COMP9020 Lecture 12
Session 1, 2018
Course Review

Course Review

Goal: for you to become a competent computer **scientist**.

Requires an understanding of fundamental concepts:

- number-, set-, relation- and graph theory
- logic and proofs, recursion and induction
- order of growth of functions
- combinatorics and probability

In CS/CE these are used to:

- formalise problem specifications and requirements
- develop abstract solutions (algorithms)
- analyse and prove properties of your programs

Examples:

- The University Course Timetabling Problem ($\rightarrow$ PDF)
- COMP9801 (Extended Design and Analysis of Algorithms)

Course Review

- COMP9024 18s2 – Data Structures and Algorithms

Concept	Used for
logic and proofs	correctness of algorithms
properties of relations	reachability in graphs
graphs	shortest path problems
trees	search trees
$\mathcal{O}$ (big-Oh)	efficiency of algorithms, data structures
alphabets and words	pattern matching algorithms
probability, expectation	randomised algorithms

NB

"universitas" *(Lat.)* = sum of all things, a whole

By acquiring knowledge and enhancing your problem-solving skills, you're preparing yourself for the future

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Assessment Summary

1. your 5 best quizzes — max. marks 20
2. mid-term test — max. marks 20
3. final exam — max. marks 60

NB

*Your overall score for this course will be the **maximum** of*
- *quizzes + mid-term + final*
- *quizzes + 80*(final/60)*
- *mid-term + 80*(final/60)*
- *100*(final/60)*

NB

*To pass the course, your overall score must be 50 or higher **and** your mark for the final exam must be 25 or higher.*

Final Exam

Goal: to check whether you are a competent computer scientist.

Requires you to demonstrate:
- understanding of mathematical concepts
- ability to apply these concepts and explain how they work

Lectures and study of problem sets have built you up to this point.

Instructions & Prac Exams on course webpage ($\rightarrow$ Exams)
- Fun Quiz in today's lecture

Final Exam

Thursday, 14 June, 1:45pm
Randwick Racecourse, Royal Ballroom

- 10 multiple-choice questions plus 5 open questions
- Covers **all** of the contents of this course
- Each multiple-choice question is worth 2.5 marks
  ($10 \times 2.5 = 25$)
  Each open question is worth 7 marks ($5 \times 7 = 35$)
  Total exam marks $= 60$
- **Answer the multiple-choice questions directly in the exam paper.**
- **Write your answers to the open question in an Examination Answer Booklet.**
- Time allowed – 120 minutes + 10 minutes reading time
- *Closed book*. One handwritten or typed A4-sized sheet (double-sided is ok) of your own notes

Revision Strategy

- Re-read lecture slides
- Read the corresponding chapters in the book (R & W)
- **Review/solve problem sets**
- Solve more problems from the book
- Attempt prac exam on course webpage

(Applying mathematical concepts to solve problems is a skill that improves with practice)

Friday Week 13 (1 June) 1–3pm in the lecture theatre:
Course coordinator-facilitated discussion
- Problem sets
- Quiz questions

Requires your active participation!

Supplementary Exam

You can apply formally for special consideration

- a supplementary examination may or may not be granted
- a supplementary examination is typically more difficult than the original examination

If you attend an exam

- you are making a statement that you are "fit and healthy enough"
- it is your only chance to pass (i.e. no second chances)

Students who do not meet the requirements to pass the course but achieve an overall score ≥ 47 can sit the supplementary exam, in which they have to achieve a mark ≥ 50 to pass with a final mark of 50.

Assessment

Assessment is about determining how well you understand the syllabus of this course.

If you can't demonstrate your understanding, you don't pass.

In particular, I can't pass people just because ...

- please, please, ... my family/friends will be ashamed of me
- please, please, ... I tried really hard in this course
- please, please, ... I'll be excluded if I fail COMP9020
- please, please, ... this is my final course to graduate
- etc. etc. etc.

(Failure is a fact of life. For example, my scientific papers or project proposals get rejected sometimes too)

Assessment (cont'd)

Of course, assessment isn't a "one-way street" ...

- I get to assess you in the final exam
- you get to assess me in UNSW's MyExperience Evaluation
    - go to `https://myexperience.unsw.edu.au/`
    - login using zID@ad.unsw.edu.au and your zPass

Response rate (as of last Wednesday): 12.1% 😰

Please fill it out ...

- give me some feedback on how you might like the course to run in the future
- even if that is "Exactly the same. It was perfect this time."

So What Was The Real Point?

The aim was for you to become a better computer scientist

- more confident in your own ability to use formal methods
- with a set of mathematical tools to draw on
- able to choose the right tool and analyse/justify your choices
- ultimately, enjoying solving problems in computer science

T h a t ' s   A l l   F o l k s

**Good Luck with the final quiz, the exam
and with your future computing studies**

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