

## Vak: Beveiliging en Techniek

credits: 4

**Vakcode** ITVB18SCY3  
**Naam** Beveiliging en Techniek  
**Studiejaar** 2020-2021  
**ECTS credits** 4  
**Taal** Nederlands  
**Coördinator** H.T. Keulen

**Werkvormen** Hoorcollege  
 Opdracht  
**Toetsen** Practicumopdracht - Overige toetsing  
 Tentamen B&T - Computer, organisatie  
 tentamenbureau

### Leeruitkomsten

De student

- benoemt de begrippen,
- kenschetst de problemen,
- verklaart de verschijnselen,
- kiest de gereedschappen, en
- voert de stappenplannen uit die ten gronde liggen aan
- technische beveiligingskunde,
- toegepaste cryptografie,
- netwerkbeveiliging,
- computerbeveiliging, en
- applicatiebeveiliging.

The student

- recalls the concepts,
- illustrates the problems,
- explains the phenomena,
- selects the tools, and
- carries out the procedures behind
- security engineering,
- applied cryptography,
- network security,
- computer security, and
- application security.

Note: The description in English is the canonical version. It follows the Revised Bloom's Taxonomy, described in A Taxonomy for Learning, Teaching, and Assessing by Anderson and Krathwohl.

Body of knowledge: The course covers a technical subset of CyBOK. This is specified in more detail in the weekly readings (based on knowledge areas from the Cyber Security Body of Knowledge and chapters from the Security Engineering book by Ross Anderson).

Context of use: The focus is on integrating security into the systems development life cycle.

### Inhoud

- Security engineering
  - Principles & standards
  - Requirements engineering
  - Threat modelling (ARA)
  - Security assessment
- Applied cryptography
  - Symmetric cryptosystems
  - Public-key cryptography
  - Key life-cycle management
  - Implementation issues
- Network security
  - Packets & protocols
  - Network architectures
  - Wireless technology
  - Monitoring & response
- Computer security
  - Access control methods
  - Authentication & auditing
  - Forensics & reversing
  - Hardware-related concerns
- Application security
  - Languages & programs
  - Exploitation & mitigation
  - Distributed applications
  - Release engineering

### Opgenomen in opleiding(en)

HBO-ICT, Major Network & Security Engineering

### School(s)

Instituut voor Communicatie, Media & IT