

# Module Information

Module Identifier	<b>CS22510</b>
Module Title	<b>C++, C and Java Programming Paradigms</b>
Academic Year	<b>2015/2016</b>
Co-ordinator	<b><u>Dr Frederic Labrosse (mailto:ffl@aber.ac.uk?subject=CS22510)</u></b>
Semester	<b>Semester 2</b>
Pre-Requisite	<b><u>CS23710 (?m=CS23710)</u></b>
Other Staff	<b><u>Dr Frederic Labrosse (mailto:ffl@aber.ac.uk?subject=CS22510)</u></b> <b><u>Dr Jonathan Bell (mailto:job46@aber.ac.uk?subject=CS22510)</u></b>

## Course Delivery

Delivery Type	Delivery length / details
Lecture	20 hours

## Assessment

Assessment Type	Assessment length / details	Proportion
Semester Exam	1.5 Hours Written examination	40%
Semester Assessment	Programming assignment (30 hrs)	40%
Semester Assessment	Written assignment (2,000 words)	20%
Supplementary Exam	1.5 Hours supplementary exam Resit failed examination and/or resubmission of failed/non-submitted coursework components or ones of equivalent value	100%

## Learning Outcomes

On successful completion of this module students should be able to:

Have a command of the main features of C++.

Be able to construct C++ programs to solve problems.

Compare and contrast C++, C and Java.

Be able to distinguish between the main features of the three languages in order to decide which language is the most appropriate in different situations.

## Brief description

Students taking this module will already be programmers, and have knowledge of object oriented concepts and of the C programming language. This module will build upon this knowledge, introduce them to the C++ programming language, and provide a comparison of the three languages C++, C and Java.

## Content

The aim of this module is to introduce C++ and to provide students with the ability to choose the appropriate language for an application. As the students will have already encountered Java and C, it will be mainly a case of introducing them to a few new features which they have not seen in other languages and then to compare and contrast the languages C++, C and Java.

Thus the module will include:

learning syntactical differences from previously learned languages,  
 (the importance of) following a standard,  
 the C++ template language,  
 the STL (Standard Template Library), and external (programming) libraries.  
 The module will then consider the differences between C++, C and Java and discuss when each language is appropriate.  
 The knowledge gained will be put into practice through assignments.

## Module Skills

Skills Type	Skills details
Application of Number	Inherent to subject
Communication	Written, in exams.
Improving own Learning and Performance	Through work for the module.
Information Technology	Inherent to the subject.
Personal Development and Career planning	Students will have enhanced career opportunities.
Problem solving	Programme assignment.
Research skills	On-line research for programming.
Subject Specific Skills	The module introduces students to another programming language, and encourages them to think about choosing the appropriate programming language for a given application.
Team work	

## Notes

This module is at [CQFW \(http://wales.gov.uk/topics/educationandskills/qualificationsinwales/creditqualificationsframework/?lang=en\)](http://wales.gov.uk/topics/educationandskills/qualificationsinwales/creditqualificationsframework/?lang=en) Level 5