Module Information

Christophe Rhodes

Content

Algorithms

- searching
- sorting
- pathfinding
- matching

Data structures

- pairs and vectors
- linear collections
- trees and graphs
- numbers
- hash tables

Content

General

- analysis
- computational thinking

Practical

- measurement
- testing

Transferrable

- consistent working
- clear expression

Contact Time

- lectures: Monday 12:00–14:00, WB IGLT
- labs (starting 9th/10th October):
  - Tuesday 12:00–14:00, RHB 306/306a
  - Wednesday 10:00–12:00, RHB 306/306a

Extra help

- discussion forum
- study groups
- office hours, 25 St James room 18
    - Thursday 14:00–16:00

Assessment

Coursework: 50%

- quizzes
- labs
- peer assessments
- written work

Exam: 50%

- bookwork
- problem-solving
- unseen questions

Coursework

Quizzes

- up to 20 in the year
- take them more than once
  - best attempt counts
  - enforced 4-hour break between attempts
  - use that break to review, ask questions on the forum, understand what you don't yet understand
- each quiz has a twelve-day open period
  - Monday 09:00–Friday 16:00

Coursework

Labs

- all 18 lab activities compulsory
  - no labs in first week of each term
- some will have assessment
  - upload to automated marking system
  - “instant” mark and feedback
  - resubmission allowed (sometimes)
  - variable deadlines (in-lab or take-home)
- labsheets
  - documents from learn.gold
  - code bundle and other materials over version control

Coursework

Peer assessments

- helping develop skills
  - deployment of code to unknown systems
  - critical assessment
  - written expression of ideas
- giving expected milestones
  - checkpoints before major deadlines

Written work

- understanding of complex material
- ability to communicate understanding

Coursework

Working together

- what does “working together” mean?
- where is the line between good and not-OK?
- why all this coursework anyway?

Exam

Revision materials available next term:

- bookwork *vs* problem-solving
- seen *vs* unseen material
- choice *vs* compulsory

Exam technique helps...

- ... but not as much as knowing the material

Reading material

Textbooks:

- Cormen, Leiserson, Rivest, Shamir, *Introduction to Algorithms* [CLRS]
- Dasgupta, Papadimitriou, Vazirani, *Algorithms* [DPV]
- Drozdek, *Algorithms in C++ | Java*

And also:

- academic papers
- online tutorials
- published source code
- video lectures
- blogs

Ground rules