Research Masters (MRes) Programme in Tissue Engineering for Regenerative Medicine

School of Medicine

Faculty of Medical & Human Sciences

University of Manchester

Student Programme Handbook

2009-2010
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INTRODUCTION

Welcome to the Postgraduate Taught Programme of the Faculty of Medical and Human Sciences at the University of Manchester. The University has a worldwide reputation based on high quality teaching and research, and I am sure that your taught programme will provide a solid foundation for your future career success.

Within the Faculty of Medical and Human Sciences, our goal is to create an environment that allows you to excel and reach your full potential. Offering access to first-class facilities and strong links with regional health-service providers, our postgraduate taught programmes are designed to meet the diverse needs of all our students. Research topics span all areas of biomedical research, ranging from molecular to experimental biology. While subject areas are broad, our taught programmes have two principle aims:

- To develop your skills in your chosen field of study
- To enhance your knowledge within the field you have chosen. Whether you are a graduate, professional or have a clinical background, the programmes have been tailored to meet your specific needs.

As a student in the Faculty you will be expected to take responsibility for your degree, within a supportive environment that fosters your development and helps prepare you for your future career. This handbook will be a useful resource as you progress through your taught programme. It provides programme specific information that I am sure that you will find useful throughout your study. If however, you have questions or would like some further advice, please do not hesitate to contact the people listed in this handbook for further help and assistance.

I wish you every success as you embark upon your taught programme.

Professor Gillian Wallis
Director for Graduate Education

Using this handbook

This handbook contains information that you will need throughout the year, so please keep it somewhere that you can find it, even after the first week. If you need any further help, advice or clarification on any academic or personal matter, seek help straight away. Any member of staff will be willing to help, but usually your first point of contact should be the Programme Director, Dr Sarah Herrick Tel: 0161 275 1528 (internal 51528); email: sarah.herrick@manchester.ac.uk

This handbook is in combination with an essential logbook of Record of Achievement forms and Personal Development Plans (PDP) that need to be completed by you, your MRes Programme Director, or other members of staff that you will meet during the MRes Programme. It is your responsibility to ensure that these forms are completed and returned (or copied) to Joy Stewart, Programme Administrator, MRes in TERM, Room G42, Ground Floor, Stopford Building. By doing this the Programme Administrator will be able to ensure that you are completing the Programme according to schedule. All course work and paperwork must also be submitted through Joy Stewart, Programme Administrator. Do not submit laboratory reports, tutorial work or other items of work to your MRes Director or other members of staff unless specifically asked to do so.

Student Representation and Feedback

A few weeks after the beginning of the year you will be asked to elect your first student representative. The student representative will be invited to attend the first Programme Committee meeting. A different student will be elected to attend each meeting (held every two months). The student representative should make students’ views known to the programme management. In addition, they should report any staff response back to the students. Minutes of programme committee meetings and any action taken as a result of student feedback will be fed back to the students. The quality of teaching on the programme is monitored in part by student feedback. Thus it is very important that you make your views, good and bad, known. At the end of each semester, you will be asked to complete an anonymous evaluation form. In addition, please let the Programme Director know at any time if you feel there is a problem with a particular area of the programme.

Please note that only your allocated student University email address will be used as official communication by University staff. It is your responsibility to ensure that you can access and read email from this source.
We hope that your chosen programme of study will be rewarding and successful as well as enjoyable. The following information is provided to help you in your first few weeks and to use as a reference during your period of study.

**List of important dates**

The **Research Methods Course unit** is a one week (28 September - 2 October 2009) training programme run by the Faculty of Medical and Human Sciences to provide you with the skills, competencies and subject-based training necessary to complete your research. It is in combination with the Graduate Training Programme (GTP) on-line resource.

The **Masterclass Course unit** runs from October to December 2009 and will generally be on Wednesday and Friday mornings in the Keith Morgan Seminar Room or the Zochonis Building.

The **Teaching Seminars Course unit** is based on the Seminar Series run by Manchester Stem Cell Network, Wellcome Trust Centre for Cell-Matrix Research, School of Pharmacy and Faculty of Life Sciences Astra Zeneca sponsored seminars. This course unit runs from October 2009 through to March 2010. The seminars will be generally held on Wednesday and Thursday lunch-times.

The **Tutorial Course unit** runs from January until April 2010.

The **Research Placement units** involve 2 individual research project placements as follows:

- Research Placement 1 runs from October 2009 to December 2010 (10 weeks)
- Research Placement 2 runs from January 2010 to July 2010 (25 weeks)

**Calendar Appointment**

<table>
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<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>First meeting with MRes Director and MRes group members</td>
<td>21 September 2009 2-4.30pm</td>
</tr>
<tr>
<td>Faculty induction for postgraduate taught students</td>
<td>22 September 2009 11-12.30pm</td>
</tr>
<tr>
<td>Library induction</td>
<td>23 September 10-12noon</td>
</tr>
<tr>
<td>Research Methods unit</td>
<td>28 September - 2 October 2009</td>
</tr>
<tr>
<td>Staff consultation period: first research placement</td>
<td>Week of 21 September 2009</td>
</tr>
<tr>
<td>Deadline for first research placement selection</td>
<td>30 September 2009</td>
</tr>
<tr>
<td>Begin first research placement</td>
<td>5 October 2009</td>
</tr>
<tr>
<td>Deadline for selecting second research placement</td>
<td>27 November 2009</td>
</tr>
<tr>
<td>End first research placement</td>
<td>18 December 2009</td>
</tr>
<tr>
<td>Deadline for submitting Project 1 report</td>
<td>15 January 2010</td>
</tr>
<tr>
<td>Begin second research placement</td>
<td>18 January 2010</td>
</tr>
<tr>
<td>Deadline for tutorial selections</td>
<td>20 January 2010</td>
</tr>
<tr>
<td>Begin first tutorial</td>
<td>25 January 2010</td>
</tr>
<tr>
<td>1st Examiners’ meeting: MRes degree progression decisions</td>
<td>April/May 2010</td>
</tr>
<tr>
<td>GTP careers workshop (optional)</td>
<td>June/July 2010</td>
</tr>
<tr>
<td>End second research placement</td>
<td>16 July 2010</td>
</tr>
<tr>
<td>MRes symposium</td>
<td>Mid-end July 2010</td>
</tr>
<tr>
<td>Deadline for submitting Project 2 report for feedback</td>
<td>6 August 2010</td>
</tr>
<tr>
<td>Dissertation Submission Deadline</td>
<td>September 2010</td>
</tr>
<tr>
<td>Final External Examiners’ Meeting</td>
<td>October 2010</td>
</tr>
</tbody>
</table>
MRES PROGRAMME MANAGEMENT

If you have any queries or concerns at any time during your period of study in Manchester, there is a range of people you can approach. Your MRes Programme Administrator, Miss Joy Stewart, will be your first port of call for general issues. Alternatively, you may wish to contact the Programme Director, Dr Sarah Herrick for specific aspects to do with the course or your Personal Tutor for career development issues. If all else fails or you wish to raise a confidential matter at School level, you should approach the Director of Graduate Education, Professor Gillian Wallis – contact details below.

Responsibility for overall management of the Programme lies with the Programme Director. The Programme Director has assembled an MRes Programme Committee, which meets regularly, to advise on content, structure, management, student supervision, and regulatory matters such as Programme improvement and refinement. The Committee also has a series of student representative who are democratically elected by you to attend meetings. Issues which you wish to feed back to the MRes Committee can be done by your student representative.

The majority of correspondence will be by email or posted on Backboard however, an in-tray for MRes in TERM students is available for hard-copy submissions/correspondence on the School of Medicine Administration desk on the Ground Floor, Stopford Building

Points of contact

Programme Director
Dr. Sarah Herrick; Room 3.106, Stopford Building
email: Sarah.Herrick@manchester.ac.uk
Tel: 161 275 1528; (internal : 51528)

Deputy Programme Director
Professor Giorgio Terenghi
email: Giorgio.Terenghi@manchester.ac.uk

Director of Graduate Education
Professor Gillian Wallis
email: Gillian.A.Wallis@manchester.ac.uk

Programme Administrator
Miss Joy Stewart Programme Administrator
Room G42, Ground Floor, Stopford Building
email: Joy.Stewart@manchester.ac.uk
Tel: 0161 275 1702; (internal : 51702)

MRes Student representative
To be appointed democratically before each meeting.

Submission of forms and course information should be sent to Programme Administrator, Joy Stewart unless otherwise indicated.

