

MODULE DIRECTORY

BSc (HONS) APPLIED COMPUTING

LEVELS 5-6

ACADEMIC DISCIPLINE OF BIRMINGHAM AND LONDON CAMPUSES

INSTITUTE OF INNER CITY LEARNING

2026-2027

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INTRODUCTION

This Module Directory includes all the modules for Levels 5-6 within the Institute of Inner City Learning in the academic year 2026-2027.

This directory accompanies the Programme of Study Handbook, which will provide you with details of which modules you will be studying for your programme this year in the 'Programme of Study' section. This directory may include modules that are running on other programmes of study within your School/Faculty. If you require assistance in identifying the modules for your programme of study, please contact the Programme Manager (whose name and contact details are provided in the accompanying Programme of Study Handbook), or the relevant Faculty Office.

The University has made every effort to make the information as full and as accurate as possible, but you should note that minor changes in the organisation of modules between the planning stage and the actual teaching are inevitable. We shall try to keep any such changes to a minimum, and you will receive plenty of advance warning in the event of any alteration. We would also be grateful if you would let us know about any changes that you think might be helpful if introduced into future handbooks.

MODULES

LEVEL 5

Module Code	ACCA5019
Title	Business and Web Management
Date	09/09/2020
Level	5
Credits	20
Pre-Requisites	None

AIM(S)

- To enable the student to gain a broad understanding of Business & IT Management concepts, techniques and methods used within organisations today including the role of the contemporary manager in the realisation of individual and organisational potential through stakeholder relationships.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Demonstrate a sound understanding of the principal forms of business strategy and the environment, leadership & management, motivation and business information systems.
- Understand and apply essential concepts techniques and applications required to design and create a professional online presence for a business.

INDICATIVE CONTENT

- Strategy
- Business environment
- Business functions
- Leadership & management
- Structure & culture
- Motivation
- Business Information Systems
- Cloud Computing concepts
- Web design & online branding
- Web Usability Guidelines and Accessibility principles
- Online Marketing & Analytics
- E-Commerce solutions
- Professional legal and ethical issues: security, privacy, usability, accessibility.

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	48	24%
Independent learning	152	76%
Placement learning	0	0%
TOTAL	200	100%

ASSESSMENT

Assessment Component 1

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Report	2000 words	50%

Assessment Component 2

☒ Written exam ☐ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Presentation	15mins	50%

Assessment Summary

Activity type	Percentage
Written exam	50%
Coursework	50%
Practical	0%
TOTAL	100%

INDICATIVE READING LIST

Module Code	ACCA5019	
Module Title	Business and Web Management	
Classification	Reading List entry	Electronic *
Essential	Mullins, L. J. (2019) (12 th Ed.) Management & Organisational Behaviour. Pearson.	☒
Essential	Chaffey, D. & Smith, P. R. (2017) (5 th Ed.) Digital Marketing Excellence: Planning, Optimizing and Integrating Online Marketing. Routledge.	☒
Further	Chaffey, D. (2019) (7 th Ed.) Digital Business and E-Commerce Management, Pearson.	☒
Further	Piccoli, G. & Pigni, F. (2016) (3 rd Ed.) Information Systems for Managers: Text and Cases. Hoboken. Prospect Press.	☒

Further	Daconta, Michael C. (2013) Great Cloud Migration: Your Roadmap to Cloud Computing, Big Data and Linked Data. Outskirts Press.	☒
Further	Kingsnorth, S. (2016) Digital Marketing Strategy: An Integrated Approach to Online Marketing. Kogan Page.	☐
Further	Damian, R. & Jones, C (2016) (4th Ed.) Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation. Kogan Page.	☐
Further	Sklar, J. (2014) (6th Ed.) Principles of Web Design. Course Technology.	☐
Further	Krug, S. (2013) (3 rd Ed. Don't Make Me Think: A Common Sense Approach to Web Usability New Riders	☐
Further	Sharma, A (2016) The Google Checklist: Marketing Edition, CreateSpace.	☐
Further	http://businesscasestudies.co.uk	☒
Further	http://www.cbi.org.uk/	☒
Further	http://www.informationweek.com	☒
Further	http://www.forbes.com/technology/	☒
Further	Journal of Management Studies	☒
Further	Journal of Organisational Behaviour	☒
Further	Management Today	☒
Further	Harvard Business Review	☒
Further	Information Systems Journal	☒
Further	Information Systems Management	☒
Further	http://www.useit.com/	☒
Further	http://marketingland.com	☒
Further	http://www.digitaltrends.com/social-media/	☒
Further	http://www.ecommercetimes.com	☒
Further	ACM Transactions on Internet Technology.	☒
Further	International Journal of Online Marketing (IJOM).	☒
Further	Journal of Digital & Social Media Marketing.	☒
Further	International Journal of Electronic Commerce.	☒

