UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G5Z1701

Unit Name: Advanced Programming (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 5 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: This unit covers concepts relating to advanced object-oriented program design, the use of framework libraries, web server and mobile application development.

Indicative Content: A selection of topics from Object-oriented programming, interfaces, collections, exception handling, stream based file input/output, graphical user interfaces (GUI), graphics, threads and design patterns. Use of an integrated development environment (IDE) for producing different project types including desktop, web server (e.g. Java servlet) and mobile applications. Use of modern technologies and framework libraries. Implementation of a UML diagram. Case studies. Mobile Application Development, Mobile Development Toolkits, UI implementation, web server interactions, location awareness

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: understand and selectively apply advanced programming concepts and techniques to solve a range of real world based programming problems

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
	Coursework	100		
	Method of Assessment			
1				
	Description			
	A programming based coursework assignment where students will be asked to create a set of related Java classes which test their ability to write a complex software application using object oriented programming concepts.			

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

LEARNING RESOURCES

Special ICTS Requirements:

Additional Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G6Z1705

Unit Name: Artificial Intelligence (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 6 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: This unit aims to develop the student¿s knowledge of the underlying theory and industrial applications of Artificial Intelligence paradigms.

Indicative Content: A selection of topics from An overview of AI and its underlying philosophy. Artificial Neural Networks Overview of ANNs; definitions and building blocks. Biological basis of ANNs. The neuron, synaptic activity and the Perceptron. Supervised learning and the Error Back-Propagation learning algorithm. Image Processing Overview of fundamentals of image processing. Algorithms for enhancing images, for example contrast enhancement, noise reduction and re-scaling. Feature extraction case studies for real world AI classifiers for example in Mammography and Automatic Number Plate Recognition. Rule-based systems Including manual and automatic acquisition of knowledge (knowledge engineering). Production Rules and Decision Trees. Theoretical background to popular algorithms (entropy, information gain, gain ratio). Underlying processes such as forward and backward chaining. Difficulties of working with real-world datasets (e.g. missing attribute values); Attribute pre-processing (for Decision tree and other AI classifiers) including measurement scales and transformations . Problem solving Search & State Space; Game Theory; Minmax and Alphabeta searches Logic & reasoning; Ontologies; Natural Language Processing and Grammar checkers. Learning will be integrated via a large-scale case study, building and evaluating a range of AI classifiers for two real-world datasets (e.g. Mammography, US Census Data.) This will develop transferrable skills in experiment design and evaluation.

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: analyse, select and apply AI techniques to solve a range of problems based on real world scenarios

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
	Coursework	100		
	Method of Assessment			
1	Report			
	Description			
	The student will be supported in the production of a report on the application of AI techniques and methods to a real world inspired problem data set.			

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G5Z1705

Unit Name: Computer Network & Operating Systems (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 5 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: The unit provides an introduction to the operation of computer networks, operating systems theory and practice.

Indicative Content: A selection of topics from Operating systems structure and organisation , concurrency: the solutions to, and the problems of concurrency concerning aspects such as race conditions, livelock, deadlock, starvation and priority inversion. Process and memory management concerning techniques for process and thread scheduling, along with virtual memory concepts and computer architecture support for memory management. File systems [10%] concepts and aspects of structural and organisational choices. Computer networks content focusses on producing a complete overview of the OSI and TCP/IP models . The physical, data-link, network, transport, session, presentation and application layers are covered in sufficient detail to demonstrate how a complete protocol is implemented over a packet switched network. Wireless and mobile networks explain the main characteristics and issues involved with networks where nodes are mobile and communications involves wireless links.

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: understand and apply a selection of techniques from the fields of Operating Systems and Networks

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
	Coursework	100		
	Method of Assessment			
1	Report			
	Description			
	The student will be supported in the production of a report on a set of concepts and their application within Operating Systems and Networks			

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

LEARNING RESOURCES

Special ICTS Requirements:

Additional Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G4Z1702

Unit Name: Computer Systems Fundamentals (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 4 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: This unit provides an introduction to the fundamental principles underpinning the design and construction of Computer Systems.

