



TEQSA ID PRV:14323
CRICOS Provider Code: 03866C

MIT501 PROGRAMMING

SYDNEY INSTITUTE OF HIGHER EDUCATION > PROGRAMS > MIT501 PROGRAMMING

Unit Outline

Important Update:	Our aim is to provide you with an optimal learning experience, regardless of how this unit is delivered. Teaching will be delivered in line with the most current COVID Safe health guidelines. This may include a mix of online and face-to-face. Please check the learning management system for announcements and updates. Thank you for your flexibility and commitment to studying with Sydney Institute of Higher Education.
Enrolment Modes:	Year 1, Semester 1.
Credit Point(s):	12.5
EFTSL Value:	0.125
Prerequisites:	Nil.
Typical study commitment:	Students will on average spend 10 hours per week over the teaching period undertaking the teaching, learning and assessment activities for this unit.
Scheduled learning activities:	4 timetabled hours per week, 6 personal study hours per week.
Other resource requirements:	Computer Lab, Eclipse IDE (Integrated Development Environment) - open source software.

Unit description

This unit introduces students to the basic skills of programming, algorithm development and problem-solving with no assumed programming knowledge and/or experience. It provides an extensive theoretical and practical foundation for understanding the basic concepts in object-oriented programming (OOP) techniques. Students will be exposed to the various topics of object-oriented programming, design, variables, statements, arrays and algorithms in sorting and searching. The unit covers a design process using multiple design strategies and demonstrates how to build a readable and reusable solution.

Unit learning outcomes (ULO)

On the successful completion of this unit student will be able to:

ULO1	Understand the concepts of object-oriented programming and design.
ULO2	Use algorithms to implement a solution for a problem.
ULO3	Apply proper design strategies to develop a software program.
ULO4	Design and create programs using object-oriented principles in a real world programming environment.
ULO5	Develop accurate documentation so that coding can be re-used.

Topics to be included in the unit

1.	Introduction to Java and Object-oriented Programming
2.	Java Basics & Primitive data types
3.	Branches - Decision Making Logic
4.	Looping - for and Looping - while
5.	Using Arrays
6.	Using Methods
7.	Introduction to OOP
8.	Define Classes and Objects
9.	Class members & Array List
10.	Exceptions and File I/O
11.	Inheritance
12.	Abstract classes & Interfaces

Assessment

Assessment Description	Grading and weighting (% total mark for unit)	Due date
Assessment 1: Class Participation	10%	Weeks 1-12
Assessment 2: Mid-Semester Exam	20%	Mid-semester week
Assessment 3: Applied Project	30%	Week 12
Assessment 4: Final Exam	40%	Final exam week