



Welcome to the Department!

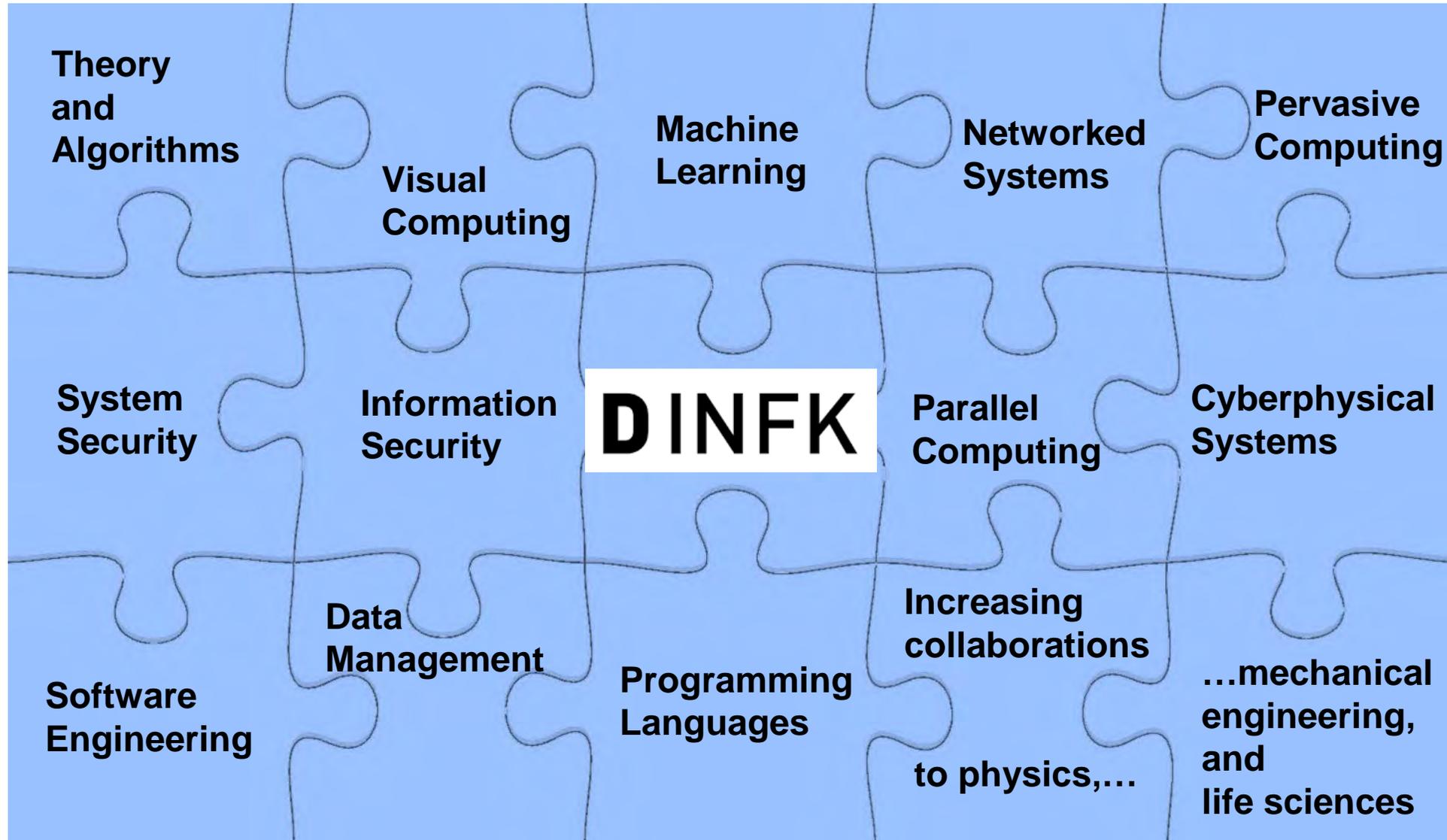
Prof. Dr. Adrian Perrig
Deputy Director of Studies

15 September 2025

The Cyber Security Faculty



Broad Topics in Research and Education



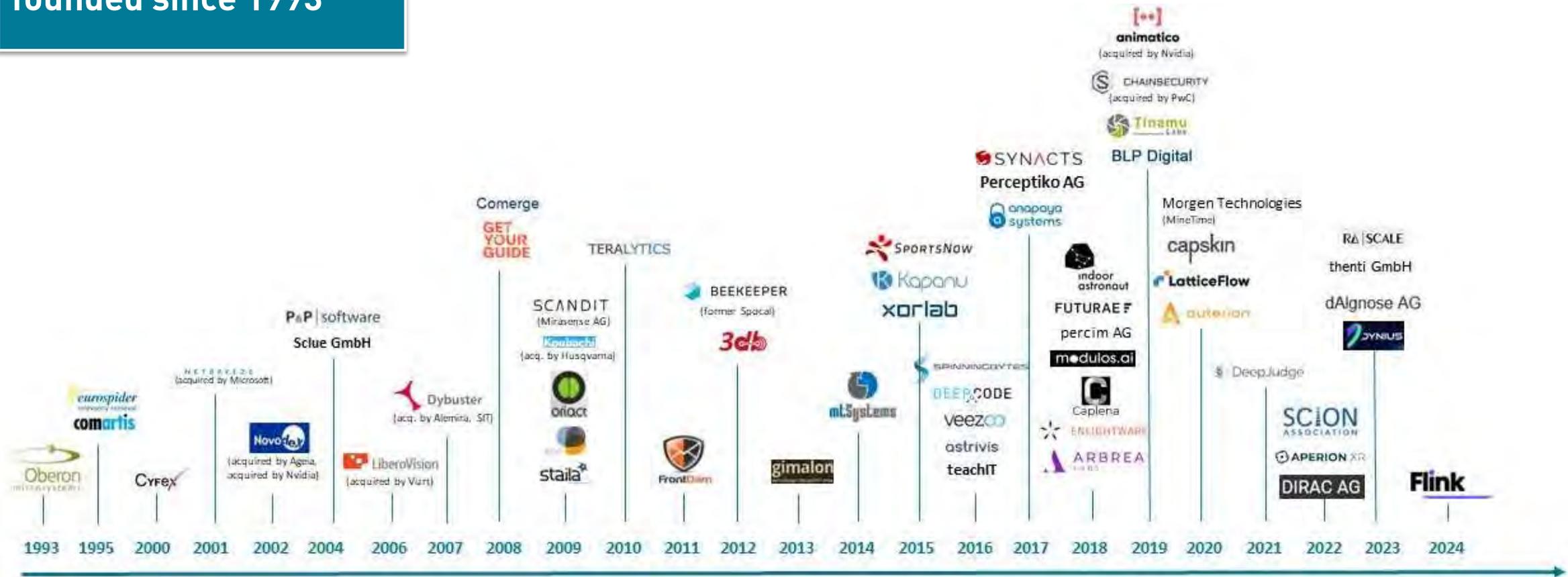
Top-Ranked CS Departments Worldwide



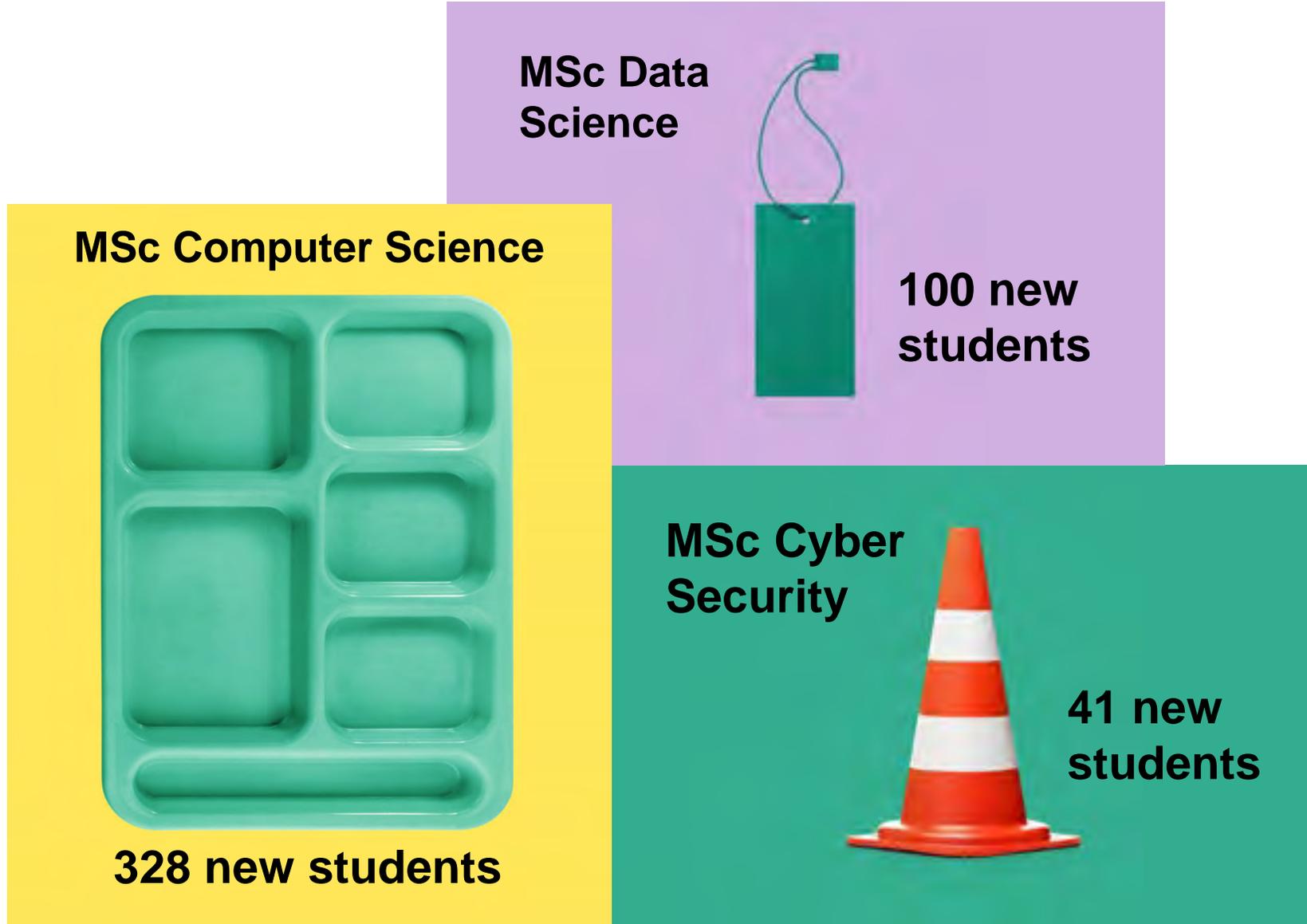
Rank 2025	Institution	Country
1	University of Oxford	United Kingdom
2	University of Cambridge	United Kingdom
3	Massachusetts Institute of Technology	United States
4	ETH Zurich	Switzerland
5	Stanford University	United States

Start Your Own Company

58 D-INFK Spin-offs
founded since 1993



D-INFK Master's Programmes



Some Quick Advice

- Take advantage of the unique opportunity of studying at ETH
- Attend classes, interact with your peers, TAs, and faculty
- Work hard, practice self-reflection, seek help when needed
- Make this not only a degree, but a major step in your life and career
- Stay positive and have fun!

Getting started

Joint Degree Master's Programme
Cyber Security ETH Zurich / EPFL

Dr. Ralf Sasse, Study Coordinator





Who's who?

