

IB96D-15 Building Business Solutions with Agentic AI

27/28

Department

Warwick Business School

Level

Taught Postgraduate Level

Module leader

Zhewei Zhang

Credit value

15

Module duration

5 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 1 hour (7%)
Other activity	20 hours (13%)
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

Other activity description

10 x 2 hr workshops F2F (some of these sessions will be lab sessions)

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 A9

	Weighting	Study time	Eligible for self-certification
Assessment component			
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

Course availability information is based on the current academic year, so it may change.

This module is Core for:

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