

IMT6021 Foundations of Information Security - 2012-2013

Emnekode:

IMT6021

Emnenavn:

Foundations of Information Security

Faglig nivå:

PhD (syklus 3)

Studiepoeng:

5

Varighet:

Vår

Språk:

Engelsk

Forventet læringsutbytte:

Having completed the course, the student should have

- the ability to derive and apply modelling techniques used for secure computer systems and reasoning about them
- in-depth knowledge of selected access control mechanisms and their mathematical foundations as well as an in-depth understanding of identification and authentication mechanisms
- obtained a solid understanding of security analysis and developmental assurance techniques and issues

Emnets temaer:

- Identification and authentication mechanisms including biometrics
- Access control models and formalisms
- Decidability results and limitations of access control and security models
- Security models including the Bell-LaPadula, RBAC, and Chinese Wall models
- Information-theoretic models of information flow and covert channels
- Developmental assurance and evaluation criteria

Pedagogiske metoder:

Annet

Pedagogiske metoder (fritekst):

- Lectures
- Term paper

Vurderingsformer:

Annet

Vurderingsformer:

Assessment consists of two parts, pass decision is on cumulative grade of both parts:

- Part 1 is a written examination (3 hours), accounting for 33% of grade.

Candidates must achieve an 'A' or 'B' grade to gain the equivalent 'Pass' Grade.

Internal and external examiners.

- Part 2 is a term paper, accounting for 67% of grade.

Term paper is evaluated by the lecturer.

Karakterskala:

Bestått/Ikke bestått

Sensorordning:

Evaluated by external and internal examiner.

Utsatt eksamen (tidl. kontinuasjon):

A new term paper must be provided and the examination must be re-sat next autumn.

Tillatte hjelpemidler:**Tillatte hjelpemidler (gjelder kun skriftlig eksamen):**

Dictionary, simple calculator

Obligatoriske arbeidskrav:

None

Ansvarlig avdeling:

Avdeling for informatikk og medieteknikk

Emneansvarlig:

Professor Stephen Wolthusen

Læremidler:

The following textbooks are the primary references; further recommended reading is provided in the course syllabus.

- M. Bishop: Computer Security: Art and Science. Addison-Wesley, 2003.
- D. Gollmann: Computer Security, 2nd edition Wiley, 2006

Supplerende opplysninger:

Capacity of the course is limited to 50 students unless explicitly arranged by lecturer.

Klar for publisering:

Ja