School of Information and Physical Sciences

SENG1110: Object Oriented Programming

Singapore PSB

Trimester 3 - 2023 (Singapore)

COURSE OUTLINE

OVERVIEW

Course Description

This course is an introduction to an object-oriented programming language. The course introduces the fundamentals of analysing a problem and then implementing a solution as a computer software system using an object-oriented language. Students learn about problem-solving strategies, top-down program development and programming style. The course provides a basic introduction to data abstraction and object-oriented analysis and design. Emphasis is placed on programming and testing.

Academic Progress Requirements

Nil

Contact Hours

Singapore PSB
Computer Lab
Face to Face On Campus
2 hour(s) per week(s) for Full Term starting Week 1

Lecture
Face to Face On Campus
2 hour(s) per week(s) for Full Term starting Week 1

Unit Weighting

10

Workload

Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.

CONTACTS

Course Coordinator

Singapore PSB
Dr Shaleeza Sohail
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Consultation: By email at any time

Teaching Staff

Other teaching staff will be advised on the course Canvas site.

School Office

School of Information and Physical Sciences
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SYLLABUS

Course Content

1. Programming language syntax
2. Elementary programming concepts
3. Control structures
4. Object oriented programming basics
5. Methods and classes
6. Documentation techniques
7. Testing and debugging techniques
8. Arrays

Course Learning Outcomes

On successful completion of this course, students will be able to:

1. Comprehend the concepts of object-oriented programming
2. Comprehend a programming problem and design a solution
3. Code a solution to a problem
4. Comprehend and implement selection and loop structures
5. Comprehend and implement classes and methods
6. Comprehend and implement different input/output solutions
7. Comprehend and implement arrays
8. Test and document program solutions

Course Materials

Recommended Text:
-Java: An Introduction to Problem Solving and Programming, Walter Savitch, Pearson

COMPULSORY REQUIREMENTS

In order to pass this course, each student must complete ALL of the following compulsory requirements:

Course Assessment Requirements:

- Assessment 4 - Formal Examination: Minimum Grade / Mark Requirement - Students must obtain a specified minimum grade / mark in this assessment item to pass the course. Students whose overall mark in the course is 50% or more, but who score less than 40% in the compulsory item and thus fail to demonstrate the required proficiency, will be awarded a Criterion Fail grade, which will show as FF on their formal transcript. However, students in this position who have scored at least 25% in the compulsory item will be allowed to undertake a supplementary 'capped' assessment in which they can score at most 50% of the possible mark for that item.

ASSESSMENTS

This course has 5 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Programming Assignment 1	Week 9, Fri, 3 November 2023, 11:59pm	Combination	15%	1, 2, 3, 4, 5, 6
2	Programming Assignment 2	Week 13, Fri, 1 December 2023, 11:59pm	Combination	20%	1, 2, 3, 4, 5, 6, 7, 8
3	Mid Term Exam	Week 8, more details in Canvas	Individual	15%	1, 2, 3, 4, 5, 6
4	Final Exam*	Per university timetable	Individual	40%	1, 2, 3, 4, 5, 6, 7, 8
5	Quizzes	Every Sunday, 11:59 pm during weeks 1-6, 9-12	Individual	10%	1, 2, 3, 4, 5, 6, 7, 8

* This assessment has a compulsory requirement.

Late Submissions The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

Assessment 1 - Programming Assignment 1

Assessment Type Written Assignment
Description Programming task (more details will be available in Canvas).
Students will be able to work in pairs and will have around 3 weeks to complete the assignment.
Weighting 15%
Due Date Week 9, Fri, 3 November 2023, 11:59pm
Submission Method Online
Assessment Criteria In Canvas
Return Method Not Returned
Feedback Provided Online – 2 weeks after submission

Assessment 2 - Programming Assignment 2

Assessment Type Written Assignment
Description Programming task (more details will be available in Canvas).
Students will be able to work in pairs and will have around 3 weeks to complete the assignment.
Weighting 20%
Due Date Week 13, Fri, 1 December 2023, 11:59pm
Submission Method Online

