Institute of Technology Tallaght
Institiúid Teicneolaíochta Tamhlacht

COPR H1001: Computer Programming 1 Extra Header Data

Short Title:	Computer Programming 1 APPROVED
Full Title:	Computer Programming 1

Module Code:	COPR H1001	**NFQ Level:**	6	**ECTS Credits:**	5

Reviewed By:	JAMES WRIGHT

Description:	This subject introduces algorithms as a mechanism to specify the solution to problems and the computer as a mechanism to carry out algorithms (and hence solve problems).

Learning Outcomes:

On successful completion of this module the learner will be able to

1. Express the solution to a problem as a sequence of steps textually by writing pseudo code and visually by drawing flowcharts diagrams.
2. Decompose simple problems into actions and data.
3. Demonstrate their understanding of how a computer works in terms of actions on data (instructions on memory) by predicting the output of a machine code program.

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Module Content & Assessment

Content (The percentage workload breakdown is inidcative and subject to change)

Number Systems: (15%)
Understanding number systems; converting numbers between different bases.

Pseudocode: (15%)
Basics of writing pseudo code programs; keywords; debugging

Flowcharting: (20%)
Flowchart symbols; program designs

The LMC Computer ("Littleman Computer" tools are used to simulate a simple computer): (20%)
Instruction set; writing simple programs

Machine Code: (15%)
Design of programs with branching and loops

Assembly Language: (15%)
LMC instruction set; design and debug of simple programs

Assessment Breakdown	**%**
Course Work	40%
End of Semester Formal Examination	60%

	Outcome addressed	*% of total*	*Assessment Date*
Formal End-of-Semester Examination	None	60%	Semester End

Coursework Breakdown

Type	*Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Continuous Assessment	Number Systems exercise		5	Week 2
Continuous Assessment	Pseudocode exercise		5	Week 3
Continuous Assessment	Flowcharts exercise		5	Week 4
Continuous Assessment	Midterm Exam		10	Week 6
Continuous Assessment	Instruction Set exercise		5	Week 9
Continuous Assessment	Random Programs exercise		5	Week 10
Continuous Assessment	Assembler exercise		5	Week 11

IT Tallaght reserves the right to alter the nature and timings of assessment

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Module Workload & Resources

This course has no full time workload.

Resources