**GAU, School of Aviation, Aviation Management**

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| **Course Unit Title** | | **Aviation Meteorology** | |
| **Course Unit Code** | | **AVM303** | |
| **Type of Course Unit** | | **Compulsory, Aviation Management and Cabin Services**  **Students** | |
| **Level of Course Unit** | | **3rd Year BSc** | |
| **National Credits** | | **3** | |
| **Number of ECTS Credits Allocated** | | **5 ECTS** | |
| **Theoretical (hour/week)** | | **3** | |
| **Practice (hour/week)** | | **-** | |
| **Laboratory (hour/week)** | | **-** | |
| **Year of Study** | | **3** | |
| **Semester when the course unit is delivered** | | **5** | |
| **Course Coordinator** | |  | |
| **Name of Lecturer (s)** | |  | |
| **Name of Assistant (s)** | |  | |
| **Mode of Delivery** | | **Face to Face and E-learning activities** | |
| **Language of Instruction** | | **English** | |
| **Prerequisities and co-requisities** | | **-** | |
| **Recommended Optional Programme Components** | | **Basic background of Fundamentals of Aviation** | |
| **Objectives of the Course:** | | | |
| * **Teaching the basic aviation meteorology.** * **Teaching the Motion of the Earth** * **Teaching basic knowledge of Atmospheric Aerosols, Clouds and Turbulence** | | | |
| **Course Description** | | | |
| **This course provides students to learn on basic concepts of Meteorology science, the physical processes of Meteorological events and importance of Aviation. Topics covered on the course include: Definition of Meteorology, the structure and characteristics of the atmosphere, the gas laws, global circulation, weather systems and effects to Aviation.** | | | |
| **Course Contents** | | | |
| **Week** |  | | **Exams** |
| **1** | **Introduction to Aviation Meteorology** | |  |
| **2** | **Introduction to Meteorology: Definition of Meteorology, Categories and Brief History of**  **Meteorology, Definition of Weather, Climate and Forecasting.** | |  |
| **3** | **Definition of The Atmosphere, Composition, Impurities, Structure, Stratification.** | |  |
| **4** | **Definition of Atmospheric motion, The Pressure Gradient Force, The Coriolis Force, Geostrophic**  **Balance, Acceleration and Friction, Global Circulation.** | |  |
| **5** | **Air Masses, types and Modification process.** | | **Quiz #1** |
| **6** | **Altimetry, Altitude and Flight** | |  |
| **7** | **Tutorial and Revision Class** | |  |
| **8** | **Midterm Exam** | | **Midterm** |
| **9** | **Winds and Currents, wind patterns.** | |  |
| **10** | **Wind maps and Isobars** | |  |
| **11** | **Turbulence, types of turbulence and importance of flight.** | |  |
| **12** | **Clouds, types of clouds and Precipitation.** | | **Quiz #2** |
| **13** | **Precipitation and seminars by students** | |  |
| **14** | **Exercise and Tutorial Class** | |  |
| **15** | **Final Exam** | | **Final** |
| **Recommended Sources** | | | |
| **Textbook: Navale Pandharinath, “Aviation Meteorology”, 1th edition, BS Publications, 2009.**  **Supplementary Material(s):** | | | |
| **Assessment** | | | |

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| **Attendance** | **5%** |  |  |  |  |
| **Assignments** | **5%** |  |  |  |  |
| **Project-Seminar** | **5%** |  |  |  |  |
| **Midterm Exam** | **30%** | **Written** |  |  |  |
| **Quizzes** | **5%** |  |  |  |  |
| **Final Exam** | **50%** | **Written** |  |  |  |
| **Total** | **100%** |  |  |  |  |
| **ECTS Allocated Based on the Student Workload** | | | | | |
| **Activities** | | | **Number** | **Duration (hour)** | **Total Workload(hour)** |
| **Hours per week (Theoretical)** | | | **15** | **3** | **45** |
| **Presenting of observations and tutorials as report** | | | **5** | **5** | **25** |
| **Preparation of the homeworks** | | | **5** | **5** | **25** |
| **Quizzes** | | | **2** | **11** | **22** |
| **Supervision** | | | **1** | **17** | **17** |
| **Final Exam** | | | **1** | **22** | **22** |
| **Total Workload** | | | | | **156** |
| **Total Workload/30 (h)** | | | | | **5.2** |
| **ECTS Credit of the Course** | | | | | **5** |