Programme Management Structure
The Programme Committee will meet approximately every 2 months and will comprise the Programme Director, the course coordinators and student representative. The coordinators are Professor Tim Hardingham (FLS); Professor Sandra Downes and Dr Julie Gough (School of Materials); Professor Nicola Tirelli (School of Pharmacy); Dr Stephen Richardson, Dr Brian Bigger, Professor Giorgio Terenghi, Professor Judith Hoyland; and Professor Gus McGrouther (School of Medicine). The course is run through the School of Clinical and Laboratory Sciences, School of Medicine, Faculty of Medical and Human Sciences.

The remit of the committee will be to:

- Oversee the teaching assessment and examining arrangements;
- Monitor cohort progression including failure rate, withdrawal rate;
- Evaluate the extent to which the learning outcomes are achieved by students;
- Monitor, maintain and enhance standards of all aspects of the programme;
- Evaluate the effectiveness of the curriculum and of assessment in relation to programme learning outcomes;
- Evaluate the effectiveness and relevance of the teaching and learning methods employed;
- Review and revise the programme in the light of any relevant QAA benchmarks, any other relevant external and/or professional requirements and developing knowledge in the subject area;
- Receive, consider and respond to feedback from students, staff, employers and external examiners;
- Where the need for change is identified, effect the changes quickly and efficiently;
- Produce an annual action plan via annual monitoring;
- Produce reports for periodic review and participate in the panel meeting;
- Produce relevant information for an Institutional Audit;
- Review programme documentation, eg, programme handbooks, programme specifications, promotional literature;
- Ensure suitable and efficient arrangements are in place for recruitment, admission and induction.

The selection process onto the course will be on the basis of an application form, demonstration of aptitude, references and performance at interview. For 4th year MBChB undergraduates, this will be carried out on a rolling basis by monitoring performance in earlier years when students will be expected to carry out a “taster” period with a research group. The Programme Committee Admissions sub-group will select candidates for admission to the programme. This sub-group will report to the Programme committee and its membership will comprise: Dr Herrick, Professor Hoyland and Professor Terenghi.

The Programme Committee will answer to the School of Medicine PGT Committee and the MRes Programme Director will be a member of the School of Medicine PGT committee.
MRES PROGRAMME - AN OVERVIEW

Aims and learning objectives of the MRes Programme

It is recognised by the Research Councils, by Universities and by employers that a gap has opened up between the skills possessed by new graduates and the skills normally expected on entry to a higher research degree or an industrial research career. The MRes's niche is that it has been specifically designed to bridge this gap.

The programme is entitled Masters in Research (MRes) in Tissue Engineering for Regenerative Medicine (TERM). The 1-year programme is structured around a 2:1 split between laboratory-based research projects and taught elements. Laboratory experience is gained by 1 x 10 week and 1 x 25 week projects in research laboratories in a number of Faculties including School of Medicine, School of Material Sciences, School of Pharmacy and Pharmaceutical Sciences and Faculty of Life Sciences within the University of Manchester.

Aims of the programme are to:
- Equip students with the knowledge and skills to enable them to pursue a research career
- Provide graduates who will meet the regional, national and international demands for scientists with a broad range of Research Methods
- Provide highly qualified researchers to contribute to and enhance the excellence of the Faculty’s research programmes

Intended learning outcomes of the programme are:

1) Knowledge and Understanding

On successful completion of the programme students will be able to:
- Understand scientific method together with the philosophical contexts within which research is conducted in tissue engineering and regenerative medicine.
- Be familiar with the theoretical and practical basis of the research methods and techniques used in the major sciences basic to medicine.
- Have acquired an understanding of the theory and practise of research methods and techniques.
- Be aware of the practical issues and problems associated with conducting high quality research in medicine, including ethical issues; informed consent; storage of patient information both summative and formative
- Have a detailed and systematic understanding of a chosen area of medical science

2) Intellectual (thinking) skills:

The ability to:
- Adopt a reflective and inquisitive attitude to the analysis and evaluation of research in tissue engineering and regenerative medicine
- Recognise, define, formulate and prioritise research questions that are pertinent to tissue engineering and regenerative medicine
- Analyse, interpret, objectively evaluate and prioritise information, recognising its limitations
- Understand and be able to critically appreciate methodology, including the appropriate selection of quantitative or qualitative methods
- Recognise the importance of rigour in collecting, analysing and interpreting data
- Exhibit creativity and resourcefulness in their professional learning, scientific endeavour and research formulations

3) Practical Skills

The ability to:
- Apply appropriate methodologies to specific research questions
- Demonstrate competence in practical laboratory or clinical skills to enable sound and reproducible collection of data
- Present information clearly in written, electronic and oral forms, and communicate ideas and arguments effectively
- Retrieve, manage and manipulate information by all means, including electronically

4) Transferable Skills
- Effectively manage time resources and set priorities
- Monitor and realistically evaluate their own performance and personal capability
- Be aware of career opportunities and begin to plan a career path
- Demonstrate scholarship in research
• Demonstrate a capacity for self-directed, independent learning and adopt the principles of reflective practice and lifelong learning
• Deal with uncertainty and work within a changing environment

Programme Structure
The Programme comprises six compulsory components:

1. Research Methods course unit
2. Masterclass course unit
3. Teaching Seminars course unit
4. Tutorial course unit
5. One 10 week research placements including a report
6. One 25 week research placement including a final dissertation and oral presentation

Credit Rating
A credit is a measurement of learning time. Learning time includes attendance (contact) time, practical work, private reading and note taking, preparation of projects, etc. In accordance with the University's credit rating for Masters degrees the MRes degree comprises 180 credits. 120 credits are dedicated to research projects and 60 credits to four taught elements ; 15 credits each to Research Methods, Maserclasses, Tutorials and Teaching Seminars (see table below). You will receive percentage marks for all assessed components of the course, and each will contribute to your final degree mark based on their credit rating identified below.

<table>
<thead>
<tr>
<th>Programme name or description</th>
<th>Credits</th>
<th>Teaching method(s)</th>
<th>Assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Methods course unit</td>
<td>15</td>
<td>Lectures and workshops</td>
<td>Written abstract, case report and poster presentation</td>
</tr>
<tr>
<td>Masterclass course unit</td>
<td>15</td>
<td>Lectures, workshops and site visits</td>
<td>Formative self-learning exercises; online assessment and presentation</td>
</tr>
<tr>
<td>Tutorial course unit</td>
<td>15</td>
<td>Orientation meetings. Preparative directed reading, private study and preparation of oral presentation. Pre-tutorial meeting. Tutorial.</td>
<td>Peer-review of tutorial session and staff assessment of oral presentation during the 3 tutorials. Written assignments (1500 words) marked.</td>
</tr>
<tr>
<td>Teaching Seminars</td>
<td>15</td>
<td>Attendance at the seminar. Private study and preparation of written assignment.</td>
<td>For each of 5 seminar presentations, 500 word assignment marked.</td>
</tr>
<tr>
<td>Research Placement 1.</td>
<td>30</td>
<td>Research project laboratory experience. 10 week duration.</td>
<td>Written report maximum 6,500 words.</td>
</tr>
<tr>
<td>Research Placement 2.</td>
<td>90</td>
<td>Research project laboratory experience. 25 week duration.</td>
<td>Written report maximum 13,000 words. Report incorporated into MRes dissertation in a format accepted by the University of Manchester</td>
</tr>
</tbody>
</table>

The MRes Programme is operationally divided into two parts:
**Part 1** comprises Research Placement 1, Research Methods unit, Tutorial Course unit, Masterclass Course unit, Teaching Seminars Course unit, and First Examiners’ Meeting.


Students who wish to leave the Programme due to unforeseen circumstances may do so at the end of Part 1. Depending on the achievement, it might be possible to submit for the PG Diploma in Tissue Engineering for Regenerative Medicine (exit point 9 months). Students who fail to complete Part 1 will not be allowed to progress onto Part 2. Depending on the performance of the student in Part 1, it might be possible to transfer to the PG Diploma in Tissue Engineering for Regenerative Medicine (exit point 12 months; see below).

**First Examiners’ Meeting**
The MRes Programme has one External Examiner, who advises the Faculty of the quality of the MRes Programme and its management, as well as providing advice on the quality of the assessment procedures and fairness of the decisions made about individual students. The Examiner may be kept informed of student progress from updated copies of the Student Record of Achievement Forms. They will be sent the reports from research placement 1. The major purpose of the First Examiners’ Meeting (held in late spring) is to ratify the provisional marks from project 1 and to decide if any students should not be allowed to progress to Part 2 of the MRes Programme (see below for details). This meeting also provides the examiner with an opportunity to find out how students perceive the course. Students should be available for a meeting, if requested by the External Examiner.