Module Code	ACCA5023
Title	Network Operating Systems and Services
Date	09/09/2020
Level	5
Credits	20
Pre-Requisites	None

AIM(S)

- To provide students with a sound understanding of the concepts, principles, skills and techniques required to manage and deploy network resources in a Network Operating Systems environment, e.g. Windows, or Linux.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Apply a systematic understanding of network operating system environments to deploy, manage and maintain critical network services and resources.
- Analyse a given network to produce suitable security audit/disaster recovery strategy, working individually and as part of a team.

INDICATIVE CONTENT

- Overview of Directory Services.
- Directory Services administration, e.g. user, computer accounts, group accounts.
- The name resolution process.
- Deployment, configuration and testing of a Domain Name System (DNS) server.
- Dynamic Host Configuration Protocol (DHCP) and its relevance to network deployment.
- Deployment, configuration and testing of a Dynamic Host Configuration Protocol (DHCP) server.
- Identification of the risks and threats to the security of resources and data (digital and physical).
- Disaster prevention and recovery methods.
- Principles and common levels of Redundant Array of Inexpensive Disk (RAID) arrays, e.g. 0, 1, 5, 6, 10.
- Virtualisation.
- Failover clustering and associated principles, e.g. quorum-based decision-making.
- Network load balanced clustering.
- Monitoring programs: use of network monitoring and management tools/protocols.
- Network penetration testing as pertains to the services explored.
- Legal, social and ethical issues.

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	48	24%
Independent learning	152	76%
Placement learning	0	0%
TOTAL	200	100%

ASSESSMENT

Assessment Component 1

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Coursework	2500 words	50%

Assessment Component 2

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Coursework	2500 words	50%

Assessment Summary

Activity type	Percentage
Written exam	0%
Coursework	100%
Practical	0%
TOTAL	100%

INDICATIVE READING LIST

Module Code	ACCA5023	
Module Title	Network Operating Systems and Services	
Classification	Reading List entry	Electronic*
Essential	Bekim Dauti (2019) Windows Server 2019 Administration Fundamentals: A beginner's guide to managing and administering Windows Server environments, 2nd Edition. Packt Publishing	☐
Essential	Evi Nemeth et al. (2017) UNIX and Linux System Administration Handbook. Addison Wesley	☐
Further	ACM	☒
Further	IEEE	☒
Further	Computer Networking	☒
Further	Data Communications	☒

Module Code	ACCA5026
Title	Databases and Application Development
Date	09/09/2020
Level	5
Credits	20
Pre-Requisites	None

AIM(S)

- To provide students with a systematic understanding of the concepts underlying the design and development of databases and data applications for real-world problems.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Critically evaluate the concepts, technologies and techniques used in the design and development of databases and data applications.
- Select and deploy appropriate concepts, technologies and techniques to design and implement database solutions and backend data applications for real-world problem scenarios.

INDICATIVE CONTENT

- Relational database concepts e.g. data independence, normalisation techniques, transaction management.
- Database query languages e.g. Structured Query Language (SQL).
- NoSQL and NewSQL database concepts.
- Data models e.g. entity-relationship, object-oriented, object-relational, and NoSQL models.
- Software programming languages, development libraries, frameworks, object-oriented design methods, design patterns, and architectural models for data applications.
- Data access, management and manipulation techniques, options for preserving data and dynamic data content, and displaying data user interfaces and views.
- Security, authorisation and authentication measures in databases and data applications.
- Testing, debugging, and evaluation techniques and tools.

