



UNIVERSITY
OF SKÖVDE

COURSE SYLLABUS

Operator 4.0 - The Human Role in Future Industry A1N

3 credits

Course code: VP751A

Version number: 2

Valid from: 1 July 2022

Ratified by: Curriculum Committee for Engineering Science

Date of ratification: 21 April 2022

1. General information about the course

The course is provided by the University of Skövde and is named Operator 4.0 - The Human Role in Future Industry A1N (Operatör 4.0 - Människans roll i framtidens industri A1N). It comprises 3 credits and is a second-cycle course. The level of progression is A1N.

The course is a part of the main field of study in Virtual Product Realization. The disciplinary domain of the course is Technology.

2. Entry requirements

To be eligible to participate in the course at least 60 credits are required within the areas of informatics, design engineering, production engineering, automation engineering or mechanical engineering (or similar). A further requirement is proof of skills in Swedish, equivalent of studies at upper secondary level in Sweden known as Swedish course 3 (or equivalent).

If you do not fulfill the academic prerequisites, you can apply to be assessed based on work experience.

3. Course content

This course is directed at professionals in industry.

The course introduces the students to operator 4.0 and closely related concepts about how technology development and digitalization changes the operator role. The course will also briefly describe industry 4.0 and industry 5.0, especially what in the latter is named human-centricity. The course will contain teaching around the eight operator roles described in the operator 4.0 typology and how these will affect the future work role for industrial operators. Focus is on the human and the technology interaction rather than on the technology itself.

4. Objectives

After completed course the student should be able to:

- analyse and reflect on how the operator role of the future will be changed through digitalization and industry 4.0,
- explain and argue for potential benefits and drawbacks in physical and cognitive work environments for the industrial operators of the future through using new technology and new tools,

TRANSLATION FROM SWEDISH

- reflect and discuss the main effects that a new operator role could have for a company with a basis in the eight types of technological enhancements that are presented in Operator 4.0.

5. Examination

The course is graded G (Pass) or U (Fail).

To receive the grade Pass on the course, all examination parts have to be graded Pass.

The examinations of the course consist of the following modes of assessment:

- **Written assignment**
2 credits, grades: G/U
- **Oral presentation**
1 credit, grades: G/U

Students with a permanent disability who have been approved for directed educational support may be offered adapted or alternative modes of assessment.

6. Types of instruction and language of instruction

Teaching on the course contains of student work, lectures, labs, and exercises.

The teaching is conducted in Swedish. Some teaching in English may occur.

7. Course literature and other educational materials

Scientific articles and other relevant material will be provided via the learning platform.

8. Student influence

Student influence in the course is ensured by means of course evaluation. The students are informed about the results of the evaluation and potential measures that have been taken or are planned, based on the course evaluation.

9. Additional information

The course has been developed within the framework of the project WISER - Digital Transformation and Industrial Excellence, which is a collaborative project between the University of Skövde and industrial partners. The project is financed with support from the KK Foundation.

Further information about the course, as well as national and local governing documents for higher education, is available on the website of the University of Skövde.