

## Part I

### Organizational Matters

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- ▶ Modul: IN2004
- ▶ Name: “Efficient Algorithms and Data Structures II”  
“Effiziente Algorithmen und Datenstrukturen II”
- ▶ ECTS: 8 Credit points
- ▶ Lectures:
  - ▶ 4 SWS  
Wed 10:15–11:45 (Room 00.13.009A)  
Fri 10:15–11:45 (MS HS3)
- ▶ Webpage:  
<https://www.moodle.tum.de/course/view.php?id=79534>

## The Lecturer

- ▶ Harald Räcke
- ▶ Email: [raecke@in.tum.de](mailto:raecke@in.tum.de)
- ▶ Room: 03.09.044
- ▶ Office hours: (per appointment)

## Tutorials

- ▶ Tutor:
  - ▶ Omar AbdelWanis
  - ▶ [omar.abdelwanis@tum.de](mailto:omar.abdelwanis@tum.de)
  - ▶ per appointment
- ▶ Room: 03.11.018
- ▶ Time: Mon 14:00–16:00

## Assessment

- ▶ In order to pass the module you need to pass an exam.
- ▶ Exam:
  - ▶ 2.5 hours
  - ▶ There are no resources allowed, apart from a hand-written piece of paper (A4).
  - ▶ Answers should be given in English, but German is also accepted.

## Assessment

- ▶ Assignment Sheets:
  - ▶ An assignment sheet is usually made available on Monday on the module webpage.
  - ▶ The first one will be out on Monday, 2 May.

## 1 Contents


Part 1: Linear Programming

Part 2: Approximation Algorithms

## 2 Literatur

-  V. Chvatal:  
*Linear Programming*,  
Freeman, 1983
-  R. Seidel:  
*Skript Optimierung*, 1996
-  D. Bertsimas and J.N. Tsitsiklis:  
*Introduction to Linear Optimization*,  
Athena Scientific, 1997
-  Vijay V. Vazirani:  
*Approximation Algorithms*,  
Springer 2001

 David P. Williamson and David B. Shmoys:  
*The Design of Approximation Algorithms*,  
Cambridge University Press 2011

 G. Ausiello, P. Crescenzi, G. Gambosi, V. Kann, A.  
Marchetti-Spaccamela, and M. Protasi:  
*Complexity and Approximation*,  
Springer, 1999