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	48	24%
Independent learning	152	76%
Placement learning	0	0%
TOTAL	200	100%

ASSESSMENT

Assessment Component 1

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Portfolio	6 - 8 elements	100%

Assessment Summary

Activity type	Percentage
Written exam	0%
Coursework	100%
Practical	0%
TOTAL	100%

INDICATIVE READING LIST

Module Code	ACCA5026	
Module Title	Databases and Application Development	
Classification	Reading List entry	Electronic*
Essential	Connolly, T., Begg, C., 2015, <i>Database Systems: A Practical Approach to Design, Implementation and Management</i> , 6th Edition, Addison Wesley	☒
Essential	Viescas, J. L., 2018, <i>SQL Queries for Mere Mortals: A Hands-On Guide to Data Manipulation in SQL</i> , 4 th Edition, Addison-Wesley Professional	☒
Essential	Joshi, B., 2019, <i>Beginning Database Programming Using ASP.NET Core 3: With MVC, Razor Pages, Web API, jQuery, Angular, SQL Server, and NoSQL</i> , Apress	☒
Further	Freeman, A., 2020, <i>Pro ASP.NET Core 3: Develop Cloud-Ready Web Applications Using MVC 3, Blazor, and Razor Pages</i> , 8 th Edition, Apress	☒
Further	Lock, A., 2018, <i>ASP.NET Core in Action</i> , Manning Pub	☒
Further	Kleppmann, M., 2017, <i>Designing Data-Intensive Applications: The Big Ideas Behind Reliable, Scalable, and Maintainable Systems</i> , O'Reilly Media	☒
Further	Sharp, J., 2018, <i>Microsoft Visual C# Step by Step</i> (9th Edition), Microsoft Press	☒
Further	Troelsen, A., Japiske, P., 2017, <i>Pro C# 7: With .NET and .NET Core</i> , 8 th Edition, Apress	☒

Module Code	ACCA5033
Title	Changemakers: Creativity and Value Creation
Date	25/06/2020
Level	5
Credits	20
Pre-Requisites	None

AIM(S)

- To develop the concepts and practice of creativity and value creation for the development of innovative, aspiring and progressive solutions.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Demonstrate knowledge and critical understanding of innovation, creativity and enterprising mindset, recognising the values and the contribution creativity makes to the common good.
- Conceive, articulate and apply creative thinking within a work-based or academic context to develop novel solutions and/or value creation.

INDICATIVE CONTENT

- Creativity in theory and practice.
- Value creation in theory and practice.
- Creative and ethical leadership: skills and challenges.
- Driving innovation and change, the intra and entrepreneurial individual.
- Critical thinking, troubleshooting and problem solving, developing novel solutions.
- Information gathering for inspiration, vision creation and ideation.
- Developing the enterprising and data driven mindset.
- Contemporary technologies: virtual and augmented reality and artificial intelligence to enhance creativity and innovation.
- Time management practices for an entrepreneurial mindset.
- Being resourceful, in the context of making do with less.
- Reflection and self-reflection.

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	48	24%
Independent learning	152	76%
Placement learning	0	0%
TOTAL	200	100%

ASSESSMENT

Assessment Component 1

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Online portfolio of set exercises	2,000 words or equivalent	50%

Assessment Component 2

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Assignment	2,000 words or equivalent	50%

Assessment Summary

Activity type	Percentage
Written exam	0%
Coursework	100%
Practical	0%
TOTAL	100%

INDICATIVE READING LIST

This will be guided by the student's subject area.

