

The Hong Kong University of Science and Technology

UG Course Syllabus

[Course Title] **Programming with C++**

[Course Code] COMP2011

[No. of Credits] 4

[Any pre-/co-requisites] COMP 1021 OR COMP 1022P OR COMP 1022Q (prior to 2020-21) OR ISOM 3230

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Course Description

This course covers programming and data structures using C++. In addition to basic programming concepts such as variables and control statements, students will learn about arrays, pointers, dynamic data allocation, linked lists, stacks, queues, binary trees, recursion, and the basics of object oriented programming. Exclusion(s): COMP 2012H

List of Topics

1. Introduction to computer programming
2. C++ basics: basic syntax, data types, operators
3. Control flow
4. Functions
5. Array and structure
6. Recursion
7. Scope
8. Struct
9. Pointers
10. Dynamic Data
11. Class
12. Stack and Queue
13. File input / output

Assessments:

Assessment Task	Contribution to Overall Course grade (%)
Lab Exercises	10%
Programming Assignments	24%
Quiz	5%
Mid-Term	25%
Final examination	36%

Required Texts and Materials

Textbooks

[Big C++: Late Objects, 3rd Edition](#), Cay S. Horstmann eBook ISBN: 9781119402978

Reference books

N/A

[Optional] Additional Resources

N/A