

Programme Specification

Award and title: MSc Computer Science

MSc Computer Science with Professional Experience

<i>School:</i>	London
<i>Subject area:</i>	Computer Science
<i>Entry from academic year:</i>	2027-28
<i>in the month(s) of</i>	September and February
<i>Awarding institution:</i>	York St John University
<i>Teaching institution:</i>	York St John University
<i>Delivery location:</i>	YSJU London
<i>Programme/s accredited by:</i>	Not applicable
<i>Exit awards:</i>	Postgraduate Certificate in Computer Science Postgraduate Diploma in Computer Science
<i>UCAS code / GTTR / other:</i>	Not applicable
<i>Joint Honours combinations:</i>	Not applicable
<i>QAA subject benchmark statement(s):</i>	Subject Benchmark Statement for Computing (March 2022) Master's Degree Characteristics (February 2020)
<i>Mode/s of study:</i>	Full time (12 months) Full time with professional experience* (24 months) Part time (24 months) Part time with professional experience* (36 months)
*NB. The Professional Experience element provides a 12-month window of opportunity for completion for full time, and 24 months for the part time programme. A minimum of 9 months professional experience activity is required.	
<i>Language of study:</i>	English
<i>Paired with Foundation Year</i>	No
<i>Study abroad opportunities:</i>	No
<i>Opt-in YSJU Placement Year opportunity:</i>	No
<i>Excluding a year-long placement/professional experience, are there placement/field trip/work experience(s) totalling 20 days or more?</i>	No

Introduction and special features

This MSc Computer Science programme builds on an established curriculum, integrating foundational knowledge with advanced principles and practices across contemporary computing domains. The programme comprises four 30-credit taught modules and a 60-credit dissertation, enabling in-depth

engagement with each subject area. The structure promotes coherence, supports specialisation, and enhances practical application in line with current industry and research expectations.

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As a student on the MSc Computer Science programme, you will develop in-depth expertise in areas such as Cloud Computing and Cyber Security, enabling you to design robust and scalable solutions to complex computational problems. Through integrated modules covering the Internet of Things (IoT), Smart Systems, and Embedded Artificial Intelligence, you will build the knowledge and practical skills required to innovate and contribute to emerging smart technologies and intelligent device ecosystems.

The User-Centred Agile Development module ensures you cultivate essential skills in agile methodologies, focusing on user experience (UX), iterative design, and responsive software development practices. Additionally, the Deep Learning and Neural Architectures module provides rigorous training in advanced machine learning techniques, neural network models, and their application across various domains.

Designed for students from computing or numerate backgrounds seeking career advancement in software development, artificial intelligence, cloud infrastructure, and related technology sectors, this programme offers practical, hands-on experience using industry-standard tools and methodologies. Engagement with contemporary research and IT industry trends is central, supported by regular seminars and workshops conducted by leading industry professionals.

Teaching and learning are delivered primarily through face-to-face lectures, interactive seminars, and laboratory sessions, fostering an active learning environment. Learning is supported by structured classroom activities, project-based work, and real-world scenarios that strengthen the integration of theory and practice.

Students on the Professional Experience route will undertake either an industry placement, which must be sourced and secured by the student, or participate in York St John University London's Enterprise Academy. The Enterprise Academy supports students to develop professional, entrepreneurial, leadership, and technical skills through applied projects addressing real-world challenges.

Your experience on the MSc Computer Science programme will be shaped by current industry standards and practices through applied learning, contemporary case studies, and engagement with real-world computing challenges. Upon completion of the programme, graduates will be well prepared to pursue careers in computer science, with the ability to design, deploy, and manage advanced computing solutions, communicate complex technical concepts effectively, and contribute to innovative projects within a rapidly evolving technological landscape.

Admissions criteria

You must meet the University's general entry criteria for postgraduate study. In addition, you must have:

1. A bachelor's degree or equivalent, achieved at Class 2:2 or above, from an approved university or institution

or:

2. Current or recent work experience (within the last two years) appropriate to enable contribution to the programme.

Whilst we look to maintain the London ethos of inclusion and equity, MSc Computer Science requires applicants from (national or international) numerate science, computer science, data science or engineering backgrounds. Either traditionally via the undergraduate route, or via substantial industrial/practical experience.

If your first language is not English, you will need to take an IELTS test, or an equivalent qualification accepted by the University (<https://www.yorks.ac.uk/international/how-to-apply/english-language-requirements/>).

If you do not have traditional qualifications, you may be eligible for entry on the basis of [Recognition of prior learning](#) (RPL). York St John University also considers applications for entry with advanced standing.

