1. GENERAL INFORMATION

<table>
<thead>
<tr>
<th>Award</th>
<th>Programme Title</th>
<th>Duration</th>
<th>Mode of study</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSc</td>
<td>Computational Methods &amp; Imaging in Medicine</td>
<td>1 year</td>
<td>Full-time</td>
</tr>
<tr>
<td>MSc</td>
<td>Computational Methods &amp; Imaging in Medicine</td>
<td>2-4 years</td>
<td>Part-time</td>
</tr>
<tr>
<td>MSc</td>
<td>Computational Methods &amp; Imaging in Medicine</td>
<td>3-4 years</td>
<td>Modular</td>
</tr>
<tr>
<td>PG Diploma</td>
<td>Computational Methods &amp; Imaging in Medicine</td>
<td>1 year</td>
<td>Full-time (exit award only)</td>
</tr>
<tr>
<td>PG Diploma</td>
<td>Computational Methods &amp; Imaging in Medicine</td>
<td>2-3 years</td>
<td>Part-time</td>
</tr>
<tr>
<td>PG Diploma</td>
<td>Computational Methods &amp; Imaging in Medicine</td>
<td>2-3 years</td>
<td>Modular</td>
</tr>
<tr>
<td>PG Diploma</td>
<td>Computational Methods &amp; Imaging in Medicine</td>
<td>1 year</td>
<td>Full-time (exit award only)</td>
</tr>
<tr>
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<tr>
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<td>Computational Methods &amp; Imaging in Medicine</td>
<td>2 years</td>
<td>Modular (exit award only)</td>
</tr>
</tbody>
</table>

School: Computer Science  
Faculty: Engineering & Physical Sciences  
Awarding Institution: The University of Manchester  
Programme Accreditation: None  
Relevant QAA benchmark(s): N/a – currently only at undergraduate level

2. AIMS OF THE PROGRAMME(S) (must include separate aims for PG Certificate and PG Diploma awards)

The programme aims to: (NB PG Cert is exit award only):

01. **At PG Diploma level:** Produce high quality professionals & researchers who have the skills and knowledge to use computational systems across the wide range of applications to medical treatment

02. Provide a vehicle for dissemination of leading-edge knowledge and skills, focusing on the research strengths of the ISBE division of the Medical Faculty and the Medical Applications research in the School of Computer Science

03. Provide an interdisciplinary platform for training and research between the Medical School and the School of Computer Science

04. Attract high quality students from the UK and overseas who wish to enhance their knowledge and skills in the medical applications of computing.

05. **Diploma Only:** Provide an opportunity to engage in a small research project in Computational Methods & Imaging in Medicine

06. **At MSc level:** [Replace 05. above with] Provide high quality training and experience in research in Computational Methods & Imaging in Medicine
THE UNIVERSITY OF MANCHESTER
Postgraduate Programme Specification

3. INTENDED LEARNING OUTCOMES OF THE PROGRAMME(S) (must include separate outcomes for PG Certificate and PG Diploma awards)

A. Knowledge & Understanding

Students will be able to acquire knowledge & understanding of:

A1. (At all levels) advanced applications of computing in the medical area

A2. (At all levels) leading-edge technologies in one or more of: Health Informatics, Medical Imaging, Medical data analysis, Computational processing in Medicine

A3. (At all levels) basic supporting knowledge in biomedicine

Learning & Teaching Processes (to allow students to achieve intended learning outcomes)

At MSc, PG Diploma & PG Certificate levels
Each advanced course unit utilises methods appropriate to the subject matter.

At MSc, PG Diploma & PG Certificate levels
Small group lectures, supervised laboratory work, mini-projects (group & individual) and independent preparatory learning are the main vehicles for dissemination of knowledge & understanding during the first half of the programme.

Following the taught part of the programme, students undertake a programme of supervised individual research, leading to a 90 cr dissertation at MSc level and a 30 cr dissertation at PG Diploma level.

Assessment (of intended learning outcomes)

Course units are assessed by a mixture of written examinations, computer-based practical work, and a range of coursework assessments including assessed miniprojects, group projects, reports, essays etc.

The research project includes an oral presentation of the research, and examination of the dissertation by two internal examiners and an external examiner.

