Programme Specification

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Please check the Programme Directory for the most up to date version:
UG Programme Directory
PG Programme Directory

Section 1 – regulatory details		
1.1	Awarding body	Wrexham University
1.2	Teaching institution	Wrexham University
1.3	Final award and programme title (Welsh and English)	MSc Deallusrwydd Artiffisial MSc Artificial Intelligence
1.4	Exit awards and titles	PG Dip Artificial Intelligence PG Cert Artificial Intelligence
1.5	Credit requirements	MSc - 180 credits at Level 7 PGDip - 120 credits at Level 7 PGCert - 60 credits at Level 7
1.6	Intake points	Full time - September and February Part time - September only
1.7	Mode of study	Full & part time
1.8	Length of delivery	Full-time: 1 year Part-time: 2 years
1.9	Location of delivery	Wrexham, Plas Coch campus
1.10	Language of delivery	English
1.11	Faculty	Faculty of Arts, Computing and Engineering (FACE)
1.12	Subject area	Computing and Cyber
1.13	HECoS Code	100359
1.14	Suitable for applicants requiring a student visa?	Yes
1.15	Is DBS check required on entry?	No
1.16	Professional, Statutory or Regulatory Body (PSRB) accreditation	Not accredited yet. All programmes have been designed to align with the requirements of the British Computer Society (BCS) and accreditation will be sought.
1.17	Welsh Medium Provision	The programmes will be delivered through the medium of English. Students are entitled to submit assessments in the medium of Welsh. The department encourages students to develop bilingual digital skills by incorporating Welsh-language datasets, tools, and resources where appropriate, offering an inclusive learning environment. We also support the development of bilingual

Section 1 – regulatory details		
		visualisation techniques, enabling students to create digital outputs that reflect the Welsh language, should they wish to do so.
1.18	External reference points	Guidance – please list the relevant: QAA Subject Benchmark Statements (Computing (including Masters')) QAA Characteristics Statements Higher Education Credit Framework CQFW PSRB accreditation guidelines (BCS Academic Accreditation Guidelines)
1.19	Derogation to Academic Regulations	None
1.20	Foundation Year route	N/A
1.21	Placement / Work based learning	N/A – no placement
1.22	Length and level of the placement	N/A
1.23	Collaborative arrangement	N/A

Section 2 – programme details

2.1 Aims of the programme

The MSc Artificial Intelligence programme is designed to equip students with advanced knowledge and specialist skills in artificial intelligence, preparing them to address complex challenges across research, industry and society. The programme provides a strong foundation in AI theory and practice through modules in advanced algorithms, machine learning, computer vision and natural language processing, and intelligent agents. Alongside technical expertise, students develop critical research skills and an understanding of the ethical, social and professional issues associated with AI. The dissertation offers an opportunity to undertake an in-depth investigation or applied project, consolidating advanced learning and contributing to the field of artificial intelligence.

The MSc Artificial Intelligence programme will cover:

- **Core Knowledge**: Advanced study of artificial intelligence concepts, techniques and applications.
- **Research Methods**: Development of skills for conducting rigorous research in digital technologies and AI, including evaluation, analysis and critical review.
- **Advanced Algorithms**: Exploration of data structures, optimisation methods and algorithmic techniques that underpin AI systems.
- **Machine Learning**: In-depth knowledge of machine learning approaches including supervised, unsupervised and reinforcement learning.
- **Computer Vision and Natural Language Processing**: Specialist study of AI techniques for processing visual and textual data, with applications across industries.
- **Intelligent Agents**: Examination of autonomous and multi-agent systems, decision-making models and their applications in real-world contexts.

2.1 Aims of the programme

- **Dissertation**: A substantial independent research or applied project, allowing students to demonstrate mastery of AI knowledge and research capability.
- **Ethical and Professional Awareness**: Consideration of the societal, ethical and professional implications of artificial intelligence, including issues of fairness, accountability and transparency.
- **Adaptability and Lifelong Learning**: Preparation for the rapidly evolving AI landscape, developing critical thinking, adaptability and the ability to engage with emerging technologies and research.

2.2 Programme structure and diagram, including delivery schedule

Full-time Programme Structure – September Intake

Level	Module Code	Module Title	Credit Value	Core/ Option	Delivery (i.e. semester 1,2)
Level 7	COM754	Research Methods for Digital Technologies	20	Core	1
Level 7	COM757	Artificial Intelligence	20	Core	1
Level 7	COM713	Advanced Data Structures and Algorithms	20	Core	1
Level 7	COM763	Advanced Machine Learning	20	Core	2
Level 7	COM767	Computer Vision and NLP	20	Core	2
Level 7	COM768	Intelligent Agents	20	Core	2
Level 7	COM752	Dissertation Project	60	Core	3