Who's who: Studies Administration

The main point of contact for almost all issues related to MSc Cyber Security (if not, will find the right person), in particular issues concerning

- administration
- semester in Lausanne
- military service (Swiss only)

→ studiensekretariat@inf.ethz.ch

Who's who



Prof. Thomas Hofmann
Head of Department



Prof. Dennis Hofheinz
Director of Studies



Prof. David Basin
Programme Director



Dr. Ralf Sasse
Study Coordinator



Brigitte Marti
Studies Administration

Who's who: Faculty (Core)

Information Security



Prof. Dr. David Basin

System Security



Prof. Dr. Srdjan Capkun

Applied Cryptography



Prof. Dr. Kenny Paterson

Network Security



Prof. Dr. Adrian Perrig

Secure & Trustworthy Systems



Prof. Dr. Shweta Shinde

Secure and Private AI



Prof. Dr. Florian Tramèr

Who's who: Faculty (Affiliated)

Foundations of
Cryptography



Prof. Dr. Dennis Hofheinz

Computer Security
Group COMSEC



Prof. Dr. Kaveh Razavi

Information

Master in Cyber Security www.inf.ethz.ch/master-cybsec

Forms and Documents <https://inf.ethz.ch/studies/forms-and-documents.html>

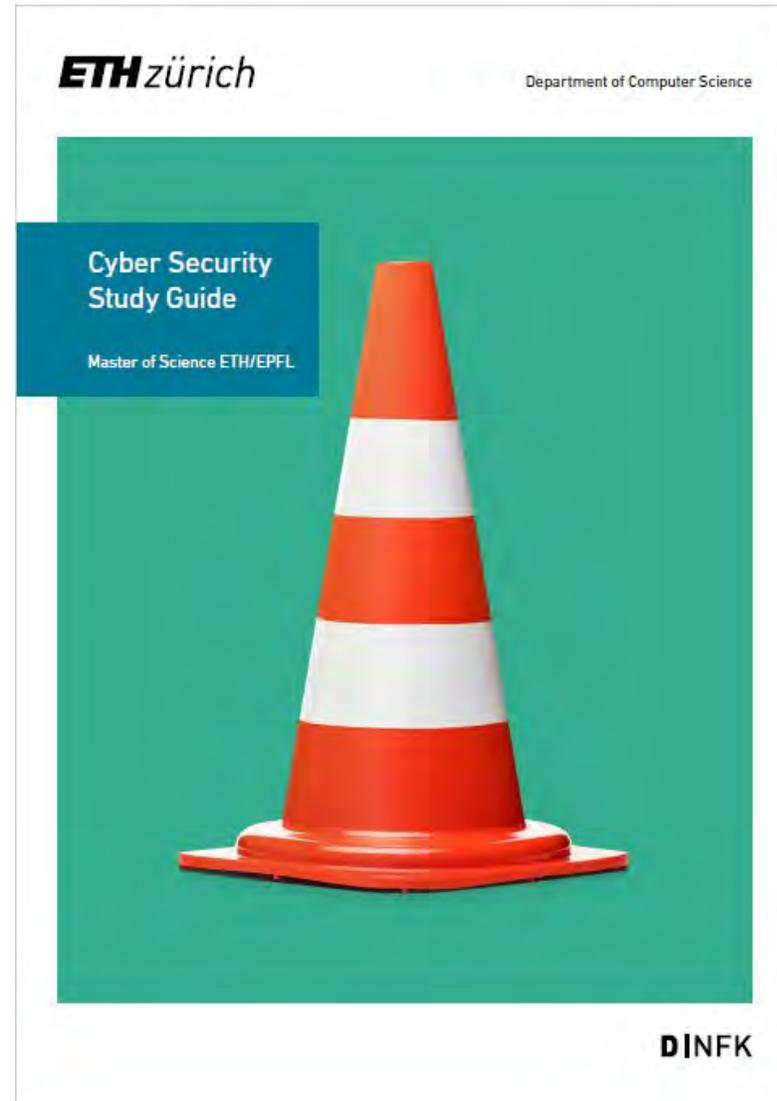
- Study guide
- Regulations of studies (in German)
- Tentative course list
- Semester and Master's thesis projects
-



Master's programme in Cyber Security

Study Guide

We recommend:
Read it!



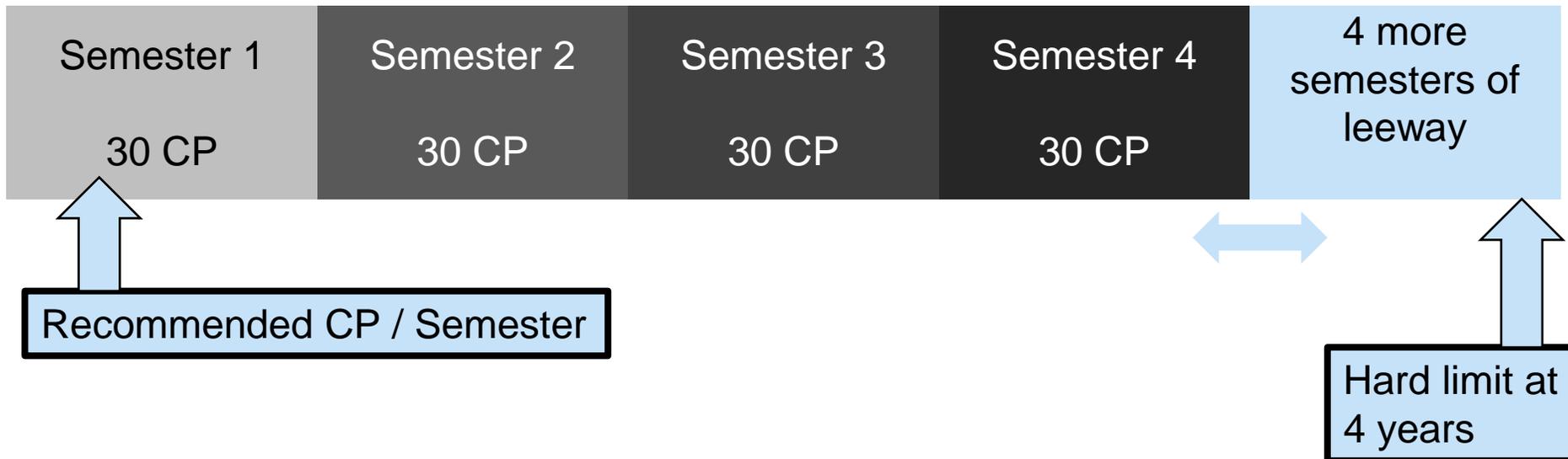
Credit System

- ECTS credits (European Credit Transfer System)
- Course completed successfully → **full amount of credits** is awarded
- One ECTS credit represents 25 to 30 working hours.
- **30 credits per semester**

Master's programme: 120 credits

120 Credit Points

The Master's programme is designed to be completed within 4 semesters. The overall study duration must not exceed 8 semesters. The last semester focuses completely on the Master's thesis.



Grading System

- 6 Very good
- 5 Good
- 4 Sufficient
- 3 Insufficient
- 2 Poor
- 1 Very poor

- **Pass:** grade ≥ 4
- **Fail:** grade < 4
- Resolution for individual grades: 0.25

Repetition of exams

Every failed examination or project can be repeated **once**.

Master's Programme Structure

Master ETHZ – EPFL in Computer Science Major in Cyber Security	120
Core Courses and Electives in Cyber Security	28
Core Courses	16
Core Electives	
Seminar	2
Core Courses and Electives in a Minor	18
Core Courses	8
Core Electives	
Inter Focus Courses	16
Semester Project	12
Free Electives	
Science in Perspective	2
Master's Thesis	30

← Minimum required credit points

Core Courses and Electives in Cyber Security

Core Courses and Electives in Cyber Security	28
Core Courses	16
Core Electives	
Seminar	2



- High level of competence
- Provide essential knowledge in Cyber Security

Minor

Core Courses and Electives in a Minor

18

Core Courses
Core Electives

8



The Minor is mandatory and has to be chosen from the Majors of the Master's programme in Computer Science.

Students must decide on one of the following:

- Data Management Systems
- Machine Intelligence
- Visual and Interactive Computing
- Theoretical Computer Science

Inter Focus Courses – The “labs”

Inter Focus Courses

16

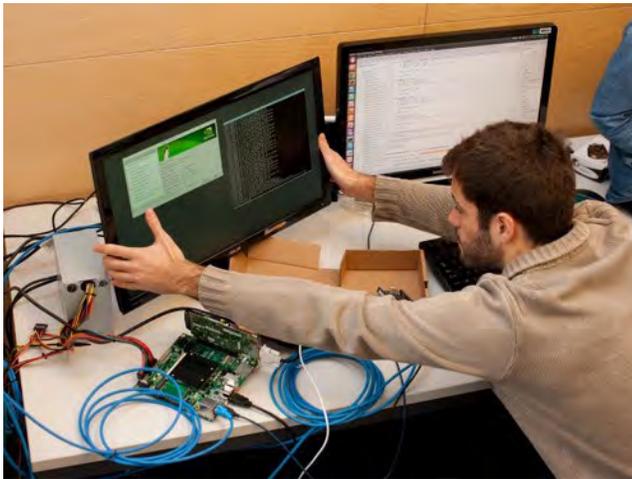


- Cover all topics in computer science
- Teach algorithmic reasoning
- Methods of advanced system design

- You need ≥ 16 ECTS from Inter Focus Courses \rightarrow two courses
- Two offered in autumn semester, two in spring semester
- Repetition typically requires re-enrolling \rightarrow one year later

Recommendation: take one “lab” per semester (and plan in enough time)

Semester Project



- Apply acquired knowledge and skills
- Solve independently a technical-scientific problem

Free Electives

Free Electives



- Courses offered by ETH, UZH, EPFL
- Master's level
- In the area of computer science or a closely related field

Science in Perspective



- Courses offered in the programme Science in Perspective (mostly by the department D-GESS)
- 851-xxxx-xx language courses (≤ 3 credits including ETH BSc)

Master's Thesis



- Finally!
- 6 months of research, problem solving, writing, ...

Programme Structure

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Core Courses and Electives in a Minor	18
Core Courses	8
Core Electives	
Inter Focus Courses	16
Semester Project	12
Free Electives	
Science in Perspective	2
Master's Thesis	30

Does not sum up:
freedom



Plan your Studies

Planning

Plan your Master's studies

- Establish a personal study plan

Template: <https://inf.ethz.ch/studies/forms-and-documents.html>

Where to get information or help:

- Mentor (Core Faculty member assigned to you)
- Study guide
- Studies Administration

Studying

- Register for courses online: www.mystudies.ethz.ch
- Course list: www.vvz.ethz.ch

Cyber Security Master 				
▸ Field of Specialization				
▸ ▸ Core Courses				
Number	Title	Type	ECTS	Hours Lecturers
252-0463-00L	Security Engineering 	W	7 credits	2V + 2U + 2A D. Basin, S. Krstic
252-1414-00L	System Security 	W	7 credits	2V + 2U + 2A S. Capkun, S. Shinde
263-4640-00L	Network Security 	W	8 credits	2V + 2U + 3A P. De Vaere, A. Perrig
263-4658-00L	Privacy Enhancing Technologies 	W	7 credits	3V + 1U + 2A F. Tramèr
▸ ▸ Electives				
Number	Title	Type	ECTS	Hours Lecturers
227-0575-00L	Advanced Topics in Communication Networks 	W	6 credits	2V + 2U L. Vanbever
227-0579-00L	Hardware Security 	W	8 credits	2V + 2U + 2A K. Razavi
252-0811-00L	Applied Security Laboratory  	W	8 credits	7P D. Basin, C. Sprenger
252-1411-00L	Security of Wireless Networks 	W	6 credits	2V + 1U + 2A S. Capkun, K. Kostianen
263-4665-00L	Zero-Knowledge Proofs	W	5 credits	2V + 1U + 1A J. Bootle

Semester in Lausanne
<https://www.epfl.ch/schools/ic/>

School of Computer and Communication Sciences

Our School is one of the main European centers for education and research in the field of computing.



Semester in Lausanne

During the course of the programme, one semester has to be spent at EPF Lausanne.

- Students enrolled at ETHZ must start the Master's programme at ETHZ
- Students must earn 20–35 CP at EPFL
- Inter Focus Courses must be done at ETHZ
- Master's thesis may be conducted externally (counts as ETHZ credits) –with a Cyber Security MSc faculty member's agreement
- Students starting their studies fall 2026 (HS 26) or before receive a scholarship for their exchange semester
- Spring semester: support in searching accommodation by EPFL
- Eligible courses are published on the MSc Cyber Security website
- Study plan for the exchange semester at EPFL has to be approved by the Studies Administration
- During the exchange semester, students are enrolled at ETHZ **and** EPFL –but pay tuition fee only at ETHZ

Semester in Lausanne

Study plan (= course list) and regulation (only in French) at EPFL:

https://www.epfl.ch/education/studies/en/rules-and-procedures/study_plans/

<https://edu.epfl.ch/studyplan/en/master/computer-science-cybersecurity/>

Computer Science - Cybersecurity 2025-26

COURSES	LANGUAGE	MASTER 1	MASTER 2	SPECIALISATIONS/ORIENTATIONS	EXAM	CREDITS / COEFFICIENT
<u>Advanced computer architecture</u> CS-470 / Section IN lenne	EN		<ul style="list-style-type: none"> ▪ Courses: 3h ▪ Lab: 2h 		Summer session Written	8
<u>Advanced networks</u> COM-407 / Section SC Nikolopoulos	EN	<ul style="list-style-type: none"> ▪ Courses: 2h ▪ Exercises: 2h ▪ Lab: 2h 			Winter session Written	8
<u>Advanced topics on privacy enhancing technologies</u> <i>(This course is a "depth" for Cyber Security master program and Cyber Security minor.)</i> CS-523 / Section IN Vacat	EN		<ul style="list-style-type: none"> ▪ Courses: 3h ▪ Exercises: 1h ▪ Course based project: 2h 	<ul style="list-style-type: none"> ▪ Depth requirement 	Summer session Written	8
<u>Algorithms II</u> CS-450 / Section IN Kapralov	EN	<ul style="list-style-type: none"> ▪ Courses: 4h ▪ Exercises: 3h 			Winter session Written	8

Semester in Lausanne

Find information on the exchange semester at EPF Lausanne here:

https://inf.ethz.ch/studies/master/master-cybsec/semester_epfl.html

In particular, make sure you read the course transfer list with all EPFL courses, showing the corresponding course category at ETHZ.

