Programme Specification

Information Technology [Frenchay]

Version: 2022-23, v0,

Contents

Section 1: Key Programme Details

Part A: Programme Information

Programme title: Information Technology [Frenchay]

Highest award: MSc Information Technology

Interim award: PGCert Information Technology

Interim award: PGDip Information Technology

Awarding institution: UWE Bristol

Affiliated institutions: Not applicable

Teaching institutions: UWE Bristol

Study abroad: No

Year abroad: No

Sandwich year: No

Credit recognition: No

Department responsible for the programme: Z-FET Dept of Computer Sci & Creative Tech, Z-FET_CMT Restructure

Contributing departments: Not applicable

Professional, statutory or regulatory bodies: Not applicable

Apprenticeship: Not applicable

Mode of delivery: Full-time, Part-time

Entry requirements: For the current entry requirements see the UWE public website.

For implementation from: 01 September 2020

Programme code: G56A12

Section 2: Programme Overview, Aims and Learning Outcomes

Part A: Programme Overview, Aims and Learning Outcomes

Overview: The programme aims to equip students with the knowledge, skills and attitudes necessary to work effectively and take on management responsibilities in a modern business or public sector environment where information technology and information services are key components of the organisation.

Educational Aims: The educational aims of the scheme are:

To provide an intellectual experience of advanced study, underpinned by staff expertise, research, and experience with systems development;

To enable the student to further and deepen his/her knowledge, understanding and analytical abilities in a stimulating and challenging academic environment;

To prepare the student for further professional development in his/her chosen field;

To develop the student's ability to conduct research in their chosen field;

To offer a flexible provision of postgraduate opportunities which allows for the engagement of part-time students whilst still in employment.

At the end of the programme, students should:

Have a flexible and critical attitude to innovation and change and be prepared for changing and varied employments;

Understand the significance of the dynamic role of information and systems technologies in the development of modern business and its importance in society in general;

Be able to analyse, synthesise and provide for the acquisition of appropriate skills in order that these may be applied in future employment;

Understand, and be able to use and exploit, relevant modern information systems;

Have management and communication skills relevant to the activities involved in information systems use and management;

Have an awareness of the social and organisational contexts in which information and technological changes operate;

Have a firm foundation on which to build future professional development;

Be able to carry out independent supervised research within the information world through the application of relevant methodical and analytical approaches.

Programme Learning Outcomes:
On successful completion of this programme graduates will achieve the following learning outcomes.

Knowledge and Understanding

A1.   The nature of information and data, the range of application domains and trends in the application of IT systems

A2.   Key principles in the fields of management, information and communication of relevance to information technology

A3.   Approaches to systems development and to information management, processing and communication

A4.   Appreciation of strategies for information systems introduction, change and risk management and quality assurance

A5.   Appreciation of the professional, legal, social, cultural and ethical issues related to computing and IT

A6.   Appreciation of security risks and the impact of security breaches on corporate integrity and personal privacy

A7.   Awareness of sustainability and environmental issues in IT practice

A8.   Appropriate research methods to investigate a specific area of professional interest or concern and to evaluate larger-scale research done by others

Intellectual Skills

B1.   Critically evaluate developments and new applications of information and communication technology systems

B2.   Evaluate the roles and uses of IT in different business and public sector settings

B3.   Analyse and model system problems and develop pragmatic, creative and innovative solutions

B4.   Evaluate a variety of methods and approaches to systems development

B5.   Recognize a clear research question or hypothesis and thus critically analyse theoretical perspectives relevant to the research process

B6.   Evaluate research methodologies, tools and techniques, and the process of research, reflectively

B7.   Relate theory and practice in the context of the application domains explored in the chosen option modules

B8.   Balance conflicting objectives in the research, selection and development of information systems and supporting technical platforms

Subject/Professional Practice Skills

C1.   Design, improve and retire/replace systems incorporating social, informational and technical elements

C2.   Develop familiarity with legislation, codes of practice and industrial standards relating to information management and computing

C3.   Identify and mitigate security risks and risks to successful project implementation

C4.   Involve stakeholders in the design, prototyping and evaluation of new digital systems

C5.   Manage and optimise software development including efficient coding, testing and integration

