Technology
Arts Sciences
TH Köln

Course Manual EBS

Embedded Security

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― General information

Long name	Embedded Security
Approving CModule	EBS_MaCSN
Responsible	Prof. Dr. Kerstin Lemke-Rust Professor Hochschule Bonn-Rhein-Sieg
Valid from	summer semester 2021
Level	Master
Semester in the year	summer semester
Duration	Semester
Hours in self-study	96
ECTS	5
Professors	Prof. Dr. Kerstin Lemke-Rust Professor Hochschule Bonn-Rhein-Sieg
Requirements	- Basics of IT Security - basic knowledge applied cryptographi and known algorithms as DES, AES, RSA, DSA
Language	German
Separate final exam	Yes

Literature

Ross Anderson: Security Engineering, Wiley, 2008.

Stefan Mangard, Elisabeth Oswald, Thomas Popp: Power Analysis Attacks, Springer, 2007.

Marc Joye, Michael Tunstall (Eds.): Fault Analysis in Cryptography, Springer, 2012.

Weitere Literatur wird in der Lehrveranstaltung bekannt gegeben.

Final exam

Details	oral examination
Minimum standard	regular attendance of the labs and solving of the problems
Exam Type	EN Klausur

Lecture / Exercises

Learning goals

Goal type	Description
Knowledge	The course deals with basics and advanced subjects of embedded security, i.e. the implementation of embeded security.
Skills	students are able to work on actual subjects in the field of embedded security. they can implement advanced methods of security in security sensitive products, analyse vulnerabilities, and rate security measures in regard of their effectivity.

Special requirements

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Accompanying material	slides, problems, lab manuals, course material on LEA, bibliography
Separate exam	No

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	2
Exercises (whole course)	1
Exercises (shared course)	0
Tutorial (voluntary)	0

− Practical training

Learning goals

Goal type	Description
Skills	students are able to work on actual subjects in the field of embedded security. they can implement advanced methods of security in security sensitive products, analyse vulnerabilities, and rate security measures in regard of their effectivity.

Special requirements

Accompanying material

Separate exam	No

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Practical training	0
Tutorial (voluntary)	0