**Programme Specification**

**For BSc Honours Multimedia**

**Computing**

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| **1. Programme title** | BSc Honours Multimedia Computing |  |
| **2. Awarding institution**  | Middlesex University |  |
| **3. Teaching institution**  | Middlesex University |  |
| **4. Programme accredited by**  |  |  |
| **5. Final qualification**  | BSc Honours |  |
| **6. Academic year** | 2012/2013 |  |
| **7. Language of study** | English |  |
| **8. Mode of study** | Full Time + Part Time + Thick Sandwich |  |

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| **9. Criteria for admission to the programme**We normally make offers on a minimum of 200 UCAS tariff points, plus GCSE Maths and English Language at grade C. BTEC National Diploma/International Baccalaureate/Advanced Progression Diplomas at equivalent tariff. Access to HE - Pass. Applications from candidates without formal qualifications are welcomed.The most common English Language requirements for international students are IELTS 6.0 (with minimum 5.5 in all four components) or TOEFL internet based 72 (with at least 17 in listening & writing, 20 in speaking and 18 in reading).Middlesex also offers an [Intensive Academic English course](http://www.mdx.ac.uk/courses/short/study-english/index.aspx) (Pre-Sessional) that ranges from 5-17 weeks depending on your level of English. Successful completion of this course would meet English language entry requirements. For more information on applying for the pre-sessional please email english@mdx.ac.uk. |

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| **10. Aims of the programme** |
| This degree provides a broad base of computing competencies with an in depth focus on the design, planning, construction and evaluation of multimedia systems and software. By the end of this degree students will be expected to be able to apply theoretical, heuristic and conceptual approaches to their work. This will enable them to continue to develop their competence in this area with understanding and articulation of the technical, ethical, cultural, functional, usability and aesthetic requirements of digital media projects. Students will be able to progress and develop careers as members of a multimedia team involving design and the production aspects of multimedia projects. The development of these skills and competencies will be facilitated through a mixture of theoretical work and practical project work throughout the course. This will culminate in a substantial project assignment in year three, where students are able to choose specific study areas. |

