



**Information sheet for 'Mathematics for Computer Scientists 1'**

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**ORGANISATIONAL INFORMATION**

Team

Lecturer: Prof. Dr. Mark Groves (groves@math.uni-sb.de)  
Office hours by arrangement

Assistant: Jens Horn (horn@math.uni-sb.de)  
Office hours by arrangement

Tutorial assistants: Jonas Bosche  
Katharina Bonaventura  
Eva Gressung  
Umangathan Kandasamy  
Vincent Nebel  
Eileen Oberringer  
Mina Paulus  
Vincent Preiß  
Moritz Speicher  
Pascal Thiele

Sessions

Lectures: Wed. 10-12, Fri. 10-12, Günter Hotz lecture theatre (Groves)

Tutorials: Mo. 10-12 (HS IV)	Mi. 12-14 (Zeichensaal)
Mo. 10-12 (Zeichensaal)	Mi. 16-18 (Zeichensaal)
Mo. 12-14 (Zeichensaal)	Do. 8-10 (SR 1, in English)
Mo. 14-16 (Zeichensaal)	Do. 12-14 (Zeichensaal)
Mo. 16-18 (Zeichensaal)	Do. 16-18 (Zeichensaal)
Di. 10-12 (Zeichensaal)	Fr. 12-14 (HS IV)
Di. 12-14 (Zeichensaal)	Fr. 14-16 (Zeichensaal)
Di. 16-18 (Zeichensaal)	

Tutorials (in German) begin in the third week of semester.

## Tutorial

In the second week of semester a tutorial on logic and mathematical proof will be offered in place of the tutorials.

## Web page

The web page of this module is at [www.math-uni-sb.de/ag/groves/lehre/mfi1\\_en.html](http://www.math-uni-sb.de/ag/groves/lehre/mfi1_en.html). Available resources include lecture notes (updated after each lecture), problem sheets and other relevant information.

## Problem sheets

Problem sheets will be distributed electronically on a weekly basis. Solutions are to be deposited in the boxes in the basement of building E2 5 (adjacent to the entrance to HS 2) by Friday at 10am. Submitted work will be corrected and returned in the tutorials. Joint solutions from teams of up to four students will be accepted.

## Examinations

Examinations will take place at the end of this semester and the beginning of next semester (Summer Semester 2019). To qualify for the examination students must

- (i) have missed no more than two tutorials,
- (ii) have attained an overall score of at least 50% on the problem sheets.

Exceptions are only possible upon presentation of a medical certificate.

## **CONTENT**

### Topics

Sets and functions, relations, the natural numbers, mathematical induction, countability, fields, properties of the real numbers, completeness, inequalities, convergence, sequences and series, continuity and differentiability, power series and Taylor formula, special functions, integration