**Progression Requirements and Options Available to Students**
Participation in Part 2 of the MRes programme can only be undertaken once the criteria noted below have been met and approved at the First External Examiners’ meeting (in practice students will have started research placement 2 by the date of this meeting). If achievements do not meet the criteria, as set out below, the student will normally be invited to submit for a PG Diploma in Tissue Engineering for Regenerative Medicine. If achievements do not meet the minimum criteria, the student will normally be excluded from the programme.

To progress with the 2nd Research Placement and therefore stay within the MRes programme, the student must:
- achieve a pass grade (50%) in the first research placement **and**;
- achieve an average of 50% in the Tutorial Course unit (with compensation if required), **and**;
- achieve an average of 50% in the Research Methods Module (with compensation if required), **and**;
- achieve an average of 50% in the Masterclass unit (with compensation if required), **and**;
- achieve an average of 50% in the Teaching Seminars Course unit (with compensation if required), **and**;
- satisfactorily attend and complete all compulsory elements; appropriate components of the Faculty of MHS GTP, including Regulatory Courses (as agreed with their Programme Director).

**Compensation**
Compensation can be claimed if the average of the four taught course units (Research Methods module, Masterclasses, teaching seminars and tutorial) is 50% or better as long as no one course unit is marked lower than 45%. There is no compensation for not being able to attend the compulsory elements.

**Criteria for Submitting a Dissertation for the Research Diploma (PG Dip. Res.)**
The Research Diploma in Tissue Engineering for Regenerative Medicine is available for those students who do not satisfy the criteria listed above. Students will be encouraged to submit for the PG Diploma in Research if:

1. First research placement has achieved at least a Diploma pass grade (over 40%)
   AND
2. The overall average mark for the MRes Taught Course unit should be in the range of 40-49%.

For those students who cannot complete the programme, depending on the achievement in Part 1, it might be possible to submit for the PG Diploma in Tissue Engineering for Regenerative Medicine (exit point 9 months). To acquire a PG Dip. Res, the student will be required to write a dissertation based on the research done in the first (10 weeks) and a shorter second (12 weeks) research placement. The dissertation should be no longer than 10,000 words (double spaced text, single sided pages) and should contain a description of the work done in the two laboratories. The first and second supervisors will examine this dissertation. The pass mark shall be 40%.

For a student to leave the Programme with neither a Research Diploma nor a Research Masters, the student will have failed (below 40%) on one or both of the project write-ups or the taught elements of the Programme (average mark below 40%).
Submission of the MRes Dissertation and the Final Examiners' Meeting

Dissertation submission is now set at 51 weeks after the start of teaching on your programme. The updated Ordinances and Regulations: Degree of Master, Postgraduate Diploma and Postgraduate Certificate (June 2007) can be found at the following link: http://www.campus.manchester.ac.uk/medialibrary/tlao/pgt-regulations-june2007.pdf

The student must give notification to submit to the Faculty Graduate Office prior to submitting the MRes dissertation. Students will be informed of the notification date. After marking and ratification by the external examiner, the dissertation marks are sent to the Faculty Masters/Diploma Panel for ratification. The External Examiner, who ensures that the marking is fair and accurate, will assist at the Final Examiners' Meeting, which is normally held in October. At this meeting, the progress of each student is discussed with members of staff and supervisors. Dissertation marks are combined with the marks for the taught elements of the course to provide a final weighted average percentage score.

Each student will also be recommended according to the following categories:

1. Award MRes with Distinction
2. Award MRes with Merit
3. Award MRes
4. Award Diploma
5. Fail

The MRes Program Director, MRes Committee or the Graduate Office are not permitted to disclose the recommendations made at the Final Examiners' meetings.

In the event that there are conflicts of opinion between the recommendations made by the External Examiners and those made by the Internal Examiners, the Faculty Masters/Diploma Committee have the mandate to resolve the conflict and to make the final decision.

Award of Distinction

A student on a Degree of Master or Postgraduate Diploma programme who has satisfied all the following criteria will be awarded a distinction:

A. A weighted average at first assessment of 70% or more in the taught component of the programme with no mark below 50% in any course unit.
B. A mark of 70% or more for the dissertation (or equivalent), project or extended essay where this is part of the programme.
C. A Pass at first assessment in components of the programme where only a Pass/Fail is recorded.
   • Students who have been reassessed in any unit(s), or individual components of any unit(s), or have been granted a compensated pass will not be eligible for the award of distinction.
   • Students on Postgraduate Certificate programmes will not be eligible for the award of distinction.

Award of Merit

A student on a Degree of Master or Postgraduate Diploma programme who has satisfied all the following criteria will be awarded a merit:

A. A weighted average at first assessment of 60% or more in the taught component of the programme with no mark below 50% in any course units.
B. A mark of 60% or more on the dissertation (or equivalent), project or extended essay where this is part of the programme.
C. A Pass at first assessment in components of the programme where a Pass/Fail is recorded.
   • Students who have been reassessed in any unit(s), or individual components of any unit(s), or have been granted a compensated pass, will not be eligible for the award of merit.
   • Students on Postgraduate Certificate programmes will not be eligible for the award of merit.

Resits of Laboratory Research Placements

Research placements cannot be repeated.

Late Submissions of Dissertations

For students on postgraduate taught programmes Schools will normally use the zero tolerance option, unless their Faculty gives special permission to do otherwise, save for the case of late submission of the final dissertation (or equivalent). Where the final dissertation (or equivalent) is submitted after the deadline, at the discretion of the Board of Examiners or other appropriate Committee*, it may be treated in the same manner as a resubmission following failure with the mark capped at 50% (or 40% for programmes with a pass mark of 40%) with no further opportunity for resubmission.”
*For FMHS, decisions relating to late submission of dissertations will be considered, for the foreseeable future by the Faculty Masters Degrees Panel (or by Chair’s Action). Requests for late submission should be submitted before the submission deadline on the late permission pro forma to the Faculty Graduate Office.

**Interruption**

In very exceptional circumstances, such as serious illness, students may interrupt their studies for up to 12 months. For Research Council-funded students, such action requires the prior approval of the Research Council. In addition, stipends will be withheld until the student is readmitted to the Programme. For students funded from other sources the ability to interrupt may be determined by the policy of the funding body.

**Fitness to Practice**

‘Postgraduate students at the University of Manchester who are qualified health or social care professionals (e.g. doctor, dentist, nurse, social worker) registered by a healthcare or social care regulatory body (e.g. General Medical Council, General Dental Council, Nursing & Midwifery Council, Social Care Council) are expected to behave at all times in a way that is consistent with the recommendations or code of practice of the relevant professional regulatory body.

Postgraduate students need to be aware that in the event of misconduct, dishonesty, unprofessional behaviour, or other behaviour or illness (e.g. mental health illness) that raises the possibility that the student’s fitness to practise may be impaired; the University has a duty to protect the public and to inform the relevant professional regulatory body. This means, for example, that where a student has been found to be dishonest (e.g. plagiarism, collusion, falsification of research data or other forms of cheating) the matter may be reported by the University to the relevant professional regulatory body.

Students who are dishonest not only risk failing to be awarded the intended degree, but also place at risk their whole professional career.

**Student Record of Achievement**

Student progress is monitored by a series of Record of Achievement Forms (9 in total) that have to be completed during the course by each MRes student at set dates. These forms are shown at the end of the handbook and will be provided as a separate logbook. The Programme Administrator will return to you a copy of each of your completed Record of Achievement Forms.

**Personal Development Plan (PDP)**

The PDP is a process to plan, reflect and record aspects of your progress and development during your programme. There are 5 components to the PDP: meetings, careers, research, time management and action planning. At the beginning of the course you will be assigned a Personal Tutor who will be a member of the Programme Committee. It is your responsibility to arrange to meet your Personal Tutor and complete the Personal Development Plan forms found in your logbook. See website below for more detailed information: [http://www.mhs.manchester.ac.uk/intranet/pg/myrecord/pdp/](http://www.mhs.manchester.ac.uk/intranet/pg/myrecord/pdp/)

**Blackboard**

Blackboard is a web-based system that complements and builds upon traditional learning methods used at The University of Manchester. By using the Blackboard system you can view course materials and learning resources, including multimedia, for any units that you are taking that have a Blackboard module. The software also provides tools for communicating and collaborating with your lecturer or other students about the course using discussions, chat or email.

This will allow you to participate in a number of interactive tasks which you can do at a time and place of your convenience, providing a degree of flexibility to your studying. You can complete, and electronically submit, coursework in Blackboard as well as monitoring your progress using quizzes and assignments that teaching staff have set for you. It is also possible to check your grades for Blackboard activities online.

