



Course Syllabus
Weapons effect and protection against weapons effect

Vapenverkan och skydd mot vapenverkan

Course Code	2FS020	Main Field of Study	Systems Science for Defence and Security
Valid from Semester	Spring 2022	Department	Department of Systems Science for Defence and Security
Education Cycle	Advanced level	Subject	Systems Science for Defence and Security
Scope	7.5	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	2022-01-01
Revision	1.0		

Entry Requirements

Degree of Bachelor of Science in Engineering including a combined minimum of 15 HE credits in mechanics and solid mechanics at first-cycle level, or equivalent.

Course Content and Structure

The purpose of the course is to provide the student with an in-depth understanding of weapons effect and protection from a defence systems perspective.

The course deals with protection principles in a broad sense, according to models such as the survivability onion and kill chain. Perspectives on protection in addition to physical measures are addressed.

The threat and effect of various weapon systems used in a military context are dealt with in order to provide the student with the prerequisites for participating in capability development in the field of effect and protection. Functional principles for the delivery of weapons effect by systems such as artillery and missile systems are also dealt with.

The ability to withstand the types of effects dealt with in the above paragraph is studied. The purpose is to be able to protect a target of interest¹ against a given threat or, alternatively, to attack a target of interest that has a given level of protection.

Intended Learning Outcomes

After completed course the student should be able to:

- show an in-depth understanding of the duel between weapons effect and protection against weapons effect; and
- utilise scientifically structured methods to compare the capabilities of targets of interest to withstand a given threat, along with the capability of weapons systems to attack the target; and
- assess the capabilities and limitations of a given protective shield in withstanding a given weapons system, and vice versa.

Type of Instruction

Project Work

Assessment

Examination

Scope: 7.5

Grading Scale: Fail, Pass, Pass with Distinction

The course is examined through a project assignment to be presented independently, orally and in writing.



Grading

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

A pass (G) requires a pass for the project assignment.

In addition to the above pass (G), a pass with merit (VG) requires a pass for a specialised assignment in connection with the project assignment.

Grading criteria are stated in the course description.

The examiner may decide that supplementary work is required in order for a pass 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.

Restrictions in Number of Examinations

The number of examination opportunities is unlimited.

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

The course is held as an elective course in the Master's Programme in Defence and Security Systems Development.

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

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



Reading List

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