lclim2280

2017

8 credits		Q2

Teacher(s)	Crucifix Michel coordinator ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	•
Aims	Firstly, this module is dedicated to the interpretation and the analysis of surface and upper meteorological maps.

Secondly, the goal of this module is to acquire several valuable techniques and working methods for the forecasting of the main parameters and/or weather phenomena like wind and temperature, the formation of fog and the forecasting of clouds and precipitation.

1 • At the end of the module, the students should be able to :Identify and explain the different elements found on a surface map
• Perform an analysis of the atmosphere on the main standard levels ; recognize the main atmospheric patterns and follow their developments
• Understand and apply correctly the forecasting techniques in exercises and case studies : choose and apply the appropriate methods for forecasting temperature (Tmin,Tmax , Tgrass,'), wind (speed, direction, gusts,'), clouds and precipitation (type, amount,') and the formation and formation/dissipation of fog

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The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit". |
| Evaluation methods | A presentation of a case study (weight is **40%** of the total score).

A written exam (weight is **60%** of the total score) will consist of two parts :
- theory (30%)
- practice ' open book (30%) |
| Content | **a.** **Revision basic meteorology**
· Wind, jet stream, thermodynamics, clouds, air masses, frontal systems, pressure centres,
b. **Analysis meteorological maps**
· Analysis of surface maps, upper maps (500 hPa, 700 hPa, 850 hPa, 925 hPa, ') and additional maps (temperature, humidity, thetaw, ')
c. **Wind & temperature forecasting**
· Wind forecasting (direction, speed, gusts, ')
· Heating and cooling in the atmosphere
· Temperature forecasting (maximum temperature, minimum temperature, ')
· Exercises
d. **Clouds & precipitation forecasting**
· Profile of clouds
· Stratiform clouds
· Convective clouds
· Exercise
e. **Fog forecasting**
· Fog identification and forecasting techniques
· Fog identification on satellite images
· Exercises
f. **Practice**
· Meteorological briefings
· Case studies |
| Faculty or entity in charge | GEOG |

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Geography : Climatology	CLIM2M	8		🔍