B. Intellectual Skills

Students will be able to:

B1. Develop original ideas in a research context (MSc and PG Diploma levels only)

B2. Use methodologies for development of computational systems in a medical setting (All)

B3. Perform problem-solving in healthcare and industrial environments (All)

B4. Develop mathematical models of data and its applications in healthcare (All)

Learning & Teaching Processes

B1. is mainly demonstrated during the research project.

The intellectual ability B2. is learned through small-group lecturing and practical lab exercises designed to put theoretical knowledge into practice.

B3 & B4. are mainly demonstrated during the research project, mini-projects and problem-based learning in teams.

Assessment

B1. & B3 are developed and assessed during the research project through presentation of a seminar and examination of the dissertation.

B2. is assessed through laboratory exercises, either marked on-line or by written report.

B3 & B4. are also assessed by reports from mini-projects (individual & group).
### C. Practical Skills

**Students will at MSc, PG Diploma & PG Certificate levels be able to:**

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>C1.</strong></td>
<td>Develop applications to satisfy given requirements</td>
</tr>
<tr>
<td><strong>C2.</strong></td>
<td>Organise &amp; pursue a scientific or industrial research project <em>(MSc and PG Diploma only)</em></td>
</tr>
<tr>
<td><strong>C3.</strong></td>
<td>Use, manipulate and develop large computational systems</td>
</tr>
<tr>
<td><strong>C4.</strong></td>
<td>Perform independent information acquisition and management</td>
</tr>
<tr>
<td><strong>C5.</strong></td>
<td>Analyse medical data</td>
</tr>
</tbody>
</table>

### Learning & Teaching Processes

- C1. and C3. are demonstrated in practical lab exercises and mini-projects, as well as during the research project.
- C2. and C4. are demonstrated during the research project. C4. is also present in many course units.
- The practical skills C4 & C5 are demonstrated in the preliminary preparation for each course unit.

### Assessment

- C1. and C3. are assessed through laboratory exercises, either marked on-line or by written report.
- C2. and C4. are developed and assessed during the research project through presentation of a seminar and examination of the dissertation.
- C4 and C5. are also assessed by a report or marked presentation in some course units.

### D. Transferable Skills and Personal Qualities

**Students will *please delete as appropriate* be able to:**

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>D1.</strong></td>
<td>Work effectively as a team member <em>(MSc, PG Diploma &amp; PG Certificate)</em></td>
</tr>
<tr>
<td><strong>D2.</strong></td>
<td>Prepare and present seminars to a professional standard <em>(MSc level only)</em></td>
</tr>
<tr>
<td><strong>D3.</strong></td>
<td>Write theses and reports to a professional standard <em>(MSc and PG Diploma)</em></td>
</tr>
<tr>
<td><strong>D4.</strong></td>
<td>Perform independent and efficient time-management <em>(MSc, PG Diploma &amp; PG Certificate)</em></td>
</tr>
</tbody>
</table>

### Learning & Teaching Processes

- D1. is evident in a number of course units
- D2. is demonstrated during the research project seminar and also within a number of course units.
- D3. is demonstrated through lab practical and mini-project reports and the research project dissertation.
- D4. is demonstrated by the ability to meet a number of deadlines throughout the year, and to effectively carry out a research project on time.

### Assessment

- D1. is assessed through reports and marked presentations.
- D2. is assessed by two internal examiners during the research project seminar, who provide feedback on presentation skills.
- D3. is assessed by the research project dissertation which is examined by two internal examiners and an external examiner.
- D4. is assessed by course unit teachers & the exams office, who must ensure coursework and dissertations are submitted on time. The research project internal examiners assess progress of the project at the project seminar.
4. THE STRUCTURE OF THE PROGRAMME(S)

Programme structure and credits

| Please indicate both compulsory units and optional units (including Choice of _ from _), as well as requirements for exit awards and any specified pathways. |
| Credits |

