COURSE SPECIFICATION DOCUMENT

Academic School / Department: School of Liberal Arts

Programme: Computer Science

***RQF* Level:** 3

Course Title: Fundamentals of Programming

Course Code: DGT 3100

Student Engagement Hours: 120

Lectures: 22.5
Lab: 22.5
Independent / Guided Learning: 75

Credits: 12 UK CATS credits
6 ECTS credits
3 US credits

Course Description:
The course provides a foundation in programming and gives students the skills necessary to build and test small systems. Eg. using Python. Students will learn how to use programming constructs such as numbers, strings, loops, functions and execute code that includes variables, conditionals and control structures in small but fully functioning programs and test them.

Prerequisites:
None

Aims and Objectives:
The primary aim of this course is to introduce the foundations of basic programming constructs to prepare students to write more advanced and independent code. This course will focus on enabling students to understand, apply and test small but fully functioning programming constructs.

Programme Outcomes:
COMPSCI: A2, A6, B1, B5, B6, C4

A detailed list of the programme outcomes are found in the Programme Specification.

This is located at the archive maintained by Registry and found at:
https://www.richmond.ac.uk/programme-and-course-specifications/

Learning Outcomes:
By the end of this course, successful students should be able to:

- Understand basic programming constructs including numbers, assignments, strings, loops and functions
- Apply learnt constructs and write small programs to draw geometric shapes and create animation
- Understand and execute code that includes variables, basic types, conditionals and control structures
- Test the functionality of the written code

Indicative Content:

- Introduction to basic concepts
- Numbers, assignments, strings
- Loops
- Variables
- Functions
- Basic Python modules
- Lists
- Classes and objects

Assessment:

This course conforms to the University Assessment Norms approved at Academic Board and located at: https://www.richmond.ac.uk/university-policies/

Teaching Methodology:

- Lectures, practical demonstrations and step-by-step software tutorials, class workshops, one-to-one tutorials.

Indicative Text(s):

"Python programming: an introduction to Computer Science" by John Zelle, Franklin, 3rd Revised edition, Beedle & Associated Inc., 2016

Web Sites

www.python.org

See syllabus for complete reading list

Change Log for this CSD:

Nature of Change	Date Approved & Approval Body (School or AB)	Change Actioned by Registry Services
Revision – annual update	May 2023	