Universitat Autònoma de Barcelona

2020/2021

Geography of Global Change

Code: 101587
ECTS Credits: 6

Degree	Type	Year	Semester
2501002 Geography and Spatial Planning	OT	3	2
2501002 Geography and Spatial Planning	OT	4	0

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

Contact

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Use of Languages

Principal working language: english (eng)
Some groups entirely in English: Yes
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: Yes

Prerequisites

Successful completion of both the Physical Geography and Climatology courses.

Objectives and Contextualisation

Geography of Global Change is an optional second cycle course in Geography. The course has a total of 6 theory credits and includes a series of practicals.
The main objective of the course is to explore causes, processes and consequences of global environmental change in the world today, with particular emphasis on human influence. Despite being global in extent, this change may manifest itself uniquely and differently depending on the temporal and spatial scales examined. The course considers the Earth as a system, and bases everything on the concepts of Earth System Science. Despite global-scale influences, more local-scale manifestations of such processes will also be explored and examined. Global environmental change is partly driven by human activities, with sometimes unexpected and indirect consequences. Some of these global change processes have become the subject of international attention and agreements, with the aim of minimizing negative impacts.

With regard to more specific objectives, the course will be subdivided into introductory concepts and distinctions, and followed by distinct environmental spheres of impact, including the atmosphere, the oceans, and the land surfaces. With these distinctions in mind, constant exploration of more focused elements will occur, considering human population growth, urbanization, water and land use, transporation, energy and other resource consumption, pollution, and more.

Competences

Geography and Spatial Planning

- Acting and intervening in the territory and its management, displaying the practical and experimental nature of geographical formations.
- Analysing and interpreting environmental problems.
- Developing critical thinking and reasoning and communicating them effectively both in your own and other languages.

- Producing innovative and competitive proposals in research and professional activity.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Summarising and communicating geographical problems to the media.

Learning Outcomes

1. Carrying out oral presentations using an appropriate academic vocabulary and style.
2. Communicating the geographical problems about issues related to global change.
3. Defining the environmental problems in order to understand global change.
4. Describing the main characteristics of global change.
5. Drawing up innovative proposals.
6. Effectively communicating and applying the argumentative and textual processes to formal and scientific texts.
7. Identifying the ideas and expressing them in various languages with linguistic correctness.

Content

Block 1 Introduction to Global Change

The Earth as a System

Spatial and temporal scales (e.g. human, geologic, and all in between)

Global change vs. climate change, similarities and distinctions

Block 2 The Atmosphere

Defining the structure and composition (baseline for change)

Greenhouse gases

Industrial pollution

Block 3 The Oceans

Role in global and climate change

Non-climatic global changes (e.g. fisheries, pollution, exotic species invasions)

Specific global change issues (monsoons, ENSO, hurricanes, etc.)

Block 4 Terrestrial Impacts

The nature of land surfaces

Specific terrestrial-based concerns (e.g. biosphere)

Causes for concern and likely futuristic developments

Methodology

The course content will develop along the following lines:

- lecture presentations

- readings of relevant articles, and book content

- both individual and small group activity and discussion of concepts

- question and answer / critical dialog

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Theoretical classes.	48	1.92	2, 3, 4, 6, 7
Type: Supervised			
Evaluation of field work.	17	0.68	2, 3, 4, 6, 7
Type: Autonomous			
Independent work from the classes and finalization of the practical.	55	2.2	2, 3, 4, 6, 7

Assessment

Evaluation will be based on both the theoretical (70%) and practical (30%) portions of the course. For the theoretical portion, equal weighting (30%) will be applied to both a short essay answer final exam, and research paper assignment on a global change topic of individual choice. Details on both will be provided when the course begins. 10% of the theoretical grade portion will be determined by a required field trip report. The delivery of 70% of the course activity is required to be evaluated. Those who do not reach 70% will not be evaluated.

La copia o plagi de material, tant en el cas de treballs com en el cas dels exàmens, constitueixen un delicte que serà sancionat amb un zero a l'activitat. En cas de reincidència essuspendrà tota l'assignatura. Recordem que es considera "còpia" un treball que reprodueix tot o gran part del treball d'un/a altre/a company/a. "Plagi" és el fet de presentar tot o part d'un text d'un autor com a propi, sense citar les fonts, siguin en papero en format digital. Vegeu documentació de la UAB sobre "plagi" a: http://wuster.uab.es/web_argumenta_obert/unit_20/sot_2_01.html

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Field trip.	25	8	0.32	2, 3, 4, 6, 7
Final Examination	50	2	0.08	2, 3, 4, 6, 7
Individual project.	25	20	0.8	2, 3, 4, 6, 1, 7, 5

Bibliography

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DUARTE, C. M. (2007): El Cambio Global. Madrid, CSIC.

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GUGLER, J. (2004). World Cities. Globalization, Development and Inequality. Cambridge: Cambridge University Press.

JOHNSTON, R.J., TAYLOR, P.J. I WATTS, M.J. (eds) (2002): Geographies of Global Change. Oxford: Blackwell (2ª edició).

LOVELOCK, J. (1992): Gaia. Una ciencia para curar el planeta. Barcelona, Integral.

MANNION, A.M. (1991): Global environmental change. Harlow, Essex: Longman.

MARSH,W.M. I GROSSA,J.M. Jr (1996): Environmental Geography. Science, Land Use and Earth Systems. New York: John Wiley.

OLDFIELD, F. 2005: Environmental Change. Key Issues and Alternative Perspectives. Cambridge, Cambridge University Press.

STEFFEN, W. et al 2004: Global Change and the Earth System: A Planet Under Pressure. New York, Springer.

TURNER, B.T.II; Clark,W.C., KATES,R.W., RICHARDS,J.F., MATHEWS,J.T. I MEYER,W.B. (eds) (1990): The Earth as transformed by human action. Cambridge: Cambridge University Press.

VV. AA. (2003): Encyclopaedia of Global Environmental Change. New York, Wiley (5 volums).

There will also be selected readings that come from journal articles during the course.