School of Information Technology
International Business College

7 Greenfield Parade
Bankstown 2200 NSW Australia

Introduction to Computer Science I
(Programming I in C++)

Subject Coordinator and Lecturer: Professor Minh Hung Le
School of Information Technology
International Business College
7 Greenfield Parade
Bankstown 2200 NSW Australia
Tel: (02) 9790 3300
Fax: (02) 9790 3302
Emails: m.le@sece-unsw.org or minhle@ieee.org

Aim of Unit:

This subject aims to give the student comprehension of the computer programming in C++. It contains an introduction to the science of computer programming. Major topics covered: problem solving techniques; algorithm design and programming and an introduction to object-oriented design. Good programming practice and good software engineering principles are estimated.

Unit Outline:

• Establish an understanding of good programming practices.

• Explain the basic features of the Standard Template Library and its uses for common programming tasks.

• Describe the relationships between problems, algorithms, programs and executables.

• Design and implement procedural programs using a subset of C++ on personal computers.

• Exploit structured techniques to design algorithms for problems.

Mode of Delivery:

Two hours lecture per week.
One hour tutorial per week.

Unit Assessment:

Assignments	20 %
Mid-Semester Test	20 %
Final Examination	60 %

Assessment Requirements:

Students must receive 50% or more for each part of Unit Assessment in order to pass the subject.

Student Workload:

Students will have 3 hours per week face-to-face learning during semester. Students are expected to work at least 4 hours per week out of class.

Text Book:

Diane Zak, "An Introduction to Programming with C++", 4th Edition, Thomson Learning, 2005

Recommended Reference:

H.M. Deitel, P.J. Deitel, "C++ How to Program", Upper Saddle River, Pearson Education, 2005

Subject Schedule

Weeks	Lecture/Tutorial Topics	Assignments	Reading from Text Book
1	An Introduction to Control Structures	Assignment #1	Chapter 1
2	Beginning the Problem Solving Process, Completing the Problem Solving Process and Getting Started with C++	Assignment #2	Chapters 2,3
3	Variables, Constants, Arithmetic Operators, and Assignment Statements	Assignment #3	Chapter 4
4	The Selection Structure, More on the Selection Structure	Assignment #4	Chapters 5,6
5	The Repetition Structure	Assignment #5	Chapter 7
6	More on the Repetition Structure	Assignment #6	Chapter 8
7	Value-Returning Functions **Mid-Semester Test**	Assignment #7	Chapter 9
8	Void Functions	Assignment #8	Chapter 10
9	Arrays	Assignment #9	Chapter 11
10	Manipulating Characters and Strings	Assignment #10	Chapter 12
11	Sequential Access Files	Assignment #11	Chapter 13
12	Classes and Objects	Assignment #12	Chapter 14
13	Revision		
14	**Final Examination**		