For more details about all course units available, please see web-page at: http://www.cs.man.ac.uk/Study_subweb/Postgrad/

| September |
| Introductory fortnight. Introductory talks for each course unit offered. Advice about what compulsory Semester 1 course units are required, depending on students' background & area of study |
| 0 |

| Part 1 |
| Students usually take 60 credits-worth of course units in Part 1, depending on their background & area of study |
| 45 |

| Part 2 |
| Students usually take 30 credits-worth of course units in the 2nd part one of which must be from the Health Informatics area. 15 credits' of flexibility is allowed to choose from course units in CS, ISBE or related disciplines. To continue towards the research project for MSc award, students need to pass the taught component. Exit at this stage with PG Certificate or transfer to PG Diploma is determined by assessment regulations. MSc and Diploma students select their research project. |
| 45 |

| (PG Cert exit with 60 credits) |
| 30 |

| April – September |
| Research Project. |
| COMP60992 Research Skills and Professional Issues – Compulsary course unit in Second Semester. |
| 60 (MSc) |

| 30 (PG Dip exit with 60+30 credits) |

5. STUDENT INDUCTION, SUPPORT AND DEVELOPMENT (in order to deliver the intended learning outcomes, including dissertation support and guidance)

| Induction |
| Students introduced to course units available to them. Opportunity to make informed choice of course unit & to start to think about Research project. |

| Part 1 |
| CS course units are taught in an intensive mode: 1 day a week for 5 weeks are ‘taught’ days consisting of lectures, supervised practicals etc., 2.5 days a week for 5 weeks are practical exercises and 2.5 days of a coursework completion week are also practical exercises. Some of the practical exercises may be assessed work. Most course units are assessed through coursework (66%) and end-of-semester examination (34%). However, flexibility is allowed in the delivery and assessment, allowing methods appropriate for each subject. ISBE course units are taught in long-thin format throughout each semester |

| Further information is available at: http://www.cs.man.ac.uk/Study_subweb/Postgrad/ |

| Part 2 |
| To continue towards the research project for MSc award, students need to pass the taught component |
and COMP60992. MSc and Diploma students select their research project from a wide range of proposed projects, and by individual agreement with supervisors.

**Part 3 (MSc only)**

There is a presentation to supervisor, internal examiner & fellow students, 2-3 months after the start of the project. Feedback on presentation skills and a progress report are provided for the student at this point. The thesis is assessed by two internal examiners by report and moderated by one external examiner.

At all levels, students have access to the Programme Director throughout the programme. They are encouraged to contact the Director when problems arise and are informed of this during the introductory period. The School of Computer Science also has a drop-in Advice Centre for lunch-time help-sessions. During the period of the research project, an individually-assigned project supervisor is also available. Relationship with the supervisor is outlined in the Programme Handbook and the Research Skills course unit COMP60992.
<table>
<thead>
<tr>
<th>Code</th>
<th>Course unit title</th>
<th>Knowledge &amp; Understanding (A)</th>
<th>Intellectual Skills (B)</th>
<th>Practical Skills (C)</th>
<th>Transferable Skills &amp; Personal Qualities (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDN 60051</td>
<td>CMIM - Introduction to Human Biology</td>
<td>AD</td>
<td>AD</td>
<td>AD</td>
<td>AD</td>
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<tr>
<td>MEDN 70991</td>
<td>CMIM/SE - Introduction to Health Informatics</td>
<td>AD</td>
<td>AD</td>
<td>AD</td>
<td>AD</td>
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<tr>
<td>MEDN 60991</td>
<td>CMIM – Fundamentals in Epidemiology</td>
<td>AD</td>
<td>AD</td>
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<td>AD</td>
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<tr>
<td>MEDN 61182</td>
<td>CMIM - Medical Imaging</td>
<td>AD</td>
<td>AD</td>
<td>AD</td>
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<tr>
<td>MEDN 61082</td>
<td>CMIM - Nuclear Medicine</td>
<td>AD</td>
<td>AD</td>
<td>AD</td>
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</tr>
<tr>
<td>MEDN 60182</td>
<td>CMIM/ADA - Advanced Epidemiology</td>
<td>AD</td>
<td>AD</td>
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<tr>
<td>MEDN 60982</td>
<td>CMIM/ADA - Biostatistics</td>
<td>AD</td>
<td>AD</td>
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<tr>
<td>COMP 60440</td>
<td>CMIM/DA/AA/SE/AI – Advanced Machine Vision</td>
<td>AD</td>
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<tr>
<td>MEDN 60172</td>
<td>CMIM/AA/AI - Decision Analysis &amp; Decision Support Systems</td>
<td>AD</td>
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<tr>
<td>BIOL 60081</td>
<td>CMIM - Introduction to JAVA</td>
<td>AD</td>
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<tr>
<td>COMP 60302</td>
<td>Introduction to BioHealth Informatics</td>
<td>AD</td>
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<tr>
<td>COMP 60362</td>
<td>AA/AI/CMIM - Advanced Database Technologies</td>
<td>AD</td>
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<tr>
<td>COMP 60312</td>
<td>CMIM/AA – Computational Biology</td>
<td>AD</td>
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<tr>
<td>COMP 60431</td>
<td>CMIM/AI - Machine Learning</td>
<td>AD</td>
<td>AD</td>
<td>AD</td>
<td>AD</td>
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<tr>
<td>COMP 60992</td>
<td>Research Skills and Professional Issues</td>
<td>AD</td>
<td>AD</td>
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<td>AD</td>
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<td>COMP 60900</td>
<td>Research Project</td>
<td>AD</td>
<td>AD</td>
<td>AD</td>
<td>AD</td>
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</table>
Legend for cells