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| **11. Programme outcomes** |
| **A. Knowledge and understanding**On completion of this programme the successful student will be able to:1. Demonstrate understanding of, and the ability to apply, appropriate underpinning theory and conceptual approaches for multimedia practitioners from a range of disciplines.
2. Demonstrate knowledge and understanding of a range of evaluation techniques and their deployment in a multimedia context.
 | **Teaching/learning methods**The focus of the first year is on providing students with the underpinning theory and concepts together with the transferable skills required, facilitating effective future study. An emphasis on formative feedback and tasks is built into all the first year modules. Outcomes A1, 2, are assessed at an introductory level.**Assessment Method**Students’ relevant skills are assessed by a wide range of activities including quizzes and tests, short written assignments, essays, practical projects, the production of software and reports, and examination. Some assessment will include on-line components and may involve presentations and vivas. |
| **B. Cognitive (thinking) skills**On completion of this programme the successful student will be able to:1. Critically evaluate a range of research methodologies from computing Science and other subjects that are relevant to this discipline.
2. Explore, discuss and evaluate key components of legal, ethical, and cultural issues relevant to a multimedia practitioner.
 | **Teaching/learning methods**Students develop their cognitive abilities over the Programme, gradually developing them to the requirements of a multimedia practitioner with an emphasis on a user focused and professional approach to practice.All of the cognitive abilities are assessed at an appropriate Level. For example students will use a wide range of evaluation techniques across different modules including user-focused approaches. Students will also be completing guided group projects and developing software for use in the wider community. Year three students are expected to demonstrate that they are independent learners and that they have an in depth knowledge of Multimedia, and are capable of working in a professional manner in the multimedia industry.The delivery of cognitive skills uses a variety of traditional strategies such as lectures, seminars and workshops, together with guided reading and on-line resources and tasks. Group and individual work may require students to direct their own study but this will always be under the guidance of a named tutor.**Assessment Method**Students’ cognitive skills are assessed by a wide range of activities including quizzes and tests, short written assignments, essays, practical projects, the production of software and reports, and examination. Some assessment will include on-line components and may involve presentations and vivas. |
| **C. Practical skills**On completion of the programme the successful student will be able to:1. Design, construct and maintain interactive multimedia software using a wide range of software and media editing tools including for distribution on the web.
2. Select among and apply appropriate methodologies for requirements gathering, material capture, application design and the production of multimedia artefacts.
3. Effectively select, use and personalise a range of media editing tools and authoring software.
4. Adapt and improvise when using software tools.
5. Develop material suitable for deployment on more than one computing platform.
6. Effectively plan and monitor multimedia projects with an understanding of project and software lifecycles.
7. Demonstrate knowledge, skills, and attitudes needed for a career in multimedia computing together with the ability to tackle problems in a creative and imaginative way.
8. Apply multimedia concepts and programming principles using a range of languages and environments.
 | **Teaching/learning methods**In Year one, practical abilities are developed and assessed at an introductory level and this can be seen as “working towards” the outcomes. Students will design simple standalone multimedia software and familiarity with the range of editors available, but not be introduced to advanced editing techniques. These aspects of the learning outcome C3 are built upon in future modules. Outcomes such as C4 not specifically assessed in year one however the exposure to a range of different software will allow this ability to be developed and assessed at a later stage. In year two the practical skills are refined and a more analytical approach is adopted in order that students are capable of decision making in the design process. This builds upon the basic skills in year one and allows skills to be developed in the context of understanding form, function, and the potential users of the finished product. This includes the use of editors and the introduction of new scripting tools including those for web based material. In year three the specialist Multimedia modules will help students effectively get to grip with new media and new communication strategies while developing strong image and audio skills. Students will also demonstrate that they can independently work and develop their skills in the project module and develop a portfolio of material to help them in starting their careers.The delivery of practical skills uses a variety of traditional strategies such as lectures, seminars and workshops, together with guided reading and on-line resources and tasks. Group and individual work may require students to direct their own study but this will always be under the guidance of a named tutor.**Assessment method**Students are assessed using a wide range of activities including quizzes and tests, short written assignments, essays, practical projects, the production of software and reports, and examination. Some assessment will include on-line components and may involve presentations and vivas. |
| **D. Graduate Skills**On completion of this programme the successful student will be able to:1. Communicate using a wide range of media including written work, dissemination of information over the Internet, technical report writing and oral presentation to an audience, using appropriate tools.
2. Demonstrate information literacy to include Internet and Digital Library and appropriate referencing and citation of material used.
3. Apply time management skills both as an individual and team member
4. Work within a diverse student body, showing respect and consideration for the belief systems of others in order to achieve common goals.
5. Demonstrate and further develop an autonomous and reflective approach to learning that facilitates lifelong learning.
6. Demonstrate the ability to apply appropriate mathematics to the solving of typical multimedia problems.
 | **Teaching/learning methods**The graduate skills are embedded within the curriculum and the teaching and learning strategies are as those for knowledge and skills.Personal and Career DevelopmentStudent will be provided with access to support for a Personal Development Portfolio and tasks they complete as part of their coursework can be used towards this. Students will be exposed to areas of the subject via the broad scope of the first year curriculum and this will expose them to an understanding of the range of opportunity that exists. In the second year the Professional Development and Management module will develop students planning skills and help them identify their strengths in a real project scenario and students will be encouraged to take projects in the third year that will assist them in finding employment in their chosen area. The Advanced Multimedia Applications module will include the development of a portfolio and career development work.**Effective Learning**Students will be using strategies for planning their work from year one; this will involve individual pieces of work, group work and the development of strategies for time management. Students will be required to show how they have responded to formative feedback by changing their practice. This will also assist in developing a reflective approach to learning. Students will be expected to make use of a variety of resources appropriately referenced. By year three the student will be able to demonstrate an awareness of their own learning and will be able to independently plan their own project, showing a reflective approach to understanding how they developed their own knowledge and skills.**Communication**All student work requires the students to convey information and ideas in an appropriate structured manner using a good standard of English and correct referencing strategies. From year one, students develop the ability to retrieve information from a range of resources and will be expected to work with the material to develop skills of précis and to use material to support arguments or justify decisions. All students in this Programme will be involved in peer evaluation as part of their assessment. Students are expected to take part in oral presentations, on-line dissemination of media and portfolio development as part of developing these skills and to develop the confidence to meet the communication challenges of the future. **Teamwork**Students will be expected to work in teams across all years with activities explicitly assessed in year two in the Professional Project Development and Management module in year two. Students will be expected to work with peer evaluation.**Information Technology**All students will be using IT skills across all modules and will be expected to be able to use a wide range of software tools and to use them in an appropriate way. This includes the use of online tools and resources and includes website design and the ability to design IT system and a strong understanding of communication tools. **Numeracy**Students develop numeracy skills specific to the subject area and develop these in order that they can work with a variety of data formats, present information succinctly and analyse a range of quantitative data. In year one, logic, binary number systems, relational algebra and the use of representational data are developed and assessed in the context of internet searches, the fetch execute cycle, databases, and digital media representation. In year two, students will be working with sampling theory and compression ratios and in year three, students will be developing filters and modelling response curves.**Assessment method**Students are assessed using a wide range of activities including quizzes and tests, short written assignments, essays, practical projects, the production of software and reports, and examination. Some assessment will include on-line components and may involve presentations and vivas.  |

