Course Syllabus:

Environmental Engineering MA, Climate Change, Impact and Action Strategies, 7.5 Credits

General data

Code	MÖ003A
Subject/Main field	Environmental Engineering
Cycle	Second cycle
Credits	7.50
Progressive specialisation	Second cycle, has only first-cycle course/s as entry requirements
Answerable department	Faculty of Science, Technology and Media
Established	2007-12-14
Date of change	2015-03-04
Version valid from	2013-08-15

Aim

The objective is that the student should acquire an understanding of how the global climate system responds to anthropogenic influence, how society may adapt to climate change and how society may mitigate the effects on the climate system.

Course of objectives

After the course the student should be able to:
- give a brief description of the global climate system
- describe the scientific foundations of anthropogenic influence on the global climate system
- give an account of the consequences of anthropogenic influence on the global climate system
- describe different ways of adaptation to climate change in relation to sustainable development and equity
- describe and analyse different strategies for reduction of the net emissions of greenhouse gasses
- describe methods for dealing with uncertainty in models, scenarios and mitigation strategies.

Content

The course gives a description of the scientific understanding of anthropogenic climate change, it's causes and possible adaptation and mitigation strategies.

Entry requirements

Degree of Bachelor of at least 180 Credits (180 ECTS) or equivalent, with at least 30 Credits (30 ECTS) in Environmental Science or Environmental Technology/Engineering.
Proven language proficiency in English (English course B), for example shown from one of the following international English tests:
- TOEFL with a minimum score of 575 on a paper based test and not below 4.5 on the TWE
- TOEFL with a minimum score of 90 on internet based test and not below 20 on the TWE
- IELTS Academic Training with a minimum overall score of 6.5 and a minimum score on the specific parts of at least 5.5.

Selection rules and procedures

The selectionprocess is in accordance with the Higher Education Ordinance and the local order of admission.

Teaching form

The teaching is given as lectures, seminars and various excercises. Computer applications may be included. Attendance may be compulsory for some of the teaching.

Examination form

A written test will be given at the end of the course.

Assessment criteria for this subject can be found on www.miun.se/betygskriterier.

Grading system

The grades A, B, C, D, E, Fx and F are given on the course. On this scale the grades A through E represent pass levels, whereas Fx and F represent fail levels.

Course reading

Required literature

Alley, R., Berntsen, T., Nathaniel, L., et al., Climate Change 2007: The Physical Science Basis. Summary for Policymakers, 2007, http://www.ipcc.ch/SPM2feb07.pdf

Atson, R.T., Noble, I.R., Bolin, B., et al. (eds), Land use, land-use change, and forestry. IPCC Special Report., Cambridge, Cambridge University Press, 2000, 0 521 80495 7, http://www.ipcc.ch/SPM2feb07.pdf

Watson, Robert T. (eds), Climate change 2001: Synthesis. IPCC Third Assessment Report, Cambridge, Cambridge University Press, 2001, 0 521 01507 3, http://www.grida.no/climate/ipcc_tar/vol4/english/index.htm

Other information

Examination by this curriculum must be made within one year of registration on the course. A student which have not passed within this time should contact the examiner.