Institute of Coding Skills Bootcamp

Aber Code: XC12010

Title: Microcredentials: Introduction to Programming

Start date: 02/10/2023

Location: Online

Cost: Free

Contact Hours: 2x 2 hours per week,

Course length: 5 weeks

Signup Link: https://www.aber.ac.uk/en/lifelong-learning/courses/course/details/SL103_XC12010/

Synopsis:

This module aims to provide a basic grounding in computer programming skills and assumes no previous knowledge or ability. After exploring the fundamentals of computer languages you'll move on to writing your first programs. Delivery will be online through lectures, recordings and practical workshops.

Notes:

This module is aimed at beginners to programming, highlighting the key components required to build your first program.

Assessment:

Learners will be assessed in three components:

1. A weekly programming worksheet to be completed by the student,
2. Each week a short multiple choice quiz will help explore that week's work,
3. Finally, a mini-project to solve a real-world solution, exploring the concepts covered in the module.

Aims:

This module will introduce students to the paradigms of procedural and object oriented programming. It is in three parts: firstly examining the fundamentals of program design - the what, why and when of programming itself. Then it will explore the use of variables, conditionals and loops to build a program. Finally, we will introduce a programming language and use online tools to build working programs.
The course will be presented in a number of blocks - each will have a worksheet with linked mini-videos and an online workshop - the latter will be recorded so you can study the course at times that suit you.

Learning Outcomes:

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

Describe the Programming Paradigm: Programming languages, elements, concepts and types.

Explain and use the basic language elements; Language structure, conventions, variables, constants, data types, operators, expressions, statements, blocks.

Solve a computational problem.