Group 1					Category ETHZ	Core/Core Elective	Overlap / cannot be combined	
Code	Course	Semester	CP	Exam				
CS-470	Advanced computer architecture	spring	8	written	DMS	Core Elective		
COM-407	Advanced networks	autumn	8	written	no transfer			
CS-523	Advanced topics on privacy enhancing technologies	spring	8	written	CybSec	Core Elective	263-4658	Privacy Enhancing Technologies
CS-450	Algorithms II	autumn	8	written	TI	Core	263-4500	Advanced Algorithms
COM-401	Cryptography and security	autumn	8	written	CybSec	Core Elective		
CS-438	Decentralized systems engineering	autumn	8	written	DMS	Core Elective		
CS-451	Distributed algorithms	autumn	8	written	DMS	Core		
CS-451	Distributed algorithms	autumn	8	written	TI	Core Elective		
COM-402	Information security and privacy (last offered in fall 25)	autumn	8	written	CybSec	Core Elective		
CS-428	Interactive theorem proving	spring	8	during the semester	Free Elective		263-2520	Formal Foundations of Programming Languages

Semester in Lausanne

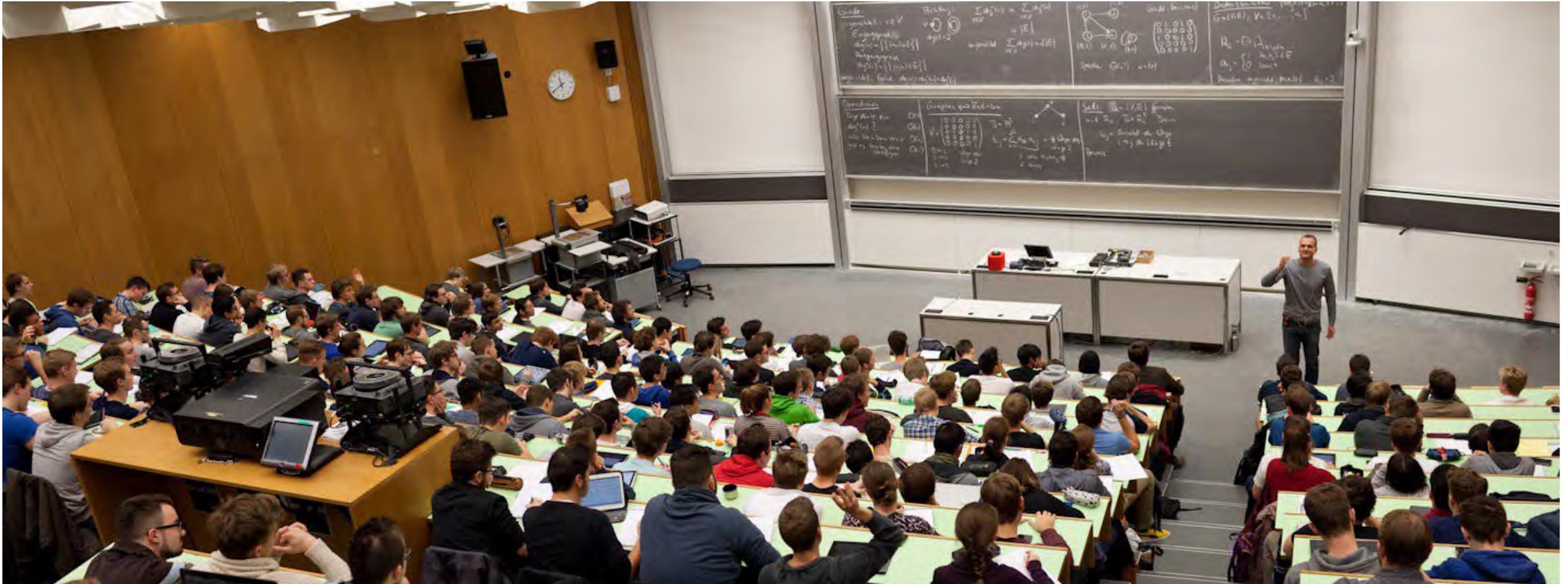
Semester in Lausanne in the **spring semester 2026**:

Students have to decide until the end of the 4th semester week at the latest whether they want to go to Lausanne for the spring semester 2026.

Send an email to studiensekretariat@inf.ethz.ch until

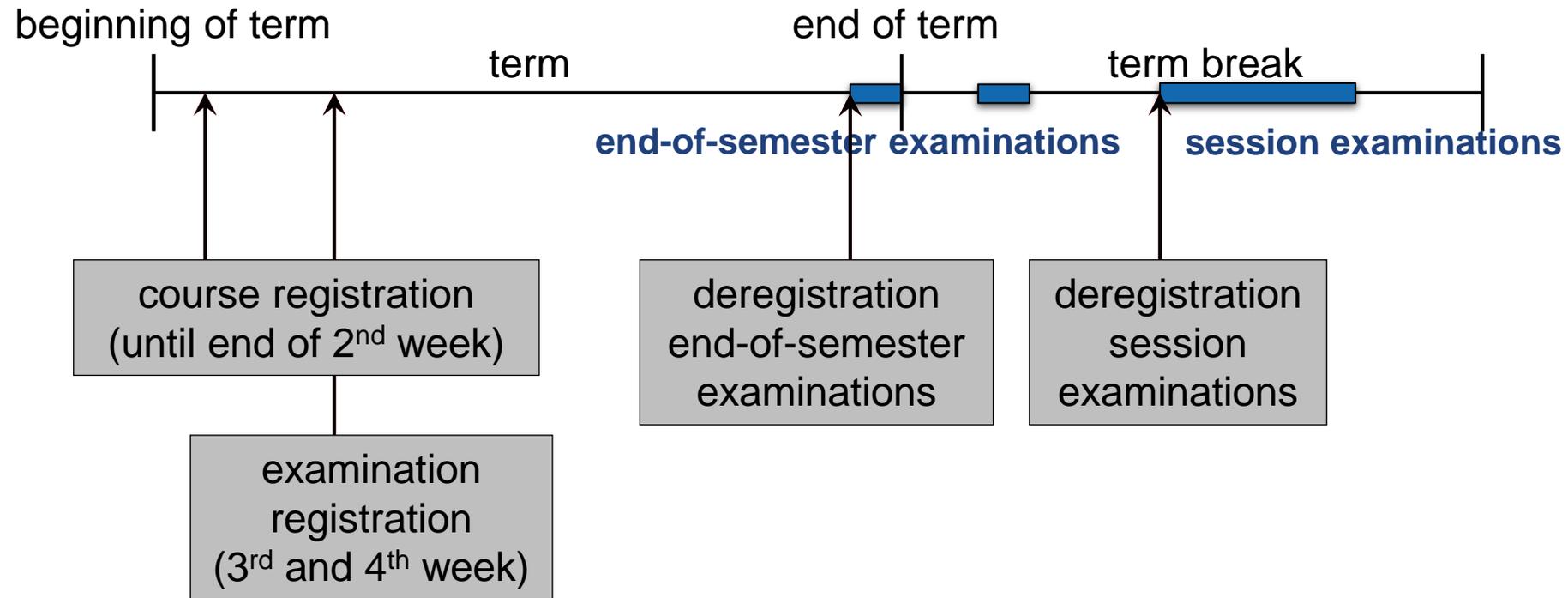
→ 12 October 2025

in case you want to register for the exchange in the spring semester 2026.

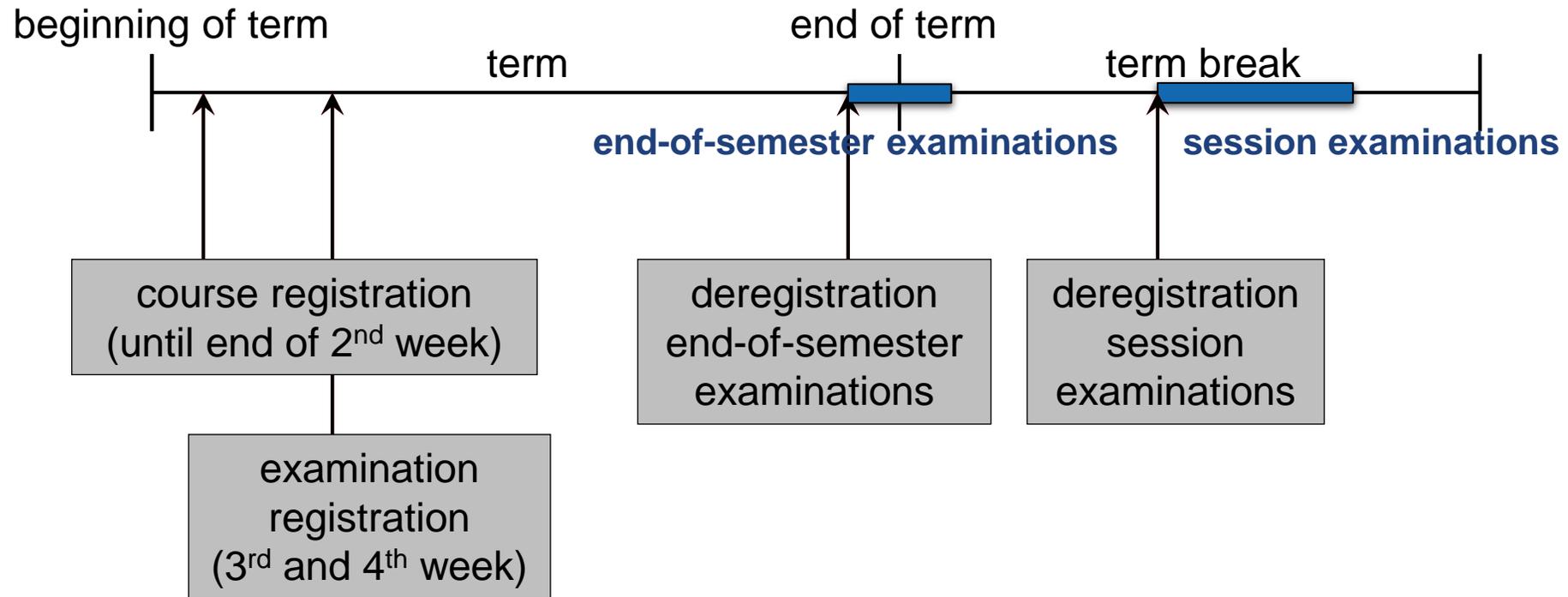


Academic Year

Autumn Semester



Spring Semester



Deadlines

- Important deadlines (course registrations, exam registration and deregistration, etc.) are always announced ahead of time via e-mail to: xxxx@student.ethz.ch
- Semester project and Master's thesis: fixed end date (6 months)
- Make sure you read your e-mails!

Preparing Examinations

- Solve the *exercises* during the semester
- Solve *old examinations* (available from the student body, i.e. VIS)
- *Oral examinations*: Get minutes of former examinations from VIS
- If you have *questions*, ask your fellow students or the assistants

highly, highly, highly recommended
to attend all lectures and exercise sessions

Classes

- **At ETH Zentrum (here):** Classes start a **quarter past** the indicated hour.
- **On Hönggerberg Campus:** depends on exact building course is in! See <https://ethz.ch/students/en/studies/academic-support/course-catalogue/lectures-times.html>
- Also check <https://ethz.ch/students/en/studies/academic-support.html> for general information – including lecture recording links, etc.
- Example (Zentrum): Class stated to take place from 8 to 10 (8–10)
 - start at 08:15
 - have in general a break from 09:00–09:15
 - end at 10:00

This rule does *not* apply to exams, meetings, etc.

Bring your own device (BYOD)



Requirement to have a personal device

- Details at www.ethz.ch/byod
- May be purchased anywhere.
- Projekt Neptun offers devices at special prices for ETH students:

Neptun Wave Fall 2025
1 – 29 September

Bring your own device (BYOD)

Recommended minimum configuration if you start your studies in HS25

Component	Minimum Requirement
Processor	AMD R5, Intel Core i5, Apple M1
Memory	16 GB
Capacity SSD	512 GB SSD
Screensize resolution	Full HD
Battery life	2-hour exam with an additional one-hour reserve running time can be performed in battery mode (see FAQ)
Interfaces	Either: 1x USB-C and 1x USB-A Or: 2x USB-C
Operating system	Licensed, officially supported and current Windows 11 or macOS
WLAN	Yes
Keyboard	Physically available
WebCam	Yes

Warranty period: 2 years, 3 years is recommended.

