[Course Title] Introduction to Computer Science

[Course Code] COMP 1021

[No. of Credits] 3

[Exclusions] COMP 1022P, COMP 1022Q (prior to 2020-21), COMP 2011, COMP 2012H

For L01 and L02: **Name:** LAM, Gibson **Email:** gibson@cse.ust.hk

For L03 and L05: **Name:** CHEUNG, Tsz Him **Email:** thjcheung@cse.ust.hk

For L06: **Name:** ZHANG, Jie **Email:** csejzhang@ust.hk

Course Description

This course introduces students to the world of computer science. Students will experience a range of fun and interesting areas from the world of computing, such as game programming, web programming, user interface design and computer graphics. These will be explored largely by programming in the Python language.

List of Topics

- Introduction to Python
- Introduction to Turtle Graphics
- Comments and Text
- Making Decisions
- Loops
- Lists and Tuples
- Slicing
- Functions
- Data Types
- File Handling
- Dictionaries
- State Diagrams
- Stacks
- Advanced Operators
- Objects
- Recursion

Intended Learning Outcomes (ILOs)

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

1. Demonstrate programming skills, with an emphasis on the Python programming language

2. Write programs in interesting areas such as game programming, computer graphics and user interface design

Assessment and Grading

This course will be assessed using criterion-referencing and grades will not be assigned using a curve.

Assessments:

There are two ways to assess each student:

- Scheme A (more midterm %): Midterm 20%, Labs 15%, Assignments 20%, Final Exam 45%
- Scheme B (less midterm %): Midterm 0%, Labs 15%, Assignments 20%, Final exam 65%

The course will automatically choose the highest mark of these two assessment schemes.

Assessment Task	Contribution to Overall Course grade (%)	
	Scheme A (more midterm %)	Scheme B (less midterm %)
Labs x 3	15% (5% for each lab)	15% (5% for each lab)
Assignments x 2	20% (10% for each assignment)	20% (10% for each assignment)
Midterm examination	20%	0%
Final examination	45%	65%

Mapping of Course ILOs to Assessment Tasks

Assessed Task	Mapped ILOs	Explanation
Midterm and Final exams	ILO1, ILO2	ILO1. Demonstrate programming skills, with an emphasis on the Python programming language. ILO2. Write programs in interesting areas such as game programming and computer graphics.
Labs and Assignments	ILO1, ILO2	ILO1. Demonstrate programming skills, with an emphasis on the Python programming language. ILO2. Write programs in interesting areas such as game programming and computer graphics.

Grading Rubrics

Detailed grading scheme for each lab and assignment will be provided in the lab and assignment description and specification.

Final Grade Descriptors:

Grades	Short Description	Elaboration on subject grading description
A- to A+	Exemplary	ILO1. The student is able to proficiently program in the Python language with no or very few errors, and is able to detect and fix bugs in the code on his/her own. The program can return the correct output on all input instances. ILO2. Given the application requirement for a specific area, the student is able to proficiently write a program that meets the requirement
C to B+	Competent	ILO 1. The student is able to program in the Python language satisfactorily. The code may contain a few bugs, but the student is able to identify the majority of the bugs on his/her own. Given some further help, the student is able to identify and fix all the bugs. The program can return the correct output on most input instances, but may miss some special or boundary cases ILO2. Given the application requirement for a specific area, the student is able to write a Python program that meets the requirement satisfactorily. The program may crash or behave incorrectly under some harsh tests
D to C-	Needs Work	ILO1. The student is able to barely program in the Python language on his/her own, but with some help, he/she is able to write a program that behaves correctly on typical input instances. The code often contains bugs and the student is hardly able to identify or correct them. ILO2. Given the application requirement for a specific area, the student is barely able to write a program that meets the requirement.
F	Unsatisfactory	ILO1. The student is not able to program in the Python language ILO2. Given the application requirement for a specific area, the student is not able to write a program to achieve the requirement.

Course AI Policy

Generative artificial intelligence tools can be used for lab projects but not allowed for the exams.

Communication and Feedback

Assessment marks for individual assessed tasks will be communicated via Canvas within two weeks of submission. Feedback on assignments will include detailed scores in various tasks and their grading criteria. Students who have further questions about the feedback including marks should consult the instructor within five working days after the feedback is received.

Resubmission Policy

Resubmission is not permitted for the course.

Required Texts and Materials

N/A

Academic Integrity

Students are expected to adhere to the university's academic integrity policy. Students are expected to uphold HKUST's Academic Honor Code and to maintain the highest standards of academic integrity. The University has zero tolerance of academic misconduct. Please refer to [Academic Integrity | HKUST – Academic Registry](#) for the University's definition of plagiarism and ways to avoid cheating and plagiarism.

Additional Resources

N/A