Programme Specification (PG)

Awarding body / institution:	Queen Mary University of London
Teaching institution:	Queen Mary University of London
Name of final award and title:	MSc Linguistics and AI
Name of interim award(s):	
Duration of study / period of registration:	1 year
Queen Mary programme code(s):	PMSF-QMARTS1, PSLAI
QAA Benchmark Group:	Linguistics
FHEQ Level of Award:	Level 7
Programme accredited by:	N/A
Date Programme Specification approved:	16 Dec 2024
Responsible School / Institute:	Other (please specify by typing in box) School of the Arts

Schools / Institutes which will also be involved in teaching part of the programme:

Collaborative institution(s) / organisation(s) involved in delivering the programme:

N/A

Programme outline

Artificial intelligence and computational linguistics — the use of computational techniques to process language data — has rapidly become a central technology in the contemporary world. It underpins the social networking revolution, the rapid development of Google and other search engines, a great deal of modern marketing, and our day-to-day use of technology. Computational linguistics uses methods from Artificial Intelligence and applies them to language. New applications are developed every year (e.g. marketing and user data, social and news media, use of AI in the workplace, product reviews, speech recognition, various natural language processing) and it is now central to the expanding technology sector. This programme will provide you with a solid foundation in AI methods for language data. Even if you don't have a computational background, but wish to learn or improve your technical skills in this area, with a view to working in careers that use AI, this is the programme for you. It is run by a world-leading Linguistics team, with strengths in statistical data processing of language, in computational and experimental techniques relevant to language analysis, in ethical, philosophical and computational theories, and in core areas of linguistics (phonology, syntax, sociolinguistics, semantics, discourse).

Aims of the programme

This programme aims to:

- Meet the needs of the rapidly growing body of Humanities and Social Sciences graduates who do not have a STEM background but wish to improve their computational skills in relation to the use and analysis of language, one of the major strands of contemporary AI
- Deliver teaching that includes technical skills and knowledge with workplace application, underpinned by cutting-edge scientific research
- Provide H&SS graduates with AI and data-sciences skills for jobs in areas of the economy including marketing, speech and language therapy, forensics, banking, user research, social research
- Build on the strength of QMUL's international reputation for excellence in Linguistics research and teaching, particularly in respect of computationally linked research and analysis of large datasets in all areas of Linguistics (Formal Linguistics, Experimental Linguistics, Sociolinguistics)

What will you be expected to achieve?

Students who successfully complete the programme will be able to:

- Demonstrate a high level of data literacy and big data management, with familiarity with a range of data types
- Use a statistical computing language to organise datasets and extract data from large datasets, in order to arrive at descriptive, diagnostic, and predictive analytics
- Evaluate the effectiveness of different data analysis approaches for processing of different properties of language data.
- Know how to design a dataset for different purposes and how to share analytic insights in a clear way
- Understand standard formal models of lexical, morphological and syntactic structure, and how semantic and discourse coherence works in human language
- Understand the concepts underpinning computational models of text processing both symbolic and statistical
- Evaluate the utility of language models as theories and as tools.
- Understand the core computational algorithms used in current practice to analyse the aspects of linguistic text
- Evaluate the effectiveness of particular programmes for computational goals, such as processing of different properties of text.
- Use a programming language, such as Python, and understand its syntax and semantics.
- Apply programming concepts to solve problems and design programs
- Apply AI and data science skills to data in a range of potential professional contexts, including user research, the tech industry, marketing, teaching, commercial enterprise and archival and data management work.

