Programme Title: MSc in Media and Arts Technology by Research (with Ateneo de Manila University)

Programme Specification

Awarding Body/Institution	Queen Mary University of London
Teaching Institution	Queen Mary University of London
Name of Final Award and Programme Title	Master of Science in Media and Arts Technology
Name of Interim Award(s)	PGdip, PGCert
Duration of Study / Period of Registration	24 months
QM Programme Code / UCAS Code(s)	G4X0
QAA Benchmark Group	
FHEQ Level of Award	Level 7
Programme Accredited by	
Date Programme Specification Approved	
Responsible School / Institute	School of Electronic Engineering & Computer Science

Schools which will also be involved in teaching part of the programme
School of Electronic Engineering & Computer Science

Institution(s) other than Queen Mary that will provide some teaching for the programme
Ateneo de Manila University, the Philippines

Programme Outline

This double degree Master's programme in 'Digital Innovation' (Master of Science in Media and Arts Technology) (IMAT) aims to produce post-graduates who combine world-class technical and creative skills with a unique vision of the world, making plausible what today seems improbable. The course of study combines theory and practice in design, media, art, computer science and engineering, with a mix of taught modules and supervised projects from specialists at AdMU and QMUL.

Aims of the Programme

IMAT is a program that combines concepts and skills in design, media, art, and computer science to arrive at a vision of the world in the future that comprises of products, technologies, and outcomes that could make plausible what today seems improbable. The actualization (through crafting, engineering, and programming) of an imagination that engages with the constraints and possibilities of current technologies galvanizes a worldview that can find purpose in directing such innovations towards relevant

real-world contexts.

The broad goal of IMAT is to develop students capable of conceptualizing, prototyping, and testing artifacts or experiences that combine the creative arts with computer and electronics-based technologies. By the end of the degree program, students are expected to achieve the following learning outcomes:
● Describe and anticipate trends in media, art, and technology
● Describe and anticipate features of everyday living in the future
● Describe, anticipate, and analyze broad world situations and problems
● Improvise with current small-scale media and artifact production equipment
● Prototype and/or perform creative engagements between the arts, media, and technology
● Conceptualize, prototype, and devise contextualized implementation plans for solutions to current problems as well as those anticipated
● Engage with the generative tensions provided by available resources and material conditions towards proactive and imaginative responses
● Enact creativity that is unlocked by play and tinkering
● Commit to a contextualized practice of media, art, and technology that is forward-thinking

IMAT is part of a nexus of new programs and endeavors being developed at AdMU. Among them include a Minor in Design and Innovation being developed on the undergraduate level by the Department of Interdisciplinary Studies, and the Committee on Innovation convened by the Vice President of the Loyola Schools to spearhead programs for creativity and innovation.

These new related endeavors are shaping more specifically what AdMU's commitment to innovation means:
- That innovation is forward thinking and preoccupied with the future
- That solving complex problems necessitates imagination and that playfulness is vital
- That art, science, and technology could integrate with one another towards socially relevant outcomes

IMAT would enact these principles. Its curriculum's preoccupation is the unforeseen and seemingly unimaginable, a pursuit that creatively extrapolates from and plays with the constraints of the present day. The program is predicated on the belief that sustainable solutions to the most befuddling problems can only be achieved by a willingness to reimagine and hybridize, necessarily dissolving seeming contradictions as well as conveniently complementary notions between disciplines. Consequently, DIMAT in its curriculum, its approach, and its philosophy is a marriage of art, science, and technology, as well as other relevant fields.

IMAT comes at an opportune time relative to emerging practices in industry. Large companies have taken to investing in entire divisions and auxiliary departments to their main line of business in order to give attention to creativity and thinking of the future and where their relevance to consumers may lie if the services and products they currently offer do not evolve. Think tanks and innovation groups are shaping the activities of NGOs and the policies of government.

In an age of aspiring for sustainable development, the imagination and creativity to not only forecast and anticipate but also to respond are skillsets—beyond proficiency and efficiency—that will be placed at a premium professionally. IMAT would be AdMU's first creative response on the graduate school level.

What Will You Be Expected to Achieve?

