

Part I

Organizational Matters

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- ▶ Modul: IN2003
 - ▶ Name: “Efficient Algorithms and Data Structures”
“Effiziente Algorithmen und Datenstrukturen”
 - ▶ ECTS: 8 Credit points
 - ▶ Lectures:
 - ▶ 4 SWS
 - Mon 10:30–12:00 (Room Interim2)
 - Fri 10:30–12:00 (Room Interim2)
 - ▶ Webpage: <http://www14.in.tum.de/lehre/2014WS/ea/>

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► **Required knowledge:**

- ▶ IN0001, IN0003
“Introduction to Informatics 1/2”
“Einführung in die Informatik 1/2”
- ▶ IN0007
“Fundamentals of Algorithms and Data Structures”
“Grundlagen: Algorithmen und Datenstrukturen” (GAD)
- ▶ IN0011
“Basic Theoretic Informatics”
“Einführung in die Theoretische Informatik” (THEO)
- ▶ IN0015
“Discrete Structures”
“Diskrete Strukturen” (DS)
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The Lecturer

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

- ▶ Tutors:
 - ▶ Chintan Shah
 - ▶ chintan.shah@tum.de
 - ▶ Room: 03.09.059
 - ▶ Office hours: Wed 11:30–12:30

 - ▶ Dario Frascaria
 - ▶ frascari@in.tum.de
 - ▶ Room: 03.09.035
 - ▶ Office hours: (by appointment)

Tutorials

- ▶ Monday 16-18 (MI 00.08.038)
Chintan
- ▶ Tuesday 14-16 (MI 00.08.038)
Dario
- ▶ Thursday 10-12 (MI 00.08.038)
Dario
- ▶ Friday 12-14 (MI 00.13.009A)
Chintan

Assignment sheets

In order to pass the module you need to pass a 3 hour exam.

Assessment

Assignment Sheets:

- ▶ An assignment sheet is usually made available on Monday on the module webpage.
- ▶ Solutions have to be handed in in the following week before the lecture on Monday.
- ▶ You can hand in your solutions by putting them in the right folder in front of room 03.09.01 9A.
- ▶ Solutions have to be given in English.
- ▶ Solutions will be discussed in the tutorial of the week when the sheet has been handed in, i.e, sheet may not be corrected by this time.
- ▶ You can submit solutions in groups of up to 3 people.

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Assessment

Assignment can be used to improve you grade

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- ▶ If you obtain 50% of the points on the first half **and** 50% on the second half of assignments your grade will improve according to the following function

$$f(x) = \begin{cases} \frac{1}{10} \text{round} \left(10 \left(\frac{\text{round}(3x)-1}{3} \right) \right) & 1 < x \leq 4 \\ x & \text{otw.} \end{cases}$$

- ▶ It will improve by 0.3 or 0.4, respectively.
Examples:

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- ▶ 2.0 → 1.7
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- ▶ Foundations
 - ▶ Machine models
 - ▶ Efficiency measures
 - ▶ Asymptotic notation
 - ▶ Recursion
- ▶ Higher Data Structures
 - ▶ Search trees
 - ▶ Hashing
 - ▶ Priority queues
 - ▶ Union/Find data structures
- ▶ Cuts/Flows
- ▶ Matchings

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