I would like to use Linux

Linux is a useful alternative for everyday study at ETH Zurich. Each operating system has its own range of supported software, and some lectures require either Linux or Windows-only software; a problem that can be solved either by dual-booting the two operating systems or by using a virtual machine. On Windows, you may also consider to use the Windows Subsystem for Linux (WSL) which is a built-in feature of Windows 11.

Windows To Go, the official USB installation from Microsoft, is not available with Windows 11 and is no longer supported. Windows To Go and unlicensed Windows installations on USB sticks do not meet the minimum configuration requirements.

Some exams at ETH Zurich require the [Safe Exam Browser](#), which cannot be used in a virtual machine and only runs on Windows and macOS. A dual boot setup is recommended for this.

PAKETH



- New academic calendar
- Teaching optimization and workload monitoring
- Linking of course unit (module) / performance assessment
- Harmonization of program regulations

You are probably affected if you do not graduate within 4 semesters.

Project website



All the best for your studies

ETH Cyber Security Survival Guide

Nicola Stocco
15th September, 2025



A little about me

Nicola

- MSc Cyber Security, ETH
 - 5th Semester
 - Minor: Machine Intelligence
- BSc Information Engineering, University of Padua ()
- Hobbies:
 - Hiking
 - Reading
 - Playing the guitar
 - Dancing (???)

*me failing to get used to Swiss weather



...it snowed...in April...

