



Undergraduate Programme Specification

Session	2024/25	Last Modified	June 2025
Named Award Title	BSc (Hons) Data Science and Artificial Intelligence (Sandwich Available)		
Award Title for Each Award	Certificate of Higher Education (CertHE) Data Science and Artificial Intelligence Diploma of Higher Education (DipHE) Data Science and Artificial Intelligence BSc Data Science and Artificial Intelligence BSc Data Science and Artificial Intelligence (Sandwich) BSc (Hons) Data Science and Artificial Intelligence (Sandwich) BSc (Hons) Data Science and Artificial Intelligence		
Date of Approval	30/05/2025		
Details of Cohort Applies to	From 2025 for students undertaking this programme at the Paisley campus.		
Awarding Institution	University of the West of Scotland	Teaching Institution(s)	University of the West of Scotland
Language of Instruction & Examination		English	
Award Accredited by			
Maximum Period of Registration		6 years (Full-Time), 8 Years (Part-Time)	
Duration of Study			
Full-time	4 Years	Part-time	6 Years
Placement (compulsory)			
Mode of Study	<input checked="" type="checkbox"/> Full-time <input checked="" type="checkbox"/> Part-time		
Campus	<input type="checkbox"/> Ayr <input type="checkbox"/> Dumfries	<input type="checkbox"/> Lanarkshire <input type="checkbox"/> London <input checked="" type="checkbox"/> Paisley	<input type="checkbox"/> Online / Distance Learning <input type="checkbox"/> Other (specify)
School	Computing, Engineering and Physical Sciences		
Divisional Programme Board	Computing		

Programme Leader	S Awan
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Admissions Criteria

Candidates must be able to satisfy the general admission requirements of the University of the West of Scotland as specified in Chapter 2 of the University Regulatory Framework together with the following programme requirements:

SQA National Qualifications:

Standard Entry Requirements: BCCC (90 UCAS Tariff points) including Maths/Applications of Maths or Computing.

Minimum Entry Requirements: CCC (63 UCAS Tariff points) including Maths/Applications of Maths or Computing.

Or GCE

Grades CCD at A-level (88 UCAS Tariff Points), including Maths or Computing at least at GCSE.

Or SQA National Qualifications / Edexcel Foundation

An appropriate HNC/HND award.

Year 2 entry with an HNC with an 'B' in the Graded Unit. Year 3 entry with at least a 'B' in the Graded Unit.

The level of entry and/or credit awarded being subject to the content of the HN programme.

Other Required Qualifications/Experience

Applicants may also be considered with other academic, vocational or professional qualifications deemed to be equivalent.

Applicants should have awareness of mathematics at the appropriate levels for later year entry, such as matrices, calculus, analysis and algorithms.

Further desirable skills pre-application

Applicants to the BSc (Hons) Data Science and Artificial Intelligence programme at UWS will benefit from possessing the following desirable skills and attributes prior to application:

- **Basic Programming Knowledge:** Familiarity with languages like Python, R, or Java will be advantageous.
- **Mathematical Aptitude:** A good foundation in algebra, statistics, or calculus is helpful for understanding key concepts in data science and AI.
- **Analytical Thinking:** The ability to approach problems methodically and critically evaluate data or processes.
- **Digital Literacy:** Comfort with basic computer applications, cloud platforms, or data management tools.
- **Communication Skills:** Proficiency in written and verbal communication for articulating ideas and collaborating effectively.
- **Curiosity and Innovation:** A keen interest in technology trends, AI advancements, and data-driven solutions.
- **Time Management:** Strong organisational skills to manage coursework and independent study effectively.

While not mandatory, these skills will give prospective students a head start in mastering the challenges and opportunities presented in this rapidly evolving field.

