

Course Title:	<b>Object Oriented Programming</b>
Course Code:	<b>COMP503</b>
Descriptor Start Date:	<b>31/01/2025</b>
POINTS:	<b>15.00</b>
LEVEL:	<b>5</b>
PREREQUISITE/S:	<b>None</b>
COREQUISITE/S:	<b>None</b>
RESTRICTION/S:	<b>None</b>

## 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

Introduces the process of program design and implementation using object-oriented programming, with particular emphasis on applications from Computer Science and engineering technology.

## LEARNING OUTCOMES

1. Use object-oriented programs to solve real-world problems.
2. Develop software with a modular design.
3. Use logic and data with classes in coding/programming.
4. Apply appropriate data structures and algorithms in problem solving.
5. Develop strategies for testing and fixing errors in programs.

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

## CONTENT

- Specification and creation of objects in programs
- Access modifiers for data encapsulation
- Debugging and testing techniques
- Program documentation
- Runtime error handling in programs
- Class hierarchies, inheritance, abstract classes and polymorphism
- Object libraries and data structures
- Recursion and recursive data structures
- IO Streams
- Graphical User Interfaces

## LEARNING & TEACHING STRATEGIES

Lectures – lecturers will introduce and emphasise key concepts for each of the topics listed in the syllabus, using slides and demonstrations.

Problem classes (lab tutorials) – students will work online to generate solutions to problems, test and discuss their solutions.

## ASSESSMENT PLAN

Assessment Event	Weighting %	Learning Outcomes
Lab work	20.00	1-5
Mid-semester practical test	30.00	1-5
Final Exam	50.00	1-5

<b>Grade Map</b>	<b>MAP1</b>
	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 this course, students must achieve a minimum overall grade of C-.

## LEARNING RESOURCES

No prescribed text.

**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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