Academic Content:	
A1	Communicate a high level of data literacy and big data management, with familiarity with a range of data types
A2	Demonstrate an understanding of basic principles of sound software design, including procedural programming, functions, recursion, and modular programming
A3	Communicate clear knowledge of the core computational algorithms used in current practice to analyse the aspects of linguistic text identified in AI
A4	Demonstrate knowledge of how to use a statistic computing language, R to organise datasets and extract data from large datasets, in order to arrive at descriptive, diagnostic, and predictive analytics

Disciplinary Skills - able to:	
B1	Evaluate the effectiveness of different data analysis approaches for processing of different properties of language data
B2	Apply programming concepts to solve problems in real world scenarios

B 3	Describe and appraise the advantages and limitations of different computational models of text properties

Attributes:	
C 1	Able to engage critically with cutting edge concepts crucial to the modern workplace
C 2	Able to learn novel concepts and skills and deploy them in new situations
C 3	Expertise with handling large amounts of information and computational tools for the management of such data

How will you learn?

A range of teaching and learning techniques will be used, tailored to the learning outcomes of the different modules. These will include: lectures; seminars; seminar discussions; workshops; programming and coding training, directed readings; practical tasks; material development; library-based research; presentations; group work; reflection through reflective learning logs, and knowledge transfer activities.

Individual module outlines will be available via QMUL's virtual learning environment QMPlus and will provide further in-depth details of teaching and learning procedures.

How will you be assessed?

Depending on the modules you select (including electives), your work will be assessed through:
- projects
- exercises and problem sets
- presentations
- essays
- in-class tests
- project plans
- reflective learning logs
- knowledge transfer activities
- dissertation

How is the programme structured?

Please specify the structure of the programme diets for all variants of the programme (e.g. full-time, part-time - if applicable). The description should be sufficiently detailed to fully define the structure of the diet.

CURRICULUM:

Semester A – Compulsory Modules (all 15 credits):

STA7XXX Programming for the Humanities (new module)
STA7XXX Analysing language datasets (new module)
STA7XXX Foundations of Computational Linguistics (new module)

Semester B – Compulsory Modules (all 15 credits)

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STA7XXX Language and Artificial Intelligence: Advanced programming (new module)
LIN7005 Dissertation Proseminar (existing module)

Semester C
LIN7006 Dissertation Module (existing module) 60 credits

Elective Modules from existing Level 7 modules:
One in semester 1, two in semester 2. Students choose from a guided elective suite of existing Level 7 modules.

Academic Year of Study FT - Year 1

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Foundations of Computational Linguistics	LINXXX	15	7	Compulsory	1	Semester 1
Analysing language datasets	LINXXX	15	7	Compulsory	1	Semester 1
Programming for the Humanities	LINXXX	15	7	Compulsory	1	Semester 1
Language and Artificial Intelligence: Advanced programming	LINXXX	15	7	Compulsory	1	Semester 2
Dissertation Proseminar	LIN7005	15	7	Compulsory	1	Semester 2
Dissertation Module	LIN7006	60	7	Core	1	Semester 3
Applying Linguistics in the Real World	LIN7053	15	7	Elective	1	Semester 2
Research Practicum	LIN7014	15	7	Elective	1	Semester 2
Trends in Linguistics Research	LIN7027	15	7	Elective	1	Semester 1
Syntax	LIN7209	15	7	Elective	1	Semester 1
Morpheme to Meaning	LIN7007	15	7	Elective	1	Semester 2

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Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Formal Semantics	LIN7210	15	7	Elective	1	Semester 2
Experimental Linguistics	LIN7039	15	7	Elective	1	Semester 1
Digital Methods and Ethics in Digital Media and Cultures	STA7XXX	15	7	Elective	1	Semester 2

What are the entry requirements?

A 2:1 or above at undergraduate level in any subject. Promising applicants who do not meet the formal academic criteria but who possess relevant credentials and who can demonstrate their potential to produce written work at Masters level will also be considered. As part of the admissions process, we may call for examples of written work and/or interview candidates.

IELTS requirement: minimum 7.0 overall, with minimum 6.0 in reading, writing, listening, reading.

How will the quality of the programme be managed and enhanced? How do we listen to and act on your feedback?

The Student Voice Committee provides a formal means of communication and discussion between the School of the Arts and its students. The committee consists of student representatives from each year in the School together with appropriate representation from staff. It is designed to respond to the needs of students, as well as act as a forum for discussing programme and module developments, and meets regularly throughout the year.