- **D** = intended learning outcomes of the programme are taught or developed by students within this course unit
- **A** = intended learning outcomes of the programme are assessed within this course unit
- **C** = compulsory course unit
- **O** = optional course unit

- **HPC = High Performance Computing, FM = Formal Methods, SE = Software Engineering, AA = Advanced Applications, AI = Artificial Intelligence (specialisations within MSc in Advanced Computer Science).**

For the MSc programmes indicated below, see the relevant MSc programme specification for additional learning outcomes for course units associated with that particular programme:

- **wICT = ACS with ICT Management,**
- **CPTL – Computational Science & Engineering,**
- **CMIM - Computational Methods & Imaging in Medicine**
- **EIS = Electronic Instrumentation Systems,**
- **CEESI = Low Power Systems Integration**
7. CRITERIA FOR ADMISSION

Candidates must be able to satisfy the general admissions criteria of the University and of the School in at least one of the following ways:

Entry to the programme is by a 1st class or good 2nd class honours degree or its overseas equivalent in either a Computer Science or Biomedical discipline or joint programme with at least 50% Computer Science or Biomedical content. Other educational backgrounds, eg a mathematical science with sufficient computing content will be considered. All candidates will have to have computer programming experience sufficient for the programme. An honours degree in another subject together with sufficient relevant industrial experience is also acceptable. Applicants without a UK equivalent honours degree, but with sufficient relevant industrial and educational experience, will be considered for admission, but will have to demonstrate, possibly through interview, that they are sufficiently prepared in knowledge and skills to undertake this MSc degree programme.

Those applicants for whom English is not their first language must satisfy the language requirement of the School of Computer Science.

Further details are available at:
http://www.cs.man.ac.uk/Study_subweb/Postgrad/

8. PROGRESSION AND ASSESSMENT REGULATIONS

The defining regulations and procedures for the MSc programme are laid down in the University’s Ordinances and Regulations

General Requirements
The assessment consists of two parts (1) an assessment of the taught course units undertaken, and (2) an assessment of the Research Project. In order to be allowed to complete the Research Project, students must pass the taught part of the programme. The award of an MSc is then made on the basis of the output from the Research Project.

Taught Part
Taught course units are normally assessed by coursework and examination.

Coursework
Coursework is likely to include practical laboratory exercises (individually or in groups), written essays, seminar presentations, and/or other forms appropriate to each individual course unit. The weightings of coursework and examination marks used in computing the course unit results are given in the course unit descriptions.

Please refer to Section 11 for important coursework issues pertaining to different types of coursework and plagiarism.

Discipline and conduct
The University’s policy on student ‘Discipline and Conduct’ is also available on the policies webpage

Examinations
The examinations usually consist of a two-hour paper for those course units with examinations. The examinations take place at the end of each Semester. Past examination papers are available via the School's information page for MSc students.