Indicative Content: A selection of topics from Digital Logic and Boolean Algebra: Digital Logic Gates and Circuits; Karnaugh maps; Use of a digital logic circuit simulator; Components of a CPU; Processor Model; Fetch execute cycle; hardware interrupts. Assembly Language Programming: Relationship between high level Languages and Assembler; Instruction sets; Registers; Debugging; Discrete Mathematics: Matrices and Vectors; Matrices as linear transforms; Functions: definition, properties; Sets: subsets, set algebra, ; Logic: Propositions, Predicates, propositional algebra, proof of simple results;

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: understand and apply some of the underlying fundamental principles of Computer Science

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
	Coursework	100		
	Method of Assessment			
1	Report			
	Description			
	The student will be supported in the production of a report on the relationship of one of the Computer science fundamental concepts studied and its application in real world computing.			

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

LEARNING RESOURCES

Special ICTS Requirements:

Additional Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G5Z1711

Unit Name: Database Systems (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 5 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: Theory and practice of the modelling, specification and querying of relational databases; aspects of implementation of database management systems.

Indicative Content: a selection of topics from database modelling: advanced UML with class diagrams and inheritance; mapping UML diagrams to relational schemas. database implementation and querying: creating and maintaining relational databases with SQL; indices; advanced SQL queries; triggers; views. relational algebra: operators: project, select, join, union, intersection, set difference; different types of join; writing algebraic expressions; properties of operators (e.g., associative, distributive). physical aspects: data structures (e.g., hash tables); buffers; different types of storage (e.g., primary, secondary); blocks as storage units; trade-offs in random and sequential access and network traffic.. query processing and optimisation: alternative implementations of relational algebra operators; rewriting of relational algebraic expressions to improve efficiency. concurrency control: locking, 2-phased locking systems, resolving conflicts, writing transaction-aware SQL scripts. interfacing with programming languages and environments: embedded queries; cursors; data access patterns.

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: Design and use relational databases concepts to model business data

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
	Coursework	100		
	Method of Assessment			
1	Report			
	Description			
	Students will be supported in the production of a report on how relational database concepts can be used to model business systems.			

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

LEARNING RESOURCES

Special ICTS Requirements:

Additional Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G6Z1703

Unit Name: Enterprise Programming (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 6 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: Students will build secure, robust, maintainable enterprise level applications using a variety of current distributed programming techniques.

Indicative Content: A selection of topics from Enterprise Design Patterns - Use of common enterprise type design patterns and implementation in a suitable language. Professional programming techniques. Distributed Programming Creation and analysis of distributed applications in a high level language Web Service Architectures e.g. Web services, WSDL, SOAP, XML/JSON Processing Current Techniques in Enterprise Application Development e.g. Hadoop, Cloud Computing Reference Architectures, Models and Frameworks, Enterprise Frameworks (eg Hibernate, Struts)

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: Critically evaluate architectures and approaches to the design of enterprise applications

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
1	Coursework	100		

Method of Assessment

Report

Description

The student will be supported in the development of a report on the development of software for a distributed system using professional techniques and design patterns. Critical analysis of the work created. Students will receive formative assessment and feedback during laboratory sessions over the course of the assessment and summative assessment on the final application and report.

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

LEARNING RESOURCES

Special ICTS Requirements:

Additional Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G5Z1707

Unit Name: File Systems Forensics & Analysis (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 5 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: The unit provides content to enable an understanding of the theory and practice of file systems and memory based forensics.

Indicative Content: a selection of topics from 1. File Systems Analysis : Forensic duplication, data acquisition, volume analysis, write blockers, file signatures, row data searching, locating and restoring deleted content and slack space. 2. Forensic Response and Artefacts : MACtimes, login data, open ports, recent processors, recent connections, reviewing event logs, printed documents and registry data. 3. Memory : Capturing memory, volatile data, memory contents identification, flash memory devices, data persistence. 4. Information Hiding & Malware Analysis : Scanning/evaluating data streams, steganography, host protected area, static and dynamic analysis, program confinement, rootkits. 5. Mobile Phones Forensics: SIMs forensic analysis & mobile phones forensic analysis.

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: perform digital forensic analysis tasks on a simulated data device.

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
	Coursework	100		
	Method of Assessment			
1	Report			
	Description			
	The student will be supported in the production of a report on how digital forensic techniques can be applied to a simulated real world scenario.			

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

LEARNING RESOURCES

Special ICTS Requirements:

Additional Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G4Z1703

Unit Name: Information Systems (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 4 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: An introduction to the use of IS in organisations, giving students an opportunity to develop key systems analysis techniques to be applied to development of IS built on a commercial RDBMS. Students will also develop essential communication skills.