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| **12. Programme structure (levels, modules, credits and progression requirements)** |
| **12. 1 Overall structure of the programme** |
| The course may be studied in three modes:* Three years full-time, 100% University-based.
* Part-time students study over longer periods, depending on the proportion of full-time to part-time study.
* Four years full-time ‘thick-sandwich’, where one complete year is an industry placement (so 75% is University-based and 25% is industry-based).

Details of the thick-sandwich industry placement year (usually taken between Levels 5 and 6) are given in the ‘Supervised Industrial Placement in School of Science and Technology’ Module Narrative, module code CMT3355 in the School of Science and Technology Subject Handbook. Students may transfer between these modes if required. Key features of the Programme are: The course is undertaken at three Levels, 4, 5 and 6. Each Level is arranged as a single academic year of 24weeks duration. There are two ‘entry points’ to the programme: September (Autumn term) and January (Winter term). In both cases, a single academic year of 24 weeks duration commences from the time of the entry point. The course is divided into study units called modules. Each module has a credit value of 30 credits. Each 30-credit module represents approximately 360 hours of student learning, endeavour and assessment including up to a maximum of 72 hours of teaching. Each Level comprises four compulsory modules, such that each Level of the programme comprises 120 credits. Levels 4, 5 comprise four compulsory modules. Level 6 consists of three compulsory modules and one optional taught module.Risk is covered in the Professional Project Management module together with ethics relevant to project management. This area is taught in consultation with experts in computing ethics. Information Technology students are required to take the Social Professional and Ethical Issues in I.T. module which ensures that a thorough understanding of ethical issues and the importance of ethics in Information Technology is covered. Some specific skills in effective communication are also developed in CMT3345 in order to assist students in developing professional approaches to customer support. |

