

1.3. Module/ course form

To be completed by Course Team	Module name : Sustainable Development					Module code:	
	Course name: Sustainable Development					Course code:	
	Faculty: Institute of Technology						
	Field of study: Environmental engineering						
	Mode of study : stationary		Learning profile: practical			Speciality:	
	Year/ semester:		Module/ course status:			Module/ course language: English	
	Type of classes	lecture	lessons	lab	project	tutorial	other (please specify)
	Course load	15				15	

Module/ course coordinator	Dr Agata Rychter
Lecturer	Dr Agata Rychter
Module/ course objectives	<p>Student should understand the basic concept of Sustainable Development (SD), the environmental-, social- and economic aspects. Know the history of the SD idea. Be able to discuss the conflicts which are involved in the SD (national and the global scale). Be able to discuss the disadvantages and advantages of instruments for SD.</p> <p>Basic level.</p> <p><i>The students will be awarded an international diploma issued by the Baltic University Programme at Uppsala University, Sweden.</i></p>
Entry requirements	

LEARNING OUTCOME		
Nr	LEARNING OUTCOME DESCRIPTION	Learning outcome reference
1	Student knows the basic concept of Sustainable Development.	P6S_UU
2	Student knows some instruments for SD, international documents of environmental protection and some aspects of environmental policy.	P6S_WK
3	Student uses English sufficiently to communicate, also in matters of professional and technical, can prepare and show a short presentation on the sustainable tasks.	P6S_KK

CURRICULUM CONTENTS

Lecture

Sustainable Development (SD) is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Report 1987). This intergenerational ethics was clearly spelled out by the World Commission in 1987. But it also asks for us living now to share resources in a just way.

The most critical resources for the survival of future generations are climate stability and biodiversity. Therefore, we have to respect the planetary boundaries of economic activity today. SD question is: How to improve the life of the poor without overburdening the ecosystems? This is a challenge for individual lifestyles, for companies and for government policy. The lecture provides a basic understanding of these challenges, introduces strategies and instruments for sustainable development.

Contents

1. Historical background and concepts : The UN process - from Stockholm to Johannesburg. Understanding sustainable development
2. Energy and Climate: Energy use and Climate change. Energy management strategies
3. Resources: Limits to Growth - How long will the World's natural resources last?
4. Urbanisation: The sustainable city.
5. Production & Consumption: Consumption – sustainable use of products.
6. Life, Food and Fibres: The living world. Land and water. Agriculture and food. Forests and fibres.
7. Mobility: Means of mobility – technology and systems. Freight.Policies and management of mobility.
8. Welfare & Life Style: Social sustainability, happiness and the one-planet-life.
9. Politics: Making and implementing sustainable development politics.
10. Economics: Economy and ecology – a single system. The dilemma of economic growth. Tools for approaching a sustainable economy.
11. Change: The processes of individual change. Teaching sustainable development - A guide for teachers. Managing change

Tutorial

The students are given the tasks of making presentation. These presentations can be made using the material Sustainable Development Course <http://www2.balticuniv.uu.se/bup-3/introduction>

Basic literature	Sustainable Development Course http://www2.balticuniv.uu.se/bup-3/introduction
Additional literature	Sörlin S., The road towards sustainability – a historical perspective, Uppsala University. 1997. 48p. ISBN 91-7005-124-0 Andersson H., Berg P.G., Community development – sustainable cities and habitation. Uppsala University, 1997. 56p. ISBN 91-7005-130-5 Rydén L., The foundations of sustainable development – ethics, law, culture and the physical boundaries. Uppsala University, 1997. 52p. ISBN 91-7005-132-1 Andersson M., From intention to action – implementing sustainable development. Uppsala University, 1997. 52p. ISBN 91-7005-133-X

Teaching methods	Discussions in class	
	Assessment method	Learning outcome number

Assessment of the presentation		03
Written exam		01, 02
Form and terms of an exam	Written exam.	

STUDENT WORKLOAD	
	Number of hours
Participation in lectures	15
Independent study of lecture topics	20
Participation in tutorials, labs, projects and seminars	15
Independent preparation for tutorials*	20
Preparation of projects/essays/etc.*	22
Preparation/ independent study for exams	2
Participation during consultation hours	2
Other	
TOTAL student workload in hours	94
Number of ECTS credit per course unit	4
Number of ECTS credit associated with practical classes	1,4
Number of ECTS for classes that require direct participation of professors	1,3