C6.   Manage projects and people, including distributed teams

C7.   Identify information/data requirements that are crucial to organisational performance and develop workflows for data extraction, management, analysis and integration into organisational intelligence and reporting

C8.   Design and conduct research in the subject area leading to evidence-based recommendations for change

Transferable Skills and other attributes

D1.   Communication skills: to communicate orally or in writing, including, for instance, the results of technical investigations, to peers and/or to "problem owners"

D2.   Self-management skills: to manage one's own time; to meet deadlines; to work with others having gained insights into the problems of team-based systems development

D3.   Leadership skills: building a vision, encouraging others to participate

D4.   IT Skills in context (to use software in the context of problem-solving investigations, and to interpret findings)

D5.   Progression to independent learning: To gain experience of, and to develop skills in, learning independently of structured class work. For example, to develop the ability to use on-line facilities to further self-study

D6.   Awareness of professional literature: to read and to use literature sources appropriate to the discipline to support learning activities

D7.   Working with others: to be able to work as a member of a team; to be aware of the benefits and problems which teamwork can bring

Part B: Programme Structure

Year 1
Full-time students must take 180 credits from the modules in Year 1.
Part-time students must take 120 credits from the modules in Year 1.

Year 1 Compulsory Modules (Full-time)
Full-time students must take 150 credits from the modules in Compulsory Modules (Full-time).

Module Code	Module Title	Credit

UFCF9Y-60-M	CSCT Masters Project 2022-23	60
UFCFQJ-15-M	Digital Design and Development 2022-23	15
UFCFED-30-M	Group Software Development Project 2022-23	30
UFCFHJ-15-M	Information Security 2022-23	15
UFCFPJ-15-M	Project Management 2022-23	15
UFCFNJ-15-M	Strategy and Governance in IT 2022-23	15

Year 1 Compulsory Modules (Part-time)
Part-time students must take 120 credits from the modules in Compulsory Modules (Part-time).

UFCF9Y-60-M CSCT Masters Project module is started in Year one and continued in Year two.

Module Code	Module Title	Credit
UFCF9Y-60-M	CSCT Masters Project 2022-23	60
UFCFQJ-15-M	Digital Design and Development 2022-23	15
UFCFED-30-M	Group Software Development Project 2022-23	30
UFCFPJ-15-M	Project Management 2022-23	15

Year 1 Optional Modules (Full-time)
Full-time students must take 30 credits from the modules in Optional Modules (Full-time).

Module Code	Module Title	Credit
UFCF8H-15-M	Big Data 2022-23	15
UFCFKR-15-M	Business Intelligence and Data Visualisation 2022-23	15

UFCFKJ-15-M	Cloud Computing 2022-23	15
UFCFEY-15-M	Data and Information Governance 2022-23	15
UFCE8J-15-M	Designing the User Experience 2022-23	15
UFCFGD-15-M	Knowledge Management 2022-23	15
UFCFLJ-15-M	Linked, Open Data and the Internet of Things 2022-23	15
UFCFMJ-15-M	Machine Learning and Predictive Analytics 2022-23	15
UFCFJJ-15-M	Social Media and Web Science 2022-23	15

Year 2
Part-time students must take 60 credits from the modules in Year 2.

Year 2 Compulsory Modules (Part-time)
Part-time students must take 30 credits from the modules in Compulsory Modules (Part-time).

UFCF9Y-60-M CSCT Masters Project module is started in Year one and continued in Year two.

Module Code	Module Title	Credit
UFCFHJ-15-M	Information Security 2023-24	15
UFCFNJ-15-M	Strategy and Governance in IT 2023-24	15

Year 2 Optional Modules (Part-time)
Part-time students must take 30 credits from the modules in Optional Modules (Part-time).

