



Course syllabus

Faculty of Technology
Kalmar Maritime Academy

4HE01A Människa, teknik och organisation i en hållbar sjöfart, 7,5
högskolepoäng

Human Element in Sustainable Shipping, 7.5 credits

Main field of study

Maritime Science

Subject Group

Shipping

Level of classification

Second Level

Progression

A1N

Date of Ratification

Approved by Faculty of Technology 2014-06-17

The course syllabus is valid from spring semester 2015

Prerequisites

180 ECTS credits in a relevant area of maritime science and English language skills corresponding to English B, IELTS or TOEFL.

Objectives

Knowledge and understanding

After completing the course, the participant shall have:

- Acquired knowledge and understanding of relevant human factor theories and their progression over the past decades.
- Acquired knowledge and understanding of human physical and mental abilities and limitations in work situations.

Competence and skills

After completing the course the participant shall have:

- Attained the ability to describe, exemplify and reflect on how organizational issues and the work environment affect maritime safety and human performance.
- Developed the ability to independently and based on scientific knowledge identify, analyse and recommend solutions to a work environment or safety problem in a real case study, presented verbally and in writing.

Content

The course aims to deepen the participants' knowledge, skills and understanding of the role of the human element in a sustainable shipping industry.

The course includes the following elements:

- Terminology, theoretical background, development and the relationship between human element, human factors and ergonomics
- The systems view and sociotechnical systems
- Humans cognitive, mental and physical abilities and limitations in work situations
- Methods and tools for analysis and evaluation of human work

The course consists of three mandatory physical meetings. The first meeting is a start-up in Kalmar with information and lectures, followed by self-studies. Additional material will be available on the e-learning platform MyMoodle. The second meeting consists of literature seminars in Kalmar, followed by completion of a written report. The third meeting will be a one day seminar on the written reports.

Type of Instruction

Lecturers, seminars and activities on MyMoodle platform.

Examination

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

The examination is based on written reports, oral presentations and active participation during seminars.

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

Course Evaluation

A written and oral course evaluation is carried out during the third meeting and compiled in a report, which will be presented for analysis within a Vasco da Gama meeting. Other types of course evaluations, for example regular evaluations throughout the course or discussions with students, will be included and encouraged with the aim of ensuring continuous quality development.

Required Reading and Additional Study Material

Required reading

Grech, Michelle Rita, Koester, Thomas & Horberry, Tim (2008). *Human Factors in the Maritime Domain*. Boca Raton: Taylor & Francis

IMO. (1997). Resolution A.850(20). *Human element vision, principles and goals for the organization*. London: International Maritime Organization.

Vicente, Kim (2004). *The Human Factor*. Toronto: Vintage Canada.

Additional study material

Carayon, P. (2006). *Human factors of complex sociotechnical systems*. Applied Ergonomics, 37(4 SPEC. ISS.), 525-535. doi: 10.1016/j.apergo.2006.04.011

Salvendy, G. (2006). *Handbook of Human Factors and Ergonomics* (3rd ed.). Hoboken, NJ: John Wiley & Sons.

Wilson, J., R., & Corlett, N. (2005). *Evaluation of human work*. Taylor & Francis.