Introduction to Computer Program Design

COMP 102 2024 S1

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Computer Science

Victoria University of Wellington

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COMP 102

Menu:

- Welcome and Introductions
- What is COMP102 about?
- Course organisation
- Other courses for the BSc and BE
- What to do NOW!

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The COMP 102 Team

Designed by Peter Andreae (Pondy)

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Co-teacher Dr. Zhang Dejian (XMUT)

Programmers Dr. Monique Damito

Markers PhD students

Students You and the people around you

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What is the course about?

- COMP 102 is about learning the language and the ways of thinking required for building the software that underlies our digital world.

- Building software means writing programs: writing the instructions to make a computer behave in the way we want it to.

- In COMP102, you will design and write lots of little programs for lots of tasks.

- Give you a new set of mental tools for addressing problems
  - Different way of thinking from most disciplines
  - Creative,
  - Very precise,
  - Dealing with abstraction and complexity,.

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What kind of course is it?

- About designing and building software.
- Not about *using* computers and applications software.
- Not an “easy credits” course for most people
  - Involves higher level thinking skills than many students expect
- Key factors for success are
  - problem solving, not memory, not guessing
  - logical/abstract thinking,
  - attention to detail
  - being able to think about your own thinking processes
  - not getting behind!!!!
- Takes time! plan on around 12 hours / week
- Practical work is critical

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Background needed for COMP 102

- We assume you have ***used*** a computer
- We do ***NOT*** assume you have done any programming
  - If you haven't, This course is for you!
  - don't worry about, or be intimidated by those who have!
- But some students have!
  - good – it is definitely helpful.
- We try to meet the needs of the full range of students
  - Lots of help available in all the lab sessions (8 hours per week)
  - Assignments have graduated components.
- If you are repeating the course:
  - Do the whole of the assignments, without looking at previous solutions
  - The course will be similar, but there will be changes.

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Essential Info: Lectures and Labs

- Lectures:
  - Mondays (Mingli 5-301), 10:15-11:50
  - Thursdays (Mingli 1-104), 10:15-11:50
- Labs: Two times a week
  - ??
  - starting this week!
- Test:
  - Thursday 10:15-11:50 (Week 8)
- All lectures will be recorded and available on the website.

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Essential Info: Assessment

Final grade based on:

- Attendance 10%
- Marked assignment (Assignment 7) 30%
- Mid-term Test (Week 8) 20%
- Final Exam 40%

pass/fail (p/f) Assignments:

- 6 p/f assignments in total
  - To get the full grade in the marked assignment (assignment 7), all six p/f assignments must be passed
    - Passed 6 pass/fail assignments: Max 100% (30/30)
    - Passed 4 or 5 pass/fail assignments: Max 80% (24/30)
    - Passed 2 or 3 pass/fail assignments: Max 60% (18/30)
    - Passed 1 pass/fail assignments: Max 50% (15/30)
    - Passed 0 pass/fail assignments: Max 40% (12/30)

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Essential Info: Assessment

Pass/Fail (p/f) assignments:

- Consists of
  - Online part:
    - When you attempt an assignment, you get immediate result/feedback.
  - Programming part:
    - This is a bigger assignment, where you implement the solution in BlueJ and submit the code for evaluation.

- Pass Level: To pass you must successfully implement a solution to all parts of this level. All students must pass these.

- Challenge level: This will be additional challenging work that students can do as extra work. These will not be marked, but are available to provide challenges for top-level COMP102 students.

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Essential Info: Assessment

pass/fail (p/f) Assignments:

- The assessment will be marked
  - 3 : Pass (recognition of challenge level)
  - 2 : Pass
  - 1 : Fail (You will be given the second chance)
  - 0 : No attempt on either of each part, late attempt, or an attempt that was not substantial (i.e. too little work)

pass/fail affect:

- If you receive 2 or 3, you have passed (you will not receive specific feedback.)
- If you receive a 1, you will be allowed to redo the assignment once (with potential support from tutors in the lab) and get it regraded in the following lab.
  - If successful, this will change the grade to a 2 grade. (You will not get 3)
- If you receive a 0, the assignment is a fail, and cannot be reattempted.
  - No attempt on either of each part, late attempt, or an attempt that was not substantial (i.e. too little work)

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Essential Info: Accessing course info.

Engineering and Computer Science use their own course websites.
(more open and more flexible than Blackboard)

- Bookmark https://ecs.wgtn.ac.nz/Courses/XMUT102_2024T2
  - all the information about the course
  - all the lecture slides
  - all the assignment handouts and code
  - all the resources

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How do you study effectively?

- It depends on you!
  - different people learn in different ways!
- Working and learning with other people.
- ?

- Ways to fail:
  - procrastinating to the last minute
  - forgetting what assignments are due or when the tests are
  - putting off the lectures until later
  - getting too much help in the assignments
  - not getting help in the assignments when you need it (wasting time going round in circles)
  - trying to do too many different things.
  - only working on your study, and not doing any living and growing

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Academic Integrity

- Central principles of Academic Integrity:
  - If you present something as your work, it should be done by you.
  - If you include something done by someone else, you must make it clear and give them credit.

- How does this work with
  - getting information and help from the web (or other sources)
  - getting help from other students (or other people)
  - getting help from staff or tutors.

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Plagiarism

- You must not present anybody else's work as if it were your own work:
  - Basic principle of academic integrity.
  - applies to work by other students, friends, relatives, the web, books…
  - If you received substantial help, then you must state who helped and how much.
  - If you declare any work from someone else, then it isn't plagiarism!!!
- **In COMP102**:
  - We encourage you to work in pairs on the core & completion parts of assignments BUT
  - You **must** put a comment at the top of your code saying that you worked with ….
  - If you use code from the *lectures* or *labs*, then you do **not** need to declare it;
  - If you use any other code that wasn't yours, then declare it!
- **AI Tools (such as copilot and chatgbt) are *not* permitted in COMP102**:
  - Tests will be on-site and paper-based
    - We teach fundamental concepts necessary to understand harder concept
    - If you use AI at this stage, you will have problems in later courses

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Cheating in the assignments.

The p/f assignments are for learning, not assessing

- Cheating in these assignments is plain stupid!
- You won't learn, so you will probably fail the tests and the marked assignment.

Do not cheat in the marked assessment and the tests!

- You won't learn, so you will probably fail.
- Being caught is serious misconduct – it has serious consequences!.

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Text Books

Text Book

- *Java Foundations* Lewis, DePasquale, Chase
  - Same as for COMP103.
  - [also OK: *Java Software Solutions* (6th ed) Lewis and Loftus]
- Online text book: Think Java

- May be an important resource for some people.
- Lectures will not cover all the details you need!
  - But nor will the textbook!

Resources

- Lecture slides & Assignments: On COMP102 web page.

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Tests and Exams

Mid-term:

- 20%
- Week 8

Exam:

- 40%

Note:

If the mid-term test mark is less than your final exam mark, we will raise the first test mark up to the final exam mark.

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Assessment

To pass the course, you must:

- Get overall mark of **60%** or better.

Final Grade:

- Attendance 10%
- Assignment: 30%
- Terms Test: 20% (mark boosted to final test mark, if better)
  Final Test: 40%

Penalties for late assignments (unless special extension for good reason):

- 0 marks for late assignments,
- But you have a total of 24 "late hours" that you can use to avoid penalties.

If you have extenuating circumstances (e.g. illness, self-isolation) there is a system to apply for extensions.

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