IMAT provides a unique bridge between academic research and real-world applications. Our mission is to produce post-graduates who combine world-class technical and creative skills with a unique vision of the world, making plausible what today seems improbable. The course of study combines theory and practice in design, media, art, computer science and engineering, with a mix of taught modules and supervised projects from specialists at AdMU and QMUL. By the end of the 18-month programme, post-graduates will have learned how to:
- Make use of small-scale fabrication and rapid prototyping technologies alongside multimedia programming;
- Conceptualize, prototype, devise and evaluate creative and scientific solutions to current and anticipated problems;
- Engage with arts and media technologies to unlock their creativity through play and tinkering.

The career opportunities for the graduates from this programme are in the (interactive) media production, music and game industry, internet, communications and consumer industries. The blending of technical courses with business and arts courses will equip the graduates with the skills that are necessary to understand and to contribute to the modern arts and media

sectors of the digital economy.

Academic Content:	
A 1	Audio/Video data capture and processing, and an understanding of how these systems can be used creatively for audiovisual and computer-based content production
A 2	Principles of operation, limitations, potential and effective use of electronic media and their associated tools and technologies
A 3	Management principles and techniques for design, projects and people.
A 4	A clear understanding of the full research cycle from framing a question through to communication of results

Disciplinary Skills - able to:	
B 1	Analyse information and experiences, formulate independent judgements, and articulate reasoned arguments through reflection, review and evaluation
B 2	Source, navigate, select, retrieve, evaluate, manipulate and manage information from a variety of sources
B 3	Critically assess a range of research methods ranging from qualitative through experimental to practice-based research
B 4	Carry out extended critical and analytic writing through a dissertation on their research project.
B 5	Analyse complex, novel and diverse situations, and identify appropriate methods of working and communicating

Attributes:	
C 1	Work independently on a practical or research-based project under supervision
C 2	Work effectively as part of a team, identifying tasks and roles, and managing time, resources and progress appropriately
C 3	Design, plan, manage, implement, evaluate and report a significant individual project in electronic media design and technology
C 4	Make effective use of enabling computer technologies for post production and compositing
C 5	Apply technical knowledge, understanding and skills in new situations

How Will You Learn?

The taught modules are delivered through a mixture of lectures, seminars and laboratory/studio work. They will also take advantage of expertise across the college and within the partner organisations to provide guest lectures, master classes and, where appropriate, formal and informal evaluation of project work. The aim is to expose students to the state-of-the-art research work and through this encourage them to identify innovative and high impact research areas for their research projects. The course is fulltime for 18 months.

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How Will You Be Assessed?

The combination and range of teaching, learning and assessment strategies are designed to ensure that MSc students from a wide range of disciplinary backgrounds are able to take advantage of each other's experience and achieve a broadly equivalent high level of critical, theoretical and practical skills. Assessment of all learning objectives is done in each module through coursework, exams, projects, practical work, and reports. Assessment in the project is done by submitted report and viva presentation. The viva will be done via Skype with the QMUL and AdMU supervisors in attendance.

Assessment of QMUL modules will occur in December before students depart for AdMU. Students who fail the assessment at QMUL will be re-assessed by coursework. To pass a QMUL module, a student's overall score in that module must be at least 50. To be awarded the Master of Science in Media and Arts Technology from QMUL, the student's overall average must be >= 50 (considering the highest two scores of the elective AdMU modules recognised by QMUL (see How is the program structured? below)), and the student must pass all courses.

Interim awards are possible for students who do not satisfy the above. To be awarded a PG Certificate from QMUL EECS, the student must have 3 modules >= 50, 1 module >= 30, and an average over 4 modules >= 50 (of four highest scores on 4 modules from QMUL and 2 from AdMU). To be awarded a PG Diploma, a student must pass at least 120 credits, with at least 90 credits awarded greater than 50, and 30 credits over 30.

