

Welcome to Introduction to Information Security INTROSEC

Introduction to the Course
Ulrika Norman Yuhong Li

Course Staff

Primarily use iLearn foras for communication and not e-mail to teachers

Yuhong Li yuhongli@dsv.su.se
Course coordinator, lecturer, supervision,
examiner

Ulrika Norman ulrikan@dsv.su.se
Course coordinator, supervision,
examiner, administration

Assignments

Irvin Homem irvin@dsv.su.se
Elias Seid elias.seid@dsv.su.se
Ioanna Maratsi ioanna@dsv.su.se

Lecturers

Haralambos Mouratidis haralambos@dsv.su.se
Fredrik Blix blix@dsv.su.se
Stefan Axelsson Stefan.axelsson@dsv.su.se
Esmiralda Moradian esmirald@dsv.su.se
Jesper Bergman jesperbe@dsv.su.se
Ioanna Maratsi ioanna@dsv.su.se

Schedule

- Lectures: from Nov.3-Dec.16, mix of campus and online
- Assignment 1 online, deadline December 3
- Assignment 2 online, deadline January 6
- Written exam on campus:
 - January 11, 2022 (regular)
 - March 30, 2022 (re-sit)
- Signing up for groups for assignments:
 - deadline November 9 for assignment 1
 - deadline December 3 for assignment 2

Communication during the course

- **Communicate Routes and Requirements**
 - Read the instruction on the top of the course page in iLearn
- **Use the foras in iLearn primarily, be sure to use the most appropriate**
- **Do not use the message function in iLearn**
- **For issues not relevant to other students, e-mail the teachers, always to Ulrika and Yuhong both**

Course Goals/Intended Learning Outcomes

After completing the course, you will be able to understand and communicate your understanding of:

- Major security areas, the fundamental and applied aspects and perspectives for information and digital security.
- Information and digital security terminology, models and principles.
- Currently relevant information and digital security issues such as prevalent threats and solutions and ongoing research.

More about the Course Goals

- The course is oriented more towards theoretical than applied studies
 - Students can expect to discover productive means to reason within the subject matter rather than how to secure specific systems.
 - Practical exercises are included as a means to grounding understanding in practical experience as well as to illustrating and demonstrating relevant concepts.
- The course offers a conceptual framework for the subject area
 - Basic concepts, tools
 - The terminology that is of importance for the more specialised security and forensics courses that can be read at the department.
 - Foundations and models of IT Security; Applied Cryptography; Authentication; Models of Access Control; OS, Network and Web Security; Program Security and Assurance, Ethics; Privacy.

Course Organization

- Lectures
- Supervision sessions will be presented in iLearn
- Assignments 1,5 credits, done in groups
- Written exam 6 credits, individual examination

Lectures

- 11 lectures, different topics given by different teachers
 - According to the timetable
 - Some of them on campus
 - Some of them online or recorded videos, depending on each teacher
 - Material other than the course book will be given online in-time
 - Q&A, use iLearn fora regarding supervision of the content of lectures

Content

Technical and administrative aspects of information security

- Basics of information security: Yuhong Li
- Cryptography: Haralambos Mouratidis
- Authentication: Stefan Axelsson
- Access control: Stefan Axelsson
- Privacy: Haralambos Mouratidis
- Law and ethics: Fredrik Blix
- Policy and models: Ioanna Maratsi
- Policy and models: Ioanna Maratsi
- OS security: Esmiralda Moradian
- Web and Network security: Yuhong Li
- Program security and malware: Jesper Bergman

Supervision sessions online on Zoom

- Supervision for questions and discussions online
 - According to the timetable presented in iLearn
 - If needed, more can be added
 - Closes when we reach the end of the allocated time or run out of questions, whichever comes first
 - Not mandatory to participate on these sessions

Assignment

- Assignment 1
 - 3-person groups
 - Practical introduction to tools, threats and methods (Windows+ Linux)
 - Documented in writing
 - Deadline: Dec.6 23:55 p.m.
 - One group member upload the assignment but all group members must press Submit
- Assignment 2
 - 3-person groups
 - Choose 2 experiments from a given set of experiments (4)
 - Specialise and deepen the understanding
 - Deadline: Dec. 16 23:55 p.m.
 - Instructions will be opened during second part of November
 - One group member upload the assignment but all group members must press Submit

Written exam

- Written exam
 - Requirements, old exams and answers can be found in iLearn
- A written exam on campus, maybe the questions and your answers are presented and written in iLearn, sitting in the computer rooms with restricted access on the web browsers
 - Information will be given in time

Grading

Grading criteria for the written exam:

The written examination is comprised of 5 separate problems. Each of the problem answers can be graded as follows:

Pass. The answer communicates understanding of the terms and concepts involved.

Pass+. The answer communicates good understanding of the problem and clarity in the answer.

Pass++. The answer communicates good understanding of the problem and gives a complete, balanced and insightful answer.

Fail. The answer does not sufficiently fulfil any of the above requirements.

The written examination as a whole is awarded one of the following grades:

A All answers are passes where at least 4 answers are a Pass++.

B All answers are passes where at least 2 answers are a Pass++, at least two of the remaining answers are at least Pass+.

C All answers are passes where at least four answers are at least Pass+.

D All answers are passes where at least two are at least Pass+.

E All answers are passes.

Fx At most one answer is a Fail and at least one are at least Pass+.

F None of the above criteria have been met.

Course Material

- Course book:
 - Security in Computing
 - Authors: Pfleeger, C.P., Pfleeger, S.L., Margulies, j.
 - Edition: 5
 - Publisher: Prentice Hall
 - Year: 2015
 - ISBN: 9780134085043
- On-line sources: slides, videos...
- Fora (Announcements, Course Discussions, Open Forum)
 - Q&A for each specific topic (lecture)
- Supervision

Recommended reading

- See recommended reading list in iLearn
 - Course book by Pfleeger
 - Other sources, not well covered in Pfleeger
 - Level a, b or c
 - A lecturer may also add additional sources

Course Council

- Consists of students who have made themselves available to act as contact point between the students on the course and the course staff in order to address any issues that students feel need the course staff's attention.
- You are welcome to be involved the course council!
 - Send an email to Ulrika and Yuhong

iLearn

- A short guided tour



Questions?