

Climatologie et glaciologie

Lecturer

Frank PATTYN (Coordinator)

Course mnemonic

GEOG-F203

ECTS credits

5 credits

Language(s) of instruction

French

Course period

Second term

Course content

Climatology: Climate of the Earth, atmosphere dynamics and thermodynamics, climate zones

Glaciology: Glacier dynamics and thermodynamics, Glacier mass balance, interaction of glaciers and ice sheets with the climate, glacial erosion and deposition, periglacial processes

Objectives (and/or specific learning outcomes)

Basic knowledge on climatology and atmosphere dynamics, dynamics of glaciers, glaciers in the climate system, glacial erosion.

Teaching method and learning activities

Lectures (theory) and laboratory exercises

References, bibliography and recommended reading

- > BELTRANDO, G., 2011, Les climats: processus, variabilité et risques. Coll. U. Armand Colin.
- > BENNETT, M.R. and N.F. GLASSER, 2009, Glacial geology: Ice sheets and landforms, Wiley-Blackwell
- > COQUE R., 1993, Géomorphologie, Coll. U. Armand Colin
- > DELMAS, R. et al. ,2007, Atmosphère, océan et climat. Belin. Paris

- > INNESS, P, 2010. Understand the weather. Teach Yourself. McGraw-Hill
- > MARSHALL, S. 2012. The Cryosphere, Princeton Primers in Climate. Princeton University Press
- > OERLEMANS, J. (2008) Minimal Glacier Models. Utrecht Publishing and Archiving Services. Universiteitsbibliotheek Utrecht (disponible en ligne à <http://www.phys.uu.nl/oerlemans/>)
- > RANDALL, D. (2012) Atmosphere, Clouds and Climate. Princeton Primers in Climate. Princeton University
- > VAN DER VEEN (2013) Fundamentals of Glacier dynamics. Second edition. CRC Press Press

cours en ligne:

Goosse H., P.Y. Barriat, W. Lefebvre, M.F. Loutre and V. Zunz: Introduction to Climate Dynamics and Climate Modeling: <http://www.climate.be/textbook>

Other information

Contact(s)

Prof. Frank PATTYN Laboratoire de Glaciologie, Faculte des Sciences, CP 160/03 UNIVERSITE LIBRE DE BRUXELLES 50, avenue F.D. Roosevelt, B-1050 BRUXELLES Téléphone: 02 650 28 46 Télécopie: 02 650 22 26 Courriel : fpattyn@ulb.ac.be

Evaluation method(s)

Oral examination

Evaluation method(s) (additional information)

Oral exam

Main language(s) of evaluation

French

Programmes

Programmes proposing this course at the faculty of Sciences

BA-GEOG | Bachelor in Geography : General | unit 2 and BA-GEOL | Bachelor in Geology | unit 2