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| **12.2 Levels and modules** **Starting in academic year 2010/11 the University is changing the way it references modules to state the level of study in which these are delivered. This is to comply with the national Framework for Higher Education Qualifications. This implementation will be a gradual process whilst records are updated. Therefore the old coding is bracketed below.** |
| Level 4  |
| COMPULSORY | OPTIONAL | PROGRESSION REQUIREMENTS |
| Students must take all of the following:CMT1312 Fundamentals of Multimedia and ScriptingBIS1200 Database Management SystemsCCM1418 Introduction to Operating Systems Architectures and network CMT1300 Discovering Interaction Design |  | Students must normally pass all modules at Level 4 in order to progress to the second year. |
| Level 5  |
| COMPULSORY | OPTIONAL | PROGRESSION REQUIREMENTS |
| Students must take all of the following:CCM2426 Professional Project Development & ManagementCMT2326 Designing Interaction: Principles and PracticeCMT2325 Principles of MultimediaCMT2317 Web Development and Scripting Technologies |  | Students must pass at least 180 credits, including 60 at Level 5, in order to be eligible to enrol on modules at Level 6, and at least 210 credits, including 90 at Level 5, in order to be eligible to enrol on the Level 6 project module. |
| Level 6  |
| COMPULSORY | OPTIONAL | PROGRESSION REQUIREMENTS |
| Students must take all of the following:Student must take all of the following:CMT3331 New MediaCMT3329 Advanced Multimedia Applications: Design and ImplementationCMT3350 Multimedia Project | Students must take one of the following:CMT3321 Novel Interactive TechnologiesBIS3328 Social, Professional and Ethnical Issues In Information SystemsBIS3324 Strategic Management and Information Systems | The Advanced Multimedia Applications module and the individual project module are of particular significance in the subject are in demonstrating the knowledge and skills required as a multimedia practitioner and must be passed in order to successfully complete the Programme.  |

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| ***12.3 Non-compensatable modules (note statement in 12.2 regarding FHEQ levels)*** |
| ***Module level*** | ***Module code*** |
| *Level 4* | Fundamentals of Multimedia and Scripting |
| *Level 6* | Advanced Multimedia Applications: Design and Implementation |

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| **13. A curriculum map relating learning outcomes to modules** |
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| **14. Information about assessment regulations** |
| * Information on how the University formal assessment regulations work, including details of how award classifications are determined, can be found in the University Regulations at [www.mdx.ac.uk/regulations/](http://www.mdx.ac.uk/regulations/).
* Practical aspects of the programme are often assessed via coursework that may be carried out using specialist software and may include lab tests.
* Theoretical material is assessed by coursework and examinations.
* Grades are awarded on the standard University scale of 1–20, with Grade 1 being the highest. To pass a module all components, both coursework and examination, must be passed individually with a minimum grade of 16. Failure in one of the components will result in the failure of the module.

For additional information on assessment and how learning outcomes are assessed please refer to the individual module narratives for this programme. |

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| **15. Placement opportunities, requirements and support (if applicable)** |
| All Undergraduate students have the opportunity to go on Industrial Placement. Industrial Placements are encouraged as this valuable experience enhances a student’s future career prospects. Additionally students normally achieve better results in their final year. In brief:* The placement provides a years experience as an appropriately paid graduate trainee.
* Industrial placement is conditional on the successful completion of all modules at Level 4 and Level 5, therefore students need 240 credits before they are able to embark on an industrial placement.
* Obtaining a placement is co-ordinated through the Campus Placement Office.
* For Undergraduate programmes, students wishing to undertake a placement position must register for CMT3985.
* Each placement will be assigned to an industrial tutor who will visit the student on placement.
* On graduation the degree will be qualified with the term “…with approved industrial experience”.

The placement option is not available to direct-entry students in their final year. |

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| **16. Future careers (if applicable)** |
| All programmes in the School of Science and Technology – their curricula and learning outcomes – have been designed with an emphasis on currency and the relevance to future employment. * The majority of graduates are employed in IT posts relevant to the subject.
* Over 20% of students pursue further postgraduate study or research.

