



Course Syllabus
Theory, Systems Science for Security and Defense

Teori, försvarssystem

Course Code	2FS038	Main Field of Study	Systems Science for Defence and Security
Valid from Semester	Autumn 2023	Department	Department of Systems Science for Defence and Security
Education Cycle	Advanced level	Subject	Systems Science for Defence and Security
Scope	15.0	Language of Instruction	The teaching is conducted in English.
Progression	A1N	Decided by	The Research and Education Board's Course Syllabus Committee at the Swedish Defence University
Grading Scale	Fail, Pass, Pass with Distinction	Decision date	2022-08-23
Revision	1.0		

Entry Requirements

Passed courses of at least 180 credits that include

- written thesis project including of at least 15 credits,

and knowledge corresponding to English 6 (B).

Course Content and Structure

The course covers theoretical approaches emanating from social, behavioral, as well as engineering science, addressing the development of systems. Particular attention is paid to theories that includes both the systems' technical and social (human) components and how these interact, i.e., apply a sociotechnical perspective. A central purpose in the course is to demonstrate how these theories have been applied, or might be applied, to the study of systems for defence and security. The course also aims to develop the students' own analytical ability and understanding relating to the course content.

The course is divided into four parts. Parts 1-3 treats the basic theoretical approaches covered in the course in three separate parts depending on their origin. These are each examined by individual written assignments. The fourth, and concluding, part integrates the theoretical perspectives covered, and is examined by an individual, by the student independently, but within the course goals, formulated task. This task requires the student to independently search for relevant literature, and is reported as an individually written assignment.

Teaching will be conducted in the form of lectures, and seminars in which the students are offered the opportunity to, with teacher support, discuss and reflect upon the course material.

Intended Learning Outcomes

After completing the course the student should be able to:

Knowledge and understanding

- describe and explain theoretical approaches relevant to the study of systems for defence and security covered in the course

Competence and skills

- apply and combine the theoretical perspectives introduced in the course to address problems related to the development of systems for defence and security

Judgement and approach

- review, compare, and evaluate different theoretical contributions to the study of systems for defence and security, from a



sociotechnical perspective.

Type of Instruction

Seminars

Lectures

Independent Study

Assessment

Part 1

Scope: 3.0

Grading Scale: Fail, Pass, Pass with Distinction

Examination will be through one individual written assignment.

Part 2

Scope: 3.0

Grading Scale: Fail, Pass, Pass with Distinction

Examination will be through one individual written assignment.

Part 3

Scope: 3.0

Grading Scale: Fail, Pass, Pass with Distinction

Examination will be through one individual written assignment.

Part 4

Scope: 6.0

Grading Scale: Fail, Pass, Pass with Distinction

Examination will be through one individual written assignment.

Grading

Grades are set according to a three-grade scale: Pass with merit (VG), Pass (G) and Fail (U).

A passing grade (G) in the course requires a pass (G) for all of the four individual written assignments.

A pass with merit (VG) in the course requires in addition to the requirements for pass (G) at least a pass with merit on 12 of the possible 15 credits.

The examiner may decide that supplementary work is required in order for a passing grade to be achieved. Examination papers submitted late will not be graded, unless there are special reasons, which have been approved by the examiner. Supplementary assignments are to be submitted no later than five working days after the notification of results and the supplementary assignment for the examination in question, unless there are special reasons, which have been approved by the examiner.

Grading criteria are released at course start, at the latest.

Restrictions in Number of Examinations

There is no limit on the total number of examination opportunities. The total number is restricted to one ordinary examination and two retakes in any two-term period, unless special circumstances exist that are acceptable to the examiner.

Restrictions Concerning Degree

The course cannot be part of a degree whose content is wholly or partly in accordance with the content of this course.

Transitional Provisions

When a course is no longer provided or when the content of a course has been significantly altered, the student retains the right to be examined in accordance with this course syllabus once per term during a three-term period.

Miscellaneous



On the completion of the course, an evaluation will be conducted under the auspices of the course coordinator, which will form the basis for any changes to the course.

If the student has a decision from the Swedish Defence University on special pedagogical support because of disability, the examiner may decide on alternative forms of examination for the student.



Reading List

Theory, Systems Science for Security and Defense

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Course Code	2FS038
Revision	1.0
Reading List Valid from Date	2021-05-31
Reading List Decided Date	2021-05-05

Theory for Defence Systems (2MF005)

Course literature

- Biddle, Stephen. (2005). Military Power; Explaining Victory and Defeat in Modern Battle. Princeton, UK: Princeton University Press.
- De Weck, Oliver, L, Roos, Daniel, & Magee, Christopher L. (2012). Engineering Systems: Meeting Human Needs in a Complex Technological World. Cambridge, MA: The MIT Press. (Available digitally through the Anna Lind Library)
- Grech, Michelle R, Horberry, Tim J., & Koester, Thomas. (2008). Human Factors in the Maritime Domain. Boca Raton, FL: CRC Press, Taylor & Francis Group.
- Latour, Bruno. (1987). Science in Action. Cambridge, MA: Harvard University Press.
- Scharre, Paul. (2018). Army of None: Autonomous Weapons and the Future of War. New York: W. W. Norton & Company.

Additional literature comprising a maximum of 1 000 pages . The texts (articles and book excerpts) will be provided on Canvas, when this is allowed, or, when not, directions to where to find them.