Programme aim(s)

As technological innovations accelerate and the complexity of computing solutions expands, there is a substantial demand for advanced computer science expertise across various sectors, including IT, healthcare, finance, government, business, and emerging smart industries. The primary aim of this programme is to cultivate a deep, critical understanding and reflective self-awareness, equipping graduates with leading-edge skills and knowledge in cloud computing, artificial intelligence, agile development, and neural architectures. These capabilities will significantly enhance individual career trajectories and organizational innovation potential.

Programme learning outcomes

Upon successful completion of the programme students will be able to:

- 7.1 Critically apply advanced principles and techniques of Secure cloud computing and scalable architectures to design efficient and robust solutions.
- 7.2 Analyse complex problems and apply appropriate computational, analytical and problem-solving approaches.
- 7.3 Design, implement and evaluate innovative computing systems using appropriate tools, technologies and methodologies.
- 7.4 Critically assess and apply user-centred agile methodologies to effectively manage software development projects.
- 7.5 Select and apply appropriate data-driven and machine learning techniques to solve real-world problems.
- 7.6 Critically evaluate emerging trends and advanced technologies in cloud computing and their security implications and assess their applicability to diverse industry sectors.
- 7.7 Integrate and evaluate system components within complex and distributed computing environments.
- 7.8 Apply analytical and modelling techniques to interpret data and support decision-making.
- 7.9 Critically evaluate and apply ethical, legal, social and professional principles in computing practice.
- 7.10 Design, conduct, analyse, and disseminate findings from an extended independent research or development project in computer science from inception to completion.

Programme structure Full Time Programme Structure (12 months)

Code	Level	Semester	Title	Credits	Module status	
					Compulsory (C) or optional (O)	Noncompensable (NC) or compensable (X)
COM7048M	7	1	Cloud Computing and Cyber Security.	30	C	X
COM7049M	7	1	Internet of Things, Smart Systems, and Embedded AI	30	C	X
COM7050M	7	2	User-Centred Agile Development	30	C	X
COM7051M	7	2	Deep Learning and Neural Architectures	30	C	X
COM7052M	7	All	Dissertation	60	C	NC

September students commence with COM7048-9M. February students commence with COM7050-51M

Full Time Programme Structure with Professional Experience (24 months)

Code	Level	Semester	Title	Credits	Module status	
					Compulsory (C) or optional (O)	Noncompensable (NC) or compensable (X)
COM7048M	7	1	Cloud Computing and Cyber Security.	30	C	X
COM7049M	7	1	Internet of Things, Smart Systems, and Embedded AI	30	C	X
COM7050M	7	2	User- Centred Agile Development	30	C	X
COM7051M	7	2	Deep Learning and Neural Architectures	30	C	X
COM7053M	7	All	Dissertation (Professional Experience)	60	C	NC

September students commence with COM7048-9M. February students commence with COM7050-51M. Professional experience will take place during the second year of the programme, with the option of a professional placement, or YSJU London's Enterprise Academy. Skills acquired will be assessed via the Capstone project (Professional Experience). Please see the 'Professional Experience (Option)' section below.

Part Time Programme Structure (24 months)

Code	Level	Semester	Title	Credits	Module status	
					Compulsory (C) or optional (O)	Noncompensable (NC) or compensable (X)
COM7048M	7	Year 1 Sem 1	Cloud Computing and Cyber Security.	30	C	X
COM7049M	7	Year 2, Sem 1	Internet of Things, Smart Systems, and Embedded AI	30	C	X

COM7050M	7	Year 1, Sem 2	User- Centred Agile Development	30	C	X
COM7051M	7	Year 2, Sem 2	Deep Learning and Neural Architectures	30	C	X
COM7052M	7	All	Dissertation	60	C	NC

September students commence with COM7048-9M. February students commence with COM7050-51M.

Part-time students join the same teaching sessions as full-time students within the carousel enrolment model. The part-time route reflects a reduced study load and extended duration, rather than separate teaching occurrences.

Part Time Programme Structure with Professional Experience (36 months)

Code	Level	Semester	Title	Credits	Module status	
					Compulsory (C) or optional (O)	Noncompensable (NC) or compensable (X)
COM7048M	7	Year 1 Sem 1	Cloud Computing and Cyber Security.	30	C	X
COM7049M	7	Year 2, Sem 1	Internet of Things, Smart Systems, and Embedded AI	30	C	X
COM7050M	7	Year 1, Sem 2	User- Centred Agile Development	30	C	X
COM7051M	7	Year 2, Sem 2	Deep Learning and Neural Architectures	30	C	X
COM7053M	7	Year 2 and Year 3 (All Sem)	Dissertation (Professional Experience)	60	C	NC

September students commence with COM7048-9M. February students commence with COM7050-51M.

