



Course syllabus

Faculty of Health and Life Sciences

Department of Biology and Environmental Science

2MX010 Utforska hållbara ekosystem i Östersjön, 7,5 högskolepoäng
Discovery of a Sustainable Baltic Sea, 7.5 credits

Main field of study

Biology, Environmental Science

Subject Group

Environmental Science

Level of classification

First Level

Progression

G2F

Date of Ratification

Approved by Faculty of Health and Life Sciences 2014-12-19

The course syllabus is valid from spring semester 2015

Prerequisites

60 credits in one of the relevant fields of study (Environmental Sciences, Biology, Aquatic Ecology, Maritime Science or Health Sciences) and English language skills equivalent to English B/6 from Swedish Upper Secondary School

Objectives

Knowledge and understanding

After completing the course the student should be able to:

- Describe how the development of a sustainable Baltic Sea will ensure a good economy, a healthy society and dynamic ecosystems to contribute to Green and Blue Growth.
- Explain the main challenges to sustainability of marine systems such as the demand for energy, climate change, human health, the use of natural resources from land and sea including water use, fisheries, pollution, agricultural run-off, the development of maritime business, education and life-long learning
- Formulate the environmental impact on the ecology and health of the Baltic Sea ecosystem and on human health (toxins, pathogens)
- Review best practices and initiatives that range from innovations in fisheries, clean technology, green maritime transport, energy, landscape networks, education and training.

Competence and skills

After completing the course the student should be able to:

- Describe how interdisciplinary science-based knowledge in ecology, environmental-, maritime- and health sciences, and education can inform land/water use decisions and applied management strategies of natural resources in marine coastal areas (marine spatial planning, maritime transport).
- Show knowledge in the use of research and innovation in the Baltic Sea to contribute to a sustainable development towards the first world's Eco-region where "ecology and economy work together in a balanced and integrated matter to sustain societies and culture".
- Develop communication skills (verbally, expository and written) that will aid in advancing the message of sustainability of the seas and oceans.
- Discuss with researchers, government authorities and sustainable business representatives.

Content

The course includes the following elements

- Ecology of the Baltic Sea in relation to human impact and climate change, resources and human health.
- Challenges to sustainability in marine systems, estuaries, coastal areas and oceans (environmental, economics and societal)
- Environmental risks linked to maritime transport and green shipping
- Best practices in innovation for a sustainable industry in the Baltic Sea Region with focus on the Kalmar Sound and Kalmar County (energy, clean air, clean water)
- Communicating the message of sustainability of the seas and oceans with stakeholders with focus on education and mindset
- Introduction to higher education opportunities and sustainable business clusters in the region
- The course includes opportunities to meet with faculty, government authorities and the business sector.
- Critical literature search for scientific articles using various e-platforms

Type of Instruction

The course consists of tutorials and seminars, independent projects, literature reviews, study visits, field excursions and practicals.

Participation in laboratory exercises, excursions and seminars and the presentation of a final written project work is obligatory.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

Examination is normally conducted by oral presentations, the final written project work, written reports, active participation in seminars and the presentation of joint project work. During group work the responsibility for the content of presentation should be divided between the students. In addition, the contribution of each student to the various elements of the presentation should be clearly stated.

On request, students may have their credits translated to A-F marks (credits). Such a request must be sent to the examiner before the grading process.

Course Evaluation

A written course evaluation is conducted at the end of the course. The result is compiled in a course report which is archived by the department's administration. The result of the evaluation and any changes made are communicated to the head of department and presented to the students the next time the course is run.

Required Reading and Additional Study Material

Required reading

Bernes C. 2005. Change Beneath the surface- an in-depth look at Sweden's marine environment. Naturvårdsverket (ISBN: 91-620-1246-0).

Additional literature is provided via the course web platform.