



EP284U Ethical Hackning, project assignment 4.0 credits

Etisk hackning, projektuppgift

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

The official course syllabus is valid from the fall semester 2023 in accordance with the decision by the Head of the ITM School: J-2023-1256. Date of decision: 2023-06-22.

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Computer Science and Engineering

Specific prerequisites

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing the degree project course, the student should be able to

- describe and use published information about vulnerabilities
- independently analyse and specialise in chosen vulnerabilities and equivalent exploitation techniques
- independently plan perform responsible development work in offensive cybersecurity
- clearly and efficiently communicate conclusions, results and relevant technical information both orally and in writing.

Course contents

The main activity of the course consists of an in-depth project where the students independently conduct investigations about published vulnerabilities and demonstrates how these can be exploited. The project includes two main components. The first is to independently design and build a relevant test environment with vulnerable components. The second is to use and modify existing malicious code or to develop such code. For both the assignments, the students are free to use their imagination and relevant tools according to their own discretion. It is emphasised that the students carry out all activities responsibly. In it is included for example acting in accordance with the laws, regulations and ethical principles that apply to offensive cybersecurity.

Examination

- PRO1 - Written report, 4.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Other requirements for final grade

- Submission of own developed harmful code
- Submission of installation instructions for vulnerable components and necessary software.
- Oral presentation and demonstration of the environment, its vulnerabilities and the malicious code that has been used.
- Upon discovery of new vulnerabilities, the student should act according to prevailing guidelines for vulnerability disclosure.
- The project work and its results are handled according to prevailing regulations and guidelines and in a manner that to the best of ability avoids to minimise foreseeable risks for involved parties.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.