Some examinations may be “Open Book”, in which case material may be taken into the examination room. Sometimes this material will be prescribed. Most examinations however are not of this form and no supporting material may be taken into the examination room.

Use of language translation dictionaries in the examinations. Students who are registered on this
programme of study are not allowed the use of a dictionary during examinations.

**Pass Rules**
The assessment for the MSc consists of two parts: (1) an assessment of the taught course units undertaken and (2) an assessment of the project (and group and individual reports in the case of group-based projects). In order to be allowed to progress to the research project, students must successfully pass the taught part of the programme and the COMP60992 unit. The award of an MSc is then dependent upon passing the assessment of the project.

The assessment regulations for the following programmes are given below.

- MSc in Advanced Computer Science
- MSc in Advanced Computer Science with IT Management
- MSc in BioHealth Informatics
- MSc in Computational Methods and Imaging in Medicine

Including Diplomas and PG Certificates

**Taught Course Units**
Each student will be assessed on 90 credits’ worth of coursework and/or examination questions. Coursework is likely to include practical laboratory exercises (individually or in groups), written essays, seminar presentations, and/or other forms appropriate to each individual course unit; for each full course unit, this usually carries two-thirds of the mark. The examinations usually consist of a two-hour paper for each course unit, carrying one third of the marks, and take place after the teaching in each Semester. The University regulations are at: [http://www.campus.manchester.ac.uk/medialibrary/tlao/pgt-regulations-june2007.doc](http://www.campus.manchester.ac.uk/medialibrary/tlao/pgt-regulations-june2007.doc)

**Individual Course Units**
Pass Rules for Individual Course Units. Individual course units are assessed as follows: a pass at MSc level is awarded if the overall mark for the course unit is at least 50%. For a pass at diploma or certificate level, an overall mark for the course unit of 40% is sufficient. A candidate is required for the MSc degree to register for 90 credits’ worth of taught course units, and will normally be considered as passing the units if all course units have been passed at 50% or more. The failed course units can be re-sat once and the maximum mark to be awarded for re-submitted coursework or re-taken examination will normally be 50%.

**Compensated pass:**
Students may be awarded a compensated pass for a Masters degree when they fail no more than 30 credits and receive a mark between 40 and 49% for those failed credits. The student must also have gained an overall average for all taught credits of 50% or more in order to be granted a compensated pass.

**Failed units:**
The maximum allowable cumulative failure of course units in a Masters programme at the first attempt is 45 credits of the taught component of the programme. A student whose failures at the first attempt exceed 45 credits will be deemed to have failed the programme. They will then be judged against the requirements for a pass on the Postgraduate Diploma programme. If this results in their failing less than or equal to 45 credits at Postgraduate Diploma level, the student may resit those units failed at Postgraduate Diploma level to obtain the award of Postgraduate Diploma. The final decision on whether a student passes is taken by the MSc Examination Board.

**Pass rules for Postgraduate Diploma and Certificate**
**Postgraduate Diploma**
The University regulations are at: [http://www.campus.manchester.ac.uk/medialibrary/tlao/pgt-regulations-june2007.doc](http://www.campus.manchester.ac.uk/medialibrary/tlao/pgt-regulations-june2007.doc) It is awarded to a student who has been assessed on 90 credits’ worth of coursework &
examination questions, and will normally be considered as passing the units if all course units have been passed at 40% or more. Students may be awarded a compensated pass for a Postgraduate Diploma programme when they fail no more than 30 credits and receive a mark between 30% and 39% for those failed credits. The student must also have gained an overall average for all taught credits of 40% or more in order to be granted the compensated pass.

The maximum allowable accumulative failure at Postgraduate Diploma level at first attempt is 45 credits of the taught component of the programme. These failed course units can be re-sat at Postgraduate Diploma level. The maximum mark to be awarded for re-submitted coursework or re-taken examination will normally be 40%.

In addition, for the Diploma, students are required to successfully complete the Project Background Assessment and achieve a mark of 40% or more.

Postgraduate Certificate
The University regulations are at: http://www.campus.manchester.ac.uk/medialibrary/tlao/pgt-regulations-june2007.doc. This is awarded to students who have successfully taken 60 credits’ worth of coursework & examination questions with a result of 40% or more in each course unit.