For Blackboard Student guide please visit website: [http://www.studentnet.manchester.ac.uk/blackboard/getting_started/blackboard_student_guide/](http://www.studentnet.manchester.ac.uk/blackboard/getting_started/blackboard_student_guide/)
RESEARCH METHODS COURSE UNIT

The Research Methods course for the Faculty of Medical and Human Sciences aims to provide you with transferable skills and competencies necessary to complete and to improve your effectiveness in research; to expose you to ideas and practice outside your own field of research and to enhance your career opportunities. The emphasis is on an organic programme of training that adapts to your requirements as you progress through the duration of your degree. The research methods course is an integral part of your research experience whilst undertaking your degree, and will provide you with the strongest grounding possible to succeed, whether in academia, industry or a medically aligned profession. The Research methods course unit has a rating of 15 credits (from 180 credits for the MRes degree) and is therefore a relatively small proportion to the credits of the degree. Nevertheless, a satisfactory pass mark for this course unit is required from students progressing into the final part of the MRes Programme (see the MRes Programme section of this handbook for further information). The main teaching will be in the week beginning 28th September 2009.

The unit aims to develop the skills and knowledge to enable students to critically design, effectively implement, ethically conduct and clearly communicate research in a clinical/medical setting. The unit will consist of a series of lectures and workshops designed to cover topics relating to critical analysis of scientific/medical research and literature, information management, study design, basic statistical analysis, ethics, fraud, plagiarism and medical and academic misconduct, presentation skills scientific writing and publishing skills.

Learning and teaching processes (including the use of e-learning)

Verbal Presentation: Students will be asked to produce a 10min PowerPoint presentation based on the remit provided. The students will then give their presentation in front of their peers and a panel of assessors. A 5min period for questions will be included at the end of the presentation. Students will be assessed on the design and content of their presentation, their knowledge and understanding of what they presented and the way they handled the audience’s questions.

Written Abstract: Each student will be asked to produce a 250-300 word abstract. A journal paper will be given to them from which the original abstract has been removed. They will then be able to compare the two abstracts and reflect on their writing skills. The abstract and reflection will be reviewed by a panel of assessors.

Poster presentation: Students will be asked to critically review a poster from their clinical discipline. Students will then be asked to give a 5min overview of the poster to their peers and a panel of assessors.

Ethics, Fraud and Plagiarism: Students will be asked to produce a reflective piece of work, of 500 words, focusing on the ethical implications highlighted in one of the case studies discussed. The reflection will be reviewed by a panel of assessors.

Schedule of Lectures/workshops

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Lecture/Workshop</th>
<th>Venue*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon 28/9</td>
<td>1.00-3.00</td>
<td>Presentation Skills: Groups of 3-4 to give talk on research paper</td>
<td>Room G306b, JMR</td>
</tr>
<tr>
<td>Tue 29/9</td>
<td>10.00-1.00</td>
<td>Research Governance and Ethics Workshop</td>
<td>Room G306b, JMR</td>
</tr>
<tr>
<td>Wed 30/9</td>
<td>9.30-12.30</td>
<td>Writing Skills: “How to write a paper”</td>
<td>Room G306b</td>
</tr>
<tr>
<td>Thur 01/10</td>
<td>9.30-12.30</td>
<td>Poster Presentation: Production of a poster</td>
<td>4.38, SB</td>
</tr>
<tr>
<td>Wed 30/9</td>
<td>3.00-5.00</td>
<td>Introduction to Statistics</td>
<td>Room G306b, JMR</td>
</tr>
<tr>
<td>Fri 02/10</td>
<td>9.30-12.30</td>
<td>Academic Writing Workshop: Introduction to academic writing including quiz</td>
<td>Room G306b, JMR</td>
</tr>
</tbody>
</table>

* Venues

JMR  Jean McFarlane Room, University Place
SB   Simon Building

Your performance on each of these sessions will be assessed through the production of a poster, oral presentation, critical appraisal of a scientific publication and abstract writing. Assessment will be mainly during the Research Methods module week.
In addition, the Faculty provides a range of courses, which you can access through the Faculty Training Team, website: http://www.mhs.manchester.ac.uk/trainingteam/

To access the Faculty intranet site you will need to be a currently registered student or a member of staff with a University username and password. If you do not have a password you will need to self-register using the on-line registration page (https://iam.manchester.ac.uk/welcome/menu). If you have forgotten or lost your password, please contact the IT helpdesk Tel: 0161 306 5544 or e-mail: it-servicedesk@manchester.ac.uk

The Aims of the Course Unit

The aims of the Research Methods course unit are to:

• increase your breadth of understanding in tissue engineering and regenerative medicine
• improve your communication skills
• develop a sense of ownership in your scientific education and career
• develop a philosophy of peer assessment and self appraisal.

The Learning Objectives of the Course Unit

After completing the course unit, you should:

• be better able to understand research reports that appear in peer-review publications, both in scientific content and in the methodology used,
• be better able to present the findings in a research paper to a group;
• be better able to appreciate the relevance of a scientific study in the context of the broad area of tissue engineering and regenerative medicine;
• understand how the peer-review system works in research and will have a rudimentary understanding of how to appraise yourself and others in a peer group.

Faculty Graduate Training Team
Faculty Training Administrator: Sarah Williams; Sarah.Williams@manchester.ac.uk
Faculty Postgraduate Trainer: Judy Williams; Judith.C.Williams@manchester.ac.uk
PG Trainer, Clinical and Laboratory Sciences: Elly Cartwright; Elizabeth.J.Carwright@manchester.ac.uk

Training Programme courses

<table>
<thead>
<tr>
<th>Programme Module</th>
<th>Course Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory Courses</td>
<td>Genetic Manipulation, Risk Assessment, Radiological Protection and Home Office (animal) Licence course. These courses take place throughout the year and will be compulsory for some students. Local variants may be run at hospital sites. You must check with your supervisor to find out which, if any, of these courses you need to attend.</td>
</tr>
<tr>
<td>Computing Skills</td>
<td>During the Introduction to research course there is an opportunity to undertake training in essential skills required to begin your studies. In addition, Manchester Computing Centre (MCC) (<a href="http://www.itservices.manchester.ac.uk/trainingcourses/">http://www.itservices.manchester.ac.uk/trainingcourses/</a>) offers a range of courses. You should discuss your training needs with your supervisor. MCC also offer courses in statistical analysis software packages.</td>
</tr>
<tr>
<td>Large Workshops</td>
<td>The workshop concentrates on communication skills.</td>
</tr>
<tr>
<td>Small Training Courses</td>
<td>In addition to the workshops there are extra courses available, giving further support and advice to students. (Further information is available on the intranet site or by contacting the training team in the Faculty Graduate Office).</td>
</tr>
<tr>
<td>Seminars &amp; Student</td>
<td></td>
</tr>
<tr>
<td>Presentations</td>
<td>Seminars A series of seminars are held within Schools/Research Groups. Student Presentations Each School/Research Group will provide the opportunity for communication of graduate research projects with presentations and poster sessions.</td>
</tr>
</tbody>
</table>
It is the **INDIVIDUAL STUDENT’S RESPONSIBILITY** to ensure that they are aware of the arrangements relating to GTP courses and workshops and that they attend all the appropriate courses promptly and in full. If, for any reason, this is not possible they should inform the School Graduate Office. Reminders and notices will be sent out from time to time about upcoming events but the Student should organise and plan their work around these events, well in advance.

**Overview of the Training Programme**

**Workshop – Communication Skills**

This workshop is held each year and can be attended by any postgraduate research student but has been designed for first year students. The aim is to understand the importance of communication for the dissemination of research findings.

The workshop includes information about abstract structure and style, how to give an effective presentation, how to get the best out of attending a conference, how to write a transfer or continuation report, tips for the first year viva and communicating science to the public.

The objectives are for students to:
- Understand how to structure and write an abstract in different styles for conferences, papers and reports
- How to present research and network efficiently at conferences or other public events
- How to prepare for a viva examination.

The next event is due to take place on Tuesday 3 November 2009 from 9.30am until 1pm. For further information please log on to research support at: http://www.researchsupport.manchester.ac.uk/TrainingAndDevelopment/Pgr/Mhs/Mhs.aspx.

**Workshop - Your Thesis and Beyond**

This workshop is held each year and can be attended by any postgraduate research student but has been designed for third year students. The aims are:
- To understand the process of thesis writing
- Information about thesis rules and regulations
- Tips for a successful viva
- To review their career options
- To develop vital career management skills including advice for interviews and producing a c.v.

The objective is for students to effectively plan the production of their thesis, be aware of the rules and regulations for submission, understand and prepare for their viva, and make arrangements for career options after completion.

The next event is due to take place on Tuesday 19th January 2010 from 9.30am until 4pm. For further information please see research support at: http://www.researchsupport.manchester.ac.uk/TrainingAndDevelopment/Pgr/Mhs/Mhs.aspx.

