



HÖGSKOLAN I GÄVLE

Perspectives on Energy Efficiency 15 cr

Perspektiv på energieffektivisering 15 hp

Set by Faculty of Engineering and Sustainable Development

Version

Set at

Valid from

5/9/22

HT2023

Level	A1N
Education level	Second cycle
Course identifier	ETA012
Credits	15 cr
Main field of study	Energy Systems
Subject group	Energy Technology
Disciplinary domain	Technology 100.0 %

Learning outcomes After completion of the course the student shall be able to

Knowledge and understanding

1. explain how various environmental factors influence human beings socially and cognitively
2. demonstrate familiarity with basic research methods and theoretical approaches used in environmental psychology
3. describe how environmental psychology can be applied in everyday environments, including workplaces and schools
4. describe and explain how theories of environmental psychology can be applied on climate change and energy related human behavior
5. demonstrate broad knowledge of environmental aspects of energy efficiency measures from a system perspective

Competence and skills

6. demonstrate understanding of “cross-pollinating” perspectives from social and engineering sciences on energy efficiency measures
7. discuss and analyze the design of energy efficiency programs, schemes and policies that incorporate environmental psychology perspectives

8. formulate research questions concerning energy efficiency in buildings and industry with an interdisciplinary perspective

9. independently identify and solve problems as well as complete tasks within given time framework

Judgement and approach

10. make assessments informed by economical, environmental and social aspects related to the course content.

Course content Theories in various specialized fields of Environmental Psychology, including those that relate to human behavior, social aspects and perception of the environment. Sociotechnical aspects of industrial Energy efficiency, Energy efficiency in existing buildings in terms of energy use, occupant behavior and rebound effects. Energy efficiency measures from system perspective: technical, economic, cultural values and environment are evaluated. Text review and peer critique.

Teaching Lectures, exercises and discussion seminar

Prerequisites Completion of Bachelor's degree in technology or natural sciences of at least 180 credits, or equivalent foreign degree with at least 12 cr of which involves studies in energy related fields or energy efficiency, or equivalent knowledge
English language proficiency equivalent to (the Swedish upper secondary school) English course 6/B

Examination Written examination, assignments and discussion seminar

0010 Discussion seminar 1 credit examines Learning outcome 7, 10, grades Pass, Fail

0020 Assignment 1 2.5 credits examines Learning outcomes 1-4, 9, grades Pass, Fail

0030 Assignment 2 2.5 credits examines Learning outcomes 5-6, 8-9, grades Pass, Fail

0040 Written examination 9 credits examines Learning outcomes 1-6, 10, grades A-F

Grade A, B, C, D, E, Fx, F

Other regulations Degree Criteria for final grade will be given by the course responsible or examiner latest at the beginning of the course.

Sustainable environment The majority of the course content deals with sustainable development..

Module			
0010	Discussion seminar	1 cr	Grade: UG
0020	Assignment 1	2.5 cr	Grade: UG
0030	Assignment 2	2.5 cr	Grade: UG
0040	Written examination	9 cr	Grade: AF