Module Code	ACCA5033	
Module Title	Changemakers: Creativity and Value Creation	
Classification	Reading List entry	Electronic*
Essential	Hargreaves, J., and Page, L. (2013) <i>Reflective Practice</i> . (Key Themes in Health and Social Care Series). Polity Press.	☒
Essential	Nardi, P.M. (2017) <i>Critical Thinking : Tools for Evaluating Research</i> . University of California Press	☒
Essential	Westerman, G., Bonnet, D. and McAfee, A., <i>Leading Digital: Turning Technology Into Business Transformation</i> . (Audiobook) Recorded Books. 2017.	☒
Further	Schiama, G. (2011) <i>Managing Knowledge Assets and Business Value Creation in Organizations : Measures and Dynamics</i> Hershey, Pa.: Business Reference Service.	☒
Further	Rescher, N. (2014). <i>A System of Pragmatic Idealism, Volume II The Validity of Values, A Normative Theory of Evaluative Rationality</i> (Princeton Legacy Library). Princeton: Princeton University Press.	☒
Further	Turner, E. (2020) <i>Be Less Zombie: How great companies create dynamic innovation, fearless leadership and passionate people</i> . John Wiley & Sons.	☒

Module Code	ACCA5034
Title	Data Security and Compliance
Date	09/09/2020
Level	5
Credits	20
Pre-Requisites	None

AIM(S)

- To provide students with the basic concepts and understanding about threats and vulnerabilities present in systems. They must learn how to use the information assets securely to support the goals and objectives of organisations through information security governance, risk management and regulatory compliance.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Understand the key issues associated with inspection, protection, detection of and reaction to threats to information assets.
- Provide an overview of the field of information security assurance, governance, policies, risk management and regulatory compliance.

INDICATIVE CONTENT

- Introduction to Information Security
- The Need for Security
- Legal, Ethical, and Professional Issues in Information Security
- Planning for Security
- Risk Management
- Regulatory Acts
- Security Governance Concepts, Principles, and Policies
- How does security governance interact with risk management?
- Security Technology: Access Controls, Firewalls, and VPNs
- Security Technology: Intrusion Detection and Prevention Systems and Other Security Tools
- Cryptography
- Physical Security
- Implementing Information Security
- Security and Personnel
- Information Security Maintenance

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	48	24%
Independent learning	152	76%
Placement learning	0	0%
TOTAL	200	100%

ASSESSMENT

Assessment Component 1

(Tick one)

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Portfolio	5,000 words equivalent	100%

Assessment Summary

Activity type	Percentage
Written exam	
Coursework	100%
Practical	
TOTAL	100%

INDICATIVE READING LIST

Module Code	ACCA5034	
Module Title	Data Security and Compliance	
Classification	Reading List entry	Electronic*
Essential	Principles of Information Security, 6th Edition Michael E. Whitman Herbert J. Mattord Copyright 2018	☐
Essential	Ladley, J. (2012), Data Governance: How to Design, Deploy and Sustain an Effective Data Governance Program, Morgan Kaufmann, MA, USA.	☒
Essential	Plotkin, D. (2013), Data Stewardship: An Actionable Guide to Effective Data Management and Data Governance, Morgan Kaufmann, MA, USA.	☒
Further	CISSP Guide to Security Essentials, 2nd Edition. Peter H. Gregory, Copyright 2015. ISBN-10: 130584601X ISBN-13: 9781305846012	☒
Further	Information Security Governance: A Practical Development and Implementation Approach by Krag Brotby. ISBN: 978-1-118-58551-1. August 2017	☒

Further	Gregory, P.H. (2015) CISSP Guide to Security Essentials, 2nd Edition. Course Technology.	☒
Further	Quinn, M. J. (2015), Ethics for the Information Age: International Edition, Pearson: NY, 2015	☒
Further	Brotby, K. (2017), Information Security Governance: A Practical Development and Implementation Approach, Wiley.	☒
Further	IEEE/ACM, IEEE/ACM Transactions on Networking	☒
Further	IEEE, IEEE Network Magazine	☒
Further	Science Direct	☒
Further	Scopus	☒
Further	ACM Transactions on Database Systems	☒
Further	ACM Transactions on Information Systems	☒
Further	CISCO Academy Website, cisco.netacad.net (password access only)	☒

Module Code	ACCA5036
Title	Scripting and Programming Concepts
Date	09/09/2020
Level	5
Credits	20
Pre-Requisites	None

AIM(S)

- To instruct the development of software using a high level programming languages. Simple design concepts and good programming practice will be adopted.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Understand the syntax and semantics of high-level programming languages and develop programs using good programming practices.
- Select and deploy basic software constructs using simple algorithms in the development of solutions to programming problems

INDICATIVE CONTENT

- The software life cycle – analysis, design, implementation and maintenance.
- Algorithm design – flow charts and pseudo-code.
- The programming environment – editor, compiler, debugger.
- High level language programming syntax and semantics
- Scripting languages eg Python, JavaScript, Ruby.
- Data types, variables, operators, control structures, data structures, functions.
- Software testing and debugging.
- Documentation including user guides, technical guides, etc.
- Introduction to problem solving techniques for well-defined problems e.g. interpreting natural language problem definitions, variable identification techniques, divide and conquer, etc.

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	48	24%
Independent learning	152	76%
Placement learning	0	0%
TOTAL	200	100%

ASSESSMENT

Assessment Component 1

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Programming assignment with associated documentation	4500 words equivalent	100%

Assessment Summary

Activity type	Percentage
Written exam	0%
Coursework	100%
Practical	0%
TOTAL	100%

INDICATIVE READING LIST

Module Code	ACCA5036	
Module Title	Scripting and Programming Concepts	
Classification	Reading List entry	Electronic*
Essential	Robbins, J., (2018), Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics, O'Reilly Media	☐
Essential	Romano, F (2018) <i>Learn Python Programming: The no-nonsense, beginner's guide to programming, data science, and web development with Python 3.7</i> , 2nd Edition, Packt	☒
Further	Cannon, J (2014) <i>Python Programming for Beginners: An Introduction to the Python Computer Language and Computer Programming</i> , CreateSpace Independent Publishing Platform	
Further	McGrath, M (2013) <i>Python in Easy Steps</i> , In Easy Steps Limited	

LEVEL 6

Module Code	ACCB6000
Title	Advanced Cyber Security
Date	09/09/2020
Level	6
Credits	20
Pre-Requisites	None

AIM(S)

- To provide students with Cyber Security concepts and a deep understanding of how they are applied using Internet technologies. Students will gain a thorough understanding of up-to-date security threats and vulnerabilities posed to the Internet and an understanding of the legal, policy and technical approaches that are necessary to mitigate such risks.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Demonstrate a systematic understanding of a wide range of current research and technological advances in Cyber Security.
- Consistently apply the principles and practices of Cyber Security for mitigating the key technical internet security vulnerabilities and threats that organisations face.

INDICATIVE CONTENT

- Fundamentals of Computer Security.
- Networking Concepts.
- Cryptography.
- Internet Security Technologies.
- Security of Computer Communications.
- Wireless Security.
- Windows Security.
- Linux Security.
- Web Applications and Security.
- Defensive Network Infrastructure – Intrusion Detection/Firewalls.
- Malware, Virus and Worms.
- Network Traffic Analysis and Forensics using Wireshark.
- Data Loss Prevention.
- Penetration Testing.

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	48	24%
Independent learning	152	76%
Placement learning	0	0%
TOTAL	200	100%

ASSESSMENT

Assessment Component 1

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Portfolio	5000 words equivalent	100%

Assessment Summary

Activity type	Percentage
Written exam	0%
Coursework	100%
Practical	0%
TOTAL	100%

INDICATIVE READING LIST

Module Code	ACCB6000	
Module Title	Advanced Cyber Security	
Classification	Reading List entry	Electronic*
Essential	The Web Application Hacker's Handbook: Finding and Exploiting Security Flaws, 2ed. Author: D. Stuttard.	☒
Essential	Cisco CyberOps Associate CBROPS 200-201 Official Cert Guide By Omar Santos Published Dec 10, 2020 by Cisco Press. Part of the Certification Guide series. Copyright 2021 ISBN-10: 0-13-680783-6 ISBN-13: 978-0-13-680783-4	☒
Essential	Cracking the Coding Interview: 189 Programming Questions and Solutions 6th Edition. Author: Gayle Laakmann.	☒
Essential	Basic Security, Penetration Testing and How to Hack. Author: Isaac Sharpe.	☐
Essential	Cyber Insecurity: Navigating the Perils of the Next Information Age. Author: Richard Harrison.	☒
Essential	Counter Hack Reloaded: A Step-by-Step Guide to Computer Attacks and Effective Defenses (2nd Edition) 2nd Edition. Authors: Edward Skoudis, and Tom Liston.	☒
Essential	www.netacad.com username & password required	☒
Further	Applied Cryptography: Protocols, Algorithms and Source Code in C. Author: Bruce Schneir. (2015)	☒
Further	The Art of Exploitation, 2nd Edition. Author: Jon Erickson.	☐
Further	Beginner to Expert Guide to Computer Hacking, Basic Security, and Penetration Testing (Computer Science Series) Kindle Edition. Author: James Patterson.	☐

Further	Hacking for Beginners – Computer Virus, Cracking, Malware, IT Security (Cyber Crime, Computer Hacking, How to Hack, Hacker, Computer Crime, Network Security, Software Security), Author: Joseph Connor.	☐
Further	Journals IEEE/ACM, IEEE/ACM Transactions on Networking IEEE, IEEE Network Magazine Science Direct Scopus ACM Transactions on Database Systems ACM Transactions on Information Systems	☒
Further	Websites http://www.veracode.com/directory/owasp-top-10 http://www.vulnerabilityassessment.co.uk/Penetration%20Test.html http://www.softwaretestinghelp.com/penetration-testing-tools/ https://www.owasp.org/index.php/Main_Page DoD Cyber Crime Center (http://www.dc3.mil) http://www.digitalforensicsmagazine.com/ www.dvwa.co.uk	☒

Module Code	ACCB6017
Title	Usability Engineering
Date	12/07/2021
Level	6
Credits	20
Pre-Requisites	None

AIM(S)

- To build upon students' interface design skills to give the ability to apply and analyse techniques of usability engineering.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Research and evaluate cognitive and social information processing
- Select, apply and analyse critically techniques of interface evaluation
- Synthesize a solution to a complex design problem from the concepts and principles of usability engineering and software development
- Critically analyse, individually and as part of a team exercise, input and output hardware appropriate for specialised applications, for example for use by disabled people, and for three-dimensional modelling applications

INDICATIVE CONTENT

- Cognitive aspects of information: perception: sensory inputs and the human memory system; concept formation and knowledge representation; cognitive processing: attention, reasoning,
- The social aspect of information: semiotics and language; verbal and non-verbal languages
- Interface evaluation methods (for example, observation, verbal protocol analysis, structured expert reviewing).
- The scope and role of usability engineering methods (for example, task analysis, GOMS, communicating sequential processes).
- Usability engineering methodologies to create a suitable interface and their relation to the software design process.
- I/O devices for specialised design needs (for example, 3-dimensional interfaces and interfaces for users with disabilities).

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	48	24%
Independent learning	152	76%
Placement learning	0	0%
TOTAL	200	100%

ASSESSMENT

Assessment Component 1

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Essay	2500 words	50%

Assessment Component 2

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Essay	2500 words	50%

Assessment Summary

Activity type	Percentage
Written exam	50%
Coursework	50%
Practical	0%
TOTAL	100%

INDICATIVE READING LIST

Module Code	ACCB6017	
Module Title	Usability Engineering	
Classification	Reading List entry	Electronic *
Essential	Shneiderman, B (2017) <i>Designing the User Interface: Strategies for Effective Human-Computer Interaction (6th Edition)</i> , Addison-Wesley	☐
Further	Rogers Y, Sharp, H, & Preece, J (2015) <i>Interaction Design: Beyond Human-Computer Interaction. 4th Edition</i> , John Wiley & Sons, Inc	☐
Further	Lazar, J., Fend, JH and Hochheiser, H (2017) <i>Research Methods in Human-Computer Interaction 2nd Edition</i> , Wiley	☐
Further	MacKenzie, S. (2014) <i>Human-Computer Interaction: An Empirical Research Perspective</i> , Morgan Kaufmann	☐
Further	BCS Human Computer Interaction Group Proceedings	☐
Further	ACM Publications: Communications, Interactions, SIGCHI	☐
Further	http://www.usability.gov/	☒
Further	http://www.w3.org/standards/webdesign/accessibility Web accessibility standards	☒
Further	http://www.nngroup.com/articles/ Short usability articles from Jacob Neilson	☒

Module Code	ACCB6019
Title	Emerging Trends
Date	25/03/2021
Level	6
Credits	20
Pre-Requisites	None

AIM(S)

- To enable students to demonstrate a theoretical or practical understanding of current technologies, concepts or practices.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Analyse the principles and concepts associated with an emerging field of computing such as the professional practices being adopted in industry, a novel technology or a new application of an existing technology.
- Evaluate the effectiveness, benefits, drawbacks or suitability of deploying appropriate technologies or approaches to the solution of a problem as part of a team and/or as an individual.

INDICATIVE CONTENT

- Current or emerging technologies within fields such as networking, web development, software applications, data analytics
- Software or network design methodologies
- Professional practices
- Testing approaches within programming, network implementations, usability, etc.
- Software tools and libraries such as network simulation tools, rootkits, graphics SDKs, game engines, software libraries, software development tools, testing tools, etc.
- Critical, analytical thinking and writing

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	48	24%
Independent learning	152	76%
Placement learning	0	0%
TOTAL	200	100%

ASSESSMENT

Assessment Component 1

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Portfolio	May take the form of an essay, a presentation and/or an implementation 4000 words equivalent	100%

Assessment Summary

Activity type	Percentage
Written exam	0%
Coursework	100%
Practical	0%
TOTAL	100%

INDICATIVE READING LIST

Module Code	ACCB6019	
Module Title	Emerging Trends	
Classification	Reading List entry	Electronic*
Essential	The nature of this module requires up to date sources. These will be provided to the students during the module. Essential texts will change during the course of the module.	
Further	Bejtlich, R. (2015) The Tao of Network Security Monitoring: Beyond Intrusion Detection, Boston: Addison-Wesley	☒
Further	Stallings, W. (2017) Cryptography and Network Security: Principles and Practice (7th Edition), Pearson Education Limited	☒
Further	Sommerville, I. (2015), Software Engineering, , Pearson	☒

Module Code	ACCA6020
Title	Independent Project
Date	25/06/2020
Level	6
Credits	40
Pre-Requisites	None

AIM(S)

- To develop the ability of students to engage critically and innovatively with theory and/or practice relevant to their studied subject areas in order to produce a discipline specific in-depth project.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Demonstrate intellectual skills in the identification of an appropriate topic, problem or challenge for investigation pertinent to their field of study and formulate a suitable plan for further research utilising relevant investigative methods in order to produce a response.
- Evidence in-depth knowledge and critical understanding of principles necessary to underpin their education within their chosen field of study and problem solving techniques applicable to this.
- Evidence independence of thought and critical evaluation in the production of an independent piece of work, demonstrating transferable skills through exercising initiative and personal responsibility in planning own learning and self-management.
- Organise their knowledge and learning through use of a range of media, and present their work appropriately in a manner that can be understood by specialist and non-specialist audiences.

INDICATIVE CONTENT

- Research paradigms, methods, and techniques of research and enquiry.
- Conducting and writing literature reviews.
- Ethical concerns and the research process.
- Resource, project, and skills management processes and techniques.
- Presenting and illustrating data and information.
- Communication of general, specialist, technical ideas and results.
- Problem solving, creative, entrepreneurial thinking and approaches.
- Collaboration, adaptability and reflection.

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	36	9%
Independent learning	364	91%
Placement learning	0	0%
TOTAL	400	100%

ASSESSMENT

Assessment Component 1

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Portfolio	Minimum of 3 elements (equivalent to 10,000 words)	100%

Assessment Summary

Activity type	Percentage
Written exam	0%
Coursework	100%
Practical	0%
TOTAL	100%

INDICATIVE READING LIST

This will be guided by the student's individual project.

Module Code	ACCA6020	
Module Title	Independent Project	
Classification	Reading List entry	Electronic*
Essential	Cottrell S, (2015) <i>Skills for Success Personal Development and Employability, 3rd edition</i> , Palgrave. London.	☒
Essential	ASET, 2013 <i>Good Practice Guide for Workbased Learning and Placement Learning in Higher Education</i>	☒
Essential	Gray, D.E. (2018) <i>Doing Real World Research</i> , London: SAGE.	☐
Further	Gallagher K, (2016) <i>Essential Study and Employment Skills For Business and Management Students</i> , Oxford	☐
Further	Gottschall, Jonathan (2013), <i>The Storytelling Animal: How Stories Make Us Human</i> , Houghton Mifflin	☐
Further	Storr, Will (2020), <i>The Science of Storytelling</i> , William Collins	☐
Further	Cohen, L. Manion, L. and Morrison, K. (2017) <i>Research Methods in Education, 8th edition</i> London: Routledge.	☒

Further	Flick, U. (2014) <i>An Introduction to Qualitative Research</i> , London: SAGE.	☐
Further	Aubrey, K. & Riley, A. (2017) <i>Understanding and Using Challenging Education Theories</i> , London: SAGE.	☒
Further	Brinkmann, S. and Kvale, S. (2018) <i>Doing Interviews (Qualitative Research Kit)</i> . Sage	☐
Further	Gibbs, G. (2018) <i>Analysing Qualitative Data (Qualitative Research Kit)</i> . Sage	☒
Further	Creswell, J. W. (2012). <i>Qualitative inquiry and research design: Choosing among five approaches</i> . Sage	☐
Further	Obschonka, M., Hakkarainen, K., Lonka, K. <i>et al.</i> Entrepreneurship as a twenty-first century skill: entrepreneurial alertness and intention in the transition to adulthood. <i>Small Bus Econ</i> 48 , 487–501 (2017). https://doi.org/10.1007/s11187-016-9798-6	☒
Further	https://ec.europa.eu/jrc/en/entrecomp	☒

Module Code	ACCA6026
Title	Data Warehousing and Data Mining
Date	09/09/2020
Level	6
Credits	20
Pre-Requisites	None

AIM(S)

- To provide students with a comprehensive and systematic understanding of the concepts underlying modern data warehouse systems. The student's technical skills will be extended to allow them to extract business intelligence from a dataset using both data analysis and data mining tools.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Analyse critically the structure, capabilities and role of a data warehouse within a modern business environment.
- Select and perform appropriate data analysis and reporting on data within a data warehouse environment and critically evaluate the results
- Provide business intelligence through the creative application of appropriate data mining processes and the critical evaluation of their results.

INDICATIVE CONTENT

- Source systems, data warehouses and data marts, dimensional modelling
- Business requirements, ETL process, data cleaning
- Reporting systems, data presentation, dashboards
- Data analysis and data mining; clustering, classification, time series analysis
- Data governance and data protection

Study Time Allocation

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	48	24%
Independent learning	152	76%
Placement learning	0	0%
TOTAL	200	100%

ASSESSMENT

Assessment Component 1

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Report	2500 words	50%

Assessment Component 2

☐ Written exam ☒ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Report	2500 words	50%

Assessment Summary

Activity type	Percentage
Written exam	0%
Coursework	100%
Practical	0%
TOTAL	100%

INDICATIVE READING LIST

Module Code	ACCA6026	
Module Title	Data Warehousing and Data Mining	
Classification	Reading List entry	Electronic*
Essential	Loth, A., (2019) <i>Visual Analytics with Tableau</i> , Wiley	☒
Essential	Kimball, R. & Ross, M. (2016) <i>The Kimball Group Reader: Relentlessly Practical Tools for Data Warehousing and Business Intelligence</i> , Wiley	☒
Further	Few, S. (2012), <i>Show Me The Numbers</i> , Analytics Press, Burlingame, CA.	☒
Further	Witten, I.H., Elbe, F., Hall, M.A., & Pal, C.J. (2016), <i>Data Mining: Practical Machine Learning Tools and Techniques</i> , Morgan Kaufmann.	☒