

# Introductory Event 2024

## Mathematics and Computer Science

— Master —



Prof. Dr. Peter Ochs  
Saarland University  
— 10.10.2024 —



<https://saarland-informatics-campus.de/en/msc-mathematics-and-computer-science/>

## Examination committee:



Prof. Dr.  
Peter Ochs\*  
(head)



Prof. Dr.  
Joachim Weickert\*



Prof. Dr.  
Laurent Bartholdi\*



Prof. Dr.  
Moritz Weber

## Study coordination:



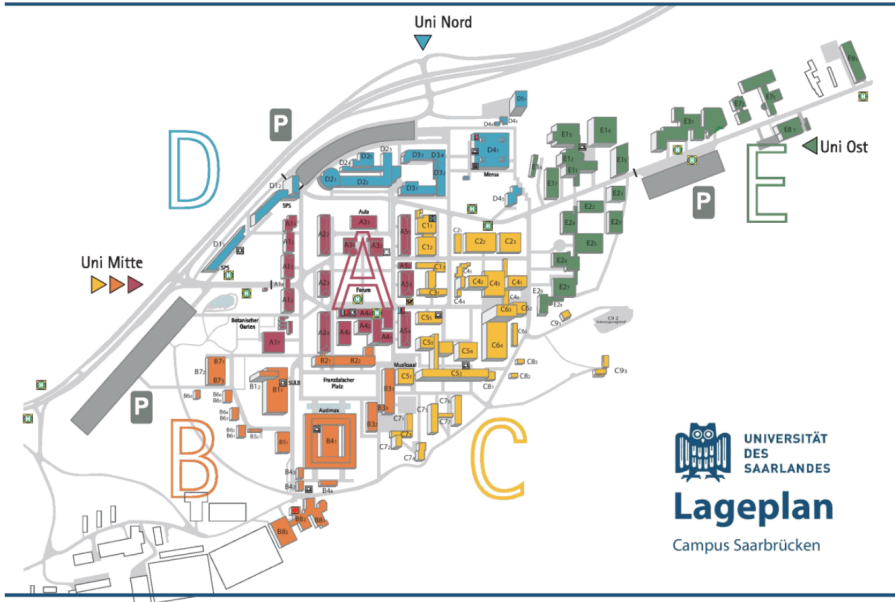
Prof. Dr.  
Peter Ochs



Prof. Dr.  
Michael Bildhauer



Rahel Stoike-Sy  
Barbara Schulz-Brücken



UNIVERSITÄT  
DES  
SAARLANDES

# Lageplan

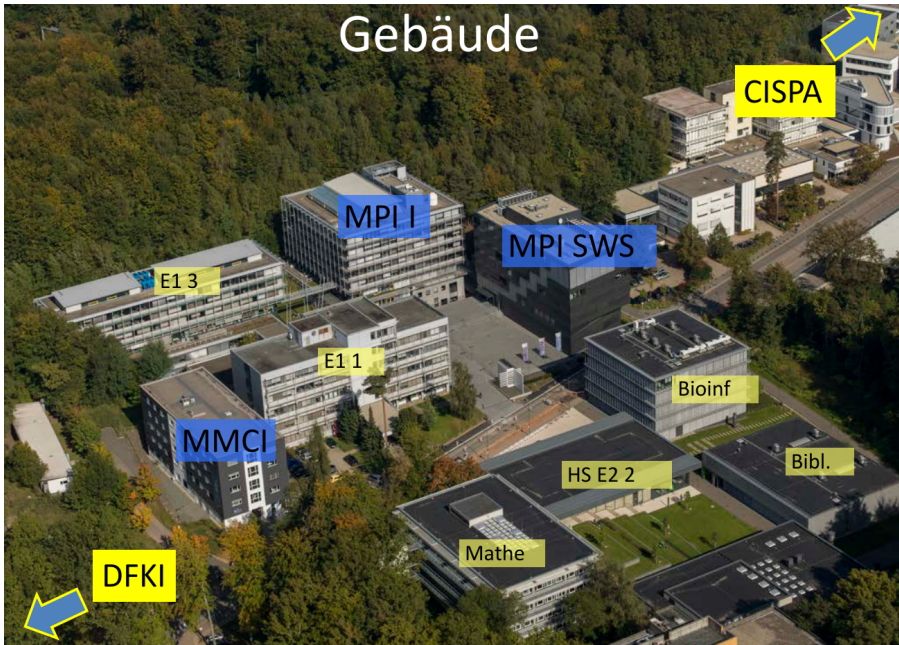
Campus Saarbrücken







# Gebäude



# How to study at Saarland University?

## Types of course:

- ◆ Advanced lectures
- ◆ Core lectures
- ◆ Seminars (Proseminar, Seminar)
- ◆ Projects

## Before/Beginning of the semester:

- ◆ Check out the offered courses and find out what courses you need (according to the curriculum) and what your like (of course!).

