

This is an important document containing a lot of information about the course. Please refer to this study guide before emailing your lecturer with course-related inquiries; you may find that your questions are answered here!

## Welcome!

COMPSCI 120 introduces basic mathematical tools and methods needed for computer science. We develop elementary mathematical skills for defining, analysing and reasoning with abstracts objects used in programming. Topics include integer arithmetic, strings and languages, methods of proof (including induction), the study of a few algorithms, and elementary introductions to graphs, trees, counting and probability. You will encounter a collection of topics:

- Integers, primes and divisibility, binary, rationals.
- Basic functions, functions.
- Strings, languages.
- Basic of graphs, trees.
- Direct proofs, proof by cases, proof by contradiction, proof by construction, proof by Induction.
- Basics of combinatorics, basics of probability.

## Lecturers

The teaching team is as follows:

Teaching Team:

Role	Lecturer	Office	Email
lecturer	<b>Padraic Bartlett</b>	<b>303E.232</b>	<b>padraic.bartlett@auckland.ac.nz</b>
lecturer, coordinator	<b>Tanya Gvozdeva</b>	<b>303-467</b>	<b>t.gvozdeva@auckland.ac.nz</b>

Office hours will be announced in class. Please visit your lecturers in their office hours if you have any questions or problems; we want to help you to succeed!

## Timetable — Lectures and Tutorials

Lectures will be held on Mondays, Wednesdays, Thursday and Fridays from 11am-12pm and Tuesday from 11am-12pm and 2-3pm.

The lecture rooms will be posted before lectures start, through Student Services Online: see [www.studentservices.auckland.ac.nz](http://www.studentservices.auckland.ac.nz).

You will also have a tutorial time on Student Services Online; tutorials take place twice a week. Every tutorial is two hours long. Tutorials start in week 1 of the semester on Thursday for the first stream and Friday for the second stream. There will be 10 tutorials: one tutorial on weeks 1,6; two tutorials on weeks 2,3,4,5.

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You must attend the tutorial that you signed up for on Student Services Online. If you are unable to do so due to illness/family emergencies/other extenuating circumstances, email your course coordinator as soon as you can.

## **Expectations & Workload**

COMPSCI 120 is a 6 week, 15 point course. The University of Auckland asks each point of a class to correspond to ten hours of work; therefore, we are expecting the average student in COMPSCI 120 to spend 150 hours overall, or about 20-24 hours a week on the course.

We recommend staying on top of the course material as it is covered, and in particular studying for tests and starting work on your assignments well in advance. An hour of study each day for a week is almost always more efficient than ten hours of study the night before a test.

There is a tremendous amount of help available for you (see Getting Help, below.) Make use of all of it. We want you to succeed!

## **Course Book**

A course book containing the lecture notes for 2019 is available from Canvas page.

## **Prerequisites & Restrictions**

The expected background of a student enrolling in COMPSCI 120 is 13 credits in Mathematics at NCEA Level 3, or equivalent, such as: a pass in MATHS 102, a D or better in Cambridge A2 Mathematics, a C or better in CIE AS Mathematics, or a pass in International Baccalaureate Mathematics.

COMPSCI 120 can not be taken after COMPSCI 225 or MATH 255.

## **DELNA (Diagnostic English Language Needs Assessment)**

All students in their first year at the University of Auckland (no matter what your background) are required to do the Screening component of DELNA. The Screening is a quick health check of your academic English skills, details can be found on the website [www.delna.auckland.ac.nz](http://www.delna.auckland.ac.nz). If you have any questions regarding DELNA, please contact the DELNA office directly or email [delna@auckland.ac.nz](mailto:delna@auckland.ac.nz).

## **Resources**

All announcements made in class will also be made on Canvas (<https://canvas.auckland.ac.nz/>). You can download assignments, lecture notes and access other resources (e.g. class recordings) from Canvas.

Students are strongly encouraged to attend lectures; we have designed our classes to offer numerous opportunities to ask questions and interact with the lecturers and material. Data has consistently shown that the more lectures you attend in person, the higher your final grade. Skipping lectures in favour of watching online recordings is not a good idea.