AdMU module grades are described in Loyola Schools Graduate Handbook section on marking policies as:
A : Excellent Performance
A- : Very Good Performance
B+ : Above Average Performance
B : Average Performance
C : Below Average Performance. This grade does not entitle students to any graduate credit for the course
F : Failure due to academic deficiency or withdrawal from a course without permission
INC : Incomplete grade given at the discretion of the instructor owing to failure to take the final examination or to submit reports or term papers

WP : Withdrawal from class with the permission of the Department Chair/Program Director and the Registrar
W : Number of allowable cuts for a graduate course exceeded

In discussion with AdMU Associate Dean for Graduate Programs and QMUL EECS Director of Postgraduate Programmes, the following mappings were agreed between AdMU grades and QMUL module %

AdMU grade A (AdMU GPE 4.00) = QMUL mark range 80%-100%; single mark suggested: 85%
AdMU grade A- (AdMU GPE 3.67) = QMUL mark range 70%-79%; single mark suggested: 75%
AdMU grade B+ (AdMU GPE 3.33) = QMUL mark range 60%-69%; single mark suggested: 65%
AdMU grade B (AdMU GPE 3.00) = QMUL mark range 50%-59%; single mark suggested: 55%
AdMU grade C (AdMU GPE 2.00) = QMUL mark range 40%-49%; single mark suggested: 45%
AdMU grade F (AdMU GPE 0.00) = QMUL mark range 0%-39%; single mark suggested: 20%
AdMU grade INC = QMUL mark 0%

How is the Programme Structured?

Please specify the full time and part time programme diets (if appropriate).

The structure of the full time 24-month program is as follows:
- Jan - May: AdMU Campus: 3 AdMU Modules (these are not recognised as part of the QMUL MSc, but each student must satisfactorily complete all of them to continue to QMUL -- see "Program specific rules and facts" below)
- Jun - Aug: AdMU Campus: 2 AdMU Modules (these are not recognised as part of the QMUL MSc, but each student must satisfactorily complete all of them to continue to QMUL -- see "Program specific rules and facts" below)

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- Sep - Dec: QMUL Campus: 4 QMUL Modules (3 of these are recognised as part of the AdMU MSc)
- Jan - Apr: AdMU Campus: 3 AdMU Modules (2 of these are recognised as part of the QMUL MSc)
- Jan - Sep: AdMU Campus: QMUL project is completed remotely (but project begins Dec. at QMUL with identification of supervisor and project specification)
- Sep - Dec: AdMU Campus: AdMU project is completed

During their visit to QMUL (Sep.-Dec.), students take four QMUL modules, two mandatory and two elective.
The mandatory modules are:
ECS742P Interactive Digital Multimedia Techniques (no prerequisites)
ECS749P Sound Recording and Production Techniques (no prerequisites)

For the other two modules, the student will select from all level 7 EECS courses offered in semester 1 (pending satisfaction of prerequisites and space and timetabling), e.g.,
ECS705P Software and Network Services Design
ECS709 Introduction to Computer Vision
ECS712P Design for Human Interaction
ECS741P Music Perception and Cognition
ECS762P Computer Graphics
ECS765P Big Data Processing

The optional specialist modules students chose is assessed at QMUL to ensure they are extending their training/skill set as determined, hence the large range of options offered (subject to availability).

All modules are taught through a combination of lectures, laboratories, and courseworks. Assessment is done through a combination of coursework and/or a final examination in December.

During the second Jan.-Apr. period in the Philippines, students will select three modules, at least two of which must come from among the following (with QMUL level 7 equivalent courses in parentheses):
- CS217 Human computer interaction (similar to ECS744P Graphical User Interfaces and ECS712P Design for Human Interaction)
- CS214 User modeling (similar to ECS733U Interactive System Design)
- CS220 Affective computing (similar to ECS712P Design for Human Interaction)
- CS293 Introduction to social computing (similar to ECS757P Digital Media and Social Networks)
- CS295 Games and game design (equivalent to ECS799P Game Design)
- CS296 Designing for mobile devices (similar to ECS725P Mobile Services)
- ECE295 Entrepreneurship for scientists and engineers (similar to ECS728U Business Technology Strategy)

All of these modules are taught at the post-graduate level at AdMU (all courses numbered 200+ are post-graduate level at AdMU). Most of these AdMU modules are not identical to those offered at QMUL, but do overlap with courses at QMUL (found through discussion of the curricula of the partners of each institution).

The content of both programmes has been jointly defined by both institutions. Over six months there were 2 visits of QMUL academics to AdMU, plus one visit of AdMU academics to QMUL, together with numerous skype calls, and email exchanges. As a result of that, both programmes are a single, coherent set of modules delivered across both institutions. Although we credit 2 modules from each other institution, the remaining modules from AdMU have also been discussed with the QMUL staff, and have been designed in a way that they complement the student's learning. This has been previously communicated in the partnerships board documentation, as well as additional documentation of all the process up to this point.

