Mittuniversitetet
MID SWEDEN UNIVERSITY

Course Syllabus:

Environmental Engineering MA, Innovation Systems and Diffusion of Technology, 7,5 Credits

General data

Code	MÖ002A
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	2008-01-14
Date of change	2015-03-04
Version valid from	2013-08-15

Aim

The objective of the course is that a student should acquire an understanding of barriers and opportunities to diffusion of innovations

Course of objectives

At the end of the course a student should be able to:
- Explain a technology transition process
- Analyze barriers and opportunities to technology transfer
- Apply systems of innovation concept to explain various factors facilitating and obstructing creation and diffusion of innovations
- Identify adopter categories and attributes of an innovation that affect speed of diffusion of that innovation
- Describe the role of change agents and information channels in diffusion of innovations
- Analyze decision-making process of an individual to adopt an innovation and how such decisions can be influenced
- Analyze factors affecting adoption of innovations in organizations

Content

The course provides an overview of the concept of systems of innovation and a thorough understanding of theories of diffusion of innovation process.

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.

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

Edquist, C., Systems of innovation: Perspectives and Challenges, in Fagerberg, J, Mowery, D.C. and Nelson, R.R. (eds.) The Oxford Handbook of Innovation, Oxford University Press, 2004

Comment: pp. 181-208.

Fagerberg, J., Innovation: A guide to the Literature, in Fagerberg, J, Mowery, D.C. and Nelson, R.R. (eds.) The Oxford Handbook of Innovation, Oxford University Press, 2004

Comment: pp. 1-27.

Fowler, F. J. Jr., Survey Research Methods, Applied Social Research Methods Series, Vol. 1,, Sage Publications, 2002, 3rd Edition

Rogers, E.M., Diffusion of Innovations, New York, Free Press, 2003

Wilkins, G., Technology Transfer for Renewable Energy: Overcoming Barriers in Developing Countries, London, Earthscan Publications, 2001

Comment: Chapter 2 and 4.

Dessutom tillkommer ett antal artiklar som obligatorisk litteratur.

Other information

The course is offered in English.