Assessment Criteria	In Canvas
Return Method	Not Returned
Feedback Provided	Online – 2 weeks after submission

Assessment 3 - Mid Term Exam

Assessment Type	In Term Test
Description	Written exams, which are designed to test students' knowledge and understanding of the course material and their ability to apply it. The examinations will be conducted online (more details will be available in Canvas)
Weighting	15%
Due Date	Week 8, more details in Canvas
Submission Method	Online
Assessment Criteria	Details about the structure of the exam will be provided on Canvas prior to exam
Return Method	Not Returned
Feedback Provided	Online – 2 weeks after submission

Assessment 4 - Final Exam

Assessment Type	Online Open Book Formal Examination
Description	Written exam, which are designed to test students' knowledge and understanding of the course material and their ability to apply it (more details will be available in Canvas)
Weighting	40%
Compulsory Requirements	Minimum Grade / Mark Requirement - Students must obtain a specified minimum grade / mark in this assessment item to pass the course. (See Compulsory requirements above.)
Due Date	Per university timetable
Submission Method	Formal Exam
Assessment Criteria	Details about the structure of the exam will be provided on Canvas prior to exam
Return Method	Not Returned
Feedback Provided	The demonstrator will provide written feedback
Opportunity to Reattempt	Students WILL be given the opportunity to reattempt this assessment.

Assessment 5 - Quizzes

Assessment Type	Quiz
Description	Multiple Choice Questions
Weighting	10%
Due Date	Every Sunday, 11:59pm during weeks 1-6, 9-12
Submission Method	Online
Assessment Criteria	In Canvas
Return Method	Not Returned
Feedback Provided	

ADDITIONAL INFORMATION

Grading Scheme This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass	Satisfactory standard indicating an adequate knowledge and

	(P)	understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

*Skills are those identified for the purposes of assessment task(s).

Communication Methods

Communication methods used in this course include:

- Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.
- Email: Students will receive communications via their student email account.
- Face to Face: Communication will be provided via face to face meetings or supervision. Face to face is related to discussions in labs (online or on campus)

Course Evaluation

Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.

Oral Interviews (Vivas)

As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the Oral Examination (viva) Procedure. In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the Student Conduct Rule.

Academic Misconduct

All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to https://policies.newcastle.edu.au/document/view-current.php?id=35.

Adverse Circumstances

The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where:

1. the assessment item is a major assessment item; or
2. the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system;
3. you are requesting a change of placement; or
4. the course has a compulsory attendance requirement.

Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at:
https://policies.newcastle.edu.au/document/view-current.php?id=236

Important Policy Information

The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at https://www.newcastle.edu.au/current-students/no-room-for/policies-and-procedures that support a safe and respectful environment at the University.

GRADUATE PROFILE STATEMENT
The following table illustrates how this course contributes towards building the skills students will need to work in their profession.

Level of capability

- Level 1 indicates an introduction to a topic at a university level.
- Levels 2 and 3 indicate progressive reinforcement of that topic.
- Level 4 indicates skills commensurate with a graduate – entry to professional practice.
- Level 5 indicates highly specialist or professional ability.

Bachelor of Information Technology

	University of Newcastle Bachelor of Information Technology Graduate Profile Statement	**Taught**	**Practised**	**Assessed**	**Level of capability**
1	Demonstrate a comprehensive understanding of the discipline of information technologies with an emphasis on net-centric applications, information management, and user requirements for ethical professional practice.				
2	Apply critical reasoning and systems thinking to understand and support the operation and constraints of contemporary enterprises and their dynamic environment.				
3	Work independently and collaboratively to locate, manage and organise information and resources and apply evidence-based methodologies to create, modify and maintain designs and design solutions.	X	X	X	1
4	Use creativity, problem solving skills, project management skills and technical expertise to analyse, interpret, evaluate and generate solutions to complex technical and organisational problems.	X	X	X	1
5	Demonstrate professional judgement and responsibility by communicating information technology principles, practices, standards to specialist and non-specialist audience clearly and persuasively.				

This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.