Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

PROGRAMME OF STUDY HANDBOOK

ACADEMIC DISCIPLINE OF APPLIED COMPUTING

BSc/HND Applied Computing
BSc/HND Cloud Computing
BSc/HND Cloud Software Development
BSc/HND Computing (Computer Networks and Cyber Security)
BSc/HND Computing (Data and Information Systems)
BSc/HND Computing (Games Development)
BSc/HND Computing (Software Engineering)
BSc/HND Computing (Web Development)

LEVEL 5

WALES INSTITUTE OF SCIENCE & ART

2021-2022

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INTRODUCTION

This handbook provides you with information about your Programme of Study for the academic year 2021/22. Module descriptors are presented in the accompanying Module Directory document.

Because of the ongoing Covid-19 situation, the University has made a number of changes for the 2021/22 academic year, e.g. in relation to how you can access facilities on our campuses, and how your programme will be delivered.

Access to the University's physical facilities will be led by Government and Public Health advice. Essential updates can be found here (https://uwtsd.ac.uk/coronavirus/) and on the Student Hwb. Please also make sure that you read the Student Bulletin for essential updates as a change in status may affect how your programme is delivered.

As a result of these circumstances, most programmes will be delivered through in-person and blended online delivery. This approach will work to ensure that if you are shielding or self-isolating you will still be able to access your studies. If you have any specific needs arising from the current circumstances, we ask that you make Student Services and your programme team aware so that we can work to support you.

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 advance warning in the event of any alteration.

FEEDBACK

Feedback on your programme of study and modules is welcome and important and will help us to improve and enhance your learning experience. You can give feedback in a number of ways: through the academic representatives for your programme of study, through module evaluation questionnaires, through informal meetings with your academic support tutor, teaching staff, or Programme Manager, through focus groups to gain feedback from students on particular issues, or through the Students' Union. If there are issues, then it is important that you share these with us so that we can address them. 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. Your opinion is valued.

PROGRAMMES OF STUDY AND PROGRAMME MANAGERS

This handbook covers the following Programmes of Study. The name and contact details of the Programme Managers are also listed below.

Programme of Study	Programme Manager
BSc/HND Applied Computing	GARETH JONES **Tel. No.** +441792481000 x4212 **Email** gareth.jones@uwtsd.ac.uk GORDON DICKERS **Tel. No.** +441792481038 x4038 **Email** gordon.dickers@uwtsd.ac.uk
BSc/HND Cloud Computing	
BSc/HND Cloud Software Development	
BSc/HND Computing (Computer Networks & Cyber Security)	
BSc/HND Computing (Data and Information Systems)	
BSc/HND Computing (Games Development)	
BSc/HND Computing (Software Engineering)	
BSc/HND Computing (Web Development)	

SUPPORT DURING YOUR STUDIES

A member of staff will be identified at the beginning of the academic year to act as a point of first contact for support issues. Further support can also be accessed through the Student Services department.

EXTERNAL EXAMINERS

All taught Programmes of Study which lead to an award of the University have at least one External Examiner. The principal purposes of the University's external examiner system are to ensure that:

- the standard of each award is maintained at the appropriate level;
- the standards of student performance are comparable with standards on similar programmes or subjects in other UK institutions with which they are familiar;
- the processes for assessment and the determination of awards are sound and fairly conducted.

Students may request a copy of the previous year's External Examiner's Report for their programme of study by contacting the Programme Manager.

The current External Examiners for the Programmes of Study are:

Programme of Study	**External Examiner for 2021/22 (forename / surname)**	**External Examiner for 2020/21 (if different to current)**
BSc/HND Applied Computing	Lorraine Gearing & Naveed Anwar	Derek Foster
BSc/HND Cloud Computing		
BSc/HND Cloud Software Development		
BSc/HND Computing (Computer Networks and Cyber Security)		
BSc/HND Computing (Data and Information Systems)		
BSc/HND Computing (Games Development)		
BSc/HND Computing (Software Engineering)		
BSc/HND Computing (Web Development)		

Please note that students are not permitted to make direct contact with the External Examiners without permission and to do so may be considered a disciplinary offence.

ACADEMIC YEAR 2021/22

The academic year 2021/22 will be divided up as follows:

Induction	20/09/21 - 24/09/21
Semester 1:	20/09/21 - 21/01/22
Exam Period 1:	05/01/22 - 14/01/22
Examining Boards:	31/01/22 - 11/02/22
Semester 2:	24/01/22 - 08/07/22
Exam Period 2:	04/05/22 - 18/05/22
Examining Boards:	30/05/22 - 16/06/22
Re-sit Period:	18/07/22 - 22/07/22

Please note that dates are subject to change depending upon developments relating to the Coronavirus/Covid-19 pandemic.

INFORMATION ABOUT YOU AND YOUR PROGRAMME OF STUDY

Information about you and your programme of study is held by the University on a central Student Record System managed by the University Registry. It is essential that the University Registry has an accurate record of your personal details at all times. It is equally important to ensure that you are enrolled on the correct Programme of Study and on the correct modules and that you read and agree to the Enrolment Agreement.

My Student Record / MyTSD

You can view your personal details on MyTSD and make requests to amend data when your circumstances change. It is important to keep your personal details up to date. You can use MyTSD to:

- enrol for the new academic year
- generate a 'Confirmation of enrolment' letter
- generate a council tax exemption letter and/or bank letter
- view enrolment and module registration details
- amend your address
- check your financial information (e.g. fees due)
- submit a programme change request
- apply for 'Extenuating Circumstances'
- check your module results and examining board decision
- request to withdraw from your studies

Failure to keep your personal details up to date can result in a range of problems including:

- delays in obtaining your student loan;
- failure to contact you in an emergency;
- not being able to borrow materials from the Library and Learning Resources; and
- not being able to use the Information Technology services;
- potential non-compliance with visa regulations.

Please take time to check your enrolment details on MyTSD.

DISCLOSURE AND BARRING SERVICE (DBS) – ENHANCED

If your programme involves you coming into contact with children or vulnerable adults, you will be required to undertake a DBS check (Enhanced). Further details will be provided by the University Registry or Programme Manager.

As part of each programme's procedures relating to DBS, continuing students will normally be required to inform their Programme Manager immediately of any change to their criminal convictions' status.

You will also be asked to complete a formal self-declaration during the enrolment period at the beginning of the academic year, which confirms your criminal conviction status.

MODULAR TERMINOLOGY

Level (of Study):

A level is assigned to each module to define the standard of its academic demand in line with the National Qualifications Framework which incorporates both Further Education and Higher Education.

The level is not necessarily synonymous with a year, though very often Level 4 will be the first year of a Programme of Study, Level 5 will be the second year, and Level 6 will be the third year. The basic characteristics of the relevant levels of study are outlined by the Welsh Assembly government and available on their website:
https://gov.wales/sites/default/files/publications/2018-02/level-descriptors.pdf

ASSESSMENT

At the start of each module, tutors will provide on Moodle full details of the means by which you will be assessed in that module. This will include a full assessment brief and guidelines on the criteria that will be used for marking your work as well as clear information about when the assessments are due and the turn-around feedback time for the assessments. It will also detail how you will be able to discuss the feedback on your work and your performance and what to do if you have any questions.

All assessed written coursework needs to be submitted in electronic copy via Turnitin; alternative instructions will be provided by the Programme Manager for any forms of coursework that cannot be submitted via Turnitin.

The University offers programmes in both English and Welsh. The normal expectation is that you will be assessed in the same language in which the programme or modules are delivered. If you have been taught in English and wish to be assessed in Welsh, or vice versa, you should consult your Programme Manager about the options available to you.

You will receive confirmation of your assessment marks at the end of each year. Any marks released prior to formal approval by the Progression / Award Examining Board are provisional.

Extenuating Circumstances

If you believe that there are extenuating circumstances which may have adversely affected your ability to complete coursework or examinations, you should follow the University's procedures for Extenuating Circumstances for Taught Provision, which can be found on the University's website and forms part of the *Mitigating Circumstances Policy*:
http://www.uwtsd.ac.uk/academic-office/procedures-for-academic-appeals-complaints-and-other-student-cases/

Additional needs in terms of assessment

If you have any additional needs in terms of assessment, it is your responsibility to liaise with Student Services regarding those needs at the start of the academic year, so that a Statement of Compensatory Measures can be drafted in line with the University's procedures for assessment of students with additional needs.
http://www.uwtsd.ac.uk/services-for-disabled-students/

Academic Appeals
Information about how to appeal is provided in the 'Academic Appeal Procedure' which forms part of the *Academic Appeal Policy* associated with Chapter 12 of the Academic Quality Handbook, and in supporting documentation published on the Academic Office section on the University's website:
http://www.uwtsd.ac.uk/academic-office/procedures-for-academic-appeals-complaints-and-other-student-cases/

Additional advice is available from the Students' Union. It is very important that you note carefully the grounds on which appeals may be made and submit your appeal on the appropriate form because incomplete or ineligible appeals cannot be processed.

Assessment Regulations
The rules and regulations that govern the assessment of your Programme of Study are available in Chapters 6 and 7 of the University's Academic Quality Handbook, a copy of which is available on the Academic Office section of the website:
http://www.uwtsd.ac.uk/academic-office/academic-quality-handbook/

Responsibilities of students in relation to the assessment process
You are responsible for ensuring that:

i) You are correctly enrolled on your programme of study (including re-enrolment for each academic year after initial enrolment).
ii) You read and understand the information provided about how you will be assessed, how your final award will be determined, and the action to take in the event that you experience difficulties relating to assessment.
iii) You attempt every assessment component of a module.
iv) You attend examinations and other assessment events, including re-examination and re-assessment events, as required; and that you are available to attend oral examinations if required to do so within the published dates of terms or semesters, or other date notified to you in advance.
v) You submit work for assessment as required and in accordance with the required format and deadline.
vi) You inform your Programme Manager or Student Services of any disability or long-term impairment which might require special provisions for assessment.
vii) You familiarise yourself with the University's definition of academic misconduct and undertake assessments in a manner that does not attempt to gain unfair advantage.
viii) You follow the prescribed procedures in the event that you experience extenuating circumstances or wish to appeal against the decision of an Examining Board.
ix) You keep a copy of work presented for assessment wherever feasible.
x) You make your work available for sampling for external examining purposes .

VIRTUAL LEARNING ENVIRONMENT (VLE)

Moodle is the University's Virtual Learning Environment (VLE). The VLE is used to support learning and teaching. It can be accessed by **enrolled** students from anywhere in the world using the internet and a web browser.

Some of Moodle's features allow students to:

- Access course materials
- Facilitate communication between students and tutors - this may also take place via Microsoft Teams
- Support group tasks
- Take online assessments with automatic marking and feedback facilities

Moodle can be used for administration tasks such as:

- Displaying announcements e.g. lecture venue changed
- Submission of assignments electronically
- Administration of online surveys, such as module questionnaires

How to Access:

You can access Moodle in 3 different ways:

1. From Hwb - Access your Hwb dashboard either by logging into a campus PC and opening Internet Explorer, or accessing https://hwb.uwtsd.ac.uk from any browser on an internet-connected device. Click on the Moodle tile.
2. From the University Website - navigate to http://uwtsd.ac.uk and select Quick Links (top left side of screen) and then Moodle.
3. URL Input - Open any browser on an internet-connected device and navigate to http://moodle.uwtsd.ac.uk

If you are already signed into the Hwb or Office 365 you should be automatically signed into Moodle when you connect, if not log in using your Network username and password which are the same as used to access a campus PC.

If you are missing courses/modules in the **My Courses** block please contact your **lecturers** to ask if they use Moodle. Please note it can take 24hrs for enrolment data to feed into Moodle. If you have problems finding resources (timetables, lecture notes, assignment briefs etc.) please contact the **lecturer** that delivers the course/module.

For any technical issues or error messages contact the **IT Service Desk** via:
Web: https://webhelp.uwtsd.ac.uk
Tel: 0300 500 5055
Or email: ITServiceDesk@uwtsd.ac.uk
In any correspondence please include your name and username (your student number) together with details of your issue.

Further information on using online and digital resources can be found at https://digitallearning.uwtsd.ac.uk/

ASSESSMENT FEEDBACK VIA TURNITIN

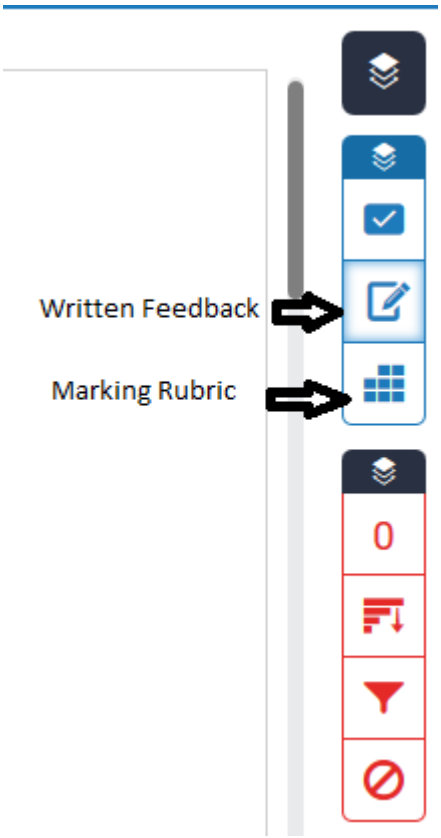
For feedback provided through Turnitin, there are two areas to get your feedback: written feedback, and the marking rubric.

Written feedback will comment on the overall work.

The marking rubric will focus on how the piece of work meets the criteria listed in the relevant rubric.

The marking rubric does not give a mathematically calculated result based on the sum of individual components but is used holistically to help determine the mark.

Written Feedback and the Marking Rubric can be found by clicking the buttons as shown when you view your submitted assignment in Turnitin.



PROGRAMMES OF STUDY

(1) BSc/HND Applied Computing

The programme has the following general educational and specific aims:

- To develop in students an understanding of the key aspects of a range of concepts, principles and techniques associated with the programme, some of which may be at the forefront of the discipline.

- To enable students to identify the appropriate technologies, techniques and tools that should be deployed, and apply them to resolve problems or to meet a set of requirements.

- To encourage students to identify problems or tasks, and design solutions showing a requisite understanding of the need for quality, with appropriate documentation that demonstrates an ability to draw on supporting evidence.

- To enable students to analyse technologies and the techniques applied to the solution of loosely defined problems or in the development of applications to meet real-world requirements.

- To develop in students the transferable skills required in the employment context, including working independently or as a team member with minimal guidance.

Programme Learning Outcomes

<u>Main Award: BSc Applied Computing</u>

<u>Computing-Related Cognitive Skills (CS)</u>

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with computing, some of which may be at the forefront of the discipline.

CS2 To give students the ability to critically evaluate and test solutions to a range of realistic problems in the implementation of applications, using appropriate methodologies and frameworks

CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report, product or service.

CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.

CS5 To develop the students' ability to analyse the requirements for a given computing related scenario. Then based on these requirements, design and implement a solution with appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study).

Computing-Related Practical Skills (PS)

PS1 To develop the students' ability to specify, design, implement a usable computer-based systems
PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with the programme including planning, risk analysis and time management.
PS3 To effectively deploy tools and programming languages in the development of applications and construction of computer based systems to solve practical problems
PS4 To critically evaluate and analyse complex and loosely defined problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a computing related topic with appropriate attribution
GS2 To demonstrate the ability to work independently, while producing innovative and creative solutions to problems.
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS5 To provide an opportunity for students to demonstrate academic rigour appropriate to Honours level by critically evaluating, analysing, designing or implementing complex systems
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the adoption of computing systems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Intermediate/Exit Award 1 HND/DipHE Applied Computing

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with computing.
CS2 To give students the ability to evaluate and test solutions to a range of realistic problems in the implementation of applications, using appropriate methodologies and frameworks
CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report, product or service
CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.
CS5 To develop the students' ability to analyse the requirements for a given computing related scenario. Then based on these requirements, design and implement a solution with appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with the programme including planning, risk analysis and time management.

PS3 To effectively deploy tools and programming languages in the development of applications and construction of computer based systems to solve practical problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a computing related topic with appropriate attribution

GS3 To enable students to work under guidance and as a member of a team.

GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner

GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the adoption of computing systems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Level 5

All Level 5 students must normally pursue 120 credits at Level 5. The credit rating of each module is specified in the module details.

PROGRAMME STRUCTURE

Full-time Students BSc/HND – (Year 2) **Semester 1 / 2**

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
ACCA5024	Advanced Networking	Optional	20
ACCB5011	Advanced Software Development	Optional	20
ACCA5025	Cloud Computing Architecture	Optional	20
ACCD5000	Computer Forensics	Optional	20
ACCA5026	Databases and Application Development	Optional	20
ACCB5017	Games Architecture and Mechanics	Optional	20
ACCA5027	Geographical Information Systems	Optional	20
ACCA5028	Indie Game Development	Optional	20
ACCA5029	Network Programmability	Optional	20
ACCA5032	Object Oriented Programming and Algorithms	Optional	20
ACCA5030	Software Engineering Principles and Testing	Optional	20
ACCB5021	Statistical Programming	Optional	20
ACCA5031	Web and Mobile Technologies	Optional	20

Part-time Students BSc/HND/C

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
Year 1	**Level 4**	**Semester 1/2**	**Sept. to May**
ACCA4022	Computer Architecture and Operating Systems	Compulsory	20
ACCA4023	Introduction to Web and Database Concepts	Compulsory	20
ACCA4025	Learning in the Digital Era	Compulsory	20
ACCB4017	Software Development	Compulsory	20
Year 2	**Level 4/5**	**Semester 1/2**	**Feb. to May**
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA4024	Networks and Cyber Security Essentials	Compulsory	20
ACCB4002	Data Analysis and Visualisation	Optional	20
ACCB5011	Advanced Software Development	Optional	20
ACDB4003	Mathematics	Optional	20
ACCA5032	Object Oriented Programming and Algorithms	Optional	20
ACCA5030	Software Engineering Principles and Testing	Optional	20
ACCB5021	Statistical Programming	Optional	20
Year 3	**Level 5**	**Semester 1/2**	**Sept. to May**
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
ACCA5024	Advanced Networking	Optional	20
ACCA5025	Cloud Computing Architecture	Optional	20
ACCD5000	Computer Forensics	Optional	20
ACCA5026	Databases and Application Development	Optional	20
ACCB5017	Games Architecture and Mechanics	Optional	20
ACCA5027	Geographical Information Systems	Optional	20
ACCA5028	Indie Game Development	Optional	20
ACCA5029	Network Programmability	Optional	20
ACCA5031	Web and Mobile Technologies	Optional	20
Year 4	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCB6000	Advanced Cyber Security	Optional	20
ACCA6011	Artificial Intelligence and Machine Learning	Optional	20
ACCA6025	Cloud Computing Administration	Optional	20
ACCA6024	Cloud-Based Web Services	Optional	20
ACCA6026	Data Warehousing and Data Mining	Optional	20
ACCB6019	Emerging Trends	Optional	20
ACCA6023	Enterprise Networking, Security & Automation	Optional	20
ACCB6014	GPU Programming	Optional	20
ACCA6021	Graphics and Games Programming	Optional	20
ACCA6029	Industrial Based Research	Optional	20
ACCA6028	Socket Programming and Concurrency	Optional	20
ACCA6027	Software Engineering Principles and Practice	Optional	20
ACCA6022	Switching, Routing and Wireless	Optional	20
ACCA6017	Usability Engineering	Optional	20
Year 5	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6020	Independent Project	Compulsory	40

(2) BSc/HND Cloud Computing

The programme has the following general educational and specific aims:

- To develop in students an understanding of key aspects of a range of concepts, principles and techniques associated with cloud computing infrastructure configuration and management, some of which may be at the forefront of the discipline.

- To enable students to identify the appropriate technologies, techniques and tools that should be deployed, and apply them to implement cloud infrastructure and services that meet a set of requirements.

- To encourage students to identify problems or tasks, and design solutions showing a requisite understanding of the need for quality, with appropriate documentation that demonstrates an ability to draw on supporting evidence.

- To enable students to analyse cloud technologies and the techniques applied to the solution of loosely defined problems or in the development of cloud and networked services to meet real-world requirements.

- To develop in students the transferable skills required in the employment context, including working independently or as a team member with minimal guidance

Programme Learning Outcomes

<u>Main Award: BSc Cloud Computing</u>

<u>Computing-Related Cognitive Skills (CS)</u>

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with cloud computing, some of which may be at the forefront of the discipline.

CS2 To give students the ability to critically evaluate and test solutions to a range of realistic cloud computing problems in the implementation of infrastructure and networked services

CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report, product or service

CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.

CS5 To develop the students' ability to analyse the requirements for a given cloud computing related scenario. Then based on these requirements, design and construct, manage or administer a cloud or networking solution with appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS1 To develop the students' ability to specify, design, implement a usable networking or cloud implementation
PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with the cloud infrastructure management including planning, risk analysis and time management.
PS3 To effectively deploy tools and programming languages in the construction of cloud or networked systems to solve practical problems
PS4 To critically evaluate and analyse complex and loosely defined problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a cloud computing related topic with appropriate attribution
GS2 To demonstrate the ability to work independently, while producing innovative and creative solutions to problems.
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS5 To provide an opportunity for students to demonstrate academic rigour appropriate to Honours level by critically evaluating, analysing, designing, implementing or administrating complex cloud systems
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the adoption of cloud computing technologies

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Intermediate/Exit Award 1 HND/DipHE Cloud Computing

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with the management and administration of cloud computing services.
CS2 To give students the ability to evaluate and test solutions to a range of realistic cloud computing problems in the implementation of infrastructure and networked services
CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report, product or service
CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.
CS5 To develop the students' ability to analyse the requirements for a given cloud computing related scenario. Then based on these requirements, design and construct, manage or administer a cloud or networking solution with appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with the cloud infrastructure management including planning, risk analysis and time management.
PS3 To effectively deploy tools and programming languages in the construction of cloud or networked systems to solve practical problems.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a cloud computing related topic with appropriate attribution
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the adoption of computing systems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Level 5
All Level 5 students must normally pursue 120 credits at Level 5. The credit rating of each module is specified in the module details.

PROGRAMME STRUCTURE

Full-time Students BSc/HND – (Year 2) **Semester 1 / 2**

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
ACCA5024	Advanced Networking	Compulsory	20
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5025	Cloud Computing Architecture	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
ACCA5029	Network Programmability	Compulsory	20

Part-time Students BSc/HND/C

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
Year 1	**Level 4**	**Semester 1/2**	**Sept. to May**
ACCA4022	Computer Architecture and Operating Systems	Compulsory	20
ACCA4023	Introduction to Web and Database Concepts	Compulsory	20
ACCA4025	Learning in the Digital Era	Compulsory	20
ACCB4017	Software Development	Compulsory	20
Year 2	**Level 4/5**	**Semester 1/2**	**Sept. to May**
ACCB4002	Data Analysis and Visualisation	Compulsory	20
ACCA4024	Networks and Cyber Security Essentials	Compulsory	20
ACCA5024	Advanced Networking	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
Year 3	**Level 5**	**Semester 1/2**	**Sept. to May**
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5025	Cloud Computing Architecture	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5029	Network Programmability	Compulsory	20
Year 4	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCB6000	Advanced Cyber Security	Compulsory	20
ACCA6025	Cloud Computing Administration	Compulsory	20
ACCB6019	Emerging Trends	Optional	20
ACCA6029	Industrial Based Research	Optional	20
ACCA6022	Switching, Routing and Wireless	Compulsory	20
Year 5	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6020	Independent Project	Compulsory	20

(3) BSc/HND Cloud Software Development

The programme has the following general educational and specific aims:

- To develop in students an understanding of key aspects of a range of concepts, principles and techniques associated with application and service development in the cloud, some which may be at the forefront of the discipline.

- To enable students to identify the appropriate technologies, techniques and tools that should be deployed, and apply them to implement cloud services that meet a set of requirements.

- To encourage students to identify problems or tasks, apply software engineering principles in the design of applications, showing a requisite understanding of the need for quality, with appropriate documentation that demonstrates an ability to draw on supporting evidence.

- To enable students to analyse cloud technologies and the techniques applied to the solution of loosely defined problems or in the development of cloud applications and services to meet real-world requirements.

- To develop in students the transferable skills required in the employment context, including working independently or as a team member with minimal guidance

Programme Learning Outcomes

Main Award: BSc Cloud Software Development

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with the development of software for cloud computing applications and services, some of which may be at the forefront of the discipline.

CS2 To give students the ability to critically evaluate and test solutions to a range of realistic problems in the implementation of cloud applications, using appropriate methodologies and frameworks

CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report, product or service

CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.

CS5 To develop the students' ability to analyse the requirements for a given cloud computing related scenario. Then based on these requirements, design and implement a cloud application or service with appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS1 To develop the students' ability to specify, design, implement a usable cloud application
PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with cloud service development including planning, risk analysis and time management.
PS3 To effectively deploy tools and programming languages in the development of cloud applications and networked services to solve practical problems
PS4 To critically evaluate and analyse complex and loosely defined problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a cloud computing related topic with appropriate attribution
GS2 To demonstrate the ability to work independently, while producing innovative and creative solutions to problems.
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS5 To provide an opportunity for students to demonstrate academic rigour appropriate to Honours level by critically evaluating, analysing, designing or implementing cloud applications and services
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the adoption of cloud computing

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Intermediate/Exit Award 1 HND/DipHE Cloud Software Development

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with cloud computing.
CS2 To give students the ability to evaluate and test solutions to a range of realistic problems in the implementation of cloud applications, using appropriate methodologies and frameworks
CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report, product or service
CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.
CS5 To develop the students' ability to analyse the requirements for a given cloud computing application scenario. Then based on these requirements, design and implement a cloud application with appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with the programme including planning, risk analysis and time management.
PS3 To effectively deploy tools and programming languages in the development of cloud applications and network services to solve practical problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a cloud computing related topic with appropriate attribution
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the adoption of cloud computing

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Level 5
All Level 5 students must normally pursue 120 credits at Level 5. The credit rating of each module is specified in the module details.

PROGRAMME STRUCTURE

Full-time Students BSc/HND – (Year 2) **Semester 1 / 2**

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5025	Cloud Computing Architecture	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5026	Databases and Application Development	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
ACCA5032	Object Oriented Programming and Algorithms	Compulsory	20

Part-time Students BSc/HND/C

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
Year 1	**Level 4**	**Semester 1/2**	**Sept. to May**
ACCA4022	Computer Architecture and Operating Systems	Compulsory	20
ACCA4023	Introduction to Web and Database Concepts	Compulsory	20
ACCA4025	Learning in the Digital Era	Compulsory	20
ACCB4017	Software Development	Compulsory	20
Year 2	**Level 4/5**	**Semester 1/2**	**Sept. to May**
ACCB4002	Data Analysis and Visualisation	Compulsory	20
ACCA4024	Networks and Cyber Security Essentials	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
ACCA5032	Object Oriented Programming and Algorithms	Compulsory	20
Year 3	**Level 5**	**Semester 1/2**	**Sept. to May**
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5025	Cloud Computing Architecture	Compulsory	20
ACCA5026	Databases and Application Development	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
Year 4	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6024	Cloud-Based Web Services	Compulsory	20
ACCB6019	Emerging Trends	Optional	20
ACCA6029	Industrial Based Research	Optional	20
ACCA6027	Software Engineering Principles and Practice	Compulsory	20
ACCA6028	Socket Programming and Concurrency	Compulsory	20
Year 5	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6020	Independent Project	Compulsory	40

(4) BSc/HND Computing (Computer Networks and Cyber Security)

The programme has the following general educational and specific aims:

- To develop in students an understanding of key aspects of a range of concepts, principles and techniques associated with network infrastructure and services, some of which may be at the forefront of the discipline.

- To enable students to identify the appropriate technologies, techniques and tools that should be deployed, and apply them to implement network architectures and services that meet a set of requirements.

- To encourage students to identify problems or tasks, design network solutions, showing a requisite understanding of the need for quality, with appropriate documentation that demonstrates an ability to draw on supporting evidence.

- To enable students to analyse networking technologies and concepts applied to the solution of loosely defined problems or in the development of networking solutions to meet real-world requirements.

- To develop in students the transferable skills required in the employment context, including working independently or as a team member with minimal guidance.

Programme Learning Outcomes

Main Award: BSc Computing (Computer Networks and Cyber Security)

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with the implementation of network infrastructure and services, some of which may be at the forefront of the discipline.

CS2 To give students the ability to critically evaluate and test solutions to a range of realistic problems in the construction of computer networks and management of networked services, using appropriate methodologies and frameworks

CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report, product or service

CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.

CS5 To develop the students' ability to analyse the requirements for a given computer networking related scenario. Then based on these requirements, design, create a network and deploy networked services providing appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS1 To develop the students' ability to specify, design, configure and administer a network and associated hardware
PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with network administration including planning, risk analysis and time management.
PS3 To effectively deploy tools and administration scripts in the management of networks and servers to solve practical problems
PS4 To critically evaluate and analyse complex and loosely defined problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a computer network related topic with appropriate attribution
GS2 To demonstrate the ability to work independently, while producing innovative and creative solutions to problems.
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS5 To provide an opportunity for students to demonstrate academic rigour appropriate to Honours level by critically evaluating, analysing, designing or implementing networks
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the computing sector

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Intermediate/Exit Award 1 HND/DipHE Computing (Computer Networks and Cyber Security)

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with computer networking.
CS2 To give students the ability to evaluate and test solutions to a range of realistic problems in the construction of computer networks and management of networked services, using appropriate methodologies and frameworks
CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report, product or service
CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.
CS5 To develop the students' ability to analyse the requirements for a given computer network scenario. Then based on these requirements, design, create a network and deploy networked services providing appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with the programme including planning, risk analysis and time management.
PS3 To effectively deploy tools and administration scripts in the management of networks and servers to solve practical problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a cloud computing related topic with appropriate attribution
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the computer sector

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Level 5
All Level 5 students must normally pursue 120 credits at Level 5. The credit rating of each module is specified in the module details.

PROGRAMME STRUCTURE

Full-time Students BSc/HND – (Year 2) **Semester 1 / 2**

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
ACCA5024	Advanced Networking	Compulsory	20
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCD5000	Computer Forensics	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
ACCA5029	Network Programmability	Compulsory	20

Part-time Students BSc/HND/C

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
Year 1	**Level 4**	**Semester 1/2**	**Sept. to May**
ACCA4022	Computer Architecture and Operating Systems	Compulsory	20
ACCA4023	Introduction to Web and Database Concepts	Compulsory	20
ACCA4025	Learning in the Digital Era	Compulsory	20
ACCB4017	Software Development	Compulsory	20
Year 2	**Level 4/5**	**Semester 1/2**	**Sept. to May**
ACCB4002	Data Analysis and Visualisation	Compulsory	20
ACCA4024	Networks and Cyber Security Essentials	Compulsory	20
ACCA5024	Advanced Networking	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
Year 3	**Level 5**	**Semester 1/2**	**Sept. to May**
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCD5000	Computer Forensics	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5029	Network Programmability	Compulsory	20
Year 4	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCB6000	Advanced Cyber Security	Compulsory	20
ACCB6019	Emerging Trends	Optional	20
ACCA6023	Enterprise Networking, Security & Automation	Compulsory	20
ACCA6029	Industrial Based Research	Optional	20
ACCA6022	Switching, Routing and Wireless	Compulsory	20
Year 5	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6020	Independent Project	Compulsory	40

(5) BSc/HND Computing (Data and Information Systems)

The programme has the following general educational and specific aims:

- To develop in students an understanding of key aspects of a range of concepts, principles and techniques associated with data science and information systems, some of which may be at the forefront of the discipline.

- To enable students to identify the appropriate technologies, techniques and tools that should be deployed to extract, visualise and analyse datasets.

- To encourage students to identify problems or tasks, showing a requisite understanding of the need for quality, with appropriate documentation that demonstrates an ability to draw on supporting evidence.

- To enable students to conduct statistical analysis, data mine and gain insight from loosely defined problems related to critically evaluating real-world data.

- To develop in students the transferable skills required in the employment context, including working independently or as a team member with minimal guidance.

Programme Learning Outcomes

Main Award: BSc Computing (Data and Information Systems)

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with the data analysis and information systems, some of which may be at the forefront of the discipline.

CS2 To give students the ability to critically evaluate and test solutions to a range of realistic problems in the configuration, management and analysis of datasets using appropriate statistical methods

CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of datasets storage, critical evaluation of data and data reporting

CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.

CS5 To develop the students' ability to analyse the requirements for a database, application or information system. Then based on these requirements, design, create a solution providing appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS1 To develop the students' ability to specify, design, solutions for data-driven applications

PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with database application development including planning, risk analysis and time management.

PS3 To effectively deploy tools and programming languages in the management of data, to implement data-driven applications and to analyse data in practical scenarios

PS4 To critically evaluate and analyse complex and loosely defined problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on database and information systems related topics with appropriate attribution

GS2 To demonstrate the ability to work independently, while producing innovative and creative solutions to problems.

GS3 To enable students to work under guidance and as a member of a team.

GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner

GS5 To provide an opportunity for students to demonstrate academic rigour appropriate to Honours level by critically evaluating, analysing, designing or implementing solutions

GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the database, information systems and data science sectors

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Intermediate/Exit Award 1 HND/DipHE Computing (Data and Information Systems)

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with databases and data analysis.

CS2 To give students the ability to evaluate and test solutions to a range of realistic problems in the storage and evaluation of data, using appropriate methodologies and frameworks

CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report, product or service

CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.

CS5 To develop the students' ability to analyse the requirements for a given computer systems scenario. Then based on these requirements, design, create a computer-based system providing appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with the programme including planning, risk analysis and time management.
PS3 To effectively deploy tools to analyse or visualize data, and programming languages in the implementation of data-driven applications to solve practical problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a databases, information systems and related topics with appropriate attribution
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the database, information systems and data science sectors

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Level 5
All Level 5 students must normally pursue 120 credits at Level 5. The credit rating of each module is specified in the module details.

PROGRAMME STRUCTURE

Full-time Students BSc/HND – (Year 2) **Semester 1 / 2**

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5026	Databases and Application Development	Compulsory	20
ACCA5027	Geographical Information Systems	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
ACCB5021	Statistical Programming	Compulsory	20

Part-time Students BSc/HND/C

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
Year 1	**Level 4**	**Semester 1/2**	**Sept. to May**
ACCA4022	Computer Architecture and Operating Systems	Compulsory	20
ACCA4023	Introduction to Web and Database Concepts	Compulsory	20
ACCA4025	Learning in the Digital Era	Compulsory	20
ACCB4017	Software Development	Compulsory	20
Year 2	**Level 4/5**	**Semester 1/2**	**Sept. to May**
ACCB4002	Data Analysis and Visualisation	Compulsory	20
ACCA4024	Networks and Cyber Security Essentials	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
ACCB5021	Statistical Programming	Compulsory	20
Year 3	**Level 5**	**Semester 1/2**	**Sept. to May**
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5026	Databases and Application Development	Compulsory	20
ACCA5027	Geographical Information Systems	Compulsory	20
Year 4	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6011	Artificial Intelligence and Machine Learning	Compulsory	20
ACCA6026	Data Warehousing and Data Mining	Compulsory	20
ACCB6019	Emerging Trends	Optional	20
ACCA6029	Industrial Based Research	Optional	20
ACCA6017	Usability Engineering	Compulsory	20
Year 5	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6020	Independent Project	Compulsory	40

(6) BSc/HND Computing (Games Development)

The programme has the following general educational and specific aims:

- To develop in students an understanding of key aspects of a range of concepts, principles and techniques associated with games development, some of which may be at the forefront of the discipline.

- To enable students to identify the appropriate technologies, techniques and tools that should be deployed, and apply them to implement games that meet a set of requirements.

- To encourage students to identify problems or tasks, apply software engineering principles in the design of games, showing a requisite understanding of the need for quality, with appropriate documentation that demonstrates an ability to draw on supporting evidence.

- To enable students to analyse games development technologies and the techniques applied to the solution of loosely defined problems in the development of games and other software applications meeting real-world requirements.

- To develop in students the transferable skills required in the games development industry, including working independently or as a team member with minimal guidance.

Programme Learning Outcomes

Main Award: BSc Computing (Games Development)

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with games artificial intelligence, games graphics and software development, some of which may be at the forefront of the discipline.

CS2 To give students the ability to critically evaluate and test solutions to a range of realistic problems in the development of computer games, using appropriate methodologies and frameworks

CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design implementation, report or video game.

CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.

CS5 To develop the students' ability to analyse the requirements for a given computer game component. Then based on these requirements, design and implement it providing appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS1 To develop the students' ability to specify, design, implement a usable game or component of it
PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with games industry including planning, risk analysis and time management.
PS3 To effectively deploy tools and programming languages in the development of game software to solve practical problems
PS4 To critically evaluate and analyse complex and loosely defined problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on topics related to game development, with appropriate attribution
GS2 To demonstrate the ability to work independently, while producing innovative a nd creative solutions to problems.
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS5 To provide an opportunity for students to demonstrate academic rigour appropriate to Honours level by critically evaluating, analysing, designing or implementing solutions to game development problems
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the creative industries and games sector

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Intermediate/Exit Award 1 HND/DipHE Computing (Games Development)

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with games development.
CS2 To give students the ability to evaluate and test solutions to a range of realistic problems in the implementation of video games
CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report or video game
CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.
CS5 To develop the students' ability to analyse the requirements for a given computer game component. Then based on these requirements, design and implement it providing appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with the programme including planning, risk analysis and time management.
PS3 To effectively deploy tools and programming languages in the implementation of games or games components to solve practical problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on games development related topics with appropriate attribution
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the creative industries and games sector

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Level 5
All Level 5 students must normally pursue 120 credits at Level 5. The credit rating of each module is specified in the module details.

PROGRAMME STRUCTURE

Full-time Students BSc/HND – (Year 2) **Semester 1 / 2**

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
ACCB5011	Advanced Software Development	Compulsory	20
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCB5017	Games Architecture and Mechanics	Compulsory	20
ACCA5028	Indie Game Development	Compulsory	20
ACCA5030	Software Engineering Principles and Testing	Compulsory	20

Part-time Students BSc/HND/C

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
Year 1	**Level 4**	**Semester 1/2**	**Sept. to May**
ACCA4022	Computer Architecture and Operating Systems	Compulsory	20
ADGD4005	Introduction to Character Animation	Compulsory	20
ACCA4025	Learning in the Digital Era	Compulsory	20
ACCB4017	Software Development	Compulsory	20
Year 2	**Level 4/5**	**Semester 1/2**	**Sept. to May**
M4X02039	Game Design and History	Compulsory	20
ACDB4003	Mathematics	Compulsory	20
ACCB5011	Advanced Software Development	Compulsory	20
ACCB5017	Games Architecture and Mechanics	Compulsory	20
Year 3	**Level 5**	**Semester 1/2**	**Sept. to May**
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5028	Indie Game Development	Compulsory	20
ACCA5030	Software Engineering Principles and Testing	Compulsory	20
Year 4	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6011	Artificial Intelligence and Machine Learning	Compulsory	20
ACCB6019	Emerging Trends	Optional	20
ACCB6014	GPU Programming	Compulsory	20
ACCA6021	Graphics and Games Programming	Compulsory	20
ACCA6029	Industrial Based Research	Optional	20
Year 5	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6020	Independent Project	Compulsory	40

(7) BSc/HND Computing (Software Engineering)

The programme has the following general educational and specific aims:

- To develop in students an understanding of key aspects of a range of concepts, principles and techniques associated with software development for a range of applications, some which may be at the forefront of the discipline.

- To enable students to identify the appropriate technologies, techniques and tools that should be deployed, and apply them to implement software that meets a set of requirements.

- To encourage students to identify problems or tasks, apply software engineering principles in the design of applications, showing a requisite understanding of the need for quality, with appropriate documentation that demonstrates an ability to draw on supporting evidence.

- To enable students to analyse software development technologies and the techniques applied to the solution of loosely defined problems or in the development of applications to meet real-world requirements.

- To develop in students the transferable skills required in the employment context, including working independently or as a team member with minimal guidance

Programme Learning Outcomes

Main Award: BSc Computing (Software Engineering)

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with software engineering and development, some of which may be at the forefront of the discipline.

CS2 To give students the ability to critically evaluate and test solutions to a range of realistic problems in the implementation of applications, using appropriate methodologies and frameworks

CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report or implemented software

CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.

CS5 To develop the students' ability to analyse the requirements for a given programming scenario. Then based on these requirements, design and implement an application with appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS1 To develop the students' ability to specify, design, implement a usable application
PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with software development including planning, risk analysis and time management.
PS3 To effectively deploy tools and programming languages in the development of applications to solve practical problems
PS4 To critically evaluate and analyse complex and loosely defined problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a software engineering related topic with appropriate attribution
GS2 To demonstrate the ability to work independently, while producing innovative and creative solutions to problems.
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS5 To provide an opportunity for students to demonstrate academic rigour appropriate to Honours level by critically evaluating, analysing, designing or implementing software
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the computing sector

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Intermediate/Exit Award 1 HND/DipHE Computing (Software Engineering)

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with software engineering.
CS2 To give students the ability to evaluate and test solutions to a range of realistic problems in the implementation of applications, using appropriate methodologies and frameworks
CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report or implemented software
CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.
CS5 To develop the students' ability to analyse the requirements for a given software application scenario. Then based on these requirements, design and implement an application with appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with software development including planning, risk analysis and time management.
PS3 To effectively deploy tools and programming languages in the development of applications to solve practical problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a software development related topic with appropriate attribution
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the computing sector

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Level 5
All Level 5 students must normally pursue 120 credits at Level 5. The credit rating of each module is specified in the module details.

PROGRAMME STRUCTURE

Full-time Students BSc/HND – (Year 2) **Semester 1 / 2**

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
ACCB5011	Advanced Software Development	Compulsory	20
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5026	Databases and Application Development	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
ACCA5030	Software Engineering Principles and Testing	Compulsory	20

Part-time Students BSc/HND/C

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
Year 1	**Level 4**	**Semester 1/2**	**Sept. to May**
ACCA4022	Computer Architecture and Operating Systems	Compulsory	20
ACCA4023	Introduction to Web and Database Concepts	Compulsory	20
ACCA4025	Learning in the Digital Era	Compulsory	20
ACCB4017	Software Development	Compulsory	20
Year 2	**Level 4/5**	**Semester 1/2**	**Sept. to May**
ACDB4003	Mathematics	Compulsory	20
ACCA4024	Networks and Cyber Security Essentials	Compulsory	20
ACCB5011	Advanced Software Development	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
Year 3	**Level 5**	**Semester 1/2**	**Sept. to May**
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5026	Databases and Application Development	Compulsory	20
ACCA5030	Software Engineering Principles and Testing	Compulsory	20
Year 4	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6011	Artificial Intelligence and Machine Learning	Compulsory	20
ACCA6024	Cloud-Based Web Services	Compulsory	20
ACCB6019	Emerging Trends	Optional	20
ACCA6029	Industrial Based Research	Optional	20
ACCA6028	Socket Programming and Concurrency	Compulsory	20
Year 5	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6020	Independent Project	Compulsory	40

(8) BSc/HND Computing (Web Development)

The programme has the following general educational and specific aims:

- To develop in students an understanding of key aspects of a range of concepts, principles and techniques associated with web application development, web service development and cloud computing, some of which may be at the forefront of the discipline.

- To enable students to identify the appropriate technologies, techniques and tools that should be deployed, and apply them to implement web applications that meet a set of requirements.

- To encourage students to identify problems or tasks, apply software engineering principles in the design of web applications, showing a requisite understanding of 80 the need for quality, with appropriate documentation that demonstrates an ability to draw on supporting evidence.

- To enable students to analyse web development technologies and the techniques applied to the solution of loosely defined problems in the development of web applications and services that can also be deployed to the cloud to meet real-world requirements.

- To develop in students the transferable skills required in the employment context, including working independently or as a team member with minimal guidance

Programme Learning Outcomes

<u>Main Award: BSc Computing (Web Development)</u>

<u>Computing-Related Cognitive Skills (CS)</u>

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with web development, some of which may be at the forefront of the discipline.

CS2 To give students the ability to critically evaluate and test solutions to a range of realistic problems in the implementation of web applications, using appropriate methodologies and frameworks

CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report, web application or web service

CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.

CS5 To develop the students' ability to analyse the requirements for a given web application scenario. Then based on these requirements, design and implement a web application or service with appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS1 To develop the students' ability to specify, design, implement a usable web application
PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with web development including planning, risk analysis and time management.
PS3 To effectively deploy tools and programming languages in the development of web applications to solve practical problems
PS4 To critically evaluate and analyse complex and loosely defined problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a web development related topic with appropriate attribution
GS2 To demonstrate the ability to work independently, while producing innovative and creative solutions to problems.
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS5 To provide an opportunity for students to demonstrate academic rigour appropriate to Honours level by critically evaluating, analysing, designing or implementing web applications and services
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the Internet

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Intermediate/Exit Award 1 HND/DipHE Computing (Web Development)

Computing-Related Cognitive Skills (CS)

CS1 To develop in students a requisite understanding of key aspects of a range of concepts, principles and techniques associated with web development.
CS2 To give students the ability to evaluate and test solutions to a range of realistic problems in the implementation of web applications, using appropriate methodologies and frameworks
CS3 To enable students to demonstrate problem solving skills and a systematic understanding of the importance of testing, verification, validation and any factors that may impact the quality of a solution, design, implementation, report, web application or service
CS4 To enable students to evaluate ethical considerations and gain an appreciation of the importance of sustainability.
CS5 To develop the students' ability to analyse the requirements for a given web application scenario. Then based on these requirements, design and implement an application with appropriate documentation.

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Computing-Related Practical Skills (PS)

PS2 To enable students to analyse, select and apply established methods, standards and best practices associated with web development including planning, risk analysis and time management.
PS3 To effectively deploy tools and programming languages in the development of web applications to solve practical problems

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Generic Skills for Employability (GS)

GS1 To enable to students to communicate effectively and construct a well-argued written discourse on a web development related topic with appropriate attribution
GS3 To enable students to work under guidance and as a member of a team.
GS4 To present students with the opportunity to interact and communicate with a range of audiences in a succinct manner
GS6 To demonstrate an awareness and understanding of the needs of businesses, the environmental issues and the social context relating to the opportunities and challenges created by the Internet

Each of the above PLOs is covered by at least two modules at the appropriate level (taking into account individual patterns of study)

Level 5
All Level 5 students must normally pursue 120 credits at Level 5. The credit rating of each module is specified in the module details.

PROGRAMME STRUCTURE

Full-time Students BSc/HND – (Year 2) **Semester 1 / 2**

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5026	Databases and Application Development	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
ACCA5032	Object Oriented Programming and Algorithms	Compulsory	20
ACCA5031	Web and Mobile Technologies	Compulsory	20

Part-time Students BSc/HND/C

Module Code	Title	Module type (component pass, core, compulsory or optional)	Credits
Year 1	**Level 4**	**Semester 1/2**	**Sept. to May**
ACCA4022	Computer Architecture and Operating Systems	Compulsory	20
ACCA4023	Introduction to Web and Database Concepts	Compulsory	20
ACCA4025	Learning in the Digital Era	Compulsory	20
ACCB4017	Software Development	Compulsory	20
Year 2	**Level 4/5**	**Semester 1/2**	**Feb. to May**
ACCB4002	Data Analysis and Visualisation	Compulsory	20
ACCA4024	Networks and Cyber Security Essentials	Compulsory	20
ACCA5023	Network Operating Systems and Services	Compulsory	20
ACCA5032	Object Oriented Programming and Algorithms	Compulsory	20
Year 3	**Level 5**	**Semester 1/2**	**Sept. to May**
ACCA5033	Changemakers: Creativity and Value Creation	Compulsory	20
ACCA5026	Databases and Application Development	Compulsory	20
ACCA5034	Data Security and Compliance	Compulsory	20
ACCA5031	Web and Mobile Technologies	Compulsory	20
Year 4	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6024	Cloud-Based Web Services	Compulsory	20
ACCB6019	Emerging Trends	Optional	20
ACCA6029	Industrial Based Research	Optional	20
ACCA6027	Software Engineering Principles and Practice	Compulsory	20
ACCA6017	Usability Engineering	Compulsory	20
Year 5	**Level 6**	**Semester 1/2**	**Sept. to May**
ACCA6020	Independent Project	Compulsory	40

Where appropriate, the University may allow students to study modules in addition to the 120 credits studied for the level of study e.g. Welsh medium or IT modules. Students would need to discuss this with their Programme Manager.

Note that on Programmes of Study offering a large number of options, timetable constraints will inevitably mean that not all combinations of options will be possible.

Module details are correct on 1 September 2021, and will not normally be changed during the year. In the unlikely event of changes having to be made to these details during the year, you will be notified in writing. Module descriptors are presented in the accompanying Module Directory document.

UNIVERSITY ATTENDANCE POLICY

Attendance is an important indicator of your engagement with and success in your studies. All students are therefore required to attend all scheduled classes and tutorials and Institutes will record individual academic attendance. It is important that:

- you familiarise yourself with the attendance policy relevant to you (see https://www.uwtsd.ac.uk/academic-office/other-forms-and-policies/);
- you are fully aware of procedures to follow in case of unexpected absences;
- you are aware that disciplinary action will be taken for any sustained periods of unauthorised absence.

This is particularly important for **international students with a UKVI student Visa.** Failure to adhere to the requirements and conditions of the Attendance Policy will lead to withdrawal from your programme and the University will also inform the UKVI to withdraw your student visa sponsorship.

Appeal against withdrawal due to poor attendance – Information on how to appeal against withdrawal due to poor attendance is provided on the University's website (http://www.uwtsd.ac.uk/academic-office/procedures-for-academic-appeals-complaints-and-other-student-cases/).

CODES OF CONDUCT

The University is committed to providing all students with a safe and inclusive learning environment where all students have the potential to succeed to the best of their ability.

The University expects all students to abide by the Student Code of Conduct (see https://www.uwtsd.ac.uk/studentcharter/).

The University also has Support for Study and Fitness to Practise Policies (see https://www.uwtsd.ac.uk/academic-office/academic-quality-handbook/).

In addition, many programmes have a professional code of conduct that you are expected to adhere to. Your Programme Manager will provide you with appropriate details.

ABOUT ACADEMIC MISCONDUCT AND PLAGIARISM

The University defines academic misconduct as 'any act, intentional or otherwise, whereby a person may obtain for himself/herself or for another, an unpermitted advantage…'. Committing academic misconduct in assessment is one of the most serious offences in academic life, and its consequences can be severe. It undermines the integrity of scholarship, research, and of the examination and assessment process.

It is very important to understand that it is no defence to claim that academic misconduct has been committed unintentionally, accidentally, due to extenuating circumstances or a long-term impairment (irrespective of whether or not these circumstances or long-term impairment have been acknowledged by the University).

Plagiarism is one type of academic misconduct. Plagiarism is passing off, or attempting to pass off, another's work as your own. It includes copying the words, ideas, images or research results of another ***without acknowledgement***, whether those words etc. are published or unpublished. It is plagiarism, for example, to copy the work of another student, of a member of staff or a published article without crediting the author. Persons who allow their work to be plagiarised are also guilty.