General Overview

Data Science and Artificial Intelligence is a multifaceted discipline encompassing a wide range of skills, including data analysis, machine learning, statistical modelling, and data visualisation. It is a field at the forefront of the digital transformation of the economy, driving innovation across industries by leveraging data to inform decision-making and optimise processes. A degree in Data Science and Artificial Intelligence will prepare students for a variety of rewarding professional careers, equipping them with expertise in data manipulation, algorithm development, and the application of Data Science and Artificial Intelligence to solve real-world problems. This includes foundational knowledge in data processing, programming, statistical analysis, business intelligence, project management, and the ethical implications of data use. Data Science and Artificial Intelligence is a multidisciplinary programme that will equip graduates with the skills necessary to succeed in this rapidly growing field, meeting both the technical and organisational demands of the sector. The programme also provides a solid foundation for further study, supporting students in pursuing postgraduate education in Data Science and Artificial Intelligence or related areas.

Course-Specific Aims

- To increase students' appreciation, awareness, and understanding of the diverse field of Data Science and Artificial Intelligence and its various applications across industries.
- To provide students with a detailed overview of the evolution of Data Science and Artificial Intelligence, helping them appreciate the historical context and the technological advancements that have shaped the field.
- To develop students' knowledge of ethical considerations and best practices in Data Science and Artificial Intelligence, including data privacy, security, and the social implications of data-driven decision-making.
- To impart knowledge of data project management principles, from data collection and processing to analysis and interpretation.
- To develop proficiency in programming languages and tools commonly used in Data Science and Artificial Intelligence, such as Python, R, SQL, and data visualisation software.
- To allow for the theoretical and practical implementation of Data Science and Artificial Intelligence solutions, providing opportunities for students to work on real-world projects.
- To provide an environment in which students can run data-driven projects, allowing them to apply their technical and research skills in practical scenarios.
- To develop a knowledge of data visualisation techniques and the ability to communicate complex data insights effectively to diverse audiences.
- To engage students in both team-based projects and substantial individual projects in an area of Data Science and Artificial Intelligence, thereby bolstering their technical, analytical, and research skills.
- To develop highly detailed business plans and strategies that leverage data for competitive advantage, including insights into the use of data for decision-making, marketing, and operations.
- To simulate real-world Data Science and Artificial Intelligence environments, providing students with hands-on experience in data analysis, machine learning, and predictive modelling.

BSc (Hons) Data Science and Artificial Intelligence graduates will be prepared for technical roles that require expertise in data analysis, algorithm development, and the management of large datasets. They will be equipped to design and implement data-driven solutions, set up and manage data infrastructures, and contribute to data-driven decision-making processes within organisations. The BSc (Hons) Data Science and Artificial Intelligence programme will build on the framework of existing undergraduate programmes and will provide opportunities

for students to develop specialist skills in areas such as machine learning, big data technologies, data ethics, data analytics, and statistical modelling.

Typical Delivery Method

The BSc (Hons) Data Science and Artificial Intelligence programme is delivered through a face-to-face teaching mode on campus, offering students a highly interactive and engaging learning experience. Lectures and tutorials are conducted in person, providing opportunities for direct interaction between students and teaching staff. This approach fosters a supportive learning environment where students can easily ask questions, discuss complex concepts, and receive immediate feedback.

To enhance student participation and involvement, a variety of modern educational tools and technologies are integrated into the teaching methodology. These include interactive presentations, group discussions, and live demonstrations of practical techniques. Digital platforms such as MS Teams, Aula, and email communication are utilised to ensure students can access additional support when needed, even outside of formal class hours.

All course materials, including lecture slides, reading resources, and assignments, are made available through the Virtual Learning Environment (VLE), enabling students to review and reinforce their understanding at their own pace. This blended approach ensures students are well-supported both during and outside classroom sessions, promoting active learning and a deeper understanding of core concepts in Data Science and Artificial Intelligence.

Any additional costs

There are no additional costs associated with this programme

Graduate Attributes, Employability & Personal Development Planning

The programme offers a thorough grounding in the principles of computer, data science, and artificial intelligence operation, including programming, mathematics and associated software engineering approaches and develops the lifelong learning skills that students will need to stay abreast of the rapidly evolving technologies in data science and artificial intelligence in addition to its related disciplines.

Students gain a solid foundation in computer science, data science, and artificial intelligence, including programming, mathematics, and software engineering. The curriculum is designed to build lifelong learning skills, enabling students to adapt to the rapid pace of technological change.

Through the University's ASPIRE (Academic, Social and Professional skills for Innovation, Reflection and Endeavour) curriculum supports our students and offers them a tailored approach to their academic, professional and personal development.