Indicative Content: A section of topics from Business activities supported and social issues affected by IS: case studies & examples, e Commerce, management information, privacy. Systems analysis and design techniques: use cases, UML. Database management systems and database design: ERDs, Normalisation, SQL. Communication and teamwork skills

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: understand and explain the role and impact of Information Systems in business organisations

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
	Coursework	100		
	Method of Assessment			
1	Report			
	Description			
	The student will be supported in the production of a report exploring an aspect of Informations systems and its impact on a typical business organisation.			

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

LEARNING RESOURCES

Special ICTS Requirements:

Additional Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code:	6G5Z1712				
Unit Name:	Introduction to Data Science (Student Mobility)				
Department:	School of Computing, Maths & Digital Technology				
Faculty:	Faculty of Science & Engineering				
Level:	5	**Credits:**	15	**ECTS:**	7.5

UNIT DESCRIPTION

Brief Summary: introduces concepts, techniques and algorithms for processing and visualising datasets so as to infer useful, actionable knowledge in a domain.

Indicative Content:
A selection of topics from:
(1) Introduction to the data science production environment: basic functionality including fundamental data structures and operations, execution control, and essential libraries.
(2) Data visualisation: fundamental plots: line and bar charts, histograms, scatter-plots; introductory aspects of visual encoding and perception and cognition; preliminaries on infographs.
(3) Data manipulation: aspects of popular formats of datasets: tabular, text, graph, markup (e.g., XML); loading datasets locally; obtaining datasets via HTTP API requests. Brief introduction to graph concepts: nodes, edges, paths; directed and undirected; degree. Fundamental transformational operations: extract and add features, obtain subsets of data, group and combine datasets.
(4) Data analytics: summarising data with measures of totality (e.g., count, sum), central tendency (e.g., mean and mode) and spread (e.g., standard deviation). frequency and probability distributions; correlation, introductory aspects of graph analytics (e.g., centrality).
(5) Data preparation: choosing, configuring and applying basic data reduction techniques and algorithms (e.g., dimensionality reduction, sampling); data cleaning, normalisation.
(6) Data mining: selecting, configuring and applying common data mining algorithms for classification, clustering and regression.
(7) Data science and society: privacy, ethical, legal, environmental and societal issues.

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: understand and apply a range of concepts and techniques from the field of Data Science

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
1	Coursework	100		

Method of Assessment

Report

Description

The assessment will be to produce a report where students are asked to work on a data science case study, employing problem-solving skills, creativity and initiative. Students are expected to obtain, process, visualise, analyse and mine datasets, and present results and insights in the form of a report

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G4Z2701

Unit Name: Introduction to Web Design and Development (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 4 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: Introduction to the modern context of web design and development; the core development technologies and standards; design methods that cater for different current platforms.

Indicative Content: A selection of topics from the study of efficient design and development of effective and robust websites for the range of popular platforms, using the most modern technologies and techniques. Learning and Teaching approaches include the use of exploratory learning, authentic case-study scenarios, and multimedia and interactive learning resources. Indicative topics include: introduction to the client-server model, web standards, HTML5 semantic markup , the control of presentation via style sheets , and of interactivity via JavaScript on the client side and PHP on the server side; the use of high-level tools for design and development ; DOM element selection and manipulation via script libraries such as jQuery ; and the production of standards-compliant HTML5 video . On the server side, students will create dynamic web pages with AMP systems and script on the server side using PHP with MySQL to create and manipulate server-side databases ; and perform a basic install of a Content Management System such as WordPress. The key theme for scripting will be the understanding and development of readable code that listens for and responds to browser and user events by manipulating DOM elements.

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: recognise and select basic client and server side technologies based on the business requirements of a given scenario

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
	Coursework	100		
	Method of Assessment			
1	Report			
	Description			
	The student will be supported in the production of a report on the development of website to meet the requirements of a given business scenario.			

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G4Z1701

Unit Name: Programming (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 4 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: This unit introduces computer programming in a high level programming language, such as Java and includes principles and practice in problem solving, program design, solution implementation and testing.

Indicative Content: A selection of topics from Design methodology: The application of design methods e.g. step-wise refinement and bottom-up (component re-use) to produce solutions to problems, incorporating constructs for sequence, selection, iteration, abstraction and re-use. Verification and testing : The use of simple debugging strategies and more formal approaches to testing e.g. black box and white box. The application of standards and conventions: software maintenance, developing a professional approach to coding. Constructs and features of a structured high level programming language : Control constructs, operators, procedural abstraction, simple I/O and use of libraries. Data types: primitive types: Constants; variables, arrays and simple structured data. Object Oriented design and implementation: inheritance and polymorphism. Software support environment: Use of an IDE, editors, compiler/linkers and operating system.