Content

- My MSc
- Surviving ETH
- Thriving at ETH
- Thriving in Zürich
- Final Remarks

My MSc

1st Semester

2nd Semester

3rd Semester

4th Semester

5th Semester

My MSc

Security Engineering

System Security

Network Security

Information Security
Lab

1st Semester

2nd Semester

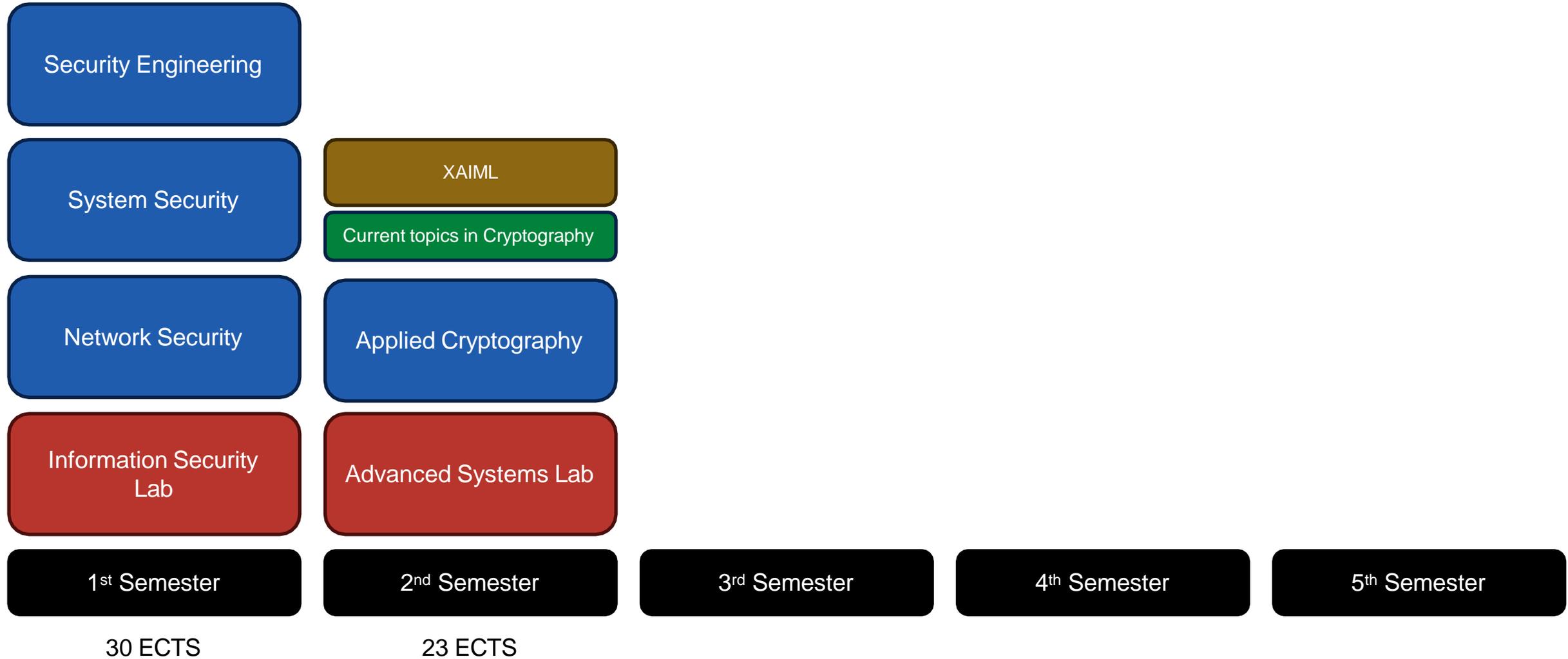
3rd Semester

4th Semester

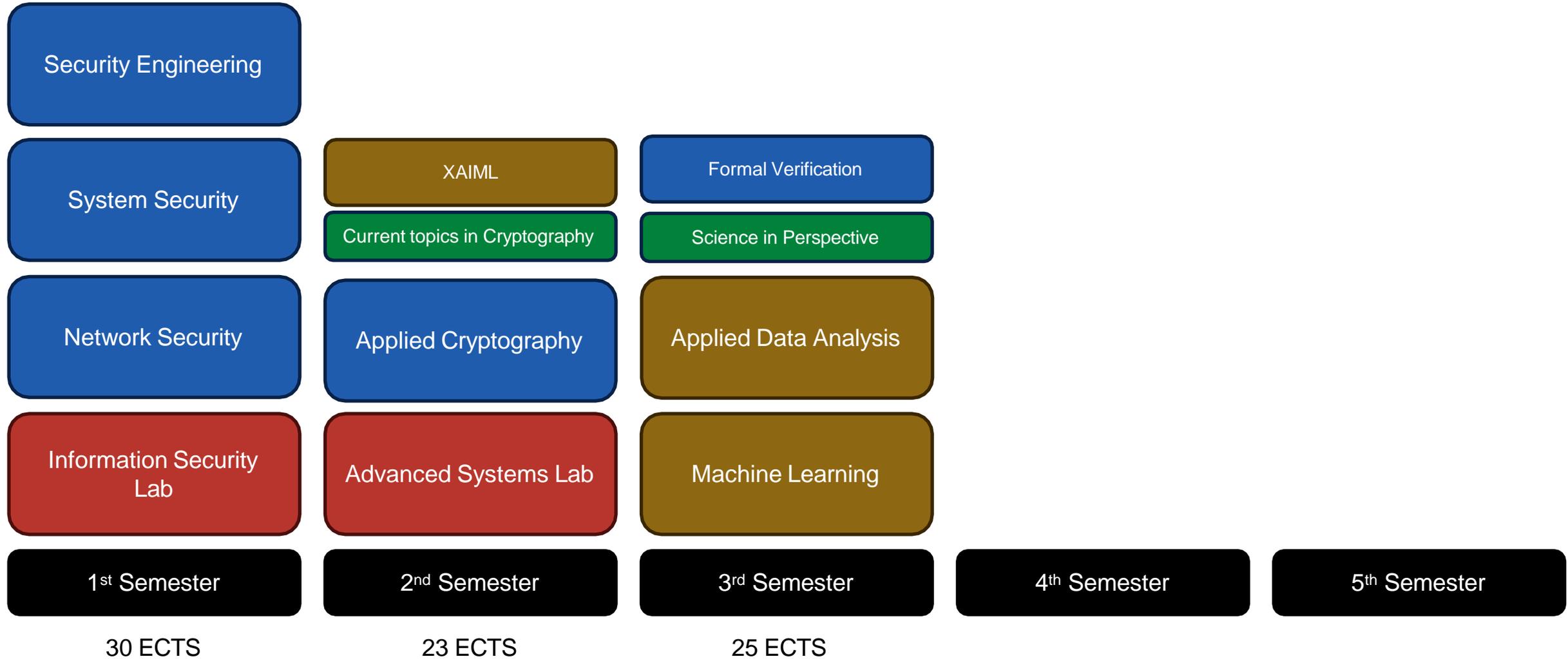
5th Semester

30 ECTS

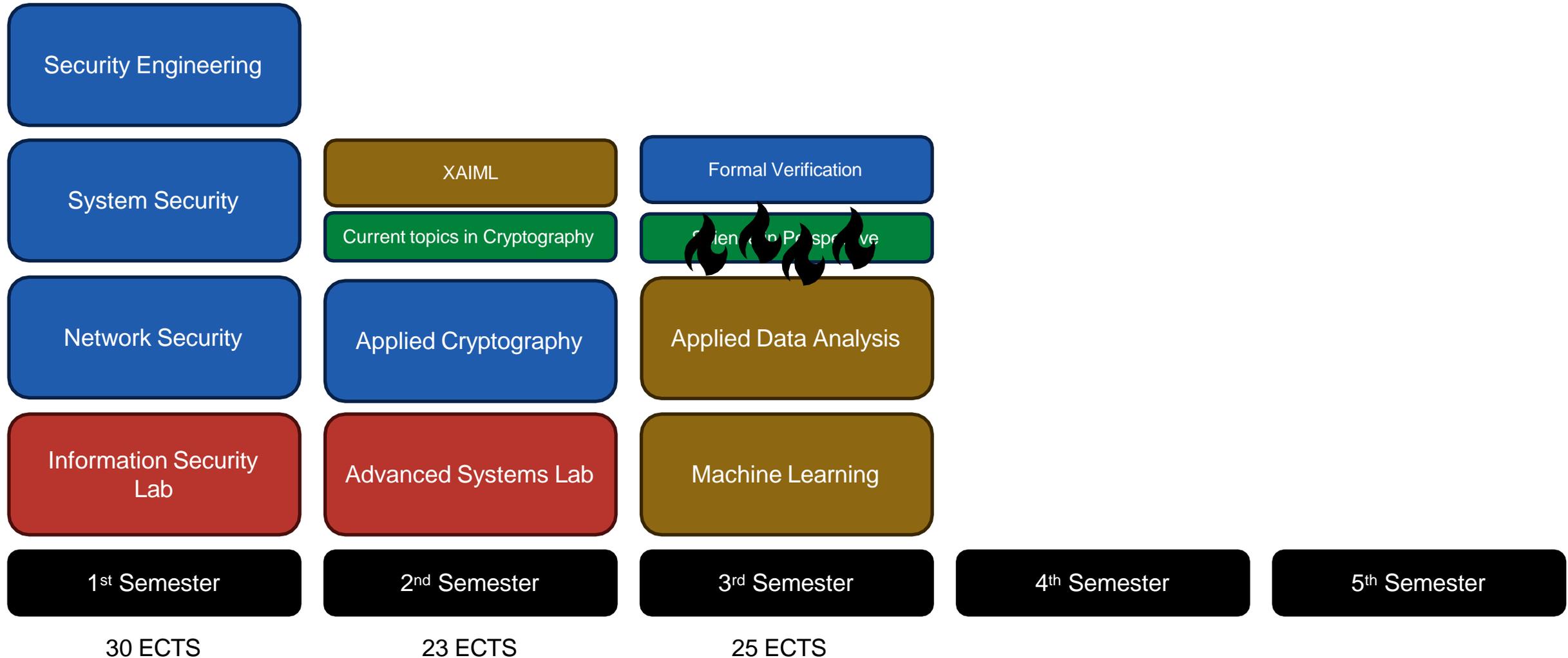
My MSc



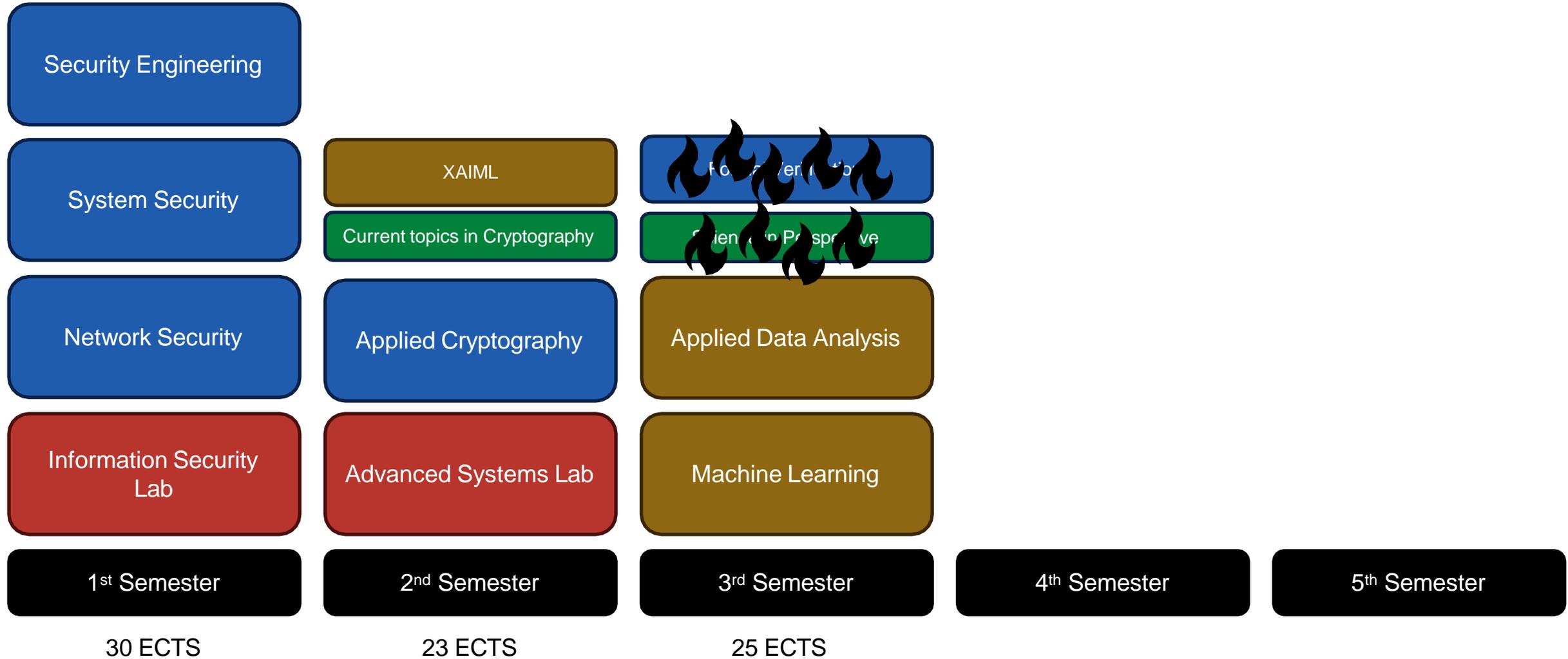
My MSc



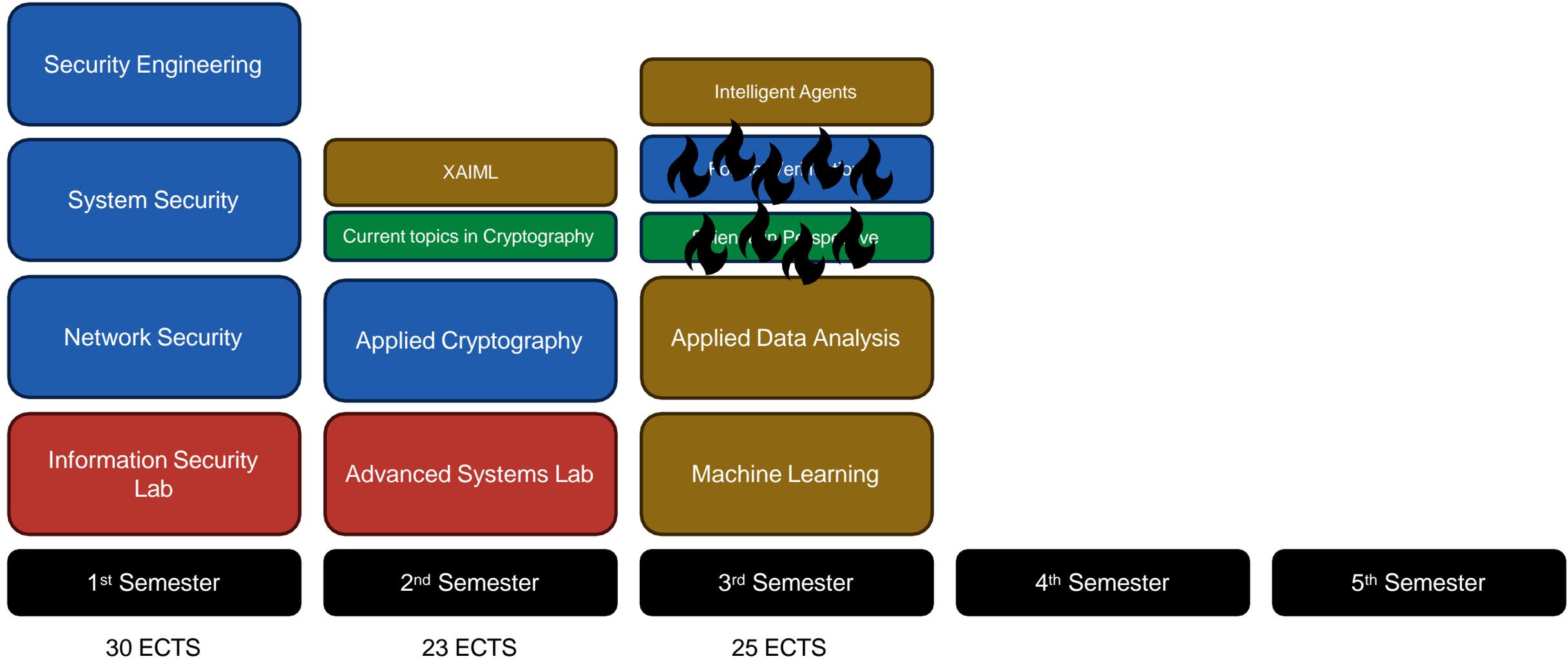
My MSc



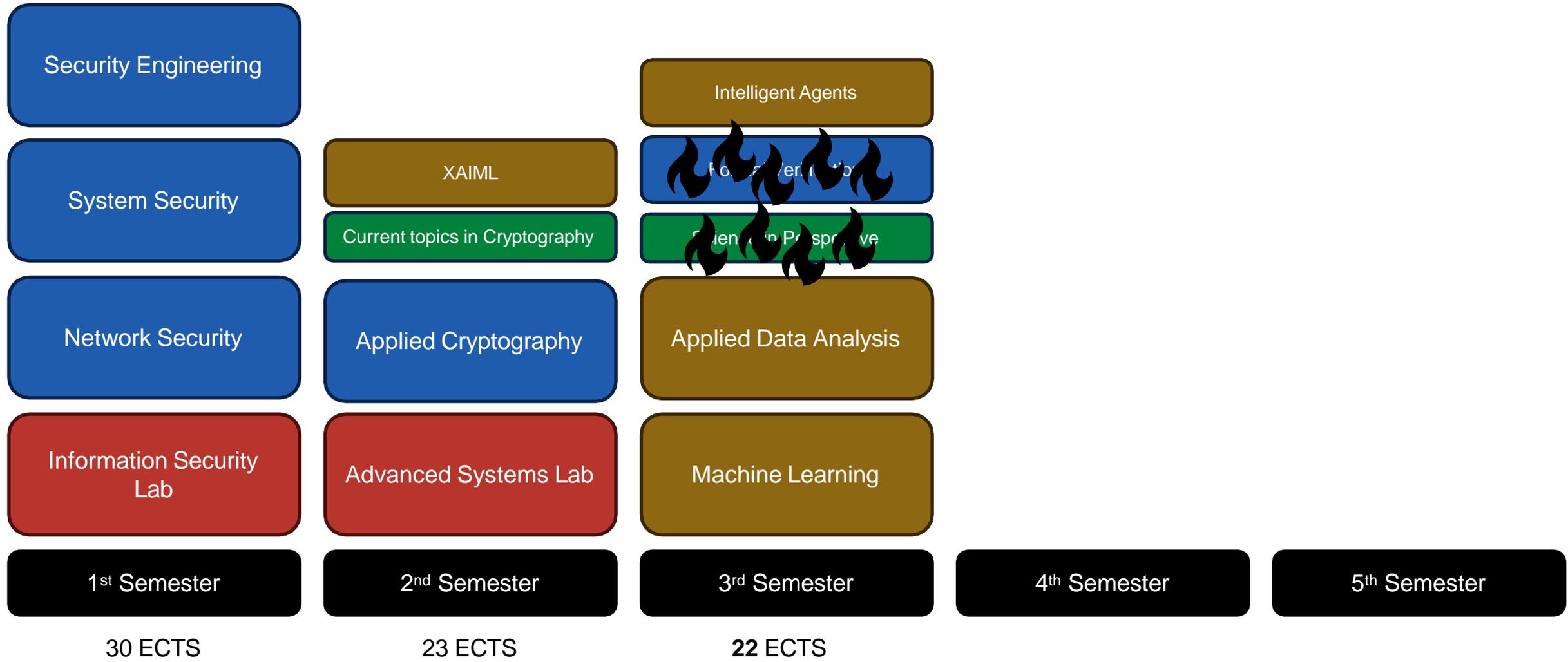
My MSc



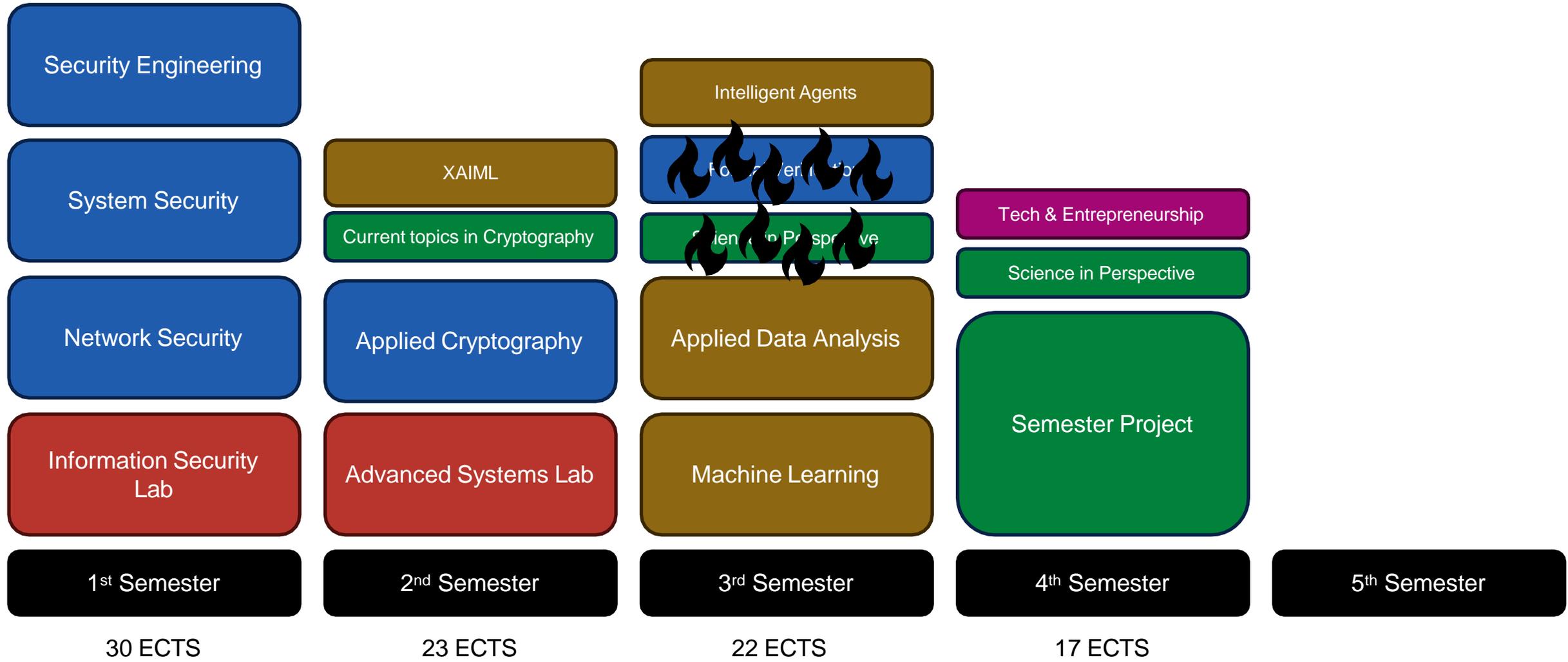
My MSc



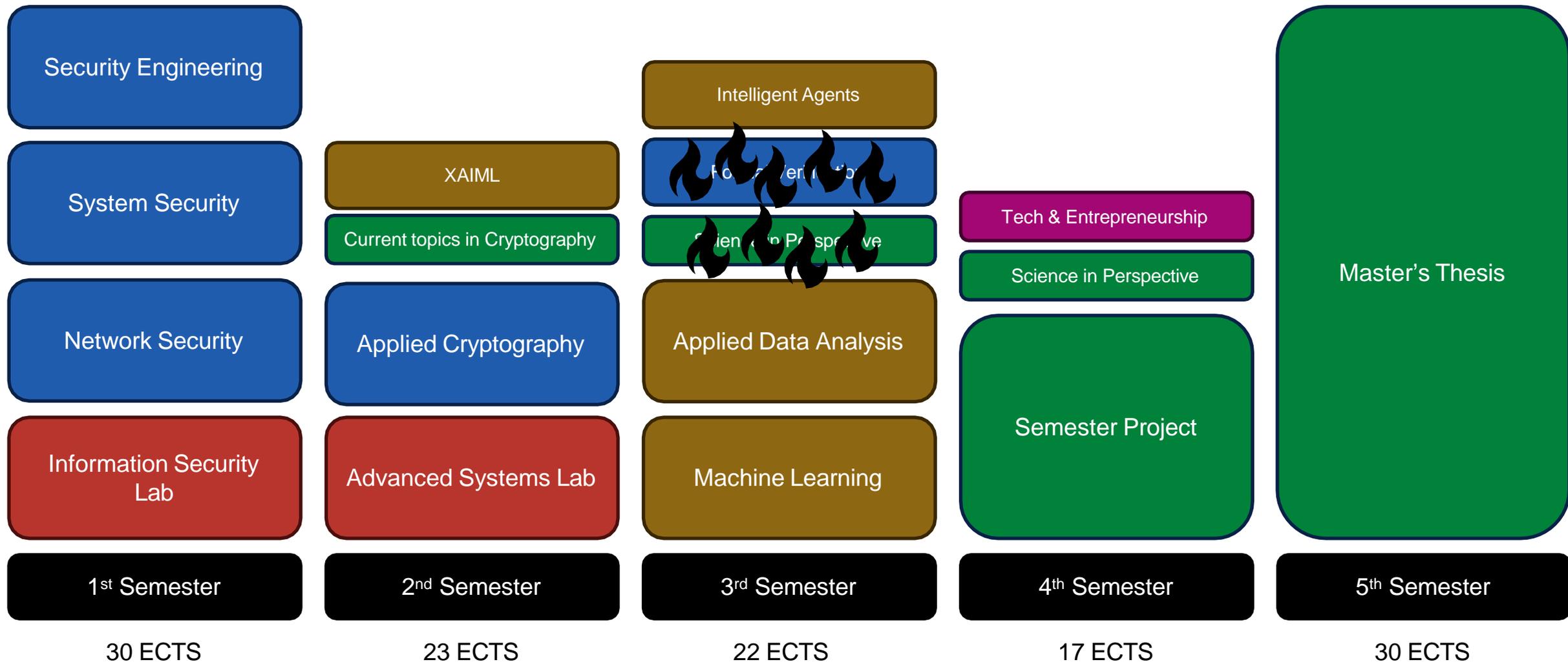
My MSc



My MSc



My MSc



Surviving ETH

Important stuff to remember

- Interfocus courses!!!
 - High workload, mandatory, can only be done at ETH
- Register to more courses than what you'll do
- Be cautious with workload
 - End of semester exams vs Session exams vs Semester performance
 - Plan for the overlap of projects deadlines
- Start early to look for your Semester Project and Master Thesis



Resources

- D-INFK Discord Server
- Github
- Course Review Website
- VIS Exam Collection

Course Review Website



<https://n.ethz.ch/~lteufelbe/coursereview/>

VIS Exam Collection



<https://exams.vis.ethz.ch/>

EPFL Exchange Semester

- Autumn vs Spring
- Accommodation in Lausanne
- Interfocus courses - **must take at ETH**
- Summer Holidays

Enjoy the experience!



Thriving at ETH

ETH offers much more than just
cool courses!

Student Project House



Do you want to build a Start-up? Or just
create something cool?

<https://sph.ethz.ch/>

Student Project House



Do you want to build a Start-up? Or just create something cool?

<https://sph.ethz.ch/>

Why not getting jacked?!

<https://www.asvz.ch/>



ASVZ

Have you ever tried dancing?

<https://www.tanzquotient.org/en/>



Tanzquotient

Sprachenzentrum



Do you fancy learning a language?

<https://www.sprachenzentrum.uzh.ch/en.html>

Have you ever tried dancing?

<https://www.tanzquotient.org/en/>



Tanzquotient

ETH 
**CYBER
GROUP**
STUDENT INITIATIVE

ETH **ENTREPRENEUR CLUB**

v  **eth**

Student associations

v  **s**

SKETHZ



Debate Club Zürich

 **ETHSG**

Flag  **bot**

And many, many more....

What is VIS?



- VIS = Verein der Informatikstudierenden
- In English: Student Association of Computer Science Students
- **Free coffee & beer** (in CAB E32)
- *Lots* of Events (check out the VIS Website)
- Cool events for you: Welcome Weekend, Mentoring Event, VIS4U...



<https://vis.ethz.ch/en/>

Cyber Security Student association



- Broad Cyber Security topics
- Technical and non-technical events
- Great networking opportunities

<http://cybergroup.ch/>



- Capture The Flag
