IB96D-15 Programming Solutions for Enterprise

26/27

Department
Warwick Business School
Level
Taught Postgraduate Level
Module leader
Zhewei Zhang
Credit value
15
Module duration
10 weeks
Assessment
100% coursework
Study location
University of Warwick main campus, Coventry

Description

Introductory description

Students will learn fundamental programming concepts in Python, along with modern software development practices using agentic AI to create business solutions for real-world problems. Upon completing the course, students will not only acquire essential programming skills useful for future modules and career development, but also, more importantly, develop computational thinking, which is critical for understanding digital innovation and entrepreneurship in today's information age and for harnessing agentic AI to build effective business solutions.

Module web page

Module aims

This module aims to provide a broad and contemporary perspective on developing business solution to address real-world problems. Specifically, the module will:
Develop students' foundational programming skills in Python and introduce modern software development practices using agentic AI to build effective business solutions.
Develop students' understanding of the key principles and practices involved in modern software development, with a particular emphasis on computational thinking as a critical capability for

navigating digital innovation and entrepreneurship.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

The Principles of Modern Software Management
Agile Development Methodology
Fundamentals of Programming
Flow Control
Complex Data and Functions
File Operation and Exceptions
AI-assisted Coding
AI-driven Development
Managing Agentic Development

Learning outcomes

By the end of the module, students should be able to:

- Demonstrate comprehensive understanding of fundamental programming techniques in a core language for business applications
- Demonstrate comprehensive understanding of the principles and practices of managing modern software development
- Demonstrate comprehensive understanding of practices of managing Agentic development projects
- Demonstrate critical understanding of technical solutions in a business context
- Demonstrate critical understanding of computational thinking in solving complex problems
- Demonstrate critical understanding of adoption of generative AI in knowledge tasks

Indicative reading list

Reading lists can be found in Talis

Subject specific skills

Demonstrate development of:
(i) agentic design skills
(ii) agile project management skills
(iii) software version control skills

Transferable skills

Demonstrate written skills

Study

Study time

Type	Required
Lectures	10 sessions of 2 hours (13%)
Seminars	10 sessions of 1 hour (7%)
Private study	48 hours (32%)
Assessment	72 hours (48%)
Total	150 hours

Private study description

Private study to include preparation for lectures and own reading

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group A8

Assessment component	Weighting	Study time	Eligible for self-certification
Individual Programming Project (4,500 words including coding)	100%	72 hours	Yes (extension)

Reassessment component is the same

Feedback on assessment

Assessments are graded using standard University Postgraduate Marking Criteria and written feedback is provided. Feedback for individual essays includes comments on a marksheet.

Availability

Courses

This module is Core for:

- Year 1 of TIBS-G5N4 Postgraduate Taught Management of Information Systems and Digital Innovation