Students may be awarded a compensated pass for a Postgraduate Certificate programme when they fail no more than 15 credits and receive a mark between 30% and 39% for those failed credits. The student must also have gained an overall average for all taught credits of 40% or more in order to be granted the compensated pass.

MSc Project
The MSc Project comprises two parts:

- Part 1 – Background research, specification, design studies (February to May/June)
  Assessment: Project Background Report
- Part 2 – Completion of MSc project (June to early September)
  Assessment: Dissertation (and Group Report for group projects) (60 credits)

Project Background Report (COMP60992)
The assessment for COMP60992 (Research Skills and Professional Issues) is through the Project Background Report in the case of an individual MSc Research Project, and a group report and individual report in case of a group based MSc Research Project. The precise content of the report depends upon the nature of the Research Project, but typically will include (1) Description of the project and its context and aims, (2) Survey of relevant literature, (3) Study of relevant research methods, design methodology, and implementation tools, (4) Requirements and specification, (5) Criteria of success, and (6) Project plan for overall project.

The report(s) will be assessed according to the standards expected of the Masters Dissertation with respect to substance, soundness of contents, and quality of presentation. The report is/are assessed in the same way. The supervisor and a second marker make independent assessments. The individual MSc Dissertation, and group report are assessed internally, see Section 10.3 below.

The report(s) contribute(s) 30 credits to the MSc. The report(s) is/are assessed and, in order to be allowed to complete the Research Project and gain an MSc the report(s) must pass at the 50% level. If the report(s) receive(s) marks of 40% or above, but below 50%, the student exits the programme with a Postgraduate Diploma. No resit of COMP60992 is allowed, except where mitigating circumstances have been approved.

Research Project and Dissertation

Individual MSc Dissertation
The general requirements for presentation of an individual dissertation are set out in the University’s Ordinances and Regulations. All work must be original: students presenting work from another source, including from other students, without explicit acknowledgement may be regarded as attempting a fraud and will be dealt with under the University’s disciplinary procedures. A more extensive discussion of what is and what is not permitted in this area can be found in Plagiarism (Section 17.3)
Group-Based MSc Projects
The assessment of group–based MSc projects is based on

- The group report 40%
- The individual report 60%

The group report is prepared by the group as a whole. The group report should include a brief description of the organisation of the project tasks, how decisions were reached and a summary of all joint and individual contributions to various aspects of the group report (typically this will include contribution to the specification and design, research, program code, program documentation, project management logs, minutes of meetings, editorship of group report). The group report, together with any supporting documents which are prepared jointly, should be submitted as a separate document under joint ownership. Each member of the group will normally get the same group report mark.

Each member of the group should prepare and submit an individual dissertation which should follow the University’s guidance on the presentation of taught Masters dissertations. [http://www.campus.manchester.ac.uk/medialibrary/researchoffice/graduateeducation/g-pres-diss-pgt.pdf](http://www.campus.manchester.ac.uk/medialibrary/researchoffice/graduateeducation/g-pres-diss-pgt.pdf)

The Individual dissertation must include the following:
Details about the individual contribution to the project and a summary of the other group member’s contributions to the project.

A suitably formulated declaration about authorship. The declaration should state that the work referred to in the dissertation was completed as part of a group project, what portion of the work referred to in the dissertation has been (or will be) submitted by which members other members of the group, and what portion (possibly none) of the work referred to in the dissertation has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

Dissertation Examination
The MSc dissertation/reports is/are evaluated by two internal examiners at Manchester (normally your supervisor and another not involved with your work on the project) who submit written reports. These reports and the dissertations themselves are considered by the external examiner at a specially convened examination meeting in November.

The MSc Project Mark is the credit-weighted average of the marks for the Project Background Report (rated 30 credits) and the MSc dissertation, and Group Project Report were applicable (rated 60 credits). A pass for the project is awarded for a project mark of 50% or above.

At the recommendation of the board of examiners, students will normally be allowed one resubmission of a failed dissertation or group project report and this will normally be within four months of the date of the publication of the result. Resubmission will not be allowed if the mark is below 40%.