The UWS graduate attributes are engrained throughout this programme.

As a UWS graduate, you will be:

- Universal: with globally relevant skills in data, AI, and software development and engineering.
- Work-ready: equipped to thrive in fast-paced, tech-driven environments.
- Successful: with a strong foundation for lifelong learning and career growth.

You will develop attributes across three dimensions:

- Academic: Deep knowledge of topics such as programming, data science, AI, and software engineering, with the ability to apply theory in real-world contexts.
- Personal: Adaptability, ethical awareness and a growth mindset, with the confidence to solve complex problems and reflect on your own development.
- Professional: Strong communication, teamwork, and leadership skills, with immediate

workplace impact and long-term career potential.

Work Based Learning/Placement Details

Work based learning and placements are available on the programme. The sandwich placement is designed for students to gain and reflect on work experience attained during their time in the workplace. Finding of sandwich placements are the responsibility of the student who wishes to undertake one. Students will be encouraged to actively engage in summer internships and placements throughout the programme of study and have the option to complete an industrial (sandwich) placement year, to ensure the relevance of skills development as applied to industry is established. To facilitate these activities, students will be given opportunities to network with professional practitioners through supported activities. Opportunities for industry focused learning activities have been built into some of the modules of the programme enabling students to engage with employers. These include 'live' case studies, problem-solving scenarios, and individual work-related projects. Some industry and research-based placement will be offered in the programme.

Attendance and Engagement

In line with the [Student Attendance and Engagement Procedure](#), Students are academically engaged if they are regularly attending and participating in timetabled on-campus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time.

For the purposes of this programme, academic engagement equates to the following:

Students are academically engaged if they are regularly attending and participating in timetabled teaching sessions, asynchronous online learning activities, and course-related learning resources, and complete assessments and submit these on time. Students are also required to be in regular contact with their academic tutor, regularly engage with materials and discussions on the learning platform and engage in independent study.

Equality and Diversity

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: [UWS Equality, Diversity and Human Rights Code](#).

Aligned with the University's commitment to equality and diversity, this programme supports equality of opportunity for students from all backgrounds and learning needs. Using the VLE, material will be presented electronically in formats that allow flexible access and manipulation of content.

Module Co-ordinators will ensure that language is inclusive and culturally sensitive within any university-created material. However, some external resources, such as textbooks or websites, may still contain outdated or non-inclusive terminology, and students will be made aware of this.

The programme complies with university regulations and guidance on inclusive learning and teaching practice. In all cases you are advised to speak to the relevant Module Co-ordinator to ensure that specialist assistive equipment, support provision and adjustment to assessment practice can be put in place, in accordance with the University's policies and regulations.

Programme structures and requirements, SCQF level, term, module name and code, credits and awards ([Chapter 1, Regulatory Framework](#))

Learning Outcomes

SCQF LEVEL 7	
Learning Outcomes	
Knowledge and Understanding	
A1	Exhibiting foundational knowledge and application of mathematical and statistical concepts in data science problem-solving.
A2	Demonstrate a comprehensive understanding of key database theory and secure data management with Database Management Systems.
A3	Understanding of structured programming principles, software engineering processes, and related ethical and professional issues.
A4	Acquiring knowledge of UWS processes, services, and expectations for conduct and collaboration.
A5	
Practice - Applied Knowledge and Understanding	
B1	Implement basic professional skills and techniques to solve standard mathematical or statistical problems in data science.
B2	Applying knowledge and skills to design and implement databases, develop computing applications using structured programming, and elicit requirements for software systems.
B3	Reflect on your UWS experience, engage in mentoring, utilize academic feedback, and apply goal-setting strategies.
B4	
B5	
Communication, ICT and Numeracy Skills	
C1	Apply software to analyse, interpret, and communicate results from statistical problems, mathematical reasoning, and database management.
C2	Utilise development environments, word processing applications, and ICT tools to create formal models and support software development.
C3	Clearly describe personal ambitions, reflect, and articulate outcomes effectively, and communicate constructively with peers and tutors.
C4	
C5	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Apply various methods to solve routine problems in data science and software engineering contexts.
D2	Use structured programming for routine issues and apply critical thinking to analyse and design databases in business contexts.
D3	Reflect on ambitions, critically assess progress, and evaluate feedback to set future goals.