**Workshop - Academic Writing**

There are several academic writing courses for students at different stages of their research degree:

*Effective Academic Writing: Getting the Message Across*: the aim of this course is to understand the principles of clear writing in an academic environment, learn to communicate research results in a clear and concise manner and effectively prepare high-quality research papers, reports, abstracts and PhD theses.

*In the Home Stretch: Preparation of a High-Quality PhD Thesis*: the aim of this course is to understand and apply the principles of clear academic writing to producing a PhD thesis, identify key steps in planning and preparing a high-quality PhD thesis, optimise data presentation and figure layout and consider strategic approaches for writing conclusions and discussions.

*Academic Writing in English*: this aim of this course is to help international students write clear, grammatically accurate and well-organised English. Areas covered will include: text structure, academic style and conventions, language for important rhetorical functions, summarising and paraphrasing and achieving flow in academic texts.
On-line Academic Writing: the aim of this course is for students to receive an overview of guidance on academic writing including sentence structure, punctuation, word choice, grammar, and the characteristics and conventions of academic style. The emphasis of the course is to provide a resource for students to utilise at all stages of their research degree.

Further training and support is available through the English Language Centre (http://www.langcent.manchester.ac.uk), who run Academic writing tutorials. For further information or to reserve a place please log onto the Research Support website at http://www.researchsupport.manchester.ac.uk/TrainingAndDevelopment/Pgr/Mhs/Mhs.aspx.

Workshops - Effective Presentations
The Effective Presentations course is split into two sessions. The first session is mainly informative, giving an outline of how to produce and deliver a successful presentation including tips on PowerPoint. The second is a practical session where students prepare a 10 minute presentation that will be videotaped and individual feedback provided. The aim of this course is to prepare participants for presenting their research to a range of audiences.

The course includes:
- An introduction to the purpose of presentations
- How to plan and structure the presentation
- The effective use of visual aids (PowerPoint)
- Knowing and understanding the audience
- Helpful tips on body language

The objective of the course is to understand what makes an effective presentation from design through to implementation, to self evaluate and give/receive feedback in the delivery of a presentation.

For further information please log onto the Research Support website at http://www.researchsupport.manchester.ac.uk/TrainingAndDevelopment/Pgr/Mhs/Mhs.aspx.

Computing Courses
The Manchester Computing Centre is a valuable facility available to staff and students at the University. Courses are available throughout the year for a variety of skill levels and abilities. Some courses are free and others carry a small charge of £5 per half day.

Courses
- Introduction courses - including using windows, using the computer safely (viruses) and endnote (http://www.itservices.manchester.ac.uk/courses/introductory/)
- Microsoft office courses – including Word, Excel, Access, PowerPoint, Project and OneNote (http://www.itservices.manchester.ac.uk/courses/office/)
- Statistics course – including an introduction to SPSS (http://www.itservices.manchester.ac.uk/courses/stats/)
- Other computing courses – including using images, writing web pages, ECDL and computer programming (http://www.itservices.manchester.ac.uk/trainingcourses/)

Resources
For those students who prefer to look through a handbook rather than attend a practical session there are a variety of resources available. (http://www.itservices.manchester.ac.uk/trainingcourses/trainingresources/)

On line learning resources
A comprehensive suite of online courses designed to provide Postgraduate students with the skills and competencies necessary to complete their research. Currently there are a number of online skills courses, including:

Academic writing
Making a Scientific Presentation
Using Endnote
MS Word for the Research Expert
Making a scientific poster (materials created by FLS)

The Faculty offer a suite of on-line self study courses that provide training in essential research skills. Modules include Academic Writing, Creating a Scientific Presentation, Reference Management Software,
Microsoft Word for Researchers and Statistics. These courses can be made available to all MHS Postgraduate Students through the Blackboard course ‘MHS Postgraduate Skills’ (course code:medn88030x025509) or through the Training Team website www.manchester.ac.uk/mhs/trainingteam)

Additional training opportunity will be offered, depending on research project, by the project supervisor in consultation with the MRes Programme Director.

**Assessment of the module**

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Length</th>
<th>Weighting within unit (if relevant)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Presentation</td>
<td>5 minute</td>
<td>25%</td>
</tr>
<tr>
<td>Abstract writing</td>
<td>250 words</td>
<td>25%</td>
</tr>
<tr>
<td>Poster presentation</td>
<td>A3 poster and 5 minute oral Presentation</td>
<td>25%</td>
</tr>
<tr>
<td>Research Governance and Ethics</td>
<td>Case study reflection 1,500 words</td>
<td>25%</td>
</tr>
</tbody>
</table>

The Programme Administrator will distribute any assignments/poster presentations to the MRes Programme Director and the MRes Programme Committee for marking and second marking. Oral presentations will be assessed by the Programme Director and members of the Programme Committee. The course has a credit rating of 15 credits (150 hours teaching/learning time).
MRES MASTERCLASS COURSE UNIT

Introduction to MRes Masterclass Course Unit

The MRes in Tissue Engineering for Regenerative Medicine at the University of Manchester requires students to attend a series of Masterclasses. For individuals to obtain a specialist interest in tissue engineering/regenerative medicine, they require a sufficient understanding of the general methodology and philosophy of research within these disciplines and its relationship to clinical therapy. To this end, a series of Masterclasses will be delivered where students are taught the principles of tissue engineering and regenerative medicine through a series of seminars, workshops, discussion groups and site visits. This unique teaching method aims to generate a multidisciplinary training environment and transfer knowledge in specialist areas including tissue repair and regeneration, cell isolation and sourcing including stem cells, biomaterials and bioengineering, and tissue modelling and testing leading to clinical implementation.

A number of different Schools and Faculties are involved including members from the School of Pharmacy, Material Sciences, Medicine and Faculty of Life Sciences. The variety of staff included in this Course Unit provides you with a truly multidisciplinary foundation in the key issues related to tissue engineering for regenerative medicine. As the classes are delivered by staff members who are internationally recognised experts in their field, you will receive a state-of-the-art overview of new developments and emerging concepts and technologies in this rapidly developing area. Furthermore you have the opportunity to learn about research being carried out in the various Faculties and thereby to acquire a broad knowledge of sciences related to tissue engineering and regenerative medicine. These classes give students the opportunity to meet with members of staff, and visa versa. Students will learn to merge, inter-relate and apply several research disciplines and technologies to address specific research problems leading to clear clinical outcomes, skills essential to this area of research. Students should participate in group discussion and will be encouraged to ask questions. Students will be required to complete online assessment and an oral presentation. The Masterclass course unit has a rating of 15 credits (from 180 credits for the MRes degree) and is therefore a relatively small proportion to the credits of the degree. Nevertheless, a satisfactory pass mark for this course unit is required from students progressing into the final part of the MRes Programme (see the MRes Programme section of this handbook for further information).

The course will be run from end of September to December and involve 2 one and a half hour Masterclasses per week.

Aims of the course unit

The aims of the course unit are to:

- provide the MRes student with a detailed understanding of tissue engineering and regenerative medicine through a broad range of multidisciplinary topics,
- develop in the MRes student the ability to learn key facts and concepts after attending a verbal and/or audio-visual presentation and to assess the relevance of the work,
- prepare students for a future career in tissue engineering by acquiring the knowledge and the skills to understand concepts, formulate ideas and translate these to clinical situations.

Learning outcomes of the course unit

After completing the course unit, the MRes student will:

- have a broader understanding of the principles of tissue engineering and regenerative medicine and the methodology used,
- have acquired the skills to learn new facts and concepts from an oral presentation, workshop or site visit whilst at the same time discussing the specific topic in the broader context of tissue engineering,
- merge, inter-relate and apply several research disciplines and technologies to address specific research problems leading to clear clinical outcomes

Organisation of the course unit

The course is organised into 5 modules which cover all the core issues that encompass tissue engineering and its application to regenerative medicine. These may be in the format of a seminar, site visit, or workshop given by an assigned speaker. Module 1 and 2 looks at the range of biomaterials available to the tissue engineer and their individual properties whereas the 3rd module will discuss normal repair processes resulting in scar formation and then how embryos and certain species of adult animals are able to repair with complete
regeneration. The 4th module consists of the cellular aspects of tissue engineering in particular the use of stem cells. Module 5 details ways to investigate engineered constructs through in vitro and in vivo modelling and the problems encountered when moving from the laboratory to the clinic.

**Structure of each Masterclass**
In most cases, the first 40 minutes of each Masterclass will give a comprehensive overview of the subject area, the next 20 minutes, a specific example of the area is reviewed and in the last 20 minutes, the speaker will encourage students to discuss different aspects of the subject covered and relate knowledge acquired with that from other modules to encourage multidisciplinary learning.