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## Calculators

No calculators are permitted on the exam or test. Please note that the test and exam are designed so that a calculator is unnecessary; if you can add and multiply single-digit numbers, you will be capable of performing any of the calculations present.

## Getting Help

- Ask questions in lectures and tutorials!
- Visit your lecturers during their office hours.
- Get help and advice from the tutors in the Mathematics Assistance Room (location 302.170.)
- Post questions on Piazza, an online forum you can find on the Canvas page for COMPSCI 120.

All students are asked to discuss any impairment related requirements privately, face to face and/or in written form with the course coordinator, lecturer or tutor.

## Collaborating & Cheating

You are encouraged to discuss problems with one another and to work together, but you must not copy another person's work. All coursework is there to enhance learning, so by cheating, you are also cheating yourself of a learning opportunity. Assignment, tutorial and test marks contribute to the final mark you receive in this course and must reflect your own work, not the work of others. We view cheating on coursework as seriously as cheating in an examination.

Acceptable forms of collaboration are:

- getting help in understanding from staff and tutors;
- discussing assignments and methods of solution with other students.

Unacceptable forms of collaboration ('cheating') are:

- copying all or part of another student's assignment, or allowing someone else to do all or part of your assignment for you;
- allowing another student to copy all or part of your assignment, or doing all or part of an assignment for somebody else.

If you are unsure about whether your collaboration is OK please discuss it with your lecturer. If you think that your collaboration will be viewed as cheating, you are probably correct, but we are more than happy to help clarify edge cases.

In order to educate students on the subject, there is a University online Academic Integrity Course (composed of 5 modules). This course can be found at [www.academicintegrity.auckland.ac.nz](http://www.academicintegrity.auckland.ac.nz) and it is a requirement that all new students complete the course.

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## Harassment & Complaints

Complaints about marking should be taken to your lecturers who are in a position to do something immediately. More general complaints can be taken up by your class representative. You may also approach the Head of Department or the Departmental Manager for Mathematics.

## Assessment

Plussage: Your test score can be replaced by your exam score if your exam score exceeds your test score.

5 Assignments	20%	(4% each)
10 Tutorials	10%	8 best out of 10
Test	20%	
Exam	50%	

**Assignments** will be due on the following days and times. They will be posted on Canvas at least 7 days before they are due:

A1 Friday, Jan. 18th, 4pm

A2 Friday, Jan. 25th, 4pm

A3 Friday, Feb. 1st, 4pm

A4 Friday, Feb. 8th, 4pm

A5 Friday, Feb. 15th, 4pm

Late assignments are typically not able to be accepted. If you are concerned that you may be unable to turn in an assignment due to illness/family matters/other issues, please contact the course coordinator as soon as you can.

The most important part when submitting an assignment is the coversheet. Coversheets must be generated on Canvas. Each coversheet contains a personalised QR-Code with your information, unique to that particular assignment.

Please make sure that your QR-Code is complete, machine readable, not resized and not corrupted. The Student Resource Centre need this QR-code to scan, track and process assignments in a timely manner. Furthermore, each coversheet has a declaration on it which you must date and sign.

Assignments without a coversheet cannot and will not be recorded. Assignments with an outdated, non-Canvas coversheet also cannot be recorded. In addition, you may be penalised for failing to sign and date the declaration.

Late assignments and those in the wrong box will not be marked.

**Tutorials** are weekly. Tutorials start in week 1 on Jan 10th for the first tutorial stream and on Jan 11th for the second tutorial stream. There are two tutorial on weeks 2,3,4,5. Tutorials end in week 6. The last tutorial is on Wednesday Feb. 14th. Every tutorial is 2 points:

- 1 point for showing-up;
- 1 point for participation.

More on points can be found in Tutorial guide.

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In order to be sure to get your tutorial mark, you must attend the tutorial that you signed up for on Student Services Online.

The **Test** is one hour long, and consists of a mix of multiple-choice and free-response questions. It covers everything from the lectures before the test; to help you prepare, we'll use the lecture before this test to revise material.

The **Exam** is two hours long and consists of 15 multi-choice questions and 4 free-answer questions, covering material from the entire course. The exact date of the exam is not available until around the middle of the semester.