



## Systems Development Course Descriptor

Course Title	Systems Development	Faculty	EDGE Innovation Unit (London)
Course code	NCHMV581	Course Leader	Marta Rodriguez-Martinez
Credit points	15	Teaching Period	6 weeks
FHEQ level	5	Date approved	March 2021
Compulsory/Optional	Compulsory		
Prerequisites	None		
Corequisites	None		

### COURSE SUMMARY

This course will build on programming skills and testing approaches developed during Level 4 courses, in addition to requirements elicitation studied during Data Analysis in Industry. This course will teach learners conceptual approaches to system development, software architectures, software development management methodologies and deployment approaches. The course will cover traditional software development approaches and those available for cloud based digital transformation. The relationship between software and underlying technologies will be explored, including an appraisal of architectural options and trade offs.

### COURSE AIMS

- Train learners to apply IT development lifecycles and understand their applicability to digitalisation techniques.
- Train learners to critique technology choices and understand the impact of software architectures.
- Train learners in the use of and appraisal of software design patterns.
- Train learners to develop testing strategies, including and up to deployment approaches for service management.

## LEARNING OUTCOMES

On successful completion of the course, learners will be able to:

### KNOWLEDGE AND UNDERSTANDING

- K1b Apply conceptual approaches, software architectures, software development management methodologies and deployment approaches, to develop digital products.
- K3b Compare the relationship between software and technologies in various deployment environments.

### SUBJECT SPECIFIC SKILLS

- S1b Apply effective approaches and design choices for the creation, deployment and management of digital information systems.
- S3b Design a regime of continual, incremental deployments to a digital platform.

### TRANSFERABLE AND PROFESSIONAL SKILLS

- T1b Think analytically about how individual components are connected to form a system.
- T2b Break complex problems into smaller components.
- T2b Use creative thinking to consider the issue from different angles and develop a solution.

## TEACHING AND LEARNING

The course learning and teaching hours will be structured as follows:

- Seminar = 15 hours
- Applied Seminar = 7.5 hours
- Coaching session = 1 hour
- Academic Drop-ins = 4 hours
- Reading and Assessment Prep = 32.5 hours
- Application of learning = 90 hours

Total = 150 hours

## ASSESSMENT

### FORMATIVE

Learners will be formatively assessed during the course through a range of techniques. During seminars, applied learning seminars and one to one coaching, questioning and quizzing are used as formative assessment. The purpose of the formative assessment is to provide learners with developmental feedback to support their learning.

**SUMMATIVE**

AE	Assessment Type	Weighting	Online submission	Duration	Length
1	Exam	50%	Yes	1.5 hours	-
2	Set exercises	50%	Yes	Requiring on average 15-25 hours to complete	2000 words +/- 10%

The summative assessment will be assessed in accordance with the assessment aims set out in the Programme Specification.

**FEEDBACK**

Learners will receive formal feedback in a variety of ways. For summative assessments, feedback is written and provided within 20 days of submission, and for formative assessment it could include verbal or written feedback. Learners will also have a progress review each quarter with their Multiverse Coach and their Line Manager. These reviews are an opportunity to discuss progress to date both in their role and on the degree programme.

For summative exams, feedback is provided through generic internal examiners’ reports, which are posted on the Appli.ed learning platform.

**INDICATIVE READING**

Note: Comprehensive and current reading lists for courses are produced annually in the Course Syllabus or other documentation provided to learners; the indicative reading list provided below is used as part of the approval/modification process only.

**BOOKS**

Kendall, K.E. and Kendall, J.E., 2011. *Systems analysis and design* (Vol. 2013). Upper Saddle River, NJ: Pearson Prentice Hall.

Martin, R.C., 2013. *Agile software development: principles, patterns, and practices*. Pearson.

Chemuturi, M., 2018. *Software Design: A Comprehensive Guide to Software Development Projects*. CRC Press.

**INDICATIVE TOPICS**

Learners will study the following topics:

- Systems design
- Software design
- Software deployment
- Development methodologies
- Software testing

<b>Title: NCHMV581 Systems Development Course Descriptor</b>					
<b>Approved by: Academic Board</b>					
Version number	Date approved	Date published	Owner	Location	Proposed next review date
1.0	March 2021	March 2021	Marta Rodriguez -Martinez	Multiverse website	March 2026
<b>Modifications (As per AQF4)</b>					
Version number	Date approved	Date published	Modification (including category number)		