It should be noted that re-submitting work that has already been submitted for a different assessment task without noting that this is the case is also regarded as plagiarism (and is called self-plagiarism) and will be treated as such.

Plagiarism is one of the worst offences in academic life, and its consequences can be severe. It undermines the integrity of scholarship, research, and of the examination and assessment process. The guidance that follows explains what is meant by plagiarism, describes the University's regulations for dealing with it, and provides help in avoiding it.

When enrolling as a student at the University of Wales Trinity Saint David you have consented to your work being scrutinised both electronically and in person to check for cases of plagiarism. Normally, your work will be submitted electronically via Moodle.

For submissions outside of the Moodle platform, it is equally important that you reference your sources accurately. In some cases, you will be expected to submit both hard and electronic copies, which can be checked against the database of the UK Higher Education Plagiarism Detection Service. For handwritten, portfolio and process workbook submissions check with your module tutor if you are in any doubt about whether you have infringed the regulations. They are here to assist you; ensure that you take advantage of their expertise.

Plagiarism: Regulations, Procedure and Penalties

Full details of the University's procedures and penalties for dealing with issues of plagiarism can be found in Chapter 12 of the *Academic Quality* Handbook and the associated *Academic Misconduct Policy*, which can be seen on the University website or obtained from the Institute Offices.
https://www.uwtsd.ac.uk/academic-office/academic-quality-handbook/

Avoiding Plagiarism

Coursework, dissertations, or creative work are meant to be your own original work. Obviously, you will use the work of others. Not only is this inevitable, it is expected.
All scholarship builds on the work of others. The important thing to remember is always to **acknowledge your sources**. The University recognises four referencing styles: APA, Harvard, IEEE and MHRA and provides a handbook for each of these styles.

For your programme of study, you should be using IEEE. The handbooks can be found online: https://www.uwtsd.ac.uk/library/infoskills/referencing-handbooks/ or in print from the Library and Learning Resources. A Referencing Essentials session will be provided during the first term of your first year but as a general rule of thumb observe the following:

- *Anything that is copied or quoted from another source, including electronic sources such as the internet, must be in quotation marks and attributed to the original author. This may be in the body of the text or as a footnote, depending on which Referencing style you are asked to use.*

- *Paraphrasing or summarising the work of others involves putting their ideas into your words. This is fine, but again, acknowledge your source.*

- *Where you are generally indebted for your ideas to one or two main sources, this can be a bit trickier. If the ideas or the way they are presented come from one or two sources, make this clear. Do the same if they come from lectures. It is important not to claim originality where it does not exist but to indicate in general where the information comes from.*

- *Full citations in timed unseen examinations are obviously not expected, but you should indicate general indebtedness and always credit any quotations you have managed to remember.*

The golden rule is; ***`if in doubt, provide references'*** and your Referencing Handbook will provide you with specific guidance to help you to do this correctly. For support, contact your tutor or Academic Liaison Librarian. There are no penalties for asking for advice and guidance; there are severe penalties for plagiarism and failure to reference means your work could be considered to be plagiarised.

Other types of Academic Misconduct
There are other types of academic misconduct, including, but not limited to producing work as a group where it is an individual task (called collusion), fabricating data or making false claims to have carried out research, using the service of an essay bank/essay mill, having an unauthorised source of information in an examination, prohibited communication during an examination. The same regulations, procedures and penalties apply to all types of academic misconduct.

LIBRARY AND LEARNING RESOURCES

Library and Learning Resources (LLR) supports the learning, teaching and research activities of staff and students across the University with library services available at Birmingham, Carmarthen, Lampeter, London and Swansea including online resources, social learning spaces, special collections and archives.

The library prioritises the purchase of e-books over print wherever possible and loan periods are regularly reviewed by the library to ensure that they are appropriate and provide equitable access to resources. It is expected that at least all Essential reading list items are available from the library. The LLR follows a Fairer Fines policy which means students are only fined on items if they are in heavy demand or requested by another library user.

The LLR provides a *Need More?* service which aims to provide a one stop shop for all learning resource needs, for example, if a book, journal or thesis is needed which is

not in the library stock then it may be purchased or borrowed from another library. Further information can be found here: https://uwtsd.ac.uk/library/need-more/.

Learning Spaces
As well as collections, the library provides a variety of modern and flexible learning spaces, reflecting different styles of working e.g. group study spaces and quiet areas, as well as IT facilities, wireless internet, photocopying and printing facilities and excellent customer service.

Online Library
The LLR offers a wide range of printed and electronic resources including an extensive collection of online e-journals and e-books that are available 24/7 providing access to scholarly journals, newspapers, company reports and reference material. The library catalogue searches the whole range of print and online library materials and gives access to your library account from anywhere.

InfoSkills
All students are provided with a library tour, a Basic Skills session and a Referencing Essentials session in the first few weeks at the University. Academic Liaison Librarians will help students to develop the skills required to find, use and evaluate information sources within their subject areas. Numerous sessions are offered throughout the year to help students develop their Information Skills further to support their academic success and employability. These include sessions on identifying fake news, using statistics, Copyright awareness, and managing your online identity. The LLR operates an open door policy which enables students to ask for help and advice on the information resources available throughout the academic year. Academic Liaison Librarians are welcomed to Staff / Student Committees, and also attend other relevant Institute meetings where invited, including the Institute Board. For further information on InfoSkills provision go to: https://www.uwtsd.ac.uk/library/infoskills/

Special Collections and Archives
The Library is also home to the Special Collections of UWTSD, including the University's oldest printed books, manuscripts and archives. The Special Collections include over 35,000 printed works, 8 medieval manuscripts, around 100 post medieval manuscripts, and 69 incunables. Material from the Archives includes the institutional archive of St David's College, later The University of Wales, Lampeter, and Trinity College Carmarthen, both constituent members of the University of Wales Trinity Saint David. Students are encouraged to use these wonderful resources as part of their studies, regardless of discipline. Visits and workshops are often arranged within the purpose-built reading rooms in the Lampeter campus library and there is a regular programme of exhibitions across the campuses and online.

For recent service developments, updates and contact information please visit the University Library website at http://www.uwtsd.ac.uk/library/. The latest updates on Covid related impact to services during 21/22 can be found here https://uwtsd.ac.uk/library/help-and-support/covid-19-services/. Please also follow the Library and Learning Resources on Facebook, Instagram or Twitter for up-to-date news, service developments and information on new services and resources: @UWTSDLib

STUDENT SERVICES

A professional support service providing high quality information, advice, guidance, practical and emotional support to enable all students to reach their full potential. Support available includes the Careers Service, Financial Support, Learning Support, Counselling Service and support for students from a care background. For further details see http://www.uwtsd.ac.uk/student-services/.

STUDY SKILLS

All students have access to study skills support to assist them in their studies. Details of provision are available from the Student Services offices on each campus and at http://www.uwtsd.ac.uk/study-skills/.

Topics covered include:
Developing effective study strategies
Planning and writing assignments
Preparing presentations
Planning for seminars
Preparing for exams

Drop-in study skills sessions and 1:1 appointments are available online (and in person where possible) – no appointment necessary. Please see the Student Services study skills webpages for further details: http://www.uwtsd.ac.uk/study-skills/.

COMPLAINTS

You have a right to make a complaint about any specific concern about the provision of your Programme of Study or a related academic service. Full details of the complaints process can be found in the *Student Complaint Policy* associated with Chapter 12 of the Academic Quality Handbook and in supporting documentation published on the Academic Office section on the University's website:
http://www.uwtsd.ac.uk/academic-office/procedures-for-academic-appeals-complaints-and-other-student-cases/