

# WM9A4-15 Digital Development with Python

**21/22**

**Department**

WMG

**Level**

Taught Postgraduate Level

**Module leader**

Mark Bonnett

**Credit value**

15

**Module duration**

1 week

**Assessment**

Multiple

**Study locations**

University of Warwick main campus, Coventry Primary

Distance or Online Delivery

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## Description

### Introductory description

This module gives an introduction to computer programming and digital development for participants with little or no experience of computer programming. It introduces the key concepts found in almost all computer languages and enables participants to gain a practical understanding and be able apply them.

In particular, the module focuses on programming for the web, and the use of frameworks to produce professional web apps. In doing so, students will be introduced to many of the key elements of web apps, including databases, HTML/CSS and basic web server/cloud functionality.

### Module aims

Through a combination of pre-work, lectures, demonstrations and practical workshops, participants develop their programming skills and gain an insight into the challenges of programming. The module concludes with the students specifying and developing an individual application and hosting it in a cloud environment using modern, cloud-native practices and the latest modern technologies

## 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.

### 1. Introduction to Programming

- Types of programming language
- Programming constructs
- Programming best practice

### 1. Introduction to Python

- Python fundamentals
- Python constructs
- Python best practices
- Flask

### 1. Web Application Development

- Databases
- HTML/CSS/Tempaltes
- Interactivity and JavaScript
- Functionality

### 1. Software development

- The SDLC
- Cloud environments
- Cloud native computing
- Web servers

## Learning outcomes

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

- Develop comprehensive testing programs to validate specific functions.
- Develop appropriate and comprehensive documentation for a program or application.
- Critically evaluate software development lifecycle practices, and design conceptual and practical workflows.
- Critically analyse a range of problems and design structured applications that can meet them using in an appropriate computer language
- Evaluate and integrate a range of programming languages to develop interactive and professional web applications.

## Indicative reading list

[View reading list on Talis Aspire](#)

## **Interdisciplinary**

A mixture of technology/computing topics and business topics

## **International**

Topics are of high international demand

## **Subject specific skills**

Programming, databases, website development, application development, cloud computing, IT architecture

## **Transferable skills**

Programming, data analysis, team work, critical analysis, IT architecture

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## **Study**

### **Study time**

<b>Type</b>	<b>Required</b>
Lectures	11 sessions of 1 hour 30 minutes (11%)
Practical classes	15 sessions of 1 hour 30 minutes (15%)
Assessment	111 hours (74%)
Total	150 hours

### **Private study description**

No private study requirements defined for this module.

### **Costs**

No further costs have been identified for this module.

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## **Assessment**

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

### **Assessment group A**

	<b>Weighting</b>	<b>Study time</b>
Programming Test Students write programming solutions to a range of problems	20%	21 hours
Post Module Assignment A high-level design of an application and example code to be used	80%	90 hours

### **Assessment group R**

	<b>Weighting</b>	<b>Study time</b>
Post Module Assignment A high-level design of an application and example code to be used	100%	

### **Feedback on assessment**

Verbal feedback for in-module element. Written feedback and annotated scripts for post-module element

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## **Availability**

### **Courses**

This module is Optional for:

- Year 1 of TWMS-H1S4 Postgraduate Taught e-Business Management (Full-time)