BIC3021-A module descriptor	
Module Title	Introduction to Programming
Credit Level	10 credits (RQF Level 3)
Session	2026/7 academic year
BDA occurrence	Semester 1 available at University of Bradford
BDB occurrence	Semester 1 available at University of Bradford
BDA occurrence	Semester 3 available at University of Bradford
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Transparency notice

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BIC3021-A module aims

This module introduces you to the theory and practice of programming with a particular focus on the use of JavaScript. Building on learning from previous modules (Introduction to Computer Science, Foundation Maths), the module contains a strong practical element and helps you to acquire the core knowledge and basic programming skills that underpin a range of computer science degrees at undergraduate level.

BIC3021-A module learning outcomes

No.	Students completing the module will be able to:
01	Demonstrate an understanding of the concept of variables and expressions.
02	Apply basic data types
03	Produce a code by implementing usable functions including control flow constructs.
04	Structure a code by implementing usable functions.
05	Demonstrate an understanding of basic object-oriented concepts such as classes and methods.

BIC3021-A module outline syllabus

Introduction
What is programming, what is it used for and how does it achieve these aims? Key programming terms and concepts.

JavaScript
The development of JavaScript and its qualities as a programming language: accessible user-friendly language, uncluttered syntax and grammar, highly extensible.

Programming with JavaScript
Introduction to object-oriented and structural programming supported by Java and core constructs.

Practical workshop
Learning to work with JavaScript in the IT Lab and using it to provide programming solutions to a range of basic problems.

For more information, visit the VLE (**Canvas**) page, go to our **Reading Lists webpage for this module** or search **https://bradford.rl.talis.com** for this module.

BIC3021-A module notional learning hours

- 60 hours Directed Study
- 20 hours Lectures
- 20 hours Laboratories

The overall expected hours may include contact time, scheduled learning activity, directed and independent study and any minimum expectations for placement learning. Most learning at the University of Bradford has some online content and sessions which are delivered fully by virtual means are labelled as "online".

BIC3021-A module learning, teaching and assessment

Groups are small and classes are student-centred, task-based and interactive.
The classroom approach is explicitly designed to help international students acquire new knowledge and skills, to build their confidence and enable them to become more independent learners. By doing this consistently and across all modules, the programme provides them with a strong foundation for further study in their chosen subject area.
The approach is inclusive and recognises that students come from different backgrounds with a range of previous learning experiences and associated expectations, beliefs and behaviours. Teaching and learning methods are clearly explained so students understand why (where appropriate) they need to engage in new ways of learning and why those they have used or relied on up to this point may be less suited to supporting their ongoing development and their chances of success in UK Higher Education.
Formative work is an integral part of the approach. In class, students are set tasks that require them to apply their knowledge and skills, to think critically and to solve problems. The level of challenge is gradually increased as the students grow in confidence and Tutors help them to see that experimentation, trial and error are central to the learning process, providing constructive feedback on both what has been achieved and how.
Students are also expected to engage in independent study, to reflect on their own performance and to discuss this with their module tutor or personal academic tutor, who will provide support and advice and, when necessary, draw the attention of the Academic Management Team to a struggling student using the Students of concern process.

Assessment is designed to support the development of practical programming skills through authentic coding activities.

The programming portfolio (100%) assesses Learning Outcomes 1-5 through a series of progressively challenging programming tasks. Students are required to develop, test and document JavaScript programs demonstrating variables, data types, control structures, functions and object-oriented principles.

Students must submit functioning code and accompanying explanations of their solutions.

Formative opportunities include coding workshops, automated coding exercises, tutor feedback sessions and peer troubleshooting activities.

Success is demonstrated through writing functional, readable and efficient code, applying programming constructs appropriately and solving practical computational problems.

To pass the module, students must achieve the University pass mark overall. Students who do not pass the first time will be given an opportunity to complete equivalent assessments that address the failed learning outcomes.

BIC3021-A mode of assessment			
Type	**Mode**	**Assessment description**	**Weight**
Summative	Coursework - Portfolio/e-portfolio	Portfoilo of written and practical tasks (LO1, LO2, LO3) (1000 words)	100%

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