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: design and implement programming solutions to a range of example problems

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
1	Coursework	100		

Method of Assessment

Description

Students will be assessed on their completion of a programming assignment that applies their knowledge and skills attained over the duration of the unit. A detailed specification will be provided that will build on some of the key themes covered in the lab exercises and for which formative feedback will have been provided.

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 30

Student-centred: 45

Mandatory Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G6Z1715

Unit Name: Programming Languages and SE Frameworks (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 6 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: This unit will compare and contrast a range of programming language that cover the major programming paradigms such as functional, imperative and declarative. The unit will also critically evaluate the architecture of large scale software.

Indicative Content: A selection of topics from An overview of the evolution of programming language paradigms and language design . A comparative analysis and critical evaluation of programming language concepts and paradigms comparing procedural, object-oriented, functional, logic-based, and the concepts of variable type and binding. An analysis of the structure of large open source software programs including design patterns and software architectures. A critical study of software engineering frameworks and build systems.

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: Compare and contrast design and implementation aspects of core programming concepts

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
	Coursework	100		
	Method of Assessment			
1	Report			
	Description			
	The student will be supported in the production of a report on programming concepts and their application.			

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

LEARNING RESOURCES

Special ICTS Requirements:

Additional Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G6Z1714

Unit Name: User Experience and Interaction Design (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 6 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: Analysis, design, prototyping and evaluation of user interfaces and interactive systems and their contexts of use

Indicative Content:
A selection of topics from Human vision, memory, thinking, learning, Perception & Cognitive factors involved in the design of interactive systems.
Select and apply appropriate computational intelligence tools to interaction designs.
User Centred Design. Emotions and design. Aesthetics and Design. Anthropomorphic interface. Persuasive Design. Designing for diversity. Accessible and Acceptable designs.
Gathering system and user requirements. Developing functional and non functional specifications. Creating personas and scenarios.
Develop designs and wire frames for prototype. Conduct heuristic evaluations and various evaluations & testing methods on prototype. Develop & test prototype.

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: Critically assess and evaluate the effectiveness of interactive computer based systems

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
	Coursework	100		
	Method of Assessment			
1	Report			
	Description			
	The student will be supported in the production of a report on the application of UX methods and techniques to a real world inspired problem scenario.			

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

LEARNING RESOURCES

Special ICTS Requirements:

Additional Requirements:

UNIT SPECIFICATION FOR EXCHANGE AND STUDY ABROAD

Manchester Metropolitan University

UNIT DETAILS

Unit Code: 6G5Z1710

Unit Name: Web Based Business Systems (Student Mobility)

Department: School of Computing, Maths & Digital Technology

Faculty: Faculty of Science & Engineering

Level: 5 **Credits:** 15 **ECTS:** 7.5

UNIT DESCRIPTION

Brief Summary: This module takes a web and business oriented view of Computing, focussing on the topics and skills necessary to allow students to exploit their computing proficiency commercially, over the web.

Indicative Content: A selection of topics from Basic economic theory, as applies to web-focussed businesses and marketplaces. e-Marketing, including the use of social media and search engine optimisation . Handling money online, including mobile payments. Web Programming. The selection, deployment and use and extension of off-the-shelf, open-source e-commerce platforms and/or hosted solutions, Usability and Security for commercial websites.

LEARNING OUTCOMES

On successful completion of this Unit, the student will be able to:

Learning Outcome 1: evaluate technologies that enable e-commerce solutions

Learning Outcome 2:

Learning Outcome 3:

Learning Outcome 4:

Learning Outcome 5:

ASSESSMENT

Element	Type	Weighting	Min Pass Mark	Employability & Sustainability Outcomes
	Coursework	100		
	Method of Assessment			
1	Report			
	Description			
	The student will be supported in the production of a report on the enabling technologies of e-commerce.			

LEARNING ACTIVITIES

Breakdown of 150 hours of student learning activity

Summative Assessment: 25

Directed Study: 40

Student-centred: 35

Mandatory Requirements:

LEARNING RESOURCES

Special ICTS Requirements:

Additional Requirements: