




5.00 credits

37.5 h + 22.5 h

Q2

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| Teacher(s) | Crucifix Michel ;Fichefet Thierry ; |
| Language : | French |
| Place of the course | Louvain-la-Neuve |
| Prerequisites | <i>The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.</i> |
| Main themes | General characteristics of the atmosphere; thermodynamics of dry air and moist air; static stability of the atmosphere; atmospheric dynamics; atmospheric heat gains and losses; large-scale atmospheric mean flows; air masses, fronts and synoptic weather systems; weather forecasting; regional climatic processes; climate changes. |
| Learning outcomes | <p>At the end of this learning unit, the student is able to :</p> <p>1 To acquire the basic notions of meteorology needed to understand the main atmospheric phenomena and weather forecasting as well as some additional training in climatology.</p> |
| Evaluation methods | Oral exam with written preparation (75% of the final mark). Homework (25% of the final mark). This second part of the mark will be used for each session and cannot be updated. If the sanitary conditions deteriorate, the modalities of teaching and examination will be reassessed according to the situation and the rules in force. |
| Teaching methods | Theoretical lectures in classroom. Tutored practicals. Commented visit of the Wing Meteo of the Belgian Air Force (Beauvechain). Homework (mandatory): analysis of a particular meteorological situation. |
| Content | <ol style="list-style-type: none"> 1. The atmosphere 2. Thermodynamics of dry air 3. Thermodynamics of moist air and saturated air 4. Condensation processes 5. The vertical equilibrium in the atmosphere 6. Reminders and complementary notions of mechanics 7. The wind 8. Heat inputs in the atmopshere 9. The general circulation of the atmosphere 10. Air masses and their evolution 11. Weather systems |
| Inline resources | The slides projected during the lectures are available on MoodleUCLouvain. |
| Bibliography | Gordon, A., W. Grace, P. Schwerdtfeger and R. Byron-Scott, 1998: Dynamic Meteorology: A Basic Course. Arnold, LONDON, U.K., 325 pp. Malardel, S., 2005 : Fondamentaux de Météorologie. Cépaduès éditions, Toulouse, France, 708 pp. |
| Faculty or entity in charge | GEOG |

| Programmes containing this learning unit (UE) | | | | |
|---|-------------------------|---------|---|---|
| Program title | Acronym | Credits | Prerequisite | Learning outcomes |
| Minor in Geography | MINGEOG | 5 | |  |
| Bachelor in Geography : General | GEOG1BA | 5 | LPHY1101 AND LPHY1102 |  |
| Master [120] in Geography : Climatology [Réforme 2024 - 2025] | CLIM2M | 5 | |  |