Part-time students join the same teaching sessions as full-time students within the carousel enrolment model. The part-time route reflects a reduced study load and extended duration, rather than separate teaching occurrences.

Professional experience will take place during the latter half of the programme, with the option of a professional placement, or YSJU London's Enterprise Academy. Skills acquired will be assessed via the Dissertation Research Project (Professional Experience). Please see the 'Professional Experience (Option)' section below.

Professional Experience (Option)

Professional experience is the perfect opportunity to enhance your career prospects and deepen your understanding of your chosen area of expertise. The MSc Computer Science programme is available with a 12month/24-month option for professional experience (depending on mode of study selected – full or part time), allowing you to gain knowledge and skills in the UK to evidence your capabilities (minimum of 9 months professional experience activity required).

York St John University London offers tailored support to students seeking professional experience through its Employability and Enterprise Team, including careers appointments, employer engagement activities, careers fairs in London and York, and access to vacancy platforms. Students on the Professional Experience route are responsible for sourcing and securing their own industry placements, with guidance available

throughout; however, placement offers depend entirely on employer selection and therefore cannot be guaranteed. As an alternative pathway, students on this route are guaranteed access to the Enterprise Academy (EA), where they develop professional, entrepreneurial, leadership, and technical skills through applied projects and enterprise-focused activities. The Professional Experience route is available as a two-year full-time option or a 36-month part-time option. For full-time students, professional experience normally takes place during the second year of the programme. For part-time students, professional experience is undertaken during the latter stages of the programme following completion of the taught modules.

Learning, Teaching and Assessment

The learning, teaching, and assessment approach underpinning this MSc Computer Science programme is built around learner-driven pedagogy, integrative curriculum design, and sustainable assessment methods, aimed at nurturing innovative, professional, and reflective computing practitioners. The programme emphasizes developing a robust set of graduate attributes through inclusive, equitable teaching practices and assessment methods that centre your learning experience and professional growth. Core tenets guiding the programme's design include:

- Active learning methods that are practical, authentic, and experiential in nature.
- Progressive development of responsibility, accountability, and autonomy throughout the programme.
- Holistic competence development in addition to subject-specific content.
- Reflective practices embedded throughout the programme to deepen learning.

The programme acknowledges and values the diverse backgrounds, experiences, and prior knowledge students bring, enabling you to actively shape the learning environment. Thus, the pedagogy employed is dynamic, integrating project-based and inquiry-led methodologies. Recognizing that you may have varied prior educational experiences, the programme provides comprehensive support in study skills, academic conventions, analytical methods, and scholarly writing.

Modules are delivered primarily through face-to-face teaching on campus, including interactive workshops, seminars, debates, discussion forums, and tutorials. Teaching is supported by the use of digital resources, such as recorded materials and online learning resources, where appropriate to enhance student learning.

The assessment framework supports inclusivity and individualised learning through a range of methods, including portfolios, presentations, vivas, practical demonstrations, and project-based research. Module tutors provide ongoing formative assessment and constructive feedback to support student development prior to final submission. Feedback is provided through a variety of methods, including written guidance, verbal or audio commentary, and face-to-face sessions, clearly identifying pathways to enhance research capability, deepen subject knowledge, and develop professional skills.

Ethical, legal and professional considerations are embedded across all modules and assessments. Students are required, where appropriate, to demonstrate awareness of issues such as data privacy, security, bias in artificial intelligence systems, sustainability, and responsible innovation. Ethical reflection forms an integral part of assessment design, particularly within project-based and research-led work, ensuring alignment with professional computing standards and regulatory expectations.

Student Experience

Students on the MSc Computer Science programme benefit from a supportive learning environment, including access to academic tutors, specialist computing facilities, digital learning resources, and academic skills support. Regular formative feedback is provided across modules to support academic development.

Careers and employability guidance is embedded throughout the programme, with additional support for students on the Professional Experience route through the London Placement Team and Enterprise Academy. Students also have access to wellbeing services, library resources, and study skills workshops to support progression and success.

Progression and graduation requirements

The University's [regulations](#) for taught postgraduate awards apply to this programme.

Any modules that must be passed for progression or award are indicated in the Programme Structure section as non-compensable.

Internal and external reference points

This programme specification was formulated with reference to:

- [University Mission, Culture and Values](#)
- [University 2026 Strategy](#)
- [QAA subject benchmark statements](#)
- [Frameworks for Higher Education Qualifications](#)
- [Freedom of Speech Code of Practice](#)
- [The University's Approach to Dignity and Respect](#)

Date written / revised: 10/3/2026

Programme originally approved: 24/4/2026