describe the different meteorological codes used in aviation
* Describe the concept of Clear Air Turbulence (CAT) and its applications
* Describe the different weather hazards that affect the aviation industry

**Learning outcomes**

By the end of the course students should be able to:

* Explain all the meteorological codes used in aviation
* Explain the relevancy of meteorology in aviation
* Describe the different weather phenomena that affect air crafts

**Intellectual, Practical and transferable skills**

* Creative and innovative
* Problem solving
* Analytical
* Communication

**Teaching and learning patterns**

* Use of practical examples
* Case studies
* Class discussions
* Lectures
* Group presentations

**Indicative content**

* Meteorological codes in aviation: International Civil Aviation Organization and standard weather regulations.
* Weather and aviation safety in regular operations.
* Monitoring of weather phenomena relevant to aviation. Hail formation and Aviation hail problem.
* Clear Air Turbulence (CAT): definition, causes and intensity. Hazards of CAT on aircraft. Visibility: causes of atmospheric obscurity. Jet streams. Selection of aerodrome sites.
* Weather hazards on operation of aircraft, rockets, missiles and projectiles. Low visibility at terminals, low level jets and wind shears, Icing on aircraft and Turbulence

**Assessment Method**

The assessment method is structured to include course work, and final examination. Course work consists of assignments, reports, practicals and tests and accounts for 40% of the final grade. The final examination will account for 60% of the final grading

**Core Reference materials**

* **UK Met Office (**1971): Hand book of aviation Meteorology, *H. M. Stationery Off*
* **Sverre Pettersen** (1956): Weather Analysis and Forecasting, Volume 1, Published by ***McGraw-Hill****.*

# Mike M.N. Mwebesa (1976): East African Observer's Handbook, (handbook of standard procedures for surface weather observing and recording of climatological data) Rev. ed. *East African Community*, East African Meteorological Dept. in Nairobi.