- Very technical meetings
- Very skilled members

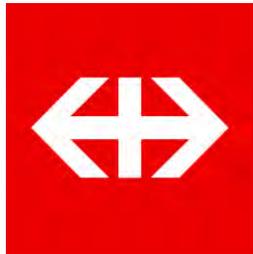
<https://flagbot.ch/>

Thriving in Zürich

Mobile Apps you should download

SBB

Trains & Schedules



ZVV

Public Transport



ETH App

Event Info, News



ASVZ App

Gym & Sports



Mensa App

Daily Restaurant Menu



Too Good to Go

Cheap Surplus food from
Restaurants & Grocery shops



UZH App

Main use: UZH mensa



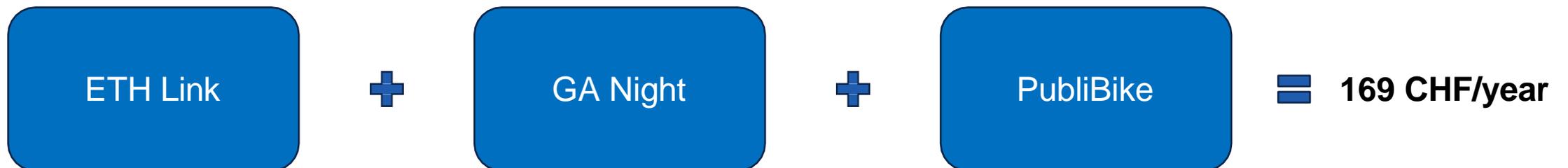
SBB deals

- SBB “Halbtax”
 - 50% on all SBB tickets
 - 120 CHF/year (100 CHF/year from 2nd year onwards)
- SBB “GA Night” (Best Deal)
 - **Free travel in all of Switzerland** between 19.00 and 05.00 (07.00 am on public holidays)
 - 99 CHF/year (must be under 25 on the day of purchase)
- SBB “Friends Pass”
 - Pay 80 CHF and travel a full day in **all of Switzerland** (4 people under 25)
- Monthly Youth GA
 - 260 CHF for 1 month of unlimited travel all throughout Switzerland (under 25)
 - Excellent to visit all the beautiful Swiss cities during the summer break!

Getting Around in Zürich

- Public Transport on the ZVV grid
 - Excellent
- PubliBike (Bike Sharing for regular and E-bikes)
 - Student Deal: 70 CHF/year
- ETH Link (Bus Shuttle between ETH central campus and ETH Hönggerberg every 10-20 minutes)
 - Free for students

Tip: There are many ways to make it cheap given your personal situation! E.g.



Get Cheap/Free Stuff

- Best websites in Switzerland:
 - Ricardo (<https://www.ricardo.ch/de>)
 - Tutti (<https://www.tutti.ch/de>)
- Facebook Marketplace
- Facebook groups
- Telegram groups
- Student dorm when someone moves out
- Randomly on the street :D



Accommodation in Zürich

- Depends a LOT on connections
 - If you are looking for a flat tell your friends about it!
- Popular student accommodations:
 - WOKO
 - JUWO
 - Living Science
 - Student Village
- For questions contact the ETH housing office:
 - <https://www.wohnen.ethz.ch/>
 - Go to their office in Sonneggstrasse 27, 8092 Zürich

The logo for WOKO, featuring the word "WOKO" in a bold, sans-serif font. The letters are a vibrant magenta color.The logo for JUWO, featuring the word "JUWO" in a bold, sans-serif font. The letters are a muted olive green color.

Final Remarks

Final Remarks

- Use this amazing opportunity to its fullest and enjoy the process!
- Opportunities to take academic jobs
 - Teaching Assistant (TA) (apply early)
 - Research Assistant
- Choose the workload that best suits you
 - ~30 ECTS/sem is not always easy to fill
 - >30 ECTS/sem is usually **very** hard
 - 4 sem is the **minimum** time to finish the MSc
- Imposter syndrome is a real thing
 - Everybody feels it at some point
 - Don't compare yourself with others
 - **If you are here it means you deserve to be here**



Have a Great Start at ETH and
in Zürich!



