



EPTE Module Description

Module name	Natural and Social Sciences
ECTS Credits	6 ECTS
Duration	14 weeks
Form of learning	Lectures, seminars, group works, workshops, presentations, discussions
Indicative workload	36 contact hours, 90 hours of self-study, integrated teaching practice of 24 hours for all modules
Module aims	<ul style="list-style-type: none"> • To explain and describe some science concepts and theories which have importance for sustainable development • To promote new patterns of behaviour, to shape attitudes, values and beliefs about the environment in global dimension • To recognize the threats of modern civilization and take responsibility for future society and state of environment • To build awareness of the child as a person who manages to undertake the protection of environment • To develop respect for regional, ethnic and national communities
Generic Competences	<p>The student is able to</p> <ul style="list-style-type: none"> • develop the knowledge of the relevant subject areas • distinguish features which unify Europeans and European education • improve intercultural skills • develop critical and creative thinking • develop aptitudes for reasoning and a problem-solving way of thinking • develop tolerance
Specific Competences	<p>The student is able to</p> <ul style="list-style-type: none"> • recognize, describe and explain the phenomena that occur between human activity and the environment. • analyze situations and evaluate the state of the environment on the basis of observation, experiment and measurement. • take reasonable steps to improve the environment at the local, regional, national and global level. • develop interdisciplinary approach to environmental problems. • be aware of science as a part of culture capable of changing society and social development.
Learning and Teaching approach	Lectures, seminars, investigations, debates, field trips and group work with different content.
Content	<p>The political, cultural, economical, social and ecological aspects on environmental issues will be discussed.</p> <p>Important topics are:</p> <ul style="list-style-type: none"> • demographic processes • ecological concepts • human basic needs and their influence on the environment • multicultural society

	<ul style="list-style-type: none"> • historical dimensions of civilizations • economy on macro, meso and micro levels • ethical issues in the discourse of sustainable development • science/technology versus philosophical perspectives
Level	First Cycle Degree
Obligatory requirements	English B2
Status	Compulsory
Learning outcomes	<p>The student is able to</p> <ul style="list-style-type: none"> • use science concepts, models and theories which are important for explaining and reasoning about sustainable development • plan and carry out research, record the results in various forms and explain them by using appropriate terminology • explain the relationship between the natural environment and the historical heritage of the region/country • justify the need for a rational human and social satisfaction as a condition for sustainable development • discuss the technological possibilities/consequences for sustainable development • be familiar with different types of hazards in contemporary society which are results of human activities. • transform some parts of the content into teaching units
Form of Assessment Proposal	<ol style="list-style-type: none"> 1. Student evaluation - elaboration of a personal portfolio with the development of three tasks <ul style="list-style-type: none"> • To investigate and present an ecological concept connected to basic understanding of natural processes such as energy, pollution or waste management. Oral presentation and essay. • To put this ecological concept in a social and economic context. Oral presentation and essay. • To elaborate the chosen content into teaching material that could be used in the educational process. Handing the presentation of material and worksheet. 2. Group evaluation: two tasks where the first one is at the beginning and the second one in the end of the course. <ul style="list-style-type: none"> • To prepare a presentation on cultural, natural and historical resources of the region. Multi-media presentation. • The regions' presentations will be developed and transformed into an educational unit. The meso level and macro level of ecological, social and economic aspects of sustainable development must be integrated in the presentation.
Literature	<p>AZEVEDO, B. (2010) Renewable energies. Porto; Atelier Nunes e Pã editor</p> <p>CAPRA, F. (2002). <i>The Hidden Connections. A Science for Sustainable Life</i>. London: Harper Collins</p> <p>DIAMOND, J. (2006). Kollaps</p> <p>DORF, R.(2001). <i>Tecnology, Humans, and Society – Toward a Sustainable World</i>. California Academic Press</p> <p>http://www.project2061.org/publications/earlychild/online/Default.htm</p>

	<p>Dialogue on early childhood science, mathematics, and technology education.</p> <p>PALMER, J. A. (1998). Environmental education in the 21th century. Theory, practice and promise. London, New York,. Routledge</p> <p><i>The Sustainable Everyday Project</i> is a platform of knowledge and actions for creative communities and innovative citizens. It proposes a catalogue of promising cases, a lab of scenarios-in-progress and a program of travelling exhibition to stimulate the social conversation towards a more sustainable future.</p> <p>http://www.sustainable-everyday.net/SEPhome/home.html#scenarios</p> <p>UNESCO's <i>Teaching and learning for a sustainable future</i>, A multimedia teacher education programme, UNESCO 2002 (available free of charge from UNESCO in Paris) http://www.unesco.org/education/tlsf/</p>
Grading	ECTS grades according to ECTS guidelines