Students who achieve a MSc project mark mark of between 40-49% may accept the award of Postgraduate Diploma with no further work required or resubmit the dissertation/reports on one occasion, at the discretion of the Board of Examiners. A student achieving a mark below 50% for a resubmitted dissertation/reports will be awarded a Postgraduate Diploma.

The maximum mark to be awarded for resubmitted dissertations or projects will normally be 50% for the Masters degree and 40% for the Postgraduate Diploma.

The project reports for the Diploma is assessed by the same procedure, applied to a project of 30 credits (instead of 90 credits) and the minimum pass mark is 40%.

Awards by Credit Accumulation
As well as the one-year MSc programme, the School offers a MSc, Diploma and a Postgraduate Certificate, by accumulating credits over a period, normally no more than four years. These qualifications are suitable for part-time students and for those who are on release for training and skills enhancement.

The MSc Programme requires a total of 90 credits in taught course units (6 course units), assessed as described above, and a 90 credit full project. The whole must normally be taken within four years, and
students are encouraged to take it within a shorter period, either over two years; or in a three-year scheme in which 45 taught credits (3 course units) are taken in each of the first two years and the research project in the third. These arrangements can be modified to suit personal circumstances.

There are two routes to achieving the Diploma.

This route is only open to part-time or part-time modular students and requires a total of 120 credits in taught course units (8 course units), assessed as follows: To pass at Diploma level the credit weighted average of the course units must be 40% or more and no more than 30 credits shall fall below the 40% mark, and these failed credits should be between 30% and 39%. The selection of these course units must fulfil the same criteria as selection for the MSc programme. Candidates would select this option at (a) entry point into the programme or (b) on successful completion of 90 credits (6 course units).

This route is open to all students and requires a total of 90 credits in taught course units (6 course units), assessed as described above, with a credit weighted average of 50%. The selection of these course units must fulfil the same criteria as selection for the MSc programme and a research project of 30 credits.

The Postgraduate Certificate is awarded to students who have successfully taken 60 taught credits (4 course units) with a result of 40% or more in each course unit.

Individual course units may be taken and these are awarded a pass when the marks for the unit are 50% or more.

The results for every student are presented to the Computer Science MSc examination board and provided they fulfil the stated criteria will be confirmed as a pass.

Upgrading from a Certificate to a Diploma or to an MSc, or from a Diploma to an MSc is permitted as long as the final award is achieved within a four-year period from first registering for the lower qualification.

MSc with Distinction
An MSc with Distinction is awardable under the following circumstances:
The student must have passed the assessment for course units with an overall mark of at least 70% with no mark below 50% in any course unit.
The examiners award a project mark of at least 70%. The recommendation is then passed to the External Examiner, who must agree to the recommendation for the award of a Distinction to be granted by the Faculty’s MSc Panel.

Students who have had to resit any unit(s) or who have been granted a compensated pass will not be eligible for the award of distinction.

Diploma students can gain a Distinction if they satisfy the same rules.

MSc with Merit
An MSc with Merit is awardable under the following circumstances:
The student must have passed the assessment for course units with an overall mark of at least 60% with no mark below 50% in any course unit.
The examiners award a project mark of at least 60%.

Students who have had to resit any unit(s) or who have been granted a compensated pass will not be eligible for the award of merit.

Diploma students can gain a Merit if they satisfy the same rules.

MSc with Pass
To obtain a pass for an MSc degree, the student is required both to pass the taught course units at Masters level as described above and to achieve at least 50% as a project mark.

Procedures for Students Who Fail
Students who fail the assessment for the taught part of the programme are permitted single resits of failed examinations on the next occasion that the examinations are normally set. This normally means that the student needs to interrupt her/his studies and retake the examinations in the next year. It is not possible to continue with the project until the taught part of the programme has been passed. There is no resit for COMP60992 (see regulations Section 6.3). If a candidate satisfies the criteria for a Diploma or Certificate, they may, at the discretion of the Examiners, be given the option to re-register accordingly. If in the opinion
of the Examiners a candidate fails to meet acceptable standards of performance, they will be excluded from the programme and their registration will be cancelled. In all such circumstances the Programme Director will discuss the candidate’s circumstances with the aim of achieving the most satisfactory outcome.

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