Advanced Algorithmics (6EAP)
courses.cs.ut.ee/2015/algorithms/fall
MTAT.03.238
Organisation of course
Jaak Vilo
2015 Fall
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 Mgmnt)
• U Tartu, professor (Bioinformatics) 2007
  – EXCS – Center of Excellence
  – STACC – Software Technologies and Applications Competence Center (Tarkvara TAK)
  – research projects
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 ät gmail.com
• Irene Teinemaa  irene.teinemaa ät gmail.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
Course and Grade

- Lectures
- Homework 30 + bonus points
- Project work 20
- Essay 10
- Exam 40

All components obligatory

- Total 100p
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** (12w*5=60)
- **Presentations orally** during the practicals
- Submissions over the web,
- **deadline** – just before the lecture starts (the same day of your practice session)
• Obligatory to get a **minimum of 50%** done
  – 30 tasks - 20 = 10 points (out of 30 max)

• Obligatory presence at the practice sessions
  – 70% (8 out of 12 weeks)
  – Every missed (out of 8) – subtract 5 points
    • 6 times present – deduct 10 points from already earned practice session points
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

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
<th>Expected</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>22</td>
<td>1.5</td>
<td>33</td>
</tr>
<tr>
<td>Practice sessions</td>
<td>12</td>
<td>1.5</td>
<td>18</td>
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<tr>
<td>Homeworks</td>
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<td>36</td>
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<td>Essay</td>
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<tr>
<td>Project</td>
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<td>Exam preparation</td>
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<td>8</td>
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<td>Exam</td>
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<td>4</td>
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<tr>
<td><strong>Total</strong></td>
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<td></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.