CSNOW - Network of Women in Computer Science ETH

Sophia Boyer and Sarah Kuhn

Zurich, 15.09.2025

Unser Team



Prof. Dr. Julia Vogt



Co-leaders



Student TAs

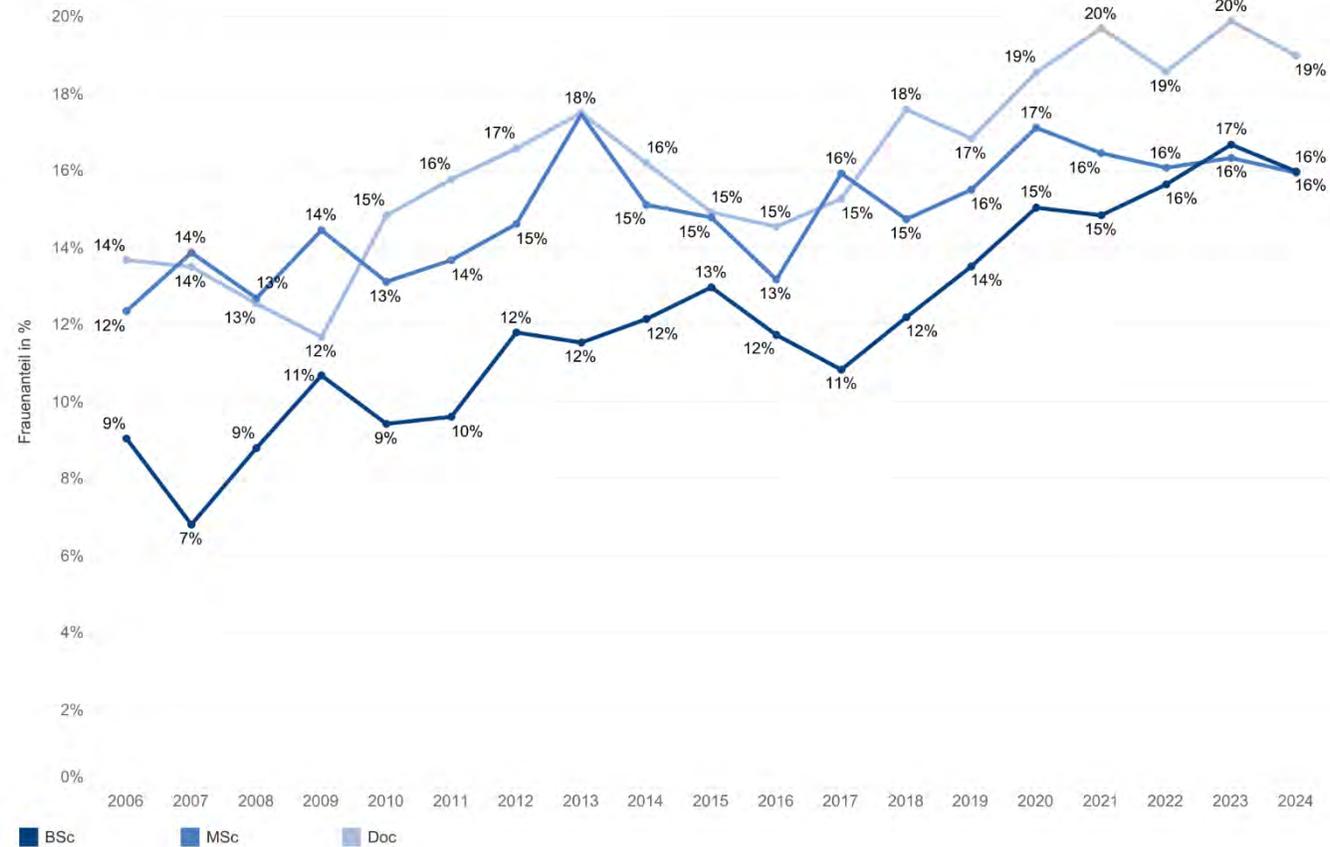
Herausforderungen

Kalenderjahr
Alle

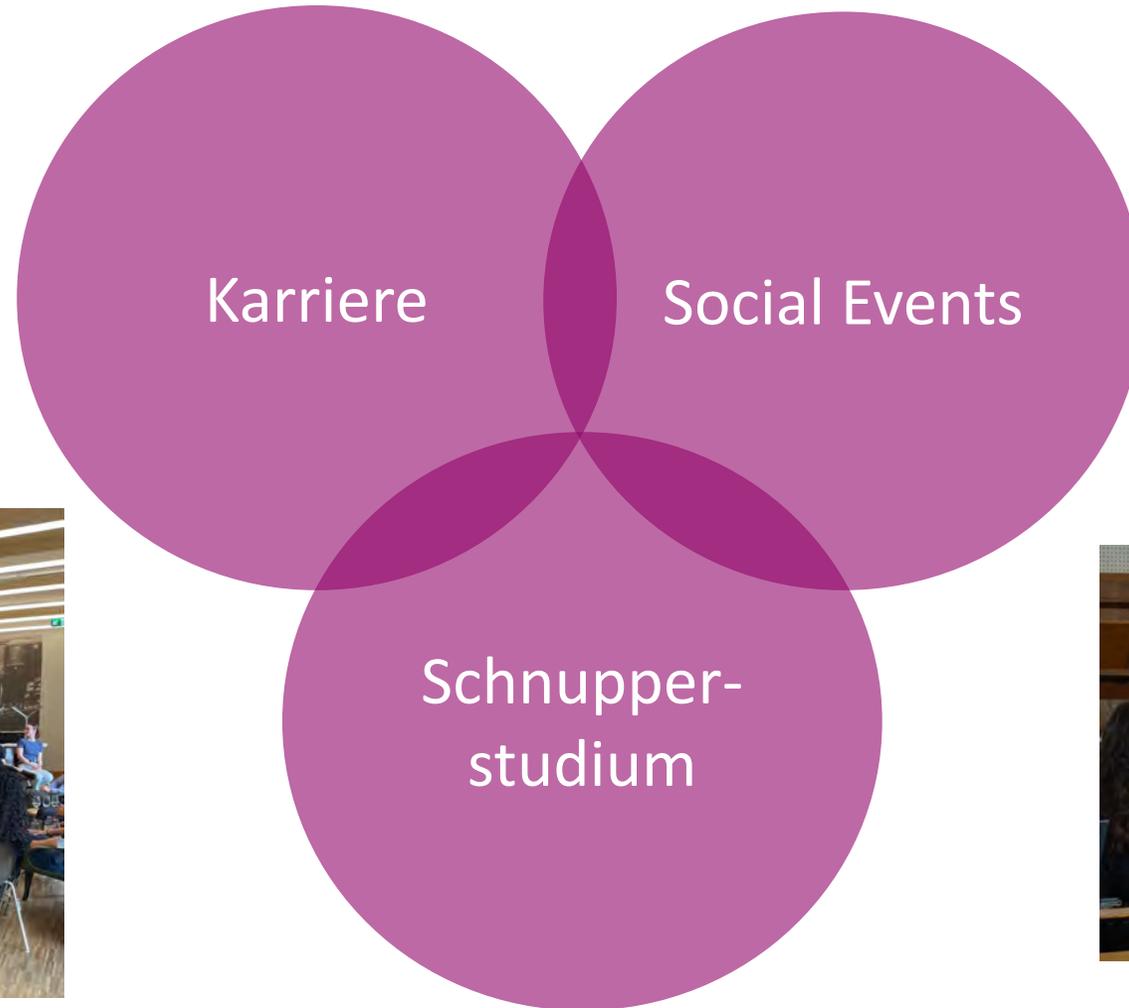
Departement
Informatik (D-INFK)

Akademische Stufe
Mehrere Werte

Frauenanteile



Unsere Events



Karriere

- Firmen-Events
- Career Panels
- Diskussionen mit Professor:innen
- Firmen News in Newsletter



ARE YOU TAKING(OR HAVE TAKEN)
A&W, ALGOLAB, APC?

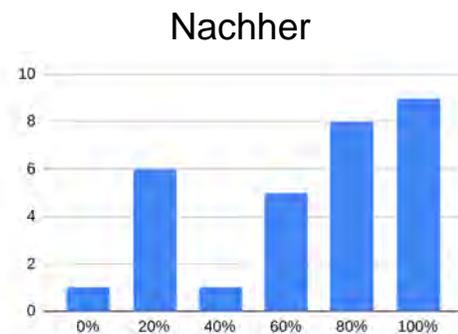
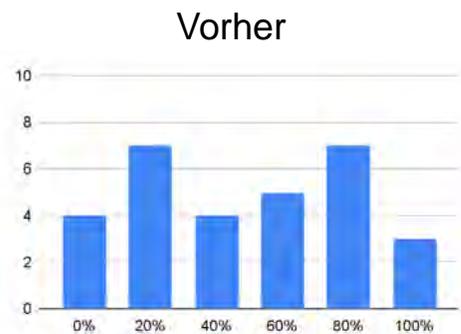
Then come and meet your professor
Angelika Steger over an Apéro!

When? 8. March Wednesday 12:30-2 pm
Where? To be announced



Schnupperstudium: Mehr Frauen im Informatik Studium

- Für Gymnasiastinnen
- 2 mal pro Jahr
- Rund 30 Teilnehmerinnen
- Wahrscheinlichkeit Informatik zu studieren:



Social Events

- Semester-Apéro 2. SW
- Mentoring Event mit VIS 3. SW
- Schlittschuh fahren
- Runclub
- Movie Night
- ...



CSNOW
WOMEN'S MEETUPS MASTERS: Tues, 12.03
BACHELORS: Thurs, 14.03
BQM | 18:00
Come and meet fellow female CS students over free drinks on us!



Future Computing Laboratory



Design Your Own Hardware





CSNOW

Network of Women in Computer Science

Website



Newsletter



Broadcast channel



Social Media





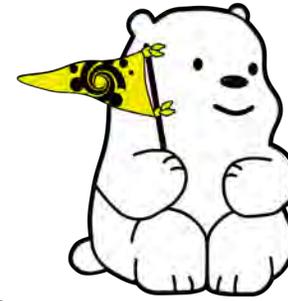
Association of Computer Science Students at ETH

Your Student Association; from Students, for Students

Jonas Blank
President

Who we are

- Students like you (+ Björn, our polar bear mascot!)
- Volunteers, who want to do fun stuff alongside their studies
- Kind people, who will stand up for you!





Events

party, organize, enjoy

VÖS 2025

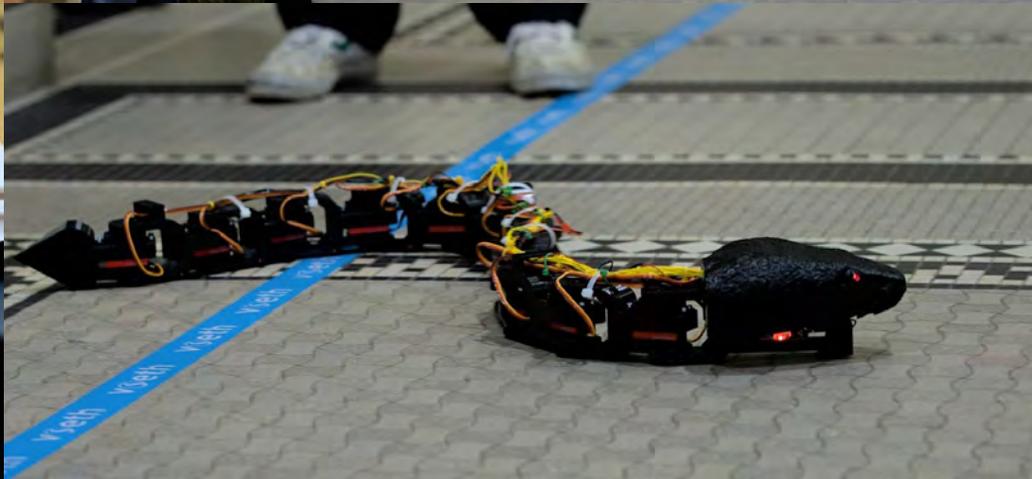
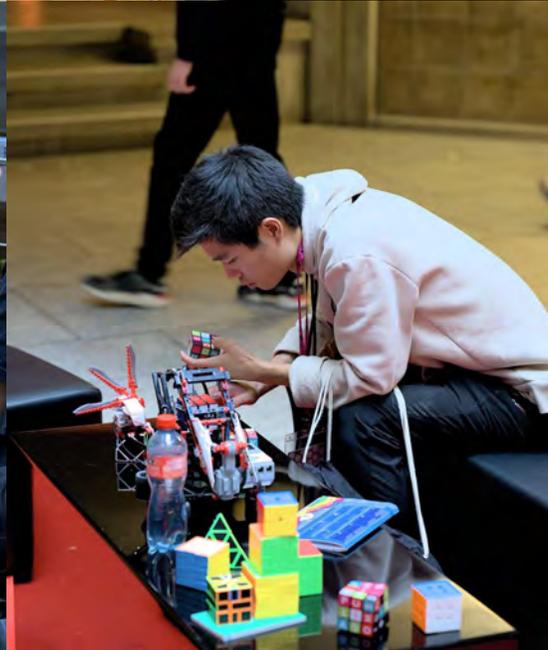
MASTER'S WELCOME WEEKEND

19th to 21st of September
CHF 60.-









Codingweekend
 Engelberg Free! Sign up: vis.ch
 11.04. - 13.04. open to all ETH students

Partnership: Verband der Studierenden an der ETH

vöeth vöeth's

VISTA 2025
 GRILL & DRINKS
 23. MAY | 16:00-00:00

FREE FOR VIS

SIGNUP AT
VISTA.VIS.ETHZ.CH

CIRCLE PARK, FLUGHAFEN

vöeth's vöeth Fachverein Verband der Studierenden an der ETH

HOT-POT DINNER

HOT POT

⚠ ETH ONLY
 VIS: 15 CHF
 Non-VIS: 30 CHF

In groups of four savor the experience of cooking thinly sliced meat and fresh vegetables!

Start

14. March 2025
 CAB F 21
 18:00

Sunday 2
 Hiking Edition
 VIS ONLY

7.06. - 29.06.
 AUSTRIAN ALPS

vöeth Fachverein Verband der Studierenden an der ETH vöeth's

Important Events in HS25

- 19. - 21.09. Master Welcome Weekend
- 22.09. VIS4U
- 25.09. VSETH Erstsemestrigenfest (ESF)
- 29.09. VIS General Assembly (GA)
- 03.10. Bytecrash Party
- 08.10. Dumpling Dinner
- 11.10. VIScon
- 13.10. - 17.10. Heimwoche
- 30.10. Midweek Mexican Madness
- 31.10. - 01.11. Björn CTF
- 28.11. FIGUGEGL
- 19.12. Winterbrunch





Coffee

2x pro Tag!