<https://www.lsf.uni-saarland.de/>

- ◆ Just attend the first lecture for specific information.

Zum Umschalten zwischen Semestern klicken Sie bitte auf die Semesterangabe in der blauen Menüleiste

## Herzlich willkommen im LSF-POS-Portal der Universität des Saarlandes

Das LSF-POS-Portal ist das Campusmanagement System der Universität des Saarlandes und wird Sie durch Ihr gesamtes Studium begleiten. Hier können Sie sich z.B. einen Überblick über das Vorlesungsverzeichnis verschaffen, sich für Veranstaltungen und Prüfungen anmelden, nach Räumen und Einrichtungen suchen, sowie nach Kontaktdaten von Mitarbeitern der Universität suchen. Falls Sie Probleme oder Fragen zum Portal haben, kontaktieren Sie bitte unseren [Service-Desk](#).








### Wichtiger Hinweis:

Bitte besuchen Sie regelmäßig die Homepage Ihres Studienganges. Hier werden Sie studienangesspezifische Hinweise wie z.B. Fristen und Besonderheiten zur Prüfungs- bzw. Veranstaltungsanmeldung finden.








### Wichtige Anleitungen und Links für Studenten:

Bezeichnung	Link
FAQ zum LSF Portal	<a href="#">HIER</a>
Anleitung zum Belegen einer Veranstaltung für die Bildungswissenschaften	<a href="#">HIER</a>
Übersicht der Studien- und Prüfungsordnungen	<a href="#">HIER</a>
Anleitung zum Erstellen von Stundenplänen	<a href="#">HIER</a>


## Course Overview (WiSe 2024/25)

-  **Vorlesungsverzeichnis**
- ➔  **Mathematics and Computer Science**
- ➔  **Mathematics**
- ➔  **Master**
- ➔  **Mathematik und Informatik / Mathematics and Computer Science**
- ➔  **FR Mathematik / Mathematics**
- ➔  **FR Informatik / Computer Science**

## Course Overview (WiSe 2024/25)









-  Vorlesungsverzeichnis
  - ➔  Mathematics and Computer Science
    - ➔  **Mathematics**
      - ➔  Master
        - ➔  Mathematik und Informatik / **Mathematics and Computer Science**
          - ➔  FR Mathematik / Mathematics
          - ➔  FR Informatik / Computer Science

## Course Overview (WiSe 2024/25)

- ①  Vorlesungsverzeichnis
  - ①  Mathematics and Computer Science
    - ①  Mathematics
      - ①  Master
        - ①  Mathematik und Informatik / Mathematics and Computer Science
          - ①  FR Mathematik / Mathematics
            - ①  StO 2016
              - ①  Core Lectures of Mathematics
              - ①  Advanced Lectures of Mathematics
              - ①  Seminars of Mathematics
              - ①  Master-/ Oberseminare / Master/Research Seminars

## Course Overview (WiSe 2024/25)

-   Vorlesungsverzeichnis
  - ➔   Mathematics and Computer Science
    - ➔   Mathematics
      - ➔   Master
        - ➔   Mathematik und Informatik / Mathematics and Computer Science
          - ➔   FR Informatik / Computer Science
            - ➔   Einführungsveranstaltungen
            - ➔   Core Lectures of Computer Science
            - ➔   Advanced Lectures of Computer Science
            - ➔   Seminars of Computer Science
            - ➔   Mandatory elective courses

- ①  Vorlesungsverzeichnis
  - ①  Mathematics and Computer Science
    - ①  Mathematics
      - ①  Master
        - ①  Mathematik und Informatik / Mathematics and Computer Science
          - ①  FR Mathematik / Mathematics
            - ①  StO 2016
              - ①  Advanced Lectures of Mathematics