The Masterclass may incorporate a laboratory visit to demonstrate a technique, piece of equipment or experimental model system, where appropriate. A list of relevant literature is displayed at the end of each Masterclass.

**Assessment of the module**
Assessment of the course will be by on-line assessment through multiple choice questionnaire after the first 4 weeks, i.e. at the end of the taught component (7.5 credits), and a 30 minute presentation on an assigned subject at the end of 6th week (7.5 credits). Marking will be performed by the Programme Director and members of the Programme Committee. The course has a 15 credit rating (150 hours teaching and learning time).
### MASTERCLASS SCHEDULE

**Module 1 – Basic Concepts of Biomaterials and Bioengineering**  
Coordinator: N Tirelli

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed 7/10</td>
<td>10-12</td>
<td>Introduction to polymers</td>
<td>N Tirelli</td>
<td>TCG10</td>
</tr>
<tr>
<td>Fri 9/10</td>
<td>10-12</td>
<td>Transport/signalling molecules and release</td>
<td>F Cellessi/NT</td>
<td>LTD1.8</td>
</tr>
<tr>
<td>Wed 14/10</td>
<td>10-12</td>
<td>Morphology and mechanical properties</td>
<td>F Cellessi</td>
<td>TCG10</td>
</tr>
<tr>
<td>Mon 19/10</td>
<td>10.30-12.30</td>
<td>Rheology of gel-like materials</td>
<td>A Saiani</td>
<td>LTD1.8</td>
</tr>
</tbody>
</table>

**Module 2 – Applications of Biomaterials in Tissue Engineering**  
Coordinator: J Gough

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed 21/10</td>
<td>10-12</td>
<td>Microscopy techniques</td>
<td>A Pluen</td>
<td>TCG10</td>
</tr>
<tr>
<td>Fri 23/10</td>
<td>10.12</td>
<td>Fabrication routes for tissue scaffolds with controlled internal architecture</td>
<td>B Derby</td>
<td>LTD1</td>
</tr>
<tr>
<td>Weds 28/10</td>
<td>10-12</td>
<td>Artificial ECMs -hydrogels and scaffolds</td>
<td>J Gough</td>
<td>TCG10</td>
</tr>
<tr>
<td>Fri 30/10</td>
<td>10-12</td>
<td>Magnetic Resonance Imaging</td>
<td>G Parker</td>
<td>LTD1.8</td>
</tr>
</tbody>
</table>

**Module 3 - Tissue Repair and Regeneration**  
Coordinator: S Herrick

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed 04/11</td>
<td>10-12</td>
<td>Tissue repair processes</td>
<td>M Hardman</td>
<td>` KMSR</td>
</tr>
<tr>
<td>Fri 6/11</td>
<td>10-12</td>
<td>Patterning and tissue organisation</td>
<td>K Mace</td>
<td>KMSR</td>
</tr>
<tr>
<td>Wed 11/11</td>
<td>10-12</td>
<td>Embryonic wound healing and regeneration in a lower vertebrate model organism</td>
<td>E Amaya</td>
<td>KMSR</td>
</tr>
<tr>
<td>Fri 13/11</td>
<td>11-1</td>
<td>Tissue Repair using Biomaterials</td>
<td>S Downes</td>
<td>KMSR</td>
</tr>
</tbody>
</table>

**Module 4 – Cell Sourcing and Characterisation**  
Coordinator: J Hoyland

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weds 25/11</td>
<td>10-12</td>
<td>Adult stem cells</td>
<td>J Hoyland</td>
<td>KMSR</td>
</tr>
<tr>
<td>Fri 27/11</td>
<td>10-12</td>
<td>Embryonic stem cells</td>
<td>S Kimber</td>
<td>KMSR</td>
</tr>
<tr>
<td>Weds 2/12</td>
<td>10-12</td>
<td>Stem cell glycobiology</td>
<td>C Merry</td>
<td>KMSR</td>
</tr>
<tr>
<td>Fri 4/12</td>
<td>10-12</td>
<td>Current approaches to gene therapy</td>
<td>B Bigger</td>
<td>KMSR</td>
</tr>
</tbody>
</table>

**Module 5 – From Concept to Clinic**  
Coordinator: G Terenghi

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weds 9/12</td>
<td>10-12</td>
<td>Cell-matrix biology in tissue engineering</td>
<td>C Kielty</td>
<td>KMSR</td>
</tr>
<tr>
<td>Fri 11/12</td>
<td>11-1</td>
<td>In vitro assembly and testing</td>
<td>T Hardingham</td>
<td>KMSR</td>
</tr>
<tr>
<td>Wed 16/12</td>
<td>10-12</td>
<td>In vivo experimental testing</td>
<td>G Terenghi</td>
<td>KMSR</td>
</tr>
<tr>
<td>Fri 18/12</td>
<td>10-12</td>
<td>Pre-clinical and clinical trials</td>
<td>G McGrourther</td>
<td>KMSR</td>
</tr>
</tbody>
</table>

TCG10: Theatre C, G10, Zochonis Building  
LTD1.8: Lecture Theatre D, 1.8, Zochonis Building  
KMSR : Keith Morgan Seminar Room, 1st Floor, Stopford Building
MRES TEACHING SEMINARS COURSE UNIT

Diagrammatic overview of the course unit

1. Students attend the Manchester Stem Cell Network Seminar Series (October to March) and any other seminars selected with external speakers agreed by MRes panel.

2. Students attend ALL the seminars in series.

3. Student prepares 500 word assignment for each of 5 seminars they have selected.

4. The assignment is submitted to the Programme Administrator. The deadline is 4 pm on the Monday following the seminar.

5. MRes committee members mark the assignment. Return the mark to the Programme Administrator.

6. The students are informed of their mark no later than Friday of the following week.
Introduction to the MRes Teaching Seminars Course Unit

It is recognised that an essential part of being a successful research scientist is the ability to give clear and interesting presentations, and likewise, to be able to assimilate new information presented in the form of a seminar. In this course unit, students will acquire the ability to listen to a presentation and then summarise its contents in a brief precis. The Teaching Seminars Course unit also encourages students to develop the ability to critically assess the scientific merit of other scientists’ work.

The Faculty of Life Sciences and Faculty of Medical and Human Sciences seminar programmes provide an excellent and unique teaching opportunity at postgraduate level. As part of the Teaching Seminar Course unit, students must attend all the seminars in the Manchester Stem Cell Network Series. This series features international and national speakers of the very highest calibre. Furthermore, the topics of the seminars are directly of relevance to tissue engineering and regenerative medicine and will test the ability of students to assimilate information that may not be familiar to them. The Manchester Stem Cell Network seminars run from October to March and are scheduled for Wednesday afternoons. In addition, other seminars will be included in the course from seminars organised by the Wellcome Trust Cell Matrix Interactions Centre, School of Pharmacy and Astra-Zeneca sponsored lectures. Students will be required to write-up 5 seminars from a total of 10 titles provided.

The course unit is not a group effort. Each student takes responsibility for his/her attendance at seminars and for his/her written assignment. The written assignment is a 500 word assignment of each seminar in the series attended and selected by the student. Each student is required to prepare 5 assignments that are based on 5 different seminars. Three of these must be selected from 5 titles provided from Oct to Dec and 2 out of 5 titles selected from Jan to March. The course unit has a rating of 15 credits (from 180 credits for the MRes degree) and is therefore a relatively small part of the degree. Nevertheless, the course unit is compulsory and is a vital part of the Programme. Students are required to achieve a minimum 50% pass mark to proceed in the Programme.

Aims of the course unit
The aims of the course unit are to:

• provide the MRes student with a detailed understanding of tissue engineering and regenerative medicine from a broad range of topics,
• develop in the MRes student the ability to learn key facts and concepts after attending a verbal and audio-visual presentation and to assess the relevance of the work,
• prepare students for the workplace by acquiring the skills to précis data and concepts into a short report.

Learning outcomes of the course unit
After completing the course unit, the MRes student will:

• have a broader understanding of research topics in tissue engineering and regenerative medicine and the methodology used,
• have acquired the skills to learn new facts and concepts from an oral presentation whilst at the same time critically assessing the relevance of the topic in the broader context of biological and medical sciences;
• have acquired the skills to communicate complex and complicated concepts in the form of a short report.

Guidelines for preparing the written assignment
The written assignment of the seminar should be no longer than 500 words no shorter than 400 words. The assignment should summarise the major findings identified in the talk. It will describe the background to the work, with a brief introduction to the field and a description of the approach that the speaker has taken to elucidate the answer to key questions. Summarise the findings described by the scientist and their importance, both in the context of other work conducted in the field and in general. Up to 10 references can be included and a word count provided (not including references). No Figures or Tables should be included.

Points to consider include:
1. The topic. Provide a brief description of the background to the work, summarising its importance.
2. What are the major questions are in the field; how was the speaker going to address these?
3. The hypothesis. Did the speaker explain what her/his hypothesis was? Was this hypothesis-driven research?
4. The approach. Describe the experimental approach(es). What were the conclusions of the work (this should include an assessment of whether they were valid)?
5. The relevance. Did the seminar topic have relevance to other areas of biological or medical sciences? Assess the importance of the work in a broad context.
It is important that the assignment should comprise a logical series of arguments and statements. It is inappropriate to list the major findings without describing the importance and relevance of these findings.

**Deadline for Submitting an Assignment**
The assignment should be submitted via Blackboard to the Programme Administrator by Monday 4pm the week after the seminar. If an assignment is submitted late, it will be marked, and 10 percentage points deducted for every 1 day late. Students will not be allowed to re-submit. Students should ensure that a valid reason for late submission is given to the Programme Administrator BEFORE THE DEADLINE.

**Marking of the Written Assignment?**
The Programme Administrator will distribute the assignments to the MRes Programme Director and the MRes committee for marking and second marking. The mark sheets (see below) shall be returned to the Programme Administrator and the students informed of their marks in the following week.

**The Marking Scheme**

<table>
<thead>
<tr>
<th>Classification</th>
<th>%</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinction</td>
<td>70+</td>
<td>Concise assignment that demonstrates insight into the research area. Well written, well structured and demonstrates accurate critique.</td>
</tr>
<tr>
<td>Good pass</td>
<td>60-69</td>
<td>Demonstrates very good knowledge and understanding. Well written. Adequate critique.</td>
</tr>
<tr>
<td>Pass</td>
<td>50-59</td>
<td>Adequate knowledge of the area. Critique or information was repeated.</td>
</tr>
<tr>
<td>Compensatory fail</td>
<td>45</td>
<td>Errors and omissions but the information provided gave some indication that the student understands the area.</td>
</tr>
<tr>
<td>Fail</td>
<td>&lt;40</td>
<td>Inadequate, misleading or erroneous information.</td>
</tr>
</tbody>
</table>

These marks are intended as guidelines and the academics responsible for the marking may give any mark from 0 to 100 so long as it can be justified on the basis of the criteria outlined above. All marking will be moderated by a second MRes committee member.

**Pass Mark**
The pass mark for the Course unit is an overall average of 50%. No single assignment should carry a mark of less than 45%. Assignments that are submitted late will have 10% deducted for every day late.

**Compensation**
Students will be allowed to have one assignment marked ≤45% as long as the average mark for the 5 assignments is 50% or more.

**Resits**
Resits are not possible because of the timing of the MRes Teaching Seminars Course unit.

**The Credit Rating of the Teaching Seminars Course unit**
The course unit comprises 5 written assignments each accruing 3 credits or 30 hours learning time giving a total of 150 hours or 15 credit units for the course.

**What Happens if the Seminar is Cancelled?**
There are excellent seminars organized by individual research divisions within the Faculty of Life Sciences and the Faculty of MHS and special seminars for invited guests. In the unusual situation of one of the selected seminars being cancelled, the MRes Committee will suggest an alternative seminar with adequate notice given to students.
**MRES TUTORIAL COURSE UNIT**

Diagrammatic overview of the course unit

**BEFORE THE TUTORIAL**
- Staff members and research fellows submit tutorial paper and titles which are sent to the groups
- Groups select their tutorials
- Chairperson contacts the tutor for prompts and to arrange time and place for tutorial

**DURING THE TUTORIAL**
- Students have private study and prepare oral presentations
- Staff members arrange a time and venue for the tutorial
- Each student contributes to the presentation and the discussion. The academic tutor can help to steer the discussion.
- The tutor awards an individual percentage mark for the tutorial.

**AFTER THE TUTORIAL**
- Tutees prepare 1500 word written assignment and submit 2 copies to the Programme Administrator no later than 1 week after the tutorial
- Tutor marks the written assignment and awards a percentage mark to each tutee.
- Tutor returns the marks to the Programme Administrator within 2 weeks of the tutorial
- Programme Administrator informs the students (individually) of the marks
Introduction to the MRes Tutorial Course Unit

It is generally agreed that there is a continuing need to find ways of making the learning process interesting and stimulating for students. Small tutorial groups of 4-6 students provide the ideal situation for developing new teaching styles. Within the University of Manchester medical curriculum problem based learning (PBL) and group based learning (GBL) tutorials are an important part of undergraduate teaching.

The theme of the MRes course is to encourage the students to develop the ability to critically-assess scientific output. One of the major mechanisms of medical scientific output is to publish research findings in medical and scientific journals. In the MRes Tutorial course unit, students will be given specific journal articles to read and study. In addition to learning to evaluate the scientific content of these papers, the students will be required to identify the strengths and weaknesses of the research, to define how one might further pursue a particular topic or piece if work at the level of research based science, and to assess critically the relevance of the work in other research disciplines. The Tutorial course unit will provide the students with the skills to communicate complex ideas both verbally and in writing.

The MRes tutorials give you the opportunity to learn about research being carried out in the various Faculties and thereby to acquire a broad knowledge of current issues related to tissue engineering and regenerative medicine. The tutorials give you the opportunity to meet with members of staff, and visa versa.

The Tutorial Course unit has a rating of 15 credits (from 180 credits for the MRes degree) and is therefore a relatively small proportion to the credits of the degree. Nevertheless, a satisfactory pass mark for this course unit is required from students progressing into the final part of the MRes Programme (see the MRes Programme section of this handbook for further information). They will run from January to April.

The Aims of the Course Unit

The aims of the MRes Tutorial course unit are to:

• increase your breadth of understanding in tissue engineering and regenerative medicine
• improve your communication skills
• develop a sense of ownership in your scientific education and career
• develop a philosophy of self appraisal.

The Learning Objectives of the Course Unit

After completing the course unit, you should:

• be better able to understand research reports that appear in peer-review publications, both in scientific content and in the methodology used;
• be better able to present the findings in a research paper to a group;
• be better able to appreciate the relevance of a scientific study in the context of the broad area of tissue engineering and regenerative medicine;

Structure of a Tutorial Group and Selecting Tutorials

All involved academic members of staff in the School of Medicine, Material Sciences, Pharmacy and Faculty of Life Sciences have been invited to propose a tutorial topic. Students should meet together in the pre-assigned groups to select 3 tutorials and assign a Chair for each tutorial, and select 3 tutorial titles. The MRes Programme Director and committee will encourage the students to select some tutorial topics that are not necessarily within their specialist area, thereby encouraging students to widen their horizons and to discover approaches used in other disciplines. Each tutorial group will comprise between 4-6 students with a range of research interests. Each group will prepare a list of tutorials and the names of the Chairs which are submitted to the Programme Administrator. Times and venues for the tutorials have not been arranged. The time and date of the tutorial will need to fit in with the availability of staff. The time and venue of tutorials should be agreed between the MRes Group and the academic giving the tutorial. A seminar room can be reserved through the Programme Administrator. It is recommended that MRes Groups schedule a tutorial at approximately three week intervals.

Structure of the Tutorials

Tutorial Material

For each tutorial, the academic member of staff prepares a title and supplies ONE research paper and ONE concise review that relates to that paper. If the research paper is a short paper, a second paper can be supplied by the tutor. The research paper may be from the staff member’s own laboratory. Staff are encouraged to provide material that can be grasped in the absence of detailed background knowledge. The academic tutor might also provide a set of questions/prompts to the chair to help the
students extract the salient concepts. It may well be that one or more of the group has background knowledge which is appropriate for particular topics – an effective Chair will be the one who ensures that this person helps the rest of the group get “up to speed” on such occasions.

Orientation Meetings
1. In week one, the students within a group arrange to meet to discuss the review and the research paper and the prompts provided by the Tutor. At this meeting (or meetings), the students should decide on the major learning outcomes of the tutorial topic. There should be 4-6 core learning outcomes that can be easily identified for each tutorial topic. For example, a core learning objective might be to understand a particular technique in its application to answer a series of regenerative medicine/tissue engineering questions (e.g. gene therapy, bioinformatics, nanotechnology), or to understand a biological process i.e. differentiation of bone marrow derived stem cells into chondrocytes. These subtopics will be divided for each student to research and learn in detail. This involves the students working through the material provided by the academic tutor plus other papers they have identified through their own searches. This part of the tutorial will reinforce their knowledge and understanding of the work, raise issues of validity and identify strengths and potential weaknesses. This is not done in quiet study but should involve open and lively discussion and involving all the students. It is the responsibility of each student to prepare a set number of high quality overheads or PowerPoint slides that will be helpful to herself/himself during the tutorial and to the Group. Prepare ahead of time. Do not turn up at the seminar room or staff member’s office with a floppy disk or CD and expect a computer to be available.

