Module Descriptor

Title	Introduction to Artificial Intelligence (AI)		
Session	2026/27	**Status**	
Code	COMP07090	**SCQF Level**	07
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**Computing, Engineering and Physical Sciences**		
Module Co-ordinator	Dr Ashraf Mahmud		

Summary of Module

This module provides a foundational understanding of Artificial Intelligence (AI), exploring its core principles, methodologies, and applications. It introduces students to key AI concepts, including machine learning, natural language processing, conversational AI, robotics, and computer vision. The module covers the history of AI, ethical considerations, and current trends shaping the field. Practical sessions involve hands-on experience with AI tools and frameworks, equipping students with the skills to develop and implement basic AI models. By the end of the module, students will understand the potential and limitations of AI and its impact on various industries, preparing them for advanced study or application in the field.

Module Delivery Method	**On-Campus[1]** ☒	**Hybrid[2]** ☒	**Online[3]** ☐	**Work -Based Learning[4]** ☐
Campuses for Module Delivery	☐ Ayr ☐ Dumfries	☐ Lanarkshire ☒ London ☒ Paisley	☐ Online / Distance Learning ☐ Other (specify)	

Terms for Module Delivery	Term 1	☒	Term 2	☒	Term 3	☒

[1] Where contact hours are synchronous/ live and take place fully on campus. Campus-based learning is focused on providing an interactive learning experience supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus contact hours will be clearly articulated to students.

[2] The module includes a combination of synchronous/ live on-campus and online learning events. These will be supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus and online contact hours will be clearly articulated to students.

[3] Where all learning is solely delivered by web-based or internet-based technologies and the participants can engage in all learning activities through these means. All required contact hours will be clearly articulated to students.

[4] Learning activities where the main location for the learning experience is in the workplace. All required contact hours, whether online or on campus, will be clearly articulated to students

Long-thin Delivery over more than one Term	Term 1 – Term 2	☐	Term 2 – Term 3	☐	Term 3 – Term 1	☐

Learning Outcomes	
L1	Explain the foundational principles of Artificial Intelligence, including its history, key methodologies.
L2	Recognize and differentiate between various AI techniques such as supervised and unsupervised learning, neural networks, and natural language processing, conversational AI, computer vision, Generative AI.
L3	Utilize basic AI tools and programming frameworks (e.g., Python libraries like TensorFlow or Scikit-learn, explore Microsoft Azure) to develop simple AI models
L4	Explore identifying AI projects on real-world industries such as healthcare, energy, finance, transportation, and entertainment.
L5	Understanding the responsible AI, discuss the ethical, societal, and legal considerations associated with AI

Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	**During completion of this module, there will be an opportunity to achieve core skills in:**
Knowledge and Understanding (K and U)	**SCQF 7** Detailed knowledge and understanding of the concepts and principles of AI, understanding of the ethical issues that are apparent when developing AI applications
Practice: Applied Knowledge and Understanding	**SCQF 7** Execute a project of identifying the requirements and methods and completing an implementation no code ML solution using Microsoft Azure.
Generic Cognitive skills	**SCQF 7** Demonstrate some originality and creativity in dealing with fundamental professional-level issues such as those presented by coursework.
Communication, ICT and Numeracy Skills	**SCQF 7** Present and convey information about AI project in the form of the group coursework
Autonomy, Accountability and Working with Others	**SCQF 7** Exercise autonomy and initiative when working with others and utilise a range of tools that enable the development

Prerequisites	**Module Code**	**Module Title**
	Other	
Co-requisites	**Module Code**	**Module Title**

Learning and Teaching

In line with current learning and teaching principles, a 20-credit module includes 200 learning hours, normally including a minimum of 36 contact hours and maximum of 48 contact hours.

Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture / Core Content Delivery	18
Tutorial / Synchronous Support Activity	6
Laboratory / Practical Demonstration / Workshop	24
Independent Study	152
Please select	
Please select	
TOTAL	200

Indicative Resources

The following materials form essential underpinning for the module content and ultimately for the learning outcomes:

Duke, T. (2023) Building Responsible AI Algorithms A Framework for Transparency, Fairness, Safety, Privacy, and Robustness. Apress.

McMahon, A.P. (2023) Machine Learning Engineering with Python. Packt Publishing Ltd.

Staron, M. (2024) Machine Learning Infrastructure and Best Practices for Software Engineers. Packt Publishing

(N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Attendance and Engagement Requirements

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 module, academic engagement equates to the following:

Attending all timetabled synchronous classes and engagement with asynchronous learning activities and resources.

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 overall commitment to equality and diversity stated in the Programme Specifications, the module supports equality of opportunity for students from all

backgrounds and with different learning needs. Using our VLE, learning materials will be presented electronically in formats that allow flexible access and manipulation of content (part-time and distant learning students should check with their programme leader for any queries). The module complies with University regulations and guidance on inclusive learning and teaching practice. Specialist assistive equipment, support provision and adjustments to assessment practice will be made in accordance with UWS policy and regulations.
(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)

Supplemental Information

Divisional Programme Board	**Computing**
Overall Assessment Results	☐ **Pass / Fail** ☒ **Graded**
Module Eligible for Compensation	☐ **Yes** ☒ **No** **If this module is eligible for compensation, there may be cases where compensation is not permitted due to programme accreditation requirements. Please check the associated programme specification for details.**
School Assessment Board	Business & Applied Computing
Moderator	
External Examiner	A Jindal
Accreditation Details	This module is accredited by BCS and Skillset as part of a number of specified programmes
Module Appears in CPD catalogue	☐ **Yes** ☐ **No**
Changes / Version Number	1.0

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
A Report of identifying the AI projects that shows the student's approach to undertake the challenges including justifications and ethical considerations taken. (50%)
Assessment 2
Individual class test consists of funmental concept of AI, and it's tools and technique (50%)
Assessment 3
(N.B. (i) Assessment Outcomes Grids for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed. (ii) An indicative schedule listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Module Handbook.)

Component 1							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Report of practical/ field/ clinical work	☐	☐	☒	☒	☒	50	0

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Class test	☒	☒	☒	☒	☐	50	2

Component 3							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
	☐	☐	☐	☐	☐		
Combined total for all components						100%	2 hours

Change Control

What	**When**	**Who**
Further guidance on aggregate regulation and application when completing template	16/01/2020	H McLean
Updated contact hours	14/09/21	H McLean
Updated Student Attendance and Engagement Procedure	19/10/2023	C Winter
Updated UWS Equality, Diversity and Human Rights Code Guidance Note 23-24 provided General housekeeping to text across sections	19/10/2023 12/12/23 12/12/23	C Winter D Taylor D Taylor