D4	
D5	
Autonomy, Accountability and Working with Others	
E1	Assess group work roles and duties, managing tasks and resources to generate cohesive results.
E2	Evaluate and assume responsibility for roles in collaborative computing tasks and problem-solving.
E3	Collaborate respectfully with others, apply goal-setting strategies, and reflect critically on progress.
E4	
E5	

Level 7 Modules

CORE

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
7	COMP07027	Introduction to Programming	20	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7	COMP07087	Introduction to Software Engineering	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7	COMP07088	Database Systems	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7	MATH07011	Applied Mathematics 1	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	MATH07001	Analysis of Data	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7	APPD07001	ASPIRE	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Footnotes for Core Modules							
COMP07027 runs as a 20 credit module spread over T1 and T2 long and thin.							

Level 7 Modules

OPTION

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Footnotes for Option Modules							

Level 7

Criteria for Progression and Award

Please refer to [UWS Regulatory Framework](#) for related regulations

Standard UWS progression rules will apply. To progress to SCQF 8 in this programme, students are normally required to obtain 120 credits at SCQF 7 from the above programme. In cases where students have not passed all modules at SCQF Level 7, they may still be permitted to progress to SCQF Level 8 under the "progression with deficit" provisions, provided they meet the conditions specified in Regulations 3.13.

Students obtaining 120 credits at SCQF 7 or above, from the above programme, are eligible for the exit award of the Certificate of Higher Education in Data Science and Artificial Intelligence (Regulation 1.19).

Distinction will be awarded in line with University Regulations and no imported credit can be used. (Regulations 3.25 & 3.26).

SCQF LEVEL 8	
Learning Outcomes	
Knowledge and Understanding	
A1	Understand and use algorithms, data structures, and probability distributions to solve problems.
A2	Define, explain, and illustrate object-oriented programming ideas and principles.
A3	Apply knowledge of computer network components, cloud computing, and software structures.
A4	Develop a solid understanding of UWS processes, services, and expectations for conduct and collaboration.
A5	
Practice - Applied Knowledge and Understanding	
B1	Implement advanced object-oriented programming skills, statistical techniques and data structures and algorithms to solve problems and interpret results.
B2	Apply professional abilities to virtualize and deploy computer systems on cloud platforms.
B3	Reflect on your UWS experience, engage in coaching, use feedback constructively, and apply goal-setting strategies.
B4	
B5	
Communication, ICT and Numeracy Skills	
C1	Convey complex information to various audiences, interpret primary materials, and address problems in programming, software engineering, and data structures.
C2	Apply ICT applications and information retrieval systems to process and present data and utilize databases for effective storage and retrieval.
C3	Clearly explain your ambitions, reflect on outcomes in various formats, and communicate constructively with peers and tutors.
C4	
C5	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Critically analyse data structures and algorithms to solve routine problems.
D2	Critically select cloud services and evaluate object-oriented programming solutions.
D3	Reflect on ambitions, review progress, and evaluate feedback to set future goals.
D4	
D5	
Autonomy, Accountability and Working with Others	
E1	Exercise autonomy and collaboration to solve statistical problems and produce reports.
E2	Manage resources and create timelines for projects; use professional autonomy in designing, creating, and testing applications.

E3	Collaborate respectfully, apply reflexive goal-setting strategies, and critically reflect on progress.
E4	
E5	

Level 8 Modules

CORE

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
8	COMP08103	Intermediate Programming	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	COMP08104	Introduction to Network and Cloud Computing	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	COMP08105	Software Engineering Practice	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8	COMP08106	Data Structures & Algorithms	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8	APPD08001	ASPIRE 2	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8	MATH08010	Probability and Statistics	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Footnotes for Core Modules							

Level 8 Modules

OPTION

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Footnotes for Option Modules							

Level 8

Criteria for Progression and Award

Please refer to [UWS Regulatory Framework](#) for related regulations

Standard UWS progression rules will apply. To progress to SCQF 9 in this programme, students are normally required to obtain 120 credits at SCQF 8 from the above programme. In cases where students have not passed all modules at SCQF Level 8, they may still be permitted to progress to SCQF Level 9 under the "progression with deficit" provisions, provided they meet the conditions specified in Regulations 3.13.