Lect.:No.	Lecture
153883	<a href="#">Differential Equations in Image Processing and Computer Vision</a> - Weickert, Mitarbeiter/-Innen des Lehrstuhls
153886	<a href="#">Image Acquisition Methods</a> - Peter
154464	<a href="#">Differential Geometry</a> - Groves, Mitarbeiter/-Innen des Lehrstuhls
154522	<a href="#">Statistical Learning</a> - Bender
154523	<a href="#">Financial Engineering</a> - Bender
154524	<a href="#">Life Insurance Mathematics</a> - Herzberg
154528	<a href="#">Non-smooth Analysis and Optimization in Data Science</a> - Ochs, Mitarbeiter/-Innen des Lehrstuhls
154529	<a href="#">Theorie und Numerik gewöhnlicher Differentialgleichungen</a> - Rjasanow, Mitarbeiter/-Innen des Lehrstuhls



## Examination

### There are written and oral exams:

- ◆ You **must** register for any exam at LSF:  
<https://www.lsf.uni-saarland.de/>
- ◆ Register **in time!!!**
- ◆ Cancel registration **not later** than **1 week** before the exam.

## Study Regulations (Bachelor) – overview

- ◆ **Total 180 credit points (CP)**  $\approx$  30 CP / Semester
- ◆ Basic courses mathematics (compulsory), 63 credits graded:
  - Analysis 1-3 (= Calculus 1-3)
  - Linear Algebra 1-2
  - Numerik 1
  - Stochastik 1
- ◆ Basic courses computer science (compulsory), 33 credits graded:
  - Programming 1-2
  - Theoretical Computer Science
  - Algorithms and Data Structuresand 12 credits graded out of
  - Big Data Engineering (6CP)
  - Concurrent Programming / Nebenläufige Programmierung (6CP)
  - Elements of Machine Learning (6CP)
- ◆ and Softwarepraktikum 9 CP (ungraded)

- ◆ Core Lecture Mathematics 9 CP graded
- ◆ Core Lecture Computer Science 9 CP graded
- ◆ Advanced, core, basic lecture Computer Science 6–9 CP graded
- ◆ Proseminar Math **or** CS (5 CP, graded)
- ◆ Seminar Math **or** CS (7 CP, graded)
- ◆  $\geq 9$  CP ungraded from ...
  - ◆ Math or CS lectures (core or advanced)
  - ◆ Math or CS seminars
  - ◆ Tutor
  - ◆ Language course
  - ◆ Soft Skill Seminar
  - ◆ Industry Internship (needs admission)
  - ◆ Additional Modules (admitted by examination committee)
- ◆ Bachelor-Seminar (6 CP, graded)
- ◆ Bachelor's Thesis (12 CP, graded)

## Workload

### European Credit Transfer and Accumulation System (ECTS):

- ◆ 1 CP is awarded for 30 hours of study.

### Example: 9 CP.

- ◆ 9 CP mean 270 h of study
- ◆ Winter Term: 15 weeks x 6 SWS = 90 h  
≈ 180 h for self-study (prepare, revise lectures, exercises, ...)
- ◆ Including lecture free period: ≈ 12 h per week.

## Example Study Plan Bachelor

Sem.	B A C H E L O R			
1	Programming 1		Analysis 1	Linear Algebra 1
2	Programming 2	Software-praktikum	Analysis 2	Linear Algebra 2
3	Theoretical Computer Science	Algorithms and Data Structures	Analysis 3	Numerics 1
4	z.B. Elements of Machine Learning, Big Data Engineering	Proseminar	Stochastics 1	Core Lecture Mathematics
5	Lecture Informatik (freie Wahl, 9CP)	Core Lecture Computer Science	<i>Advanced Lecture</i>	
6	Bachelor Seminar	Bachelor's Thesis	Seminar	<i>Language Course</i>

## Example Study Plan Master

Sem.	MASTER			
1	Core Lecture Mathematics	Core Lecture Computer Science	Advanced Lecture Computer Science	Seminar Computer Science
2	Core Lecture Mathematics	Core Lecture Computer Science	Advanced Lecture Mathematics	Seminar Mathematics
3	Masterseminar	Tutor	Advanced Lecture Computer Science	Advanced Lecture Mathematics
4	Master's Thesis			

## Contact Information:

### Head of the Examination Committee:

- ◆ Prof. Dr. Peter Ochs `ochs@cs.uni-saarland.de`.

### Study Coordination:

- ◆ Prof. Dr. Michael Bildhauer `bibi@math.uni-sb.de`

### Examination Office:

- ◆ `mathcs@ps-mint.uni-saarland.de`

### Central Student Advisory Service:

- ◆ `studienberatung@uni-saarland.de`