Common Room – free Coffee and Beer



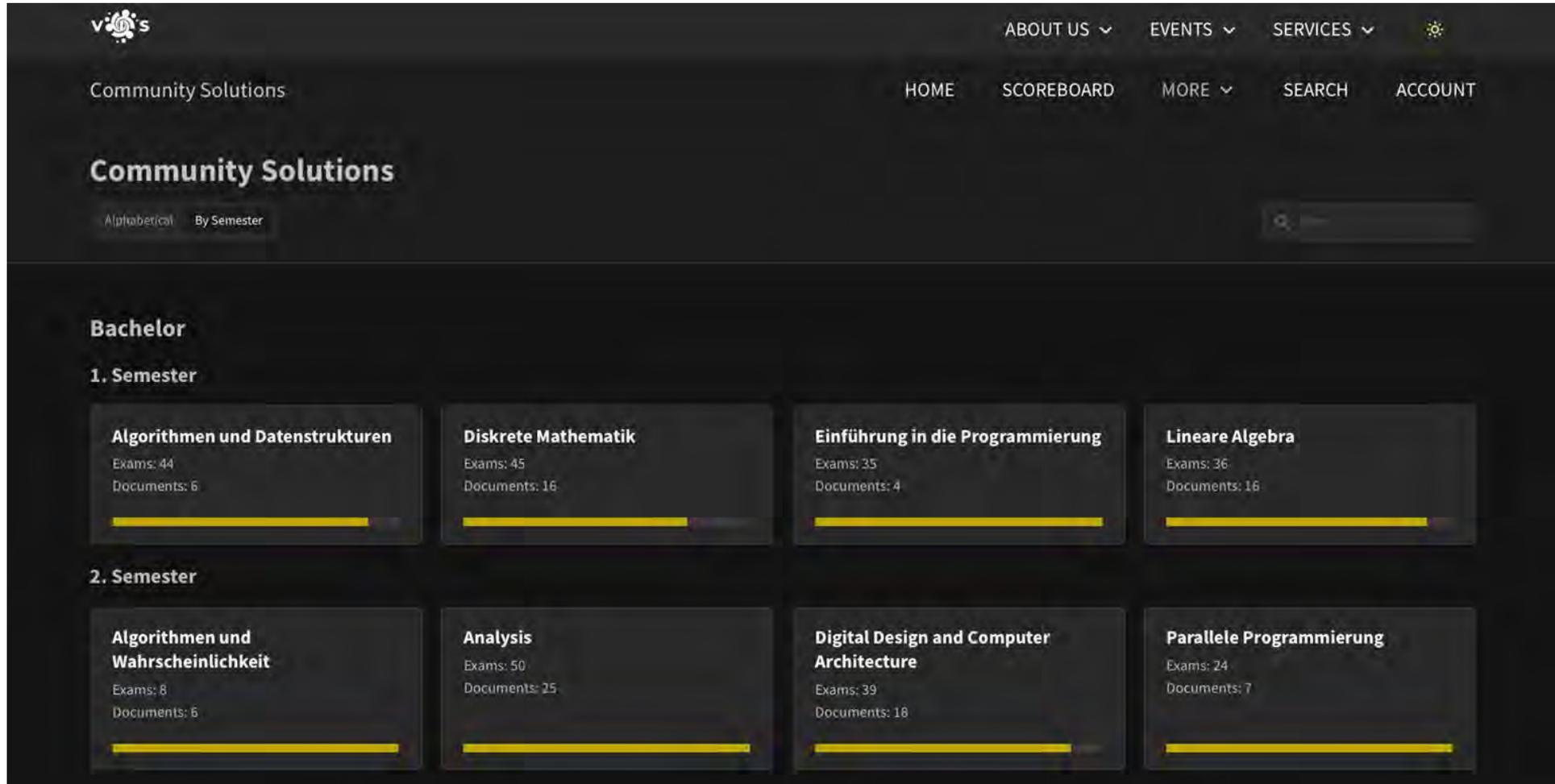


Exam Collection

exams.vis.ethz.ch

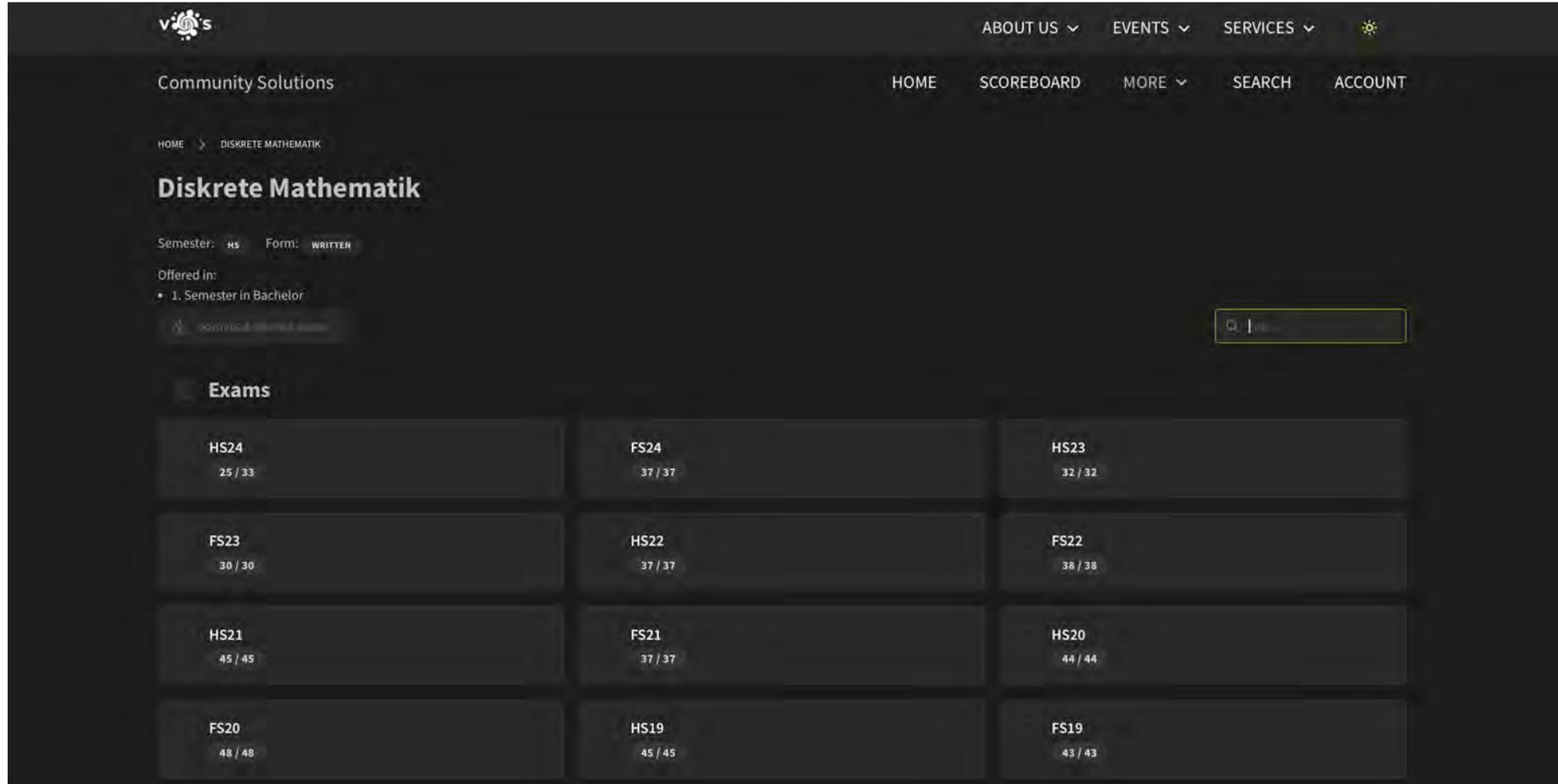






The screenshot shows the 'Community Solutions' website interface. At the top, there is a navigation bar with the VIS logo on the left and menu items: ABOUT US, EVENTS, SERVICES, HOME, SCOREBOARD, MORE, SEARCH, and ACCOUNT. Below the navigation bar, the page title 'Community Solutions' is displayed, followed by sorting options 'Alphabetical' and 'By Semester'. The main content area is divided into two sections: '1. Semester' and '2. Semester'. Each semester section contains four exam cards, each with a title, exam count, document count, and a progress bar.

Semester	Exam Title	Exams	Documents
1. Semester	Algorithmen und Datenstrukturen	44	6
	Diskrete Mathematik	45	16
	Einführung in die Programmierung	35	4
	Lineare Algebra	36	16
2. Semester	Algorithmen und Wahrscheinlichkeit	8	6
	Analysis	50	25
	Digital Design and Computer Architecture	39	18
	Parallele Programmierung	24	7



The screenshot shows the website interface for 'Diskrete Mathematik' exams. The page includes a navigation menu with 'HOME', 'SCOREBOARD', 'MORE', 'SEARCH', and 'ACCOUNT'. The main content area displays the course title 'Diskrete Mathematik' and details such as 'Semester: HS' and 'Form: WRITTEN'. Below this, there is a section titled 'Exams' containing a grid of 12 exam entries, each with a course code and a score out of a total.

Exam Code	Score
HS24	25 / 33
FS24	37 / 37
HS23	32 / 32
FS23	30 / 30
HS22	37 / 37
FS22	38 / 38
HS21	45 / 45
FS21	37 / 37
HS20	44 / 44
FS20	48 / 48
HS19	45 / 45
FS19	43 / 43



Task 2. Number Theory 23 Points

a) Short Questions. Each correct answer gives 2 points. No justification is required. (4 Points)

1.) Compute $R_{11}(9^{2024})$.

Albert Cerfeda @acerfeda · 10 months ago 13

$R_{11}(9^{2024}) = R_{11}(9^{R_{11}(2024)}) = R_{11}(9^4) = R_{11}(-2^4) = R_{11}(16) = 5$

+ Add Comment ... More

Marius Mayer @marmayer · about 1 year ago 9

Answer

Useful information:

- $a^{\varphi(n)} \pmod n = 1$
- $\varphi(11) = 10$
- $a^{\varphi(11)} \pmod{11} = R_{11}(a^{\varphi(11)}) = R_{11}(a^{10}) = 1$
- $9^2 \pmod{11} \equiv 81 \pmod{11} \equiv 6 \pmod{11}$

Therefore,

$R_{11}(9^{2024}) = R_{11}((9^{202})^{10} \cdot 9^4) = R_{11}(9^{R_{11}(2024)}) = \dots$

+ Add Comment ... More

Add Answer Hide Answers



University Politics

HoPoKo



University Politics

- We represent your interests with the department.
- Lecture Feedback
- Close contact to Head of Department and Directors of Studies
- Sounding board for new ideas
- Find help for your problems



Becoming a member and more...



How to become a Member

On your myStudies select the VSETH membership under voluntary contributions.

Voluntary contributions 

Note: If membership is selected, the personal and address data required for member administration and other club activities will be forwarded to the respective club.

	Yes	No
Solidarity fund for foreign students (CHF 5.-)	<input checked="" type="radio"/>	<input type="radio"/>
SOSETH membership (CHF 5.-)	<input type="radio"/>	<input checked="" type="radio"/>
VSETH membership (CHF 10.-; for doctoral students CHF 35.-)	<input checked="" type="radio"/>	<input type="radio"/>

Mentoring Event

**When: 23.09.2025
12:00**

Sign up:



Where: StUZ

veth

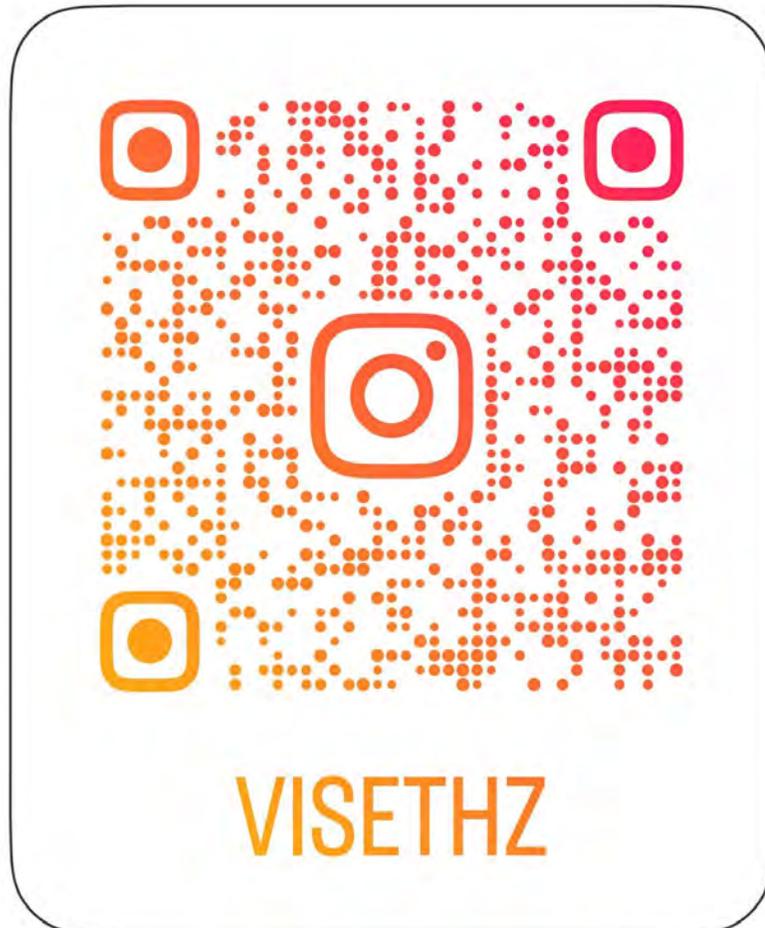
v i s

Participation is not enough? Get involved!

- Come to the General Assembly (it's held in English)
- Join one of our committees
- Help at events
- Join one of the university politics meetings and participate in the discussion

VIS Socials

[instagram.vis.ethz.ch](https://www.instagram.com/vis.ethz.ch)



[whatsapp.vis.ethz.ch](https://www.whatsapp.com/join/group/vis.ethz.ch)

VIS

WhatsApp group



Further Information

- Website: vis.ethz.ch
- Ask the board: vis@vis.ethz.ch
- Ask the MoEB committee: moeb@vis.ethz.ch
- Ask your tour guide



The federal government wants to cut the budget for education. This will result in:

- a **doubling of tuition fees** for Swiss citizens and foreign nationals with Swiss education
- a **quadrupling of fees** for foreign students
- a massive weakening of equal opportunities
- a threat to the quality of education

We put up a fight!

RALLY 1. OCT
14:00 Sechseläutenplatz Zürich
17:00 Bundesplatz Bern

[VSS | UNES | USU]

VSS | Verband der Schweizer Studierendenschaft
UNES | Union des Etudiant-e-s de Suisse
USU | Unione Svizzera degli e delle Universitari-e

vseeth | Verband der Studierenden an der ETH

bezahlbar-studieren.ch



Up next: Campus Tour & BBQ





Thank you!



Fachverein
Verband der
Studierenden
an der ETH

vis@vis.ethz.ch | www.vis.ethz.ch

Verein der Informatikstudierenden an der ETH Zürich

