Advanced Algorithmics (6EAP)
courses.cs.ut.ee/2015/algorithmics/fall

Organisation of course
Jaak Vilo
2015 Fall

Short CV
EMBL-EBI

Goals
• To learn the main concepts and techniques of the algorithm design and analysis – the practical skills and theoretical basis
• To be able to choose, design, analyze and compare algorithms and data structures
• To learn to learn, use knowledge, solve, read, write, and present

Contact hours
• Lectures: Jaak Vilo
  – Tue 10-12 (403)
  – Thu 10-12 (403)
  – In total about 23-25 lectures (not 32)

• Weekly practical sessions (homework):
  – group 1. Tue 12-14  L 403 (Mari-Liis Allikivi)
  – group 2. Thu 12-14  L 403 (Irene Teinemaa)

Contacts:
• Jaak Vilo  vilo@ut.ee
• Mari-Liis Allikivi  ml.allikivi@atgmail.com
• Irene Teinemaa  irene.teinemaa@atgmail.com

• ati.algorithmics@lists.ut.ee (lists.ut.ee)
• http://courses.cs.ut.ee/2014/algorithmics/
• JV: room 327
  – Come by (knock on door) or when door open
• Upon agreement

Lecturer
• 1986-1991 U Tartu (diploma)
• 1991-1999 U Helsinki (sequence pattern discovery, PhD)
• 1999-2002 EMBL-EBI, UK (bioinformatics)
• 2002- EGeen -> Quretec  (Biobank and Data Mgmt)
• U Tartu, professor (Bioinformatics) 2007
  – EXCS – Center of Excellence
  – STACC – Software Technologies and Applications Competence Center (Tarkvara TAK)
  – research projects
### Course and Grade

- Lectures
- Homework: **30** + bonus points
- Project work: **20**
- Essay: **10**  
  - All components obligatory
- Exam: **40**

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**Total: 100p**

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### Homework (obligatory)

- **Most essential part** of the course
- **First 20** – “no points”.
- **Thereafter: 1 task = 1 point**
- E.g. 50 HW tasks completed -> 50-20 = 30 points
- **12 weeks of homeworks** (12*5=60)
- **Presentations orally** during the practicals
- Submissions over the web,
- **deadline** – just before the lecture starts (the same day of your practice session)

### Essay (obligatory)

- Will be based on some article
- To be decided during the course
- Reading and writing skills
- A format of the scientific article (abstract, citations, etc)

### Project (obligatory)

- A practical algorithm implementation plus analysis and comparisons of efficiency
- Presentation in the form of a project report in scientific style (poster, report, ...)

### Exam (obligatory, minimum 50%)

- Will be based on questions similar to the homework assignments
- Knowledge of the basic principles of algorithms; broad understanding of the course materials.
6EAP vs expected hours

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<thead>
<tr>
<th></th>
<th>Hours</th>
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<tbody>
<tr>
<td>Lectures</td>
<td>22</td>
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<tr>
<td>Practice sessions</td>
<td>12</td>
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<tr>
<td>Homeworks</td>
<td>60</td>
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<td>Essay</td>
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<td>Project</td>
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<td>Exam preparation</td>
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<td>4</td>
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<td><strong>Total</strong></td>
<td><strong>155</strong></td>
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EAP 6 26 156

- All deadlines – strict

- Plagiarism – not tolerated (will lead to exmatriculation quickly)
  - Any material used should be referenced & cited properly
  - Develop your solutions, your opinions, etc.
  - Study group work should be finalised privately

Questionnaire

- To assess the basic starting point and expectations before the course start

- Please fill in the form to the best of your ability as is during the next 15-20 minutes.