MANUKAU INSTITUTE OF TECHNOLOGY
Te Whare Takiura o Manukau

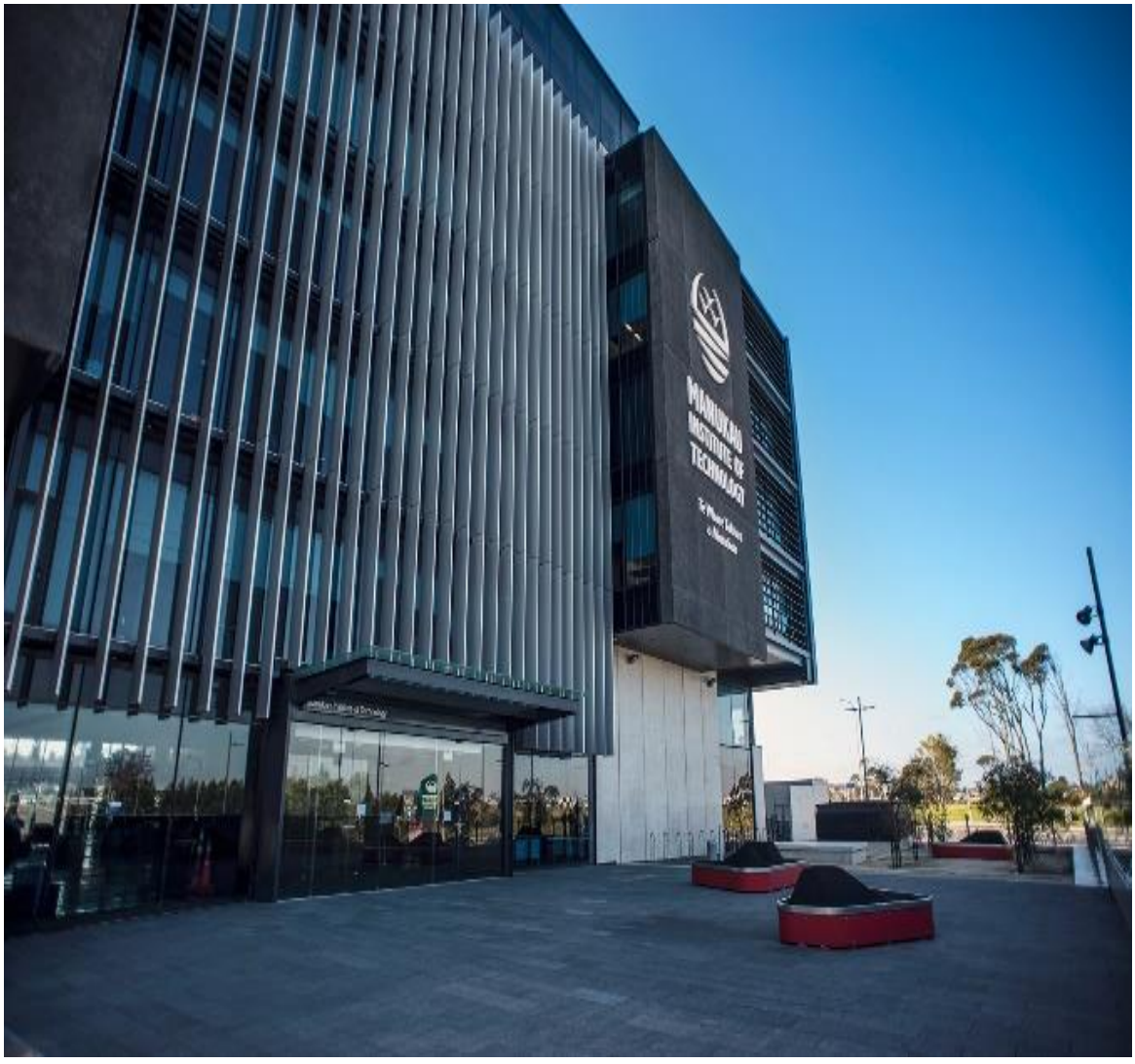
BUSINESS AND INFORMATION TECHNOLOGY

MANUKAU CAMPUS

Te Wāhanga Whakaako Kaipakihi me te Hangarau Mōhiohio

502.522
Object Oriented Programming

Quarter 1 2018 - Course Outline



Academic Staff and Class Details

Name: ***Garry Singh***

Email: ***garry.singh@manukau.ac.nz***

Phone: ***(09) 975 4717***

Office Location: ***Academic Office-level 3***

Class Sessions:

Lecture / Tutorial / Workshop: Day ***Tuesday*** Time ***11:00am*** Room ***205***

Lecture / Tutorial / Workshop: Day ***Wednesday*** Time ***1:00pm*** Room ***315***

Lecture / Tutorial / Workshop: Day ***Thursday*** Time ***10:00am*** Room ***205***

Manukau Campus Information Desk:

Floor 2, 8.30am to 5.00pm, Monday to Friday
Programme Administrator: Parizad Dumasia, 975 4617
parizad.dumasia@manukau.ac.nz

COURSE PURPOSE

To understand and code software programs using object-oriented principles. Students are required to have basic programming and problem solving skills before starting this course. By the end of this course they are expected to code object-oriented software solutions using a well-known object oriented programming language.