The optional specialist modules students chose are assessed at AdMU to ensure they are extending their training/skill set as determined. Module selections at both AdMU and QMUL will be made in consultation between student and their local faculty advisor to ensure they will not be following the same .

Finally, from Jan.-Sep. there is the nine-month project (ECS754P MSc by Research Project), which students will commence after their semester at QMUL. This project will be supervised remotely by EECS faculty Before leaving QMUL, the student will select a project from ideas proposed by EECS faculty involved with the program, and devise preliminary plans to maximise their success. Projects are marked by report and a viva (remote), and scored against six criteria: Presentation, Aims and Report Organisation, Achievement, Clarity, Analysis and Testing, Difficulty Level.

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Academic Year of Study FT - Year 1

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Interactive Digital Multimedia Techniques	ECS742P	15	7	Compulsory	1	Semester 1
Sound Recording and Production Techniques	ECS749P	15	7	Compulsory	1	Semester 1
Software and Network Services Design	ECS705P	15	7	Elective	1	Semester 1
Design for Human Interaction	ECS712P	15	7	Elective	1	Semester 1
Music Perception and Cognition	ECS741P	15	7	Elective	1	Semester 1
Big Data Processing	ECS765P	15	7	Elective	1	Semester 1
Human computer interaction		15	7	Elective	1	Semester 2
User modeling		15	7	Elective	1	Semester 2
Affective computing		15	7	Elective	1	Semester 2
Introduction to social computing		15	7	Elective	1	Semester 2
Games and game design		15	7	Elective	1	Semester 2
Designing for mobile devices		15	7	Elective	1	Semester 2
Entrepreneurship for scientists and engineers		15	7	Elective	1	Semester 2
MSc by Research Project	ECS754P	90	7	Core	1	Semester 2 & 3
Computer Graphics	ECS762P	15	7	Elective	1	Semester 1
Introduction to Computer Vision	ECS709	15	7	Elective	1	Semester 1

What Are the Entry Requirements?

- Applicants must be able to demonstrate academic achievement to the level of an upper second class Bachelors degree (or

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higher), excellent creative, critical and analytic skills, and strong programming or mathematical abilities. We will consider applications from outstanding individuals with any Arts, Engineering or Science background and welcome applications from people with a strong background in the visual arts, design, architecture, New Media, User Experience, human-computer interaction, and from people with a strong backgrounds in social science e.g. psychology, sociology, or a similar discipline.
- Satisfactory entrance exam scores.
- A TOEFL scores of 92 or IELTS score of 6.5.
- Submission of all other requirements as stipulated by the Associate Dean for Graduate Programs. These are specified for national and international applications at the following links:
http://www.ateneo.edu/ls/graduate/application-procedures-and-requirements-filipino-applicants
http://www.ateneo.edu/ls/graduate/application-procedures-and-requirements-international-applicants

How Do We Listen and Act on Your Feedback?

AdMU
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There is a student representative to the Committee on Graduate Student Concerns at AdMU. This is the body recognized by the Loyola Schools Administration to represent graduate student interests. The Committee is comprised of representatives nominated by the different academic departments.

At the end of each term at AdMU, students evaluate their teachers online through a standard evaluation form.

More details are available in the AdMU Graduate Student Handbook.

QMUL
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The Student-Staff Liaison Committee provides a formal means of communication and discussion between the School and its students. The committee consists of student representatives from each cohort, together with appropriate representation from School staff. It is designed to respond to the needs of students, as well as act as a forum for discussing programme and module developments. Student-Staff Liaison Committees meet four times a year, twice in each teaching semester.

Each semester, students are invited to complete a web-based module questionnaire for each of their taught modules, and the results are fed back through the SSLC meetings. The results are also made available on the student intranet, as are the minutes of the SSLC meetings. Any actions necessary are taken forward by the relevant Senior Tutor, who chairs the SSLC, and general issues are discussed and actioned through the School's Learning and Teaching Committee.

