Welcome to the University of Twente!

EIT Digital Security & Privacy Master

Who we are (overview)

Andreas Peter

Assistant Professor
SCS group

Jan Schut

Internationalization Coordinator
EEMCS

Rainer Harms

Associate Professor
NIKOS group

EIT Digital Security & Privacy Master

1st year (UT as entry node)	2nd year (UT as exit node)
13 students	1 student

EIT Digital Security & Privacy Master

1st year (UT as entry node)	2nd year (UT as exit node)
13 students	1 student

Coordination (curriculum) & Track mentor

Andreas Peter

Coordination (administration)

Jan Schut

I&E part

Rainer Harms

EIT Digital Security & Privacy Master

1st year (UT as entry node)	2nd year (UT as exit node)
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Communication (also among yourselves)

(eit-entry-2017@lists.utwente.nl)   **(eit-exit-2017@lists.utwente.nl)**

Dedicated Website

- **We have established a dedicated website for you:**

https://www.4tu.nl/cybsec/en/EIT/

- **You can find the study plan forms for both entry and exit students there**

- **After this kick-off, I will also upload these slides**

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ENTRY YEAR STUDENTS

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Entry Students: Curriculum (Quarter 1)

The recommended study load per quarter is 15 EC!

	Mandatory Courses
Starting Quarter 1	Cyber Risk Management (201500026), 5 EC Security and Cryptography (201500027), 5 EC [I&E] Basics: I&E Finance EIT students (201700180), 5 EC

	Elective Courses
Starting Quarter 1	Economics of Security (201500028), 5 EC System Validation (192140122), 5 EC Basic Machine Learning (201600070), 5 EC (only in combination with Cyber Data Analytics in Q4)

Remember to enroll at TU Delft! If you have questions regarding this, then please check our FAQ:

https://www.4tu.nl/cybsec/en/faq/

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Entry Students: Curriculum (overview)

Year 1 (mostly 5 EC)				(external)
Q1	Q2	Q3	Q4	July/August
CRM	SoS	InS	PET	
Crp	CoE	*I&E-BDL II*	SyS	*EIT*
I&E-Basics	*I&E-BDL I*	-	-	*Summer*
	Electives: Pick **one** *I&E course* and **one** Cybersecurity course!			*School (4 EC)*
EoS	Bio	CCS (→ Q4)	CDA (req. MaL)	
SyV	CSM	STR	E-Law	
MaL (→ CDA)	DiS (→ BCL)	SeV (req. SyV)	DiF	
-	-	BCL (req. DiS) [l.a]	SSH [l.a.]	
-	-	*I&E-DBM*	*I&E-ISF*	

Q1:
CRM = Cyber Risk Management
Crp = Security and Cryptography
I&E-Basics = I&E Finance
EoS = Economics of Security
MaL = Machine Learning
SyV = System Validation

Q2:
SoS = Software Security
CoE = Computer Ethics
I&E-BDL I= Business Development Lab I
Bio = Introduction to Biometrics
CSM = Cyber Security Management
DiS = Distributed Systems

Q3:
InS = Internet Security
I&E-BDL II = Business Development Lab II
CCS = Cyber Crime Science
STR = Software Testing and Reverse Engineering
SeV = Security Verification
BCL = Blockchain & Distr. Ledger Tech.
I&E-DBM = Designing Business Models

Q4:
PET = Privacy-Enhancing Technologies
SyS = System Security
CDA = Cyber Data Analytics
DiF = Digital Forensics
SSH = Security Services for Home Networks
I&E-ISF = Inf. Sys. for the Fin. Services Industry

Total: ≥ 60 ECTS

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EXIT YEAR STUDENTS

Exit Node Students: Curriculum

	Mandatory Courses
Starting Quarter 1	*none*
Starting Quarter 2	Computer Ethics (191612680), 5 EC Research Topics EIT (201600088), see below

	Elective Courses (at least *15 EC*)
Starting Quarter 1	Secure Data Management (192110940), 5 EC Economics of Security (201500028), 5 EC System Validation (192140122), 5 EC Fundamentals of Quantum Information (201500030), **4 EC**
Starting Quarter 2	Introduction to Biometrics (201500040), 5 EC Security Verification (201500039), 5 EC Cyber Security Management (201500041), 5 EC Quantum Cryptography (201600016), 5 EC

	Graduation
Q2/Q3/Q4 Starting ASAP	Research Topics Paper (6 EC I&E part, 4 EC CS part), 10 EC Master Thesis (together with a company), 30 EC

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Total: ≥ 60 ECTS

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4TU Cyber Security Certificate

- In total >= 80 EC on Cyber Security topics are required!

- Both study years count (even if you did one of these at a different university)!

> **Remember to enroll at TU Delft! If you have questions regarding this, then please check our FAQ:**
> **https://www.4tu.nl/cybsec/en/faq/**

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Other Things …

- **Information on courses**

   (https://osiris.utwente.nl/student/OnderwijsCatalogus.do)

- **Timetables**

   (https://rooster.utwente.nl)

- **Blackboard (UT) and Brightspace (TUD)**

   (https://blackboard.utwente.nl/)

   (http://brightspace.tudelft.nl)   (→ contact teacher, if problem)

Final Degree Project

Overview

- Master thesis (30 EC)

- Research topics (10 EC), consists of:
  - General state-of-the-art and research questions (4 EC)
  - Minor I&E thesis (6 EC) → Rainer Harms

- ≥2 months (usually 6 months) internship at company/external research institute (part of master thesis)

- In total: 40 EC

Our Contacts (Overview)

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Our Contacts (local)

BiZZdesign

nedap
technology that matters

inno valor

COblue
cybersecurity

THALES

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Our Contacts (non-local)

Final Degree Projects (Examples)

- At SIDN: SIDekICk – Suspcious Domain Classification in the .nl Zone
  (http://eprints.eemcs.utwente.nl/26196)

- At Riscure: Techniques and Experiments to Explore Effects of Electromagnetic Fault Injection on a 32-bit High Speed Embedded Device Microprocessor's Instruction Execution
  (http://eprints.eemcs.utwente.nl/25105/)

- At SecurityMatters: C&C botnet detection over SSL
  (http://eprints.eemcs.utwente.nl/25104/)

- At NXP: Secure and privacy-preserving national eID systems with Attribute-based credential technologies
  (http://eprints.eemcs.utwente.nl/25099)

- At KPMG: Exploring security vulnerabilities of unmanned aerial vehicles
  (http://eprints.eemcs.utwente.nl/26889/)

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Next steps (next to study plan): internships

- Take a look at our contacts (previous slides) and check yourself for suitable companies

- We'll also send project announcement to the mailing lists!

- Discuss your ideas/options with me!

- Foreseen timeline:
  - 1st half of September: Identify suitable companies/internships
  - September/October: Negotiate internship agreement and find UT supervisor
  - October to January: work on research topics
  - February to July: work on master thesis and I&E minor thesis ($\rightarrow$ Rainer Harms)
  - August: final presentation and graduation

- … do your best to get the internship at your chosen company!

Contact

Coordination (curriculum) & Program Mentor:
Andreas Peter (a.peter@utwente.nl)

Coordination (administration):
Jan Schut (j.schut@utwente.nl)

For both of us, use (eit-sap-coord-ut@utwente.nl)

I&E part:
Rainer Harms (r.harms@utwente.nl)

Twente Hacking Squad (THS)

Hands-on Hack1ng

Software Explo1tation

D1gital Incident Investigation

Code Break1ng

&

Hacking Competitions

http://scs.ewi.utwente.nl/home/TwenteHackingSquad/

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