Module Code	Module Title	Credit
UFCF8H-15-M	Big Data 2023-24	15
UFCFKR-15-M	Business Intelligence and Data Visualisation 2023-24	15

UFCFKJ-15-M	Cloud Computing 2023-24	15
UFCFEY-15-M	Data and Information Governance 2023-24	15
UFCE8J-15-M	Designing the User Experience 2023-24	15
UFCFGD-15-M	Knowledge Management 2023-24	15
UFCFLJ-15-M	Linked, Open Data and the Internet of Things 2023-24	15
UFCFMJ-15-M	Machine Learning and Predictive Analytics 2023-24	15
UFCFJJ-15-M	Social Media and Web Science 2023-24	15

Part C: Higher Education Achievement Record (HEAR) Synopsis

Graduates will be able to demonstrate knowledge and understanding of the foundations and history of Information Technology (IT) and trends in IT, as well as hardware and software components of IT, networks and databases and business information systems applications. They will be able to understand systems analysis and design methods and techniques; the information systems (IS) development process and IS development practice.

They will have gained understanding of the relationship between computer-based IS and business objectives, as well as business organisations and operations, and strategic issues for business. These graduates will also be able to demonstrate knowledge and understanding of the Internet/WWW/e-commerce environment.

These graduates will be critical thinkers, able to analyse, evaluate and to synthesise different types of information. They will be able to appreciate problem contexts, balance conflicting objectives and solve problems.

In addition they will be able to conduct an organisational analysis highlighting issues and concerns surrounding the use of information systems. They will be able to

conduct user requirements analysis, specify requirements for information systems applications and model and design procedures, data structures, information systems. Graduates will also be able to construct basic IS, including web-based IS; follow system development methods (including prototyping) and build applications using tools, methods and packages.

They will have shown that they are able to work (alone and in teams) in a disciplined manner on IT development projects. They are also able to integrate design methods, working methods and toolsets to achieve coherent and focused practice in application of information systems in organisational contexts. They will also be able to discuss the achievement of operational and strategic business objectives through the application of information systems.

Graduates will be good communicators, both orally and in writing. They will have developed the skills to manage their own time; to meet deadlines and to work with others, having gained insights into the problems of team-based systems development. They will be able to learn independently of structured class work and to read and to use literature sources to support their learning.

They will also be able to use software in the context of problem-solving investigations and to interpret findings, as well as have the ability to express problems in appropriate notations.

Part D: External Reference Points and Benchmarks

In designing the programme, the faculty has drawn on the following external reference points:

QAA Benchmark statements on the fundamental requirements for programme design, as well as many of the subject knowledge and skills guidance for generalist Masters programmes

The programme design and module specifications have been extensively guided by guidelines on postgraduate teaching within the University of the West of England and the influence of web-based technologies and its value in business

Level 7 guidance on learning objectives from SEEC, covering Knowledge and Understanding, Intellectual Skills and Transferable Skills and Other Activities, in particular.

From the QAA benchmarks, the programme focused on the need to integrate theory and practice as well as planning the development of a set of attitudes and an appreciation of a range of applications and their impact on users. This has been mostly achieved by making the Group Software Development Project a compulsory part of the course, and another 30 credit module exploring current IT problems (Professionalism and Governance in IT), as well as project management exploration in another module (Project Management). The Masters Dissertation develops the student's research and investigative skills. These modules, which comprise half the Masters course's credits, amply cover the QAA's guidance on Generic (transferable) Skills, such as the ability to "critically review the literature, which includes identifying all of the key developments in a particular area of study, critically analysing them and identifying limitations and avenues for further development or explanation", as well going a long way to providing an opportunity to recognise and develop innovative opportunities.

UWE Teaching and Learning Strategy has informed the design and mix of assessment regimes which are included in this Masters course, as well as the need to recognize constraints on contact and assessment allocations for staff delivering a postgraduate provision. There is a range of assessment methods, with a clear attempt to include presentation and verbal justification of studies as well as written reports. Examinations still feature in many modules but there is variation in the preparation for those controlled condition assessments (Project Management – previewed exploratory questions known at start of module) in line with guidance on provision at postgraduate level and for international students. In the SEEC Level 7 guidelines, Knowledge and Understanding at this level should cover "current theoretical and methodological approaches", which is at the core of the Professionalism and Governance in IT module. The Group Software Development Project particularly covers the Level 7 intellectual skill: "designs and undertakes substantial investigations to address significant areas of theory and/or practice". This

group project also very much satisfies a Level 7

transferable skill: "works effectively in multiple teams as leader or member… make

appropriate use of the capacities of team members".

Part E: Regulations

Approved to University Regulations and Procedures.