ZPRG C1203: Introduction to Programming

Module Title:	Introduction to Programming
Language of Instruction:	English

Credits:	10

NFQ Level:	8

Module Delivered In	3 programme(s)

Teaching & Learning Strategies:	A mix of traditional lectures, programming practicals and assignments that will enable the student to develop and apply the problem solving and programming skills necessary in order to write basic programs.

Module Aim:	To provide the student with: 1. The problem solving skills necessary for well defined programs; 2. The basic concepts of programming; 3. The capability to write simple programs.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Utilise problem solving techniques to analyse a well defined problem and develop a solution for it;
LO2	To be able to use variables and apply different sequences and the necessary control structures in their code;
LO3	To be able to use and manipulate different input and output devices, data structures and suitable libraries;
LO4	Produce maintainable programs with suitable documentation and standards;
LO5	Design, develop, test, and debug simple programs.

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*
No recommendations listed
Incompatible Modules *These are modules which have learning outcomes that are too similar to the learning outcomes of this module.*
No incompatible modules listed
Co-requisite Modules
No Co-requisite modules listed
Requirements *This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.*
No requirements listed

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Module Content & Assessment

Indicative Content
Introduction to problem solving: Designing algorithms; translating design (pseudocode & flow charts) into program code; introduction to a relevant language; identifiers, keywords, comments.
Variables: Data types, variables, assignment statements, constants, arithmetic expressions and operators.
Program control constructs: Program control constructs and their uses - sequence, selection and loops, flow of control.
Input/Output: To be able to use and manipulate simple input (keyboard) and output devices (screen).
Strings: To be able to use and manipulate strings.
Functions: To be able to use and write functions which accept arguments and return a value.
To use libraries: To use suitable libraries.
Data structures: To be able to create, populate and search data structures like the array.

Assessment Breakdown	%
Continuous Assessment	10.00%
Practical	40.00%
End of Module Formal Examination	50.00%

Continuous Assessment

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Examination	Some written exams to be given. The written exams should be a similar format and standard to their final written exam.	1,2,3,4	10.00	n/a

No Project

Practical

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Practical/Skills Evaluation	A number of practical programming lab exercises to be given and evaluated.	1,2,3,4,5	40.00	n/a

End of Module Formal Examination

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Formal Exam	The final examination will include questions on many aspects of the course.	1,2,3,4	50.00	End-of-Semester

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

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Module Workload

Workload: Full Time		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Lecture	12 Weeks per Stage	4.00
Laboratory	12 Weeks per Stage	4.00
Estimated Learner Hours	15 Weeks per Stage	10.27
	Total Hours	250.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_KCCGD_B	Bachelor of Science (Honours) in Computer Games Development	1	Mandatory
CW_KCIAD_B	Bachelor of Science (Honours) in Computing in Interactive Digital Art and Design	1	Mandatory
CW_KCIAD_D	Bachelor of Science in Computing in Interactive Digital Art and Design	1	Mandatory