

Module Card

Module Number	Module Name	Type (C/CE/E)	Semester (proposed)	Module Coordinator
REAP-M-Mod-101	Facets of Sustainability	C	1.	Prof. Irene Peters

Subject Area	Duration
Fundamentals and Methods	1 semester

CP (according to ECTS)	Contact Hours/Week (SWS)	Self-study
5 CP (= 150 h workload)	2 (=21h contact hours)	129h

Objectives and Contents

Objective of Qualification (competencies)

- A notion of the concept of natural resource flows (e.g., carbon cycle, urban hydrology, phosphorus cycle)
- “Ecological numeracy”: Knowledge of key data (e.g., the distribution of population across continents and their growth trends, statistical reach of fossil fuel resources, per capita energy and water consumption in different parts of the world), capability of estimating them in broad strokes and performing computations with them.
- Knowledge of international political efforts to promote sustainability.
- Basic notion of different disciplinary approaches towards operationalising the concept of sustainability (e.g., ecology, economics ...)

Contents

- Overview of selected global ecological sustainability deficits (e.g., climate change; depletion of freshwater, soil and forest resources; habitat fragmentation; persistent organic pollutants, etc.) with a revisiting of their natural science foundations (at high school diploma level)
- The role of human activities in creating these deficits: Historically, at present, and in scenarios of the future
- How sustainability and sustainability deficits have been perceived over the last centuries. Classics of sustainability literature (e.g., Malthus, Carson, Schumacher, Club of Rome, also Lomborg); disciplinary and interdisciplinary approaches for the analysis of the sustainability theme
- Sustainability politics: Guiding principles and action plans the world has come up with, at international, national and local levels (Agenda 21, Green communities movement, NGOs, etc.)

Recommended Literature

- The United Nations Report of 1987 *Our Common Future* („Brundtland Report“) <http://www.un-documents.net/our-common-future.pdf>
- Materials on the Website of the Intergovernmental Panel on Climate Change (IPCC), f.ex. current Assessment and Special Reports <https://www.ipcc.ch>

Teaching and Learning Methods

Lectures by I. Peters, HCU colleagues and a range of external experts in the respective fields

Exam(s)

Precondition of Examination

Type of Examination

Semester work (collection) (S): Successful completion of several smaller homeworks

Duration of Examination (if written or oral exam)

Composition of Module Mark

Simple average of grades for individual homeworks, after dropping the worst individual homework grade

Additional Information

Previous Knowledge / Conditions for Participation (in form and content)

Applicability of Module

Frequency of Offering

Course Language

English