It reports in turn to the School of the Arts' Education Committee (including the Director of Education),which advises the School Board on all matters relating to the delivery of taught programmes at School level including monitoring the application of relevant QM policies and reviewing all proposals for module and programme approval and amendment before submission to the university's Taught Programmes Board. Student views are incorporated in this Committee's work in a number of ways, such as through student membership, or consideration of student surveys.

As with all QMUL school's STA operates a regular programme review of taught undergraduate and postgraduate provision. The process is normally organised at a School-level basis with the Director of Education, or equivalent, responsible for the completion of the School's Programme Review process. Students' views are considered in this process through analysis of the Postgraduate Taught Experience Survey and module evaluations.

What academic support is available?

All students beginning study on the programme will participate in a series of Welcome Week activities, including introductions to the programme, inductions in the use of the online learning environment and the use of STA's practical spaces and technical facilities. These events also include opportunities for social interaction and scheduled small group and individual meetings with personal advisers.

Each student's academic progress and personal welfare is monitored by an advisor, with whom regular meetings are scheduled. All teaching staff will hold regular drop-in hours in which students are actively encouraged to discuss their work and their progress.

The School's Director of Student Support is a designated member of staff with whom students can also raise issues and problems, and from whom they can seek advice and guidance.

Both the Director of Student Support and all advisors are able to refer students, where appropriate, to relevant professional service departments in the College, including Disability and Dyslexia, Welfare, and Counselling.

Programme-specific rules and facts

n/a

How inclusive is the programme for all students, including those with disabilities?

The programme aims to place accessibility and inclusion at the forefront of its approach to teaching and learning. Following the development of BLOC, the School has led the way in the ongoing remodelling of ArtsOne to offer fully accessible spaces.

Queen Mary has a central Disability and Dyslexia Service (DDS) that offers support for all students with disabilities, specific learning difficulties, and mental health issues. The DDS supports all Queen Mary students: full-time, part-time, undergraduate, postgraduate, UK, and international at all campuses and all sites. Students can access advice, guidance and support in the following areas:
- Finding out if you have a specific learning difficulty like dyslexia
- Applying for funding through the Disabled Students' Allowance (DSA)
- Arranging DSA assessments of need
- Special arrangements in examinations
- Accessing loaned equipment (e.g. digital recorders)
- Specialist one-to-one "study skills" tuition
- Ensuring access to course materials in alternative formats (e.g. Braille)
- Providing educational support workers (e.g. note-takers, readers, library assistants)
- Mentoring support for students with mental health issues and conditions on the autistic spectrum.

Links with employers, placement opportunities and transferable skills

The MSc Linguistics and AI will develop employability and transferable skills, and build placement awareness, in a number of ways.

The content of the MSc is designed to equip students who don't have an extensive STEM background with programming and computational awareness, software knowledge, and strong data handling skills, the demand for which has greatly expanded across most sectors of work. The MSc convenor will work closely with Careers and Enterprise to build in professional guidance through the Dissertation Proseminar. The department also runs PGT/PGR workshops in professional skills (and technical skills) such as applying for jobs, interviewing, applying to conferences, and publishing. The department offers hands-on career guidance in both further postgraduate study at top competitive programmes, and careers in industry.

Modules also build in direct exposure to placements and employability criteria. The module Applying Linguistics in the Real World brings professionals to the classroom to discuss the application of both Linguistics and AI in a range of careers, such as the tech industry, marketing and branding, speech and language therapy, forensic science, and consulting. The module Research Practicum offer students the opportunity to work directly on real-world projects, either funded grants in the department or with external partners. Graduate attributes are embedded in curriculum through teaching and learning, authentic assessment, academic advising, and other activities.

Programme Specification Approval

Person completing Programme Specification:	Devyani Sharma

Person responsible for management of programme:	Devyani Sharma / David Adger
Date Programme Specification produced / amended by School / Institute Education Committee:	23 October 2024
Date Programme Specification approved by Taught Programmes Board:	16 Dec 2024