Full-time Programme Structure – February Intake

Level	Module Code	Module Title	Credit Value	Core/ Option	Delivery (i.e. semester 1,2)
Level 7	COM763	Advanced Machine Learning	20	Core	Sem2, Y1
Level 7	COM767	Computer Vision and NLP	20	Core	Sem2, Y1
Level 7	COM768	Intelligent Agents	20	Core	Sem2, Y1
Level 7	COM754	Research Methods for Digital Technologies	20	Core	Sem1, Y2
Level 7	COM757	Artificial Intelligence	20	Core	Sem1, Y2
Level 7	COM713	Advanced Data Structures and Algorithms	20	Core	Sem1, Y2
Level 7	COM752	Dissertation Project	60	Core	Sem2, Y2

Part-time Programme Structure – September Intake

Level	Module Code	Module Title	Credit Value	Core/ Option	Delivery (i.e. semester 1,2)	Year of Study
Level 7	COM757	Artificial Intelligence	20	Core	1	Y1
Level 7	COM713	Advanced Data Structures and Algorithms	20	Core	1	Y1
Level 7	COM763	Advanced Machine Learning	20	Core	2	Y1
Level 7	COM767	Computer Vision and NLP	20	Core	2	Y1

Part-time Programme Structure – September Intake						
Level	**Module Code**	**Module Title**	**Credit Value**	**Core/ Option**	**Delivery (i.e. semester 1,2)**	**Year of Study**
Level 7	COM754	Research Methods for Digital Technologies	20	Core	1	Y2
Level 7	COM768	Intelligent Agents	20	Core	2	Y2
Level 7	COM752	Dissertation Project	60	Core	1&2	Y2

No.	Learning Outcome	K	I	S	P	PG Cert (L7)	PG Dip (L7)	Masters (L7)	Optional Ref (PSRB standards)
1	Demonstrate advanced knowledge of Artificial Intelligence concepts, principles, and architectures, including symbolic AI, search, and knowledge representation.	☒	☐	☐	☐	☒	☒	☒	QAA Comp 3.5; BCS PG1
2	Critically evaluate machine learning algorithms, including supervised, unsupervised, and reinforcement learning, and apply them to complex problem domains.	☒	☒	☐	☐	☐	☒	☒	QAA Comp 4.3; BCS PG3
3	Apply advanced data structures, algorithms, and optimisation techniques to develop scalable AI solutions.	☒	☒	☒	☐	☐	☒	☒	QAA Comp 3.10; BCS PG5
4	Design and implement Natural Language Processing and Computer Vision applications using state-of-the-art frameworks.	☐	☐	☒	☒	☐	☒	☒	QAA Comp 4.1; BCS PG2
5	Critically analyse the limitations, challenges, and ethical considerations of AI applications, including bias, transparency, and societal impact.	☒	☒	☐	☒	☒	☒	☒	QAA Comp 4.5; BCS PG4
6	Conduct empirical evaluation of AI models using appropriate experimental methods and performance metrics.	☒	☒	☒	☐	☐	☒	☒	QAA Comp 3.7; BCS PG7
7	Develop intelligent agent systems capable of autonomous reasoning, planning, and decision-making.	☐	☒	☒	☒	☐	☒	☒	QAA Comp 3.9; BCS PG6
8	Undertake independent research into contemporary and emerging AI techniques, critically appraising academic and industry sources.	☒	☒	☐	☒	☐	☒	☒	QAA Comp 3.14; BCS PG9
9	Plan and execute a substantial research-led dissertation in Artificial Intelligence, integrating advanced theory, experimentation, and critical reflection.	☐	☒	☒	☒	☐	☐	☒	QAA Comp 3.12; BCS PG8

No.	Learning Outcome	K	I	S	P	PG Cert (L7)	PG Dip (L7)	Masters (L7)	Optional Ref (PSRB standards)
10	Communicate complex AI concepts, results, and solutions clearly to both technical and non-technical audiences, demonstrating professionalism.	☐	☐	☐	☒	☒	☒	☒	QAA Comp 3.10; BCS PG5

2.4 Learning and teaching strategy

The Computing programme suite adopts the Computing subject area model for Learning, Teaching, and Assessment, underpinned by key university frameworks such as the Active Learning Framework (ALF) and the Strategy for Supporting Student Learning and Achievement (SSSLA). The programme suite is designed to develop employability skills, using contemporary industry methods and tools to support students' transition into the workforce or postgraduate education, while fostering independent learning. Practical experience is a priority, enabling students to gain hands-on skills that are highly valued by employers.

The curriculum encourages an appreciation for learning, while focusing on the development of a professional work ethic. Students will be enriched by exposure to current research, industry engagement, and the development of transferable skills. A key element of the programme is the core project modules, which simulate the realities of industry practices, alongside subject-specific modules that combine theoretical knowledge with practical application, using industry-standard tools and software.

