VOLCANICS eLEARNING COMMUNITY

L1, 2, 3 Computer Programming | 2020

Programme description	This course will start from the very basic computer programming concepts at Level 1, through defining functions and using lists to track data at Level 2, up to creating a GUI to control your program at Level 3. This course is aimed at year 11 students with little or no programming experience but an interest in the field. Older students can develop their programming skills but need to be aware of the limited number of credits at higher levels.
Content	We'll use Python as our programming platform because it is free to download and use: Level 1: Problem solving and planning how to tackle basic programming concepts: Input/Output, For and While loops, If, Data types and getting the computer to do maths. Searching and sorting algorithms.. Level 2: Extending programming skills with more functions and lists Level 3: Object Oriented Programming concepts and GUIs
Prerequisites	Students with an interest in logical thinking, mathematics and problem solving will find this course appealing. No formal prerequisites.
Required	Access to a computer with Python 3 installed. Student's own laptop recommended. Python is free to download from www.python.org/downloads/
Assessment	The projects completed through the year will cover the requirements for 6 internal achievement standards. The course offers 25 credits: 13 at Level 1, 6 at Level 2 and 6 at Level 3
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Standards		When assessed	Type	Credit value
AS91885 v1	Level 1: Demonstrate understanding of searching and sorting algorithms	Late Term 1	I	3
AS91883 v1	Level 1: Develop a computer program	Early Term 2	I	4
AS91884 v1	Level 1: Use basic iterative processes to develop a digital outcome	Early Term 2	I	6
AS91896 v1	Level 2: Use advanced programming techniques to develop a computer program	Term 3	I	6
AS91906 v1	Level 3: Develop a complex computer program for a specified task	Term 4	I	6

I = Internally Assessed | E = Externally Assessed