LEARNING OUTCOMES (LOs)

LO1: *Understand the concepts and underlying principles of Object-Oriented Programming***.**

LO2: *Apply an Object-Oriented programming language.*

LO3: *Code Object-Oriented software solutions for small systems involving multiple objects.*

LO4: *Correct, test and debug Object-Oriented programs.*

LEARNING TIME

The total learning hours for this course are 150 hours (10 hours per credit).

For this course, it is expected that your learning time will be apportioned as follows:

In-class hours (including lectures, tutorials, seminars and workshops) = ***64 hours***

Online Canvas or other LMS activities including Activity Based Learning = ***32 hours***

Independent reading and research = ***16 hours***

Collaborative / Group activities and discussion outside of class times = ***14 hours***

Graded Assessment activities (e.g., researching, analysis & writing) = ***20 hours for the team assignment***

Ungraded Assessment activities (e.g., formative quizzes) = ***4 hours***

CANVAS LEARNING MANAGEMENT SYSTEM

Canvas is MIT's online teaching and learning tool. It is available to you 24/7 and you will need to check it regularly for updates on your course information, assessments, course content, and to receive messages. Any mandatory activities on Canvas will be explained to you by your lecturer. You can access Canvas from your own device and any computer on campus for which you have a valid log-on by logging in at https://canvas.manukau.ac.nz

COURSE MARKS

All course marks are available online via the Learner Portal https://ebs4Portal-live.manukau.ac.nz . If you have any queries about course work marks you should discuss these with your lecturer. All final grades will be published via the Learner Portal

online only within 10 working days from the course end date.

In many courses, marks for individual assessments are also made available via Canvas once marked. Please note that these marks are provisional only and as such are only intended to give you guidance on your progress. The Learner Portal is the only official source for the final marks and grades you are awarded for a course.

ASSESSMENT STRUCTURE

Assessment Type	Learning Outcome Assessed	Due date & submission method	Weighting
Test 1	LO 1, 2	Wednesday, week 4	20%
Project	LO 2, 3, 4	Wednesday, week 8	40%
Test 2	LO 1, 2, 3, 4	Wednesday, week 7	40%

To pass this course you must achieve a total combined mark of (50%)

Further details concerning the above assessments will be provided via Canvas at an appropriate time. It is your responsibility as a student to monitor Canvas for assessment related announcements and documents.

It is strongly recommended that you keep a copy of all assessments that you submit, together with evidence of when it was submitted and how.

International Students

International students studying or intending to study at MIT have dedicated support staff to assist with the applications' process, student visas/permits issuing and renewal, medical and travel insurance claims, accommodation, pastoral care, and day to day study issues. For more information go to:
https://www.manukau.ac.nz/international-students

502.522 Object Oriented Programming
COURSE SCHEDULE: QUARTER 1

Week	Date	Topics	Activities, Readings, & Assessment Tasks
1	19-Feb	Introduction and Course Outline Canvas and email **Class & Objects** • Introduction to class and object • Variable and data types • Object members • Methods introduction • Getter and setter methods	Lecture Discussion Exercises **Module 1-Week 1 on Canvas**
2	26-Feb	**Encapsulation & Collection** • Reference Data Type • Access specifier • Array vs ArrayList • Hashset	Lecture Discussion Exercises **Module 2-Week 2 on Canvas**
3	5-Mar	**Method & Constructor Overloading:** • Method Overloading • Constructor Overloading **Class Relationship:** • Implement one to one association • Implement one to many association	Lecture Discussion Exercises **Module 3-Week 3 on Canvas**
4	12-Mar	**Classes Relationship- cont.:** • Implement one to many and many to many association • Implement Aggregation • Implement Composition Test 1	Lecture Discussion Exercises **Module 4-Week 4 on Canvas** **Test 1**
5	19-Mar	**Inheritance & Abstract Class:** • Inheritance Concept and implementation • Protected members and constructors chain in inheritance • Introduction to abstract class	Lecture Discussion Exercises **Module 5-Week 5 on Canvas**
6	26-Mar	**Method Overriding & interface Polymorphism:** • Polymorphism • Method overriding • interface	Lecture Discussion Exercises **Module 6 -Week 6 on Canvas**
7	2-Apr	**Unit Testing:** • Design unit test cases • Run test cases(Pass/fail) Test 2	Lecture Discussion Exercises **Test** **Module 7-Week 7 on Canvas**
8	9-Apr	**Project Feedback** **Project Presentation**	Discussion **Project Submission** **Project Presentation**

The order of topics may change. Notice of changes will be given in class and on Canvas.

ACADEMIC REGULATIONS AND POLICIES

Students are strongly advised to read the MIT Manukau Student Handbook and the MIT Student Regulations for details concerning:

- Your rights and responsibilities (Student handbook)
- Attendance (Student regulation 9 MIT Student Regulations)
- Aegrotats (Student regulation 12.12 MIT Student Regulations)
- Anti-harassment policy (Student regulation 18 MIT Student Regulations)
- Complaints (Student regulation 19 MIT Student Regulations)
- Misconduct, cheating and disciplinary proceedings (Student regulation 13, MIT Student Regulations)
- Assessment Extensions (Student handbook)
- APA referencing http://library.manukau.ac.nz/apareferencing