Scheduled learning activities will include active learning sessions, industry-focused guest talks, practical workshops, and hands-on exercises. These activities are designed to provide an enriched learning experience, particularly through the application of real-world knowledge and the opportunity for students to engage directly with industry professionals.
The programme suite integrates multidisciplinary learning and research-driven methodologies to equip students with the skills and expertise required to meet the challenges of emerging technologies. The emphasis on practical experience ensures that students develop a robust understanding of both the theory and the application of their studies in real-world business and computing contexts.

The course provision is located on the Wrexham campus, which includes state-of-the-art facilities such as specialist computer labs and the Cyber Innovation Academy. These facilities offer both industry engagement and internationally recognised certifications, providing students with industry-leading expertise. General-purpose computing labs will also support teaching activities, offering access to a range of software used in the modules.
Additionally, the Computing Department operates an Open-Door policy, providing students with flexible access to staff for guidance and support outside of scheduled teaching hours

2.5 Assessment strategy

The Computing suite of programmes is designed with an assessment strategy that aligns with the QAA Benchmark Statements, Professional Body Requirements, and the Active Learning Framework (ALF), ensuring that students achieve the intended learning outcomes while developing the skills necessary for success in the computing industry. The assessment methods integrate real-world applications, emphasising authentic assessment approaches that mirror professional practices and industry standards.

Our approach focuses on developing a range of skills that are crucial to employability, such as problem-solving, collaboration, critical thinking, and the ability to apply knowledge to practical situations. The strategy incorporates formative assessments throughout the learning process, providing students with opportunities for continuous feedback and reflection. This iterative approach supports self-regulated learning and encourages independent thinking, which are key to fostering lifelong learning.

2.5 Assessment strategy

Formative assessment is embedded throughout all practical and classroom-based activities. During lab sessions, workshops, and technical exercises, students receive ongoing, real-time verbal feedback from academic staff as they work through tasks and develop solutions. This immediate, in-person guidance allows students to identify errors, refine their approach, and improve their technical skills while the learning is taking place. Practical sessions often include short review points where common issues are discussed with the whole class or small groups, helping students understand how to enhance their work. This continuous formative feedback supports iterative improvement and prepares students effectively for subsequent summative assessments.

Summative assessments will test students' understanding, mastery of technical concepts, and ability to apply knowledge in real-world contexts. These assessments will be carefully designed to align with industry practices, ensuring that students are well-prepared for the challenges of the modern computing landscape.

As part of our focus on Authentic Assessment, students will engage in tasks that closely simulate industry projects, incorporating elements such as team collaboration, complex problem-solving, and the use of industry-standard tools. Cloud-based systems and digital platforms will be used to manage group work and facilitate peer-to-peer learning, providing a collaborative and transparent environment that reflects the modern working world.

The strategy also includes industry-aligned assessments that involve students working with real-world scenarios, allowing them to integrate their learning into practice. These assessments enable students to demonstrate their ability to apply knowledge in realistic settings, preparing them for professional roles and ensuring that the learning experience is directly linked to employability.

Feedback provision is an integral part of our assessment strategy, and both formative and summative assessments will be followed by timely and constructive feedback. This feedback will encourage students to reflect on their performance, identify areas for improvement, and enhance their future work. The feedback loop will involve peer and self-assessment opportunities, promoting critical reflection and further supporting the development of independent learning skills.

In line with HEA's Transforming Assessment guidelines, our assessment practices ensure that students not only gain technical knowledge but also develop the professional skills required for the computing industry. The use of Generative AI in assessment will be explored in relevant contexts, allowing students to interact with emerging technologies and understand their impact on the computing and business sectors.

Overall, the assessment strategy across the Computing suite of programmes ensures that students are engaged in authentic, real-world learning experiences. By combining practical application with continuous feedback and reflection, the strategy supports students in meeting the learning outcomes and developing the skills required to succeed in the ever-evolving field of computing.

2.6 Disclaimer
Throughout quality assurance processes we have ensured that this programme engages with and is aligned to: • Academic Regulations • The University Skills Framework • Welsh Language Policy • Equality and Diversity Policy • The Student Union offers support for students

Section 3 – Programme set up (office use only)		
3.1	Framework	FRAME046_SEP FRAME046_FEB FRAME073_SEP
3.2	Board dates (progression)	Determined by framework
3.3	Cost centre	GACP
3.4	Course type (HESA)	N/A
3.5	Fee model	Standard full time PGT
3.6	In-year resits	Yes
3.7	Are any modules taught over either multiple periods or across the HESA year (defined as running 1st August - 31st July)	No
3.8	Progression points	Determined by framework
3.9	Semesters per intake	3 – full time 4 – part time
3.10	Semesters per progression point	3 – full time 4 – part time
3.11	Start and end dates	Determined by framework
3.12	Student funding model	Self-funding or SLC
3.13	Does the Suitability for Practice Procedure apply to the programme?	No
3.14	Programme Leader	Sahan Parera
3.15	Date of Approval	29/01/2026
3.16	Date and type of Revision	