Students obtaining 240 credits, of which a minimum of 90 are at SCQF 8 or above, from the above programme, are eligible for the exit award of the Diploma of Higher Education in Data Science and Artificial Intelligence (Regulation 1.19). Students must also successfully pass all core modules for this exit award.

Distinction will be awarded in line with University Regulations and no imported credit can be used. (Regulations 3.25 & 3.26).

SCQF LEVEL 9	
Learning Outcomes (Maximum of 5 per heading)	
Knowledge and Understanding	
A1	Understand data science concepts and visualization tools, and critically assess data warehouse methodologies and their business significance.
A2	Grasp theoretical and technical DevOps approaches and critically assess principles and concepts in cloud services and computing.
A3	Comprehend professionalism and its ethical implications and evaluate research methodologies to identify and justify research questions ethically.
A4	
A5	
Practice - Applied Knowledge and Understanding	
B1	Evaluate techniques to develop software solutions for data science problems and different visualization methods.
B2	Apply key computing skills to address legal, social, and ethical issues, and critically analyse research areas using appropriate design and data collection methods.
B3	Implement DevOps principles and develop cloud-native software applications.
B4	
B5	
Communication, ICT and Numeracy Skills	
C1	Present and evaluate data science solutions, interpret data, and analyse complex materials.
C2	Apply routine, advanced, and specialized skills to choose cloud services and implement cloud-native applications.
C3	Identify and discuss software and ICT platforms for data collection and analysis to support research aims and objectives.
C4	
C5	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Identify and analyse routine problems with real-world data sources and demonstrate originality in addressing professional issues with limited or varied data.
D2	Integrate information from academic and industrial sources and analyse routine problems with real-world data sources and cloud services.
D3	Conduct critical analysis, evaluation, and synthesis of ideas and information to research and assess issues on relevant topics.
D4	
D5	
Autonomy, Accountability and Working with Others	
E1	Exercise autonomy and initiative to simulate the role of a business intelligence analyst serving a real company.
E2	Manage ethical and professional issues following codes of practice and demonstrate initiative and self-management in completing coursework across various modules.

E3	Develop the ability to work independently, manage time effectively, and identify and justify a significant research area using appropriate evidence.
E4	Deal with ethical issues in accordance with current professional practice.
E5	

Level 9 Modules

CORE

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
9	COMP09092	Research Methods in Computing	10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	COMP09093	Professional Computing Practice	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	COMP09118	Fundamentals of Data Science	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	COMP09119	DevOps	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	COMP10XXX	Data Visualisation	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	COMP09XXX	Mathematics for Data Science	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Footnotes for Core Modules							

Level 9 Modules

OPTION

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
9	MATH09012	Statistical Estimation and Inference	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	COMP09120	Cloud Services and Architectures	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	COMP09044	Algorithms & Collections	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Footnotes for Option Modules							
Select ONE module (20 credits) from the list OR other modules in consultation with the Programme Leader (e.g. optional modules)							

Level 9

Criteria for Progression and Award

Please refer to [UWS Regulatory Framework](#) for related regulations

Standard UWS progression rules will apply. To progress to SCQF 10 in this programme, students are normally required to obtain 120 credits at SCQF 9 from the above programme. In cases where students have not passed all modules at SCQF Level 9, they may still be

permitted to progress to SCQF Level 10 under the "progression with deficit" provisions, provided they meet the conditions specified in Regulations 3.13.

Students obtaining 360 credits, of which a minimum of 90 are at SCQF 9 or above, from the above programme, are eligible for the exit award of the BSc Data Science and Artificial Intelligence (Regulation 1.19). Students must also successfully pass all core modules for this exit award.

To be eligible for the award of a sandwich degree, a candidate must have satisfied the requirements for the award of the BSc Data Science and Artificial Intelligence and have accumulated 36 weeks of appropriate industrial placement experience.

