Advanced Algorithmics (6EAP)  
MTAT.03.238  
https://courses.cs.ut.ee/2016/algorithmics/fall  

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  
  - STACC – Software Technologies and Applications Competence Center (Tarkvara TAK)  
  - research projects

Short CV

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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 (Mari-Liis Allikivi)

Contacts:

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- Mari-Liis Allikivi ml.allikivi at gmail.com

  ati.algorithmics@lists.ut.ee (lists.ut.ee)  
  https://courses.cs.ut.ee/2016/algorithmics/fall

- Office
Course and Grade

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

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• Total 100p

All components obligatory

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Homework (obligatory)

- Most essential part of the course
- 12 weeks of homeworks (12w*5=60)
- First 20 – “no points”.
- Thereafter: 1 task = 1 point
  - E.g. 50 HW tasks completed -> 50-20 = 30 points
- Presentations orally during the practicals
- Submissions over the web,
  - deadline – Every Monday 23:59
  - https://courses.cs.ut.ee/2016/algorithmics/fall/Main/Hwformat

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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)

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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, ...)

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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.

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Homework (obligatory)

- 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

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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)
### 6EAP vs expected hours

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<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
<th>EAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>22</td>
<td>6</td>
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<tr>
<td>Practice sessions</td>
<td>12</td>
<td>26</td>
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<td>Homeworks</td>
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<td>156</td>
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<tr>
<td>Essay</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Project</td>
<td>40</td>
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<td>Exam preparation</td>
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<td><strong>Total</strong></td>
<td><strong>155</strong></td>
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**EAP** 6 (3h/w)

### 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.

### Notes

- 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