

Course Title:	Programming Concepts and Techniques
Course Code:	COMP500
Descriptor Start Date:	28/02/2022
Descriptor End Date:	20/11/2022
POINTS:	15.00
LEVEL:	5
PREREQUISITE/S:	None
COREQUISITE/S:	None
RESTRICTION/S:	None

LEARNING HOURS

Hours may include lectures, tutorials, online forums, laboratories. Refer to your timetable and course information in Canvas for detailed information.

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

1. Write, compile, test and debug small-scale programs that adhere to a programming standard.
2. Develop programs featuring input and output that use sequence, selection, iteration, and functions.
3. Implement programs that store and manipulate data using variables and arrays.
4. Implement programs that store and manipulate data using structures and file storage.
5. Demonstrate the ability to use development tools to construct and maintain small-scale programs

Disclaimer: Course descriptors may be amended between teaching periods/semesters

CONTENT

- Variables, types, assignment and expressions.
- Control structures, sequence, selection and iteration.
- Logical operators and relational operators.
- Functions, parameters and return.
- Arrays and structures.
- Characters and strings.
- Console input and output.
- File input and output.
- Testing and debugging.
- Programming standards.
- Development tools.

LEARNING & TEACHING STRATEGIES

- Lecture sessions: Lectures will introduce key concepts using a combination of slides and programming demonstrations.
- Lab Tutorial sessions: Formative exercises are issued per lab session. Teaching assistants engage with students seeking help or further clarification on programming topics. Students will actively participate in completing the assigned lab tutorial exercises. Exercises undertaken during the lab tutorial sessions will flow into student-directed study sessions.

ASSESSMENT PLAN

Assessment Event	Weighting %	Learning Outcomes
Portfolio	25.00	1,2,3,4,5
Mid-semester Lab Practical	25.00	1,2,3,5
Final Lab Practical	50.00	1,2,3,4,5

Grade Map	MAP1
	A+ A A- Pass with Distinction
	B+ B B- Pass with Merit
	C+ C C- Pass
	D Fail

Overall requirement/s to pass the course:

- To pass the course, the student needs
- A minimum of C- (50%) overall grade.

LEARNING RESOURCES

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For further information, contact: Te Ara Auaha - Faculty of Design & Creative Technologies

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Principal Programme: **AK3697, Bachelor of Computer and Information Sciences**

Related Programme/s: **AK3698**
AK1041
AK3001
AK3003
AK3756
AK3706

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