Distinction will be awarded in line with University Regulations and no imported credit can be used. (Regulations 3.25 & 3.26).

SCQF LEVEL 10	
Learning Outcomes (Maximum of 5 per heading)	
Knowledge and Understanding	
A1	Develop a critical understanding of modern machine learning theories, principles and associated ethical issues.
A2	Demonstrate knowledge of statistical estimation methods for data science problems.
A3	Understanding in-depth knowledge of innovative data science methods and research methodologies.
A4	Describe a detailed knowledge of creating and assessing data pipelines.
A5	
Practice - Applied Knowledge and Understanding	
B1	Apply principal skills and practices to execute a project in data science with relevant professional outcomes.
B2	Implement knowledge and skills to develop and implement data pipelines throughout the data engineering lifecycle.
B3	Execute a project to deploy a machine learning solution using advanced techniques and evaluate its outcomes.
B4	
B5	
Communication, ICT and Numeracy Skills	
C1	Use of skills to formally and informally present and summarize specialized data science topics in presentations and written reports.
C2	Communicate effectively in commercial-style reports using standard ICT tools.
C3	Present machine learning topics to informed audiences, for interpretation and evaluation.
C4	
C5	

Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Conduct critical analysis, evaluation, and synthesis of ideas, concepts, and issues in the context of Data Science.
D2	Critically identify and analyse complex problems to select appropriate machine learning approaches and demonstrate originality in addressing issues with limited or diverse data.
D3	Identify and analyse problems, interpret error messages, and consolidate knowledge and skills to produce effective data engineering solutions.
D4	
D5	
Autonomy, Accountability and Working with Others	
E1	Exercise autonomy and initiative in completing a significant independent project.
E2	Independently implement data engineering solutions with professional autonomy and initiative.
E3	Address complex ethical and professional issues for deploying machine learning solutions.
E4	Work effectively in a group to explore professional-level issues in the data science and artificial intelligence domain.
E5	

Level 10 Modules

CORE

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
10	COMP10034	Computing Honours Project	40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10	COMP10085	Data Engineering	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	COMP10086	Artificial Intelligence Applications	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	COMP10087	Big Data	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Footnotes for Core Modules							

Level 10 Modules

OPTION

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
10	COMP10088	Advanced Machine Learning	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10	COMP10062	Decision Support Systems	20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Footnotes for Option Modules

Select ONE module (20 credits) from the list OR other modules in consultation with the Programme Leader (e.g. optional modules)

Level 10

Criteria for Award

Please refer to [UWS Regulatory Framework for related regulations](#)

Students obtaining 480 credits, of which a minimum of 90 are at SCQF 10 or above, from the above programme, are eligible for the exit award of the BSc (Hons) Data Science and Artificial Intelligence (Regulation 1.19). Students must also successfully pass all core modules for this exit award.

The Classification of Honours will be determined by University Regulation 3.20-3.24.

To be eligible for the award of a sandwich degree, a candidate must have satisfied the requirements for the award of the BSc Data Science and Artificial Intelligence and have accumulated 36 weeks of appropriate industrial placement experience. Students who have done a sandwich year will be entitled to the BSc (Hons) Data Science and Artificial Intelligence (Sandwich) award.

Regulations of Assessment

Candidates will be bound by the general assessment regulations of the University as specified in the [University Regulatory Framework](#).

An overview of the assessment details is provided in the Student Handbook and the assessment criteria for each module is provided in the module descriptor which forms part of the module pack issued to students. For further details on assessment please refer to Chapter 3 of the Regulatory Framework.

To qualify for an award of the University, students must complete all the programme requirements and must meet the credit minima detailed in Chapter 1 of the Regulatory Framework.

Combined Studies

There may be instances where a student has been unsuccessful in meeting the award criteria for the named award and for other more generic named awards existing within the School. Provided that they have met the credit requirements in line with the SCQF credit minima (please see Regulation 1.21), they will be eligible for a Combined Studies award (please see Regulation 1.61).

For students studying BA, BAcc, or BD awards the award will be BA Combined Studies.

For students studying BEng or BSc awards, the award will be BSc Combined Studies.

Version no: 1

Change/Version Control

[illegible]