**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**
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| **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** |