The School's Learning and Teaching Committee advises the Director of Taught Programmes 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 Taught Programmes Board. Student views are incorporated in this Committee's work in a number of ways, including through student membership and consideration of student surveys and module questionnaires.

The School participates in the College's Annual Programme Review process, which supports strategic planning and operational issues for all undergraduate and taught postgraduate programmes. The APR includes consideration of the School's Taught Programmes Action Plan, which records progress on learning and teaching related actions on a rolling basis. Students' views are considered in the APR process through analysis of the NSS and module questionnaires, among other data.

Academic Support

AdMU
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The Office of the Associate Dean for Graduate Programs (OADGP) at AdMU will conduct a general orientation for all new graduate students upon admission. The orientation covers the following: (1) Academic Rules and Regulations, (2) Academic Integrity and Student Discipline, (3) Support Services for Students, (4) Support for Student Research and Creative Work. The

Department of Information Systems and Computer Science (DISCS) will conducts its own grad school orientation at the beginning of every term. The contents include an introduction to the research tracks within DISCS, an introduction to the prospective advisers, scholarship opportunities, retention policies, residency policies, policies on leaves of absences, and reinstatement, policies on publication.

Within DISCS there is a graduate programs director who is responsible for monitoring students' compliance with retention and residency policies. He/she oversees leaves of absences and reinstatement also.

Students make contact with and select a personal adviser at the earliest possible time. The adviser is responsible for guiding the students' academic life including selections of electives and development of the thesis/project.

The Office of International Relations provides comprehensive support to international students ranging from visa requirements, finding accommodation, health care, country briefing, intercultural workshops and other activities.

Please see pages 88-102 of the Graduate Student Handbook for more student welfare and development services.

QMUL
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At QMUL, a programme induction will be held in the first week of a student's visit to QMUL. Students will be given information on the course, health and safety arrangements, introduced to the course administrator, the head of graduate studies in EECS and the senior tutor. The Media and Arts Technology programme at QMUL operates regular (usually weekly during teaching) forum meetings that provide an informal opportunity for feedback and discussion. Students on the course elect a representative who is a member of the regular EECS SSLC meetings. Students can provide anonymous feedback on modules through the Qmote system.

Programme-specific Rules and Facts

AdMU is accredited by the Philippine Accrediting Association of Schools, Colleges and Universities (all IT-related programmes, and Fine Arts), and the Asean University Network (specifically for computer science).

If a student fails any of the three AdMU modules taken in the first Jan - Aug period, they are not permitted to progress to QMUL until after they have successfully passed all of the failed modules. This means that the student may have to wait one year before visiting QMUL, and then pass all QMUL modules in a timely fashion to fit in with the maximum duration rules.

For the AdMU modules taken in the second Jan - Apr period, the student must confirm, at the point of selection, which of the modules they want QMUL to recognise.

Specific Support for Disabled Students

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.

Please see the AdMU Graduate Student Handbook for details on their support for disabled students.

Links With Employers, Placement Opportunities and Transferable Skills

The School of Electronic Engineering & Computer Science has a wide range of industrial contacts secured through research projects and consultancy, our Industrial Experience programme, our Industrial Advisory Board and our Doctoral Training Centre.

The Industrial Advisory Board works to ensure that our courses are state of the art and match the changing requirements of this fast moving industry. The Board includes representatives from a variety of Electronic Engineering & Computer Science orientated companies ranging from SMEs to major blue-chips. These include: Microsoft Research, Royal Bank of Scotland, BT Labs, Oaklodge Consultancy, Intel Research, The Usability Company, Hewlett Packard Labs and Arclight Media Technology Limited

The career opportunities for the graduates from this programme are in the (interactive) media production, music industry, gaming, internet, communications and consumer industries. The blending of technical courses with business and arts courses will equip the graduates with the skills that are necessary to understand and to contribute to the modern arts and media sectors of the digital economy. The emphasis on project work in this MSc ensures that students will have considerable high-level experience for successfully working with arts and creative industry organisations around the world.

Programme Specification Approval

Person completing Programme Specification	Nick Bryan-Kinns
Person responsible for management of programme	Nick Bryan-Kinns
Date Programme Specification produced/amended by School Learning and Teaching Committee	
Date Programme Specification approved by Taught Programmes Board	