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

Research

- Bioinformatics, Data mining, Machine Learning, Visualization, …
- Data management and analysis
- Practical algorithms

Contact hours

- Lectures: Jaak Vilo
  – Wed. 10-12 (405)
  – Thu. 12-14 (405)
– In total about 22-25 lectures (not 32)

- Weekly practical sessions (homework):
  – Wed 14-16 Aivi Kaljuvee (405)
  – Thu 16-18 Aivi Kaljuvee (403)
### Contacts:
- Jaak Vilo – prof. of bioinformatics  vilo@ut.ee
- Aivi Kaljuvee  aivi@ut.ee
- ati.algorithmics@lists.ut.ee
- http://courses.cs.ut.ee/2012/algorithms/
- 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
- Total 100p

### Homework
- Most essential part of the course
- 1 task = 0.5 points
- 30 points = 60 HW tasks completed (12w*5)
- 12-14 weeks of homeworks
- Obligatory to get a minimum 50% points
- Presentations orally during the practicals
- Submissions over the web

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

### Exam
- Will be based on questions similar to the homework assignments
- Knowledge of the basic principles of algorithms
- Creative use of the algorithms
Contact

- Lectures, practicals – active hours
- [http://courses.cs.ut.ee/2012/algorithms](http://courses.cs.ut.ee/2012/algorithms)
- Email (vilo @ ut.ee)

\[
\begin{align*}
6 \text{ EAP} \times 26 \text{ h/EAP} &= 156 \text{ h} \\
(22 \times 2) + (13 \times (2 + 3)) + 14 + 30 + 3 &= 156
\end{align*}
\]

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.