The employer links with the School are encouraged in a number of ways e.g. by inviting practitioners from industry as guest speakers in lectures; through links with companies where students are employed as part of their Industrial placement and through alumni both in the UK and overseasCampus Careers Offices can be found on each campus for advice, support and guidance – or go to[www.mdx.ac.uk/careers](http://www.mdx.ac.uk/careers) |

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| **17. Particular support for learning (if applicable)** |
| The School’s Teaching and Learning Strategy is compliant with those of the University, in seeking to develop learner autonomy and resource-based learning. In support of the students learning experience:* All new students go through an induction programme and some have early diagnostic numeric and literacy testing before starting their programme. Learning Resources (LR) provide workshops for those students needing additional support in these areas.
* Students are allocated a personal email account, secure networked computer storage and dial-up facilities
* New students are provided with a CD containing the schools Subject Handbook at enrolment (electronic copies for all students can also be found at [http://unihub.mdx.ac.uk](http://www.unihub.mdx.ac.uk). If you require a hard copy of this Subject Handbook please request them from the Student Office
* New and existing students are given module handbooks for each module they study. Soft copies of all module handbooks can be found on My UniHub. Web-based learning materials are provided to further support learning
* Extensive library facilities are available on all campuses. WebCT pages are available as learning resources through My UniHub
* Students can access advice and support on a wide range of issues from the Student Services Counter and the Student Information Desk. Student Advisers aligned to subject areas offer confidential one to one advice and guidance on programme planning and regulations
* Placements are supported by Campus Placement Offices and School academics; please refer to section 15 of this programme specification
* High quality specialist laboratories equipped with industry standard software and hardware where appropriate, for formal teaching as well as self-study
* Access to campus based teaching and learning support drop in sessions, arranged by the school to provide assistance and guidance
* School Academic Advisers for each subject offering personal academic advice and help if needed. Rotas for the operation of Academic Advice Rooms at each campus can be found at [http://unihub.mdx.ac.uk](http://www.unihub.mdx.ac.uk)
* Tutorial sessions for each module organised for groups of up to 20 students are provided for additional teaching support
* Formative feedback is given on completion of student coursework
* Past exam papers with solutions and marking schemes for all modules are available for students in module handbooks and at [http://unihub.mdx.ac.uk](http://www.unihub.mdx.ac.uk)
* Research activities of academic staff feed into the teaching programme, which can provide individual students with ad-hoc opportunities to work with academics on some aspect of research

Middlesex University encourages and supports students with disabilities. Some practical aspects of School of Science and Technology programmes may present challenges to students with particular disabilities. You are encouraged to visit our campuses at any time to evaluate facilities and talk in confidence about your needs. If we know your individual needs we’ll be able to provide for them more easily. For further information contact the Disability Support Service (email: disability@mdx.ac.uk) or contact Sobia Hussainon 020 8411 4945. |

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| **18. JACS code (or other relevant coding system)** | G456 |
| **19. Relevant QAA subject benchmark group(s)** | Computing |

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| **20. Reference points**The following reference points were used in designing the programme:* QAA computing subject benchmark statement
* QAA framework for higher education qualifications in England, Wales and Northern Ireland
* QAA/QAAS guidelines for programme specifications
* QAA code of practice for the assurance of academic quality and standards in he
* University’s regulations
* Module narratives
* British computer society (BCS) guidelines for exemption and accreditation
* Middlesex University and School of Science and Technology teaching learning and assessment policies and strategies

University policy on equal opportunities. |

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| **21. Other information** |
| Middlesex University has formal links with 250 institutions world-wide, including student exchange agreements with more than 100 institutions. Currently a number of students both from the UK/EU and overseas take part in such exchanges. For further details please visit <http://www.europe.mdx.ac.uk/> or contact Elli Georgiadou, the School of Science and Technology coordinator of European Affairs & International Exchanges (email: e.georgiadou@mdx.ac.uk).This is a new programme which will be submitted for partial BCS exemption from the Certificate, Diploma and Diploma Project |

Please note programme specifications provide a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve if s/he takes full advantage of the learning opportunities that are provided. More detailed information about the programme can be found in the student programme handbook and the University Regulations.