# Budapest University of Technology and Economics
## Faculty of Transportation Engineering and Vehicle Enginee

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| **1. Subject name** | **Meteorology** | | | | |
| **2. Subject name in Hungarian** | Meteorology | | | | |
| **3. Code** | **BMEKOVRM231** | **4. Evaluation type** | **exam grade** | **5. Credits** | **3** |
| **6. Weekly contact hours** | **2 (7) Lecture** | **0 (0) Practice** | **0 (0) Lab** | | |
| **7. Curriculum** | **Transportation Engineering MSc (K)** | **8. Role** | **Specialization (sp) at Transportation Engineering MSc (K)** | | |
| **9. Working hours for fulfilling the requirements of the subject** | | | | | **90** |
| **Contact hours** | 28 | **Preparation for seminars** | 4 | **Homework** | 0 |
| **Reading written materials** | 36 | **Midterm preparation** | 12 | **Exam preparation** | 10 |
| **10. Department** | **Department of Aeronautics and Naval Architectures** | | | | |
| **11. Responsible lecturer** | Dr. Rohács Dániel | | | | |
| **12. Lecturers** | Dr. Rohács Dániel, Jankovics István | | | | |
| **13. Prerequisites** | | | | | |

**14. Description of lectures**

ATMOSPHERE – Structure of the atmosphere. Properties of atmosphere . The International Standard Atmosphere.
VISIBILITY – Basics, Humidity, Haze, Measurement
CLOUDS, PRECIPITATION – Cloud formation. Convection. Cloud Classification. Precipitation,
WINDS, THUNDERSTORMS, ICING – WINDS. Measurement. Forces. Wind Gradient. Thunderstorms, Supercells, Dangers of thunderstroms.
AIR MASSES AND WEATHER FRONT– Warm front. Cold Front. Occlusion. Stationary front. Convergence and squall lines.
GLOBAL CLIMATOLOGY - Climatology. Jetstream. Low and High pressure areas..
WEATHER REPORTS – Weather infromation. Weather Reports and Forecasts (METAR, TAF and others)

**15. Description of practices**

**16. Description of labortory practices**

**17. Learning outcomes**

A. Knowledge
- Familiar with the meteorological processes affecting Air Traffic, know and understand their impact on aviaton safety. Knows the weather reporting and forecasting methods used in aviation.

B. Skills
- Ability to assess the impact of a given weather phenomenon on flight, from the point of view of aviation safety, economy and operation. Can interpret different flight meteorological messages.

C. Attitudes

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D. Autonomy and Responsibility
- Interested, responsive, making decisions with care and responsibility.

**18. Requirements, way to determine a grade (obtain a signature)**

Mid-term requirement: Performing laboratory excercises and 1 mid term exam
Final grade: 1 exam measuring the theoretical knowledge. The final grade is the result of the exam

**19. Opportunity for repeat/retake and delayed completion**

Retake possibility of a laboratory excercise or the mid-term exam
Retake exam possible according to the general rules of BME

**20. Learning materials**

The presentation about the lectures
Literature

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| **Effective date** | 10 October 2019 | **This Subject Datasheet is valid for** | Inactive courses |