

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)

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The Lecturer

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

- ▶ 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 restrictions on allowed materials, but you are not allowed to use a calculator.

There are 10 questions.

Answers should be given in German, but you may use English for technical terms.

Good luck!

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.

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- ▶ **Assignment Sheets:**

- ▶ An assignment sheet is usually made available on Monday on the module webpage.
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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