Welcome to COMP1511 - Programming Fundamentals

Welcome to UNSW if this is your first term here

Welcome to Sydney/Australia if you come from elsewhere

We show our respects and acknowledge the Bedegal people who are the traditional custodians of the land on which UNSW’s campus stands.
What are we talking about today?

- **First Hour**
  - Welcome & Introductions
  - How COMP1511 works
    - How we will be teaching you
    - What we expect from you
  - How to get help and the best ways to approach learning Programming
- **Second Hour**
  - What actually are computers?
  - A first look at C
  - Working in Linux
COMP1511 Teaching Team

**Convenor, Lecturer**  Andrew Taylor

**Admin Team**  Tom Kunc, Shrey Somaiya, Thomas Killingback

COMP1511 - Important Sources of Help & Information

- Course website https://cgi.cse.unsw.edu.au/COMP1511/21T2/
  - all course information linked here, including:
    - lecture slides & recordings
    - tut, lab & test questions
    - sample answers for tut, lab & test questions when released
    - useful resources
- COMP1511 does not use Moodle or webcms
- Course Forum https://discourse.cse.unsw.edu.au/21t2/comp1511/
  - you should already have an invitation email
  - ask for help here outside classes
  - you can also help other students here
- Class email mailto:cs1511@cse.unsw.edu.au
  - help with administrative issues inside COMP1511
  - use course forum for help with course topics, coding, bugs, . . .
- UNSW Nucleus Student Hub https://nucleus.unsw.edu.au/en/contact-us
  - help with enrollments
  - help with administrative issues outside COMP1511
About COMP1511

- introductory programming course
- no prerequisites
  - assumes zero previous programming experience
  - We will teach you how to code, with no assumptions of prior knowledge
- learn fundamental programming concepts
- solve problems with C programs
  - Talking to computers . . . in a language that we can both understand
- problem solving - design, testing, debugging
  - How to think when programming
  - How to solve problems with code
Lectures

- two hour sessions
  - Tuesday 09:00 - 11:00
  - Thursday 11:00 - 13:00

- streamed online via YouTube Live (recordings will be available)

- If you have a question, feel free to ask in live chat
  - we have tutors in the chat to help answer
  - please be polite and respectful in chat
    - in COMP1511 no one disrupts anyone else’s education
Lecture Format

Theory - What are we trying to understand?

Demonstrations - Some live coding to show you how some things work

Problem Solving - How do we decide what to code?

Other stuff - Outside of programming, what’s important?

Lecture slides (and other materials) are available from the Course Website: (https://cgi.cse.unsw.edu.au/COMP1511/21T2/)

Lecture recordings will be in the YouTube playlist and linked via the Course Website
A one hour classroom environment

- go further in depth into the topics we’re teaching
- actual practical working of tasks and problems we’ve given you
- learning how to solve problems before you write the code!
- tutorial questions will be available in advance of the tutorials
  - look at the questions beforehand
- tutorials are a good place for interactive learning
  - You’ll have time to discuss and work through problems
  - please talk, discuss, interact!
- online classes use Blackboard Collaborate
  - please turn your camera (pets welcome!)
- face to Face classes are on campus at UNSW
- extra tute questions provided for revision.
- sample answers available on the web after the week’s last tutorial.
Laboratory Sessions

Two hour laboratory sessions that follow immediately from tutorials

- practical coding including working in small groups
- time to have one on one conversations with your tutors
- lab exercises marked automatically and count towards your final marks (10%)
- there are challenge exercises for earning bonus marks
  - not necessary
  - some are (very) hard and will take a lot of time
- lectures, tutorials and labs do not run in week 6
Assignments

- **Larger scale projects**
- Individual work
- These will take you a few weeks and will test how well you can apply the theory you’ve learnt
- There are two Assignments due in Weeks 6 and 10
  - late penalty of 1% per hour (this reduces your maximum possible mark)
- Assignment 1 is worth 15% of your final mark
- Assignment 2 is worth 25% of your final mark
Weekly Programming Tests

- programming tests weeks 3-10
- attempt in time limit of 1 hour
- done in your own time under self-enforced exam conditions.
- immediate reality-check on your progress.
- after hour can keep working
- automarked (with partial marks)
- contribute 10% of final mark.
- any violation of the test conditions, zero for whole component
Exam

**Take-home Open-book exam**

Expected workload of around 3-5 hours total

You’ll be given a series of problems to solve in C

You will also be expected to read some C and show you understand it

There will also be some questions covering programming ideas

**Exam Hurdles**

Parts of the exam are competency hurdles

These questions must be answered correctly to pass the course
Total Assessment

10% Labs
10% Weekly Tests
15% Assignment 1
25% Assignment 2
40% Exam

To pass the course you must:

Score at least 50/100 overall
Solve problems using arrays in the final exam
Solve problems using linked lists in the final exam
Special Consideration

Support for any issues that make it difficult for you to study

https://student.unsw.edu.au/special-consideration

You can apply now if you have existing reasons (or later if something comes up)

A Supplementary exam can be offered to students granted Special Consideration for the exam

Identical in format to the main exam

Centrally timetabled in the week before term 3 (6-10 Sept).
This course and this University allows all students to learn, regardless of background or situation.

**Remember the one rule . . . you will not hinder anyone else’s learning!**

Anything connected to COMP1511, including social media, will follow respectful behaviour.

No discrimination of any kind

No inappropriate behaviour

- No harassment, bullying, aggression or sexual harassment

Full respect for the privacy of others
Plagiarism

Plagiarism is the presentation of someone else’s work or ideas as if they were your own.

Any kind of cheating on your work for this course will incur penalties (see the course outline for details).

Collaboration on individual assessments like Assignments is considered plagiarism.

And really . . . if you don’t spend the time to learn the content, the only person who loses is you.
Collaboration vs Plagiarism

- Discussion of work and algorithms is fine (and encouraged)
- The internet has a lot of resources you should learn to use, just make sure you credit your sources
- No collaboration at all on individual assignments
- Your submissions are entirely your own work
  - Don’t use other people’s code
  - Don’t ask someone else to solve problems for you (even verbally)
  - Don’t provide your code to other people
- At best, you’ll lose the marks for the particular assignment
- At worst, you’ll be asked to leave UNSW
- And even worse . . . you won’t learn what you paid all this money and time to learn
If you want more info . . .

- Reading
  - Course webpage
  - Course forum
- Recorded Lectures (replay YouTube Streams or via Moodle)
- One on One
  - Ask your tutor during lab sessions
  - Help Sessions
- Serious Issues
  - Email cs1511@cse.unsw.edu.au
  - The Nucleus (student hub: nucleus.unsw.edu.au)
  - CSE Help Desk (http://www.cse.unsw.edu.au/~helpdesk/)
Break Time!

Let’s take five minutes in between lecture sections

There’s a fun little app called **Lightbot** (/http://lightbot.com/)

Also available on iOS and Android