

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=86234>

The Lecturer

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

Tutorials

- ▶ Tutor:
 - ▶ Omar AbdelWanis
 - ▶ 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, 24 April.

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