AUT UNIVERSITY TE WĀNANGA ARONUI O TAMAKI MAKAU RAU	**SCHOOL OF COMPUTER AND MATHEMATICAL SCIENCES**
	Paper Title: Programming 1
	Paper Code: 405701

POINTS: 15

LEVEL: 5

PREREQUISITE/S: None

COREQUISITE/S: None

STUDENT LEARNING HOURS:
The learning hours are a guide to the total time needed for a student to complete the paper:

Lectures	24
Problem Classes	12
Tutorials	24
Student Directed Learning	90
Total learning hours	**150**

PRESCRIPTOR:
An introduction to the basics of computer programming to equip students for a career in any branch of IT, the sciences, data analysis or engineering. The fundamentals of writing, designing and testing programs will be developed

LEARNING OUTCOMES:
On successful completion of this paper students will be able to:

1. Write syntactically correct program statements
2. Assemble a program from statements that control the order in which tasks are performed
3. Assemble a program from statements that control the representation and processing of data
4. Read programs and predict what they do
5. Design and write programs to solve simple problems
6. Find and fix errors in programs
7. Write programs that interact with the user and the execution environment
8. Use tests to control program quality
9. Apply programming and documentation standards

CONTENT

- Structured programming
- Procedural programming
- Types
- Expressions
- Program correctness
- Testing
- Debugging
- Modularity

LEARNING & TEACHING STRATEGIES

- *Lectures* – lecturers will introduce key concepts for each of the topics listed in the syllabus, using slides, demonstrations and question and answer sessions.
- *Problem classes* – lecturers guide the students through short problems, and lead discussions concerning solutions and extension problems

- *Lab sessions* – are given weekly programming assignments, guided by the completion of online assignments. Lab sessions provide an opportunity to get help from teaching assistants. However, students will generally need to spend their own time completing the work during the following week.
- *Assessment* – is through submission of lab work and controlled programming tasks, where the students work at a computer to write programs and answer online quizzes. There is no paper-based examination.

ASSESSMENT PLAN

Assessment Event	**Weighting %**	**Learning Outcomes**
Controlled Programming Tasks	60%	1-9
Lab Assessments	40%	1-9

Grade Map	Grade Map 1: A+ A A- Pass with Distinction B+ B B- Pass with Merit C+ C C- Pass D Fail
Grade Boundaries	A+ ≥ 90%, A ≥ 85%, A- ≥ 80% B+ ≥ 75%, B ≥ 70%, B- ≥ 65% C+ ≥ 60%, C ≥ 55%, C- ≥ 50% D < 50%

Overall requirement/s to pass the paper: To pass the paper, the student needs
- A minimum mark of 35% for Lab Assessments (combined) AND
- A minimum mark of 35% for Controlled Programming Tasks (combined) AND
- A C- (50%) overall grade.

READINGS

Prescribed Text No Prescribed text.