

## COURSE SPECIFICATION DOCUMENT

<b>Academic School / Department:</b>	School of Liberal Arts
<b>Programme:</b>	Computer Science
<b>FHEQ Level:</b>	5
<b>Course Title:</b>	Programming for Industry
<b>Course Code:</b>	DGT 5101
<b>Student Engagement Hours:</b>	120 (standard 3- credit BA course)
Lectures:	22.5
Lab:	22.5
Independent / Guided Learning:	75
<b>Semester:</b>	Fall, Spring
<b>Credits:</b>	12 UK CATS credits 6 ECTS credits 3 US credits

### **Course Description:**

This course builds on the programming principles learnt in Introduction to Programming and introduces students to industry standard programming skills, e.g. Java. The course includes opportunities to enhance students' problem solving skills for computer science using tools such as IDEs and APIs and techniques such as Object-Oriented Programming.

### **Prerequisites:**

DGT 4101 Introduction to Programming

### **Aims and Objectives:**

This sits as the core of the computer science programme. By the end of this course, students will have the sufficient programming skills that can be applied in any area of their interest and/or course selection in level 6 and in the industry. Students will build on the programming principles learnt in levels 3 and 4 and will have an opportunity to apply and test these professional skills by applying them in various contexts.

### **Programme Outcomes:**

Computer Science: A2, A3, A6, B1, B5, B6, C2

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 an industry standard typed programming language such as Java for software design
- Apply object oriented programming techniques within the programming language
- Understand, use and develop program specifications and programs
- Problem solve and develop solutions for contextual problems using programming skills

**Indicative Content:**

- Introduction to Java
- Object-Oriented Programming (revision and extension)
- Variables and Types
- Control Flow
- Methods
- Libraries
- Abstract Classes
- Using IDEs
- Using APIs

**Assessment:**

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

**Teaching Methodology:**

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

**Indicative Text(s):**

Vickler, A., 2021. *Java*. New Mexico: Ladoo Publishing.

**Journals**

Click here to enter text.

**Web Sites**

Oracle Java: <https://www.oracle.com/uk/java/>

W3C Schools – Java : <https://www.w3schools.com/java/>

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