FNWI Master Evening February 18, 2016
— Computer Science —

A Joint Degree offered by:

University of Amsterdam

VU UNIVERSITY AMSTERDAM
Your hosts today:

▶ **Thilo Kielmann**  
Associate prof. (UHD) Computer Science (VU), program director

▶ **Alban Ponse**  
Associate prof. (UHD) Computer Science (UvA), UvA program coordinator

Our programme today:

▶ The new **Joint-Degree Master in Computer Science** in Amsterdam
Who is us?

University of Amsterdam

+ 

VU

UNIVERSITY AMSTERDAM

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Two top universities

for the price of one!!
Disadvantage:

- Two teaching locations: Science Park and Zuidas

Advantages:

- A Joint Degree: One diploma issued by both universities
- Larger selection of courses
- More research opportunities for graduation projects
- More world-class researchers at your finger tips
- More resources
- More of everything . . .
MSc Computer Science UvA+VU

Fact Sheet:

- 2 years
- 120 ECTS credits
- Taught in English
- Internationally visible
- International student population
- Leading to a top position in industry (in NL and abroad)
- Leading to a position in industrial research
- Leading to a career in academia
Curriculum Structure

Four pillars:

- Master Core (54 EC)
- Choice of 6 tracks (30 EC):
  - Big Data Engineering
  - Computer Systems Security
  - Foundations of Computing and Concurrency
  - Internet and Web Technology
  - Parallel Computing Systems
  - Software Engineering and Green IT
- Constrained Choice packages (6–18 EC)
- Free Choice courses (18–30 EC)
Master Core (54 EC)

- **Distributed Systems** (6 EC)
  laying the foundation of today’s IT systems where everything is connected with everything else

- **History of Digital Cultures** (6 EC)
  placing CS into its societal and historical context

- **Literature Study and Seminar** (6 EC)
  investigating existing solutions to a research question and presenting findings within one of the research groups

- **Graduation Project** (36 EC)
  Independently executing a project, turning everything learned so-far into a master piece
Track: Big Data Engineering

Track theme:

▶ The technology for transforming data into insights

Track core:

▶ High-performance Computing and Big Data
▶ Web Data Processing Systems
▶ Large-Scale Data Engineering
▶ Information Visualization
▶ Data Mining Techniques

Track coordinator:

▶ Dr Adam Belloum (a.s.z.belloum@uva.nl)
Track: Computer Systems Security

Track theme:
- Security of computer systems, malware analysis and defense

Track core:
- Systems Security
- Binary and Malware Analysis
- Software Exploitation
- Cybercrime and Forensics
- Kernel Programming

Track coordinator:
- Prof.dr Herbert Bos (h.j.bos@vu.nl)
Track: Foundations of Computing and Concurrency

Track theme:
- Formal methods, especially in concurrent programming

Track core:
- Logical Verification
- Advanced Logic
- Distributed Algorithms
- Term Rewriting Systems
- Protocol Validation

Track coordinator:
- Dr Femke van Raamsdonk (f.van.raamsdonk@vu.nl)
Track: Internet and Web Technology

Track theme:
- Software technology for web, internet, and cloud computing

Track core:
- Internet Programming
- Service Oriented Design
- Distributed Algorithms
- Performance of Networked Systems
- Web Services and Cloud-based Systems

Track coordinator:
- Dr Spyros Voulgaris (spyros@cs.vu.nl)
Track: Parallel Computing Systems

**Track theme:**
- Parallel computing is everywhere: from mobile phones to supercomputers

**Track core:**
- Parallel System Architectures
- Programming Large-scale Parallel Systems
- Parallel Programming Practical
- Programming Multi-core and Many-core Systems
- Performance Engineering

**Track coordinator:**
- Dr Clemens Grelck (c.grelck@uva.nl)
Track: Software Engineering and Green IT

Track theme:
- Systematic and quantifiable approaches to the development, execution and maintenance of software

Track core:
- Service Oriented Design
- Software Asset Management
- Green Lab
- Software Architecture
- Software Testing

Track coordinator:
- Prof.dr Patricia Lago (p.lago@vu.nl)
Ensuring the breadth of each individual study program

Constrained choice modules (6–18 EC):

- One course on foundations
- One course on software engineering
- One course on programming
- One course on mathematics

- Each to be chosen from a predefined set of choices
- Partially covered by the chosen track’s core
Free Choice Courses

Free Choice (18–30 EC):

- Courses from other tracks
- Other courses from constrained choice packages
- Any other course (Master-level) from Computer Science, Computational Science, Logic, Artificial Intelligence, or Bioinformatics
YOU decide about much of the study programme

Want to go to industry?
  ▶ Do your graduation project as an internship with a company

Want to go for a PhD / more ambitious job?
  ▶ Combine
    ▶ literature study
    ▶ individual project
    ▶ graduation project

  for a more ambitious scientific research project of up to 48 EC
  or almost a year of work
Admission to the Programme

For university students

▷ BSc degree in Computer Science or Informatica (or closely related subject)
▷ Other degrees: individual assessment

For HBO students

▷ BSc degree in Informatica (or closely related subject)
▷ Individual assessment of strengths and deficits
  ▷ Additional courses from our BSc/MSc programmes as necessary
Why you should join the VU/UvA Master in Computer Science

10 good reasons:

▶ VU and UvA are among the top universities in Europe
▶ Learn from world-renowned scientists
▶ Small student groups
▶ Wide choice of courses
▶ Excellent teacher/student ratio
▶ Become part of a research group for your graduation project
▶ Modern state-of-the-art facilities
▶ International environment at home
▶ Excellent job market for graduates (academia or industry)
▶ Get two universities for the price of one
The End

More Information:

▶ www.vu.nl/ma-computerscience

Programme director:

▶ Dr Thilo Kielmann (thilo.kielmann@vu.nl)

These slides:


UvA contacts:

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