The Tutorial
The students and the academic attend the tutorial in week two, at a mutually agreed venue and time. The students arrange (with the tutor if necessary) for a computer to be available for PowerPoint projection, or an overhead projector if acetates are being used. The tutorial is driven largely by the students and involves individual presentations and open discussion. The Chairperson should summarise and conclude at the end.

An important aspect of the MRes tutorials is that the tutor does not control the direction of the tutorials but acts as a facilitator giving guidance only when necessary. The students define the core and peripheral aims and learning outcomes. If these are trivial or inappropriate, these should be discussed after the presentation to the tutor and should be reflected in the final mark allocated. All students should be able to answer questions.

General Guidelines for a Successful Tutorial
• It is the duty of all students to be active participants in the tutorials. They should have an overall understanding of the topic of the tutorial plus a detailed understanding of at least one sub-area of interest.
• Each group member produces relevant overheads/powerpoint slides that are legible and aid discussion of the topic.
• The subject matter should be of interest to the students to promote self-learning.
• The research topic should ideally be multidisciplinary.
• Everyone in the group studies the core material but peripheral topics are assigned to individual group members prior to the tutorial.
• Group communication is essential. Everyone in the group should participate (this is strongly dependant on the Chairperson).
• The subject matter should be scientifically relevant.
• The information the students need to find is relatively easily accessible. This might include peer-review articles in well-known journals or web sites.
• The case studies must cover work that is well established in terms of research and literature.
• There should be 4-6 core learning outcomes that can be easily identified for each tutorial topic. For example, core learning objective might be to understand a particular technique (eg gene transcription, function, pharmacology, clinical trial).

The Duties of the Academic Tutor and the Students in a Tutorial:

The role of the Academic Tutor
Prior to the tutorial – The tutor selects specific research papers. The tutors provide a set of questions about this material that have been designed to help the students extract the salient concepts and information in a critical fashion. The Chairperson for the tutorial should meet with the academic tutor (15-30mins) and obtain the set of questions and set a time and venue for the tutorial.

During the tutorial – The academic tutor is the facilitator and does not take part in the tutorial, other than to explain the system or provide guidance if needed. Guidance notes will be issued to the tutor to provide direction and should be used sparingly by the tutor.
After the tutorial – The tutor receives a written assignment from each of the students no later than 2 weeks after the tutorial. The assignment is given a mark by the tutor, along guidelines that have been formulated by the MRes panel.

Facilities that should be provided for the tutorial – a whiteboard and/or overhead projector as requested by the students.

The Role of Chairperson
- Each student will have the opportunity to act as Chairperson for one tutorial.
- The Chairperson should take ownership of the tutorial. This is, the responsibility of the Chairperson to make sure that the students in his/her group know their individual roles within the tutorial, attend the tutorial, participate in an active way to the success of the tutorial, attend meetings on time, and attend the tutorial on time.
- Apologies for absence must be sent to the Chairperson who then ensures that there is a re-distribution of load to ensure that the tutorial goes ahead as scheduled.
- The Chairperson should normally arrange an “orientation” meeting with the students prior to the tutorial to prepare an agenda and running order (ie the order and list of people presenting at the tutorial, the presentation materials etc).

The Role of Discussant
- At the orientation meeting, the Discussants lead a discussion to determine the Aims and Learning outcomes of the tutorial.
- The Discussants decide on the “core learning outcomes” ie the major academic topics referred to or inferred in the articles.

Guidelines for writing and marking an MRes tutorial written assignment
After the tutorial, students will prepare a written assignment that describes succinctly the research topic. The written assignment should not contain more than 1500 words and should be structured with an Abstract, Background, Results and Discussion, Scientific Significance and Relevance, References. The use of Figures, Tables and Illustrations are encouraged. This assignment should comprise all aspects of the work covered and should not be limited to the learning outcomes addressed by that student during the tutorial. Students may take notes during the tutorial itself.

Scope of the written assignment
The aim of the tutorial course unit is to enable students to assess the impact of research paper(s) on the field of interest. The written assignment should provide a background to the scientific area, an account of the main issues that are addressed by the paper(s), and an assessment of the quality/importance of the paper(s). Each student should provide a discussion of all the issues addressed during the tutorial, and should not limit their write-ups to the material that they presented. The assignments should aim to discuss the paper(s) in the context of the field, and should not be limited to a review.

The length of the assignment should be no greater than 1500 words and submitted a week after the tutorial. The assignment is marked according to quality and clarity of thought and not on volume. However, unnecessarily brief assignments that lack content might be expected to attract a poor mark. Students are encouraged to write a structured report that can be judged by the criteria listed below. The report should include:

1. Tutorial details with their name, word count, the title of the tutorial, the tutor’s name, and the date of the tutorial;
2. an abstract (~150 words), which summaries the content of the assignment;
3. sub-sections that demonstrate understanding of the various aspects of the research topic, including a discussion of the paper in the context of the field and indications of how the work might be relevant to related fields;
4. a short conclusion that summarises the contribution of the paper;
5. tables, figures and references (up to 20) should be included if they help to explain the topic.

Abstract
Inadequate – the abstract displays some attempt to summarise the content of the tutorial;
Adequate – an abstract of appropriate length that summarises the major findings of the tutorial topic with some omissions or inaccuracies;
Good – an abstract that summarises the work reasonably well and precisely;
Very good – an abstract that is a clear, concise and accurate summary of the content of the tutorial;
Outstanding – an abstract that provides a clear, concise and accurate summary of the tutorial topic together with the relevance of the work and a statement of the broader relevance of the topic.
**Background**

It is important to take into consideration when marking the content that the student will have very little prior knowledge of specialist subject areas and consequently may need to cover basic aspects of the subject area prior to tackling more detailed aspects of the topic.

Inadequate – information relevant to the field is provided but information is not always relevant to the study in hand;
Adequate – useful summary of information that is relevant to the study;
Good – comprehensive summary of the field;
Very good – comprehensive summary of the field, including a summary of the aims and learning outcomes of the study;
Outstanding – comprehensive summary of the field that sets the primary aims and learning outcomes of the study in context; all information is relevant to topic and most is directly pertinent.

**Medical significance and relevance**

Inadequate - the basic findings of the paper are reported;
Adequate - findings of the paper are reported accurately and are discussed with reference to the field;
Good - data are reported accurately and are discussed in terms of their biological relevance, including an evaluation of the importance of the data, with some understanding of how the results take the field forward;
Very good – a comprehensive critique of the material, including a good description of the contribution of the data to the research field; incorporates some discussion of how the results of this work may provide insights into other systems;
Outstanding – a comprehensive critique of the material, including an excellent description of the importance of the results, including how they might provide insights into understanding other medical systems; shows evidence of additional reading and originality.

**Organisation of the written assignment**

Inadequate - the report approaches the topic from only one angle;
Adequate – report covers different aspects of the topic but importance given to different aspects may not be appropriate;
Good – in general a well balanced report but some sections may be inappropriately long or short; Very good – well balanced report with most aspects of the topic appropriately weighted; Outstanding – excellent balance between necessary background material and material required to address the topic, all aspects of the topic are appropriately weighted.

**Presentation of the assignment**

Inadequate - the assignment is word-processed but otherwise poorly presented; typographical and grammatical errors are frequent;
Adequate – generally well presented assignment but perhaps with some inconsistencies in notation, in the numbering of sections and alignment of tables, some figures may not be of high quality; occasional typographical and grammatical errors;
Good – well presented assignment with accurate numbering of sections; most tables and figures of good quality including editing of graphics and inclusion of captions;
Very good – high quality assignment;
Outstanding – high quality assignment with appropriate and consistent presentation style, tables well prepared, figures of very high quality, clear evidence of attention to detail.

**Citation of literature**

Students are not expected to perform a literature review but would be expected to include some references to relevant publications. No more than 20 references should be included.

**Deadline for Submission of Written Assignments**

Copies should be submitted via Blackboard to the Programme Administrator no later than ONE week after the tutorial. No assignment will be accepted after the deadline and the student will be awarded a mark of zero. Late submissions (eg by email or post) are not acceptable unless by prior arrangement. Extensions for submission require the approval of the MRes Committee and must be agreed prior to the submission deadline.

**Assessment of the Tutorial**

The academic tutor will award an individual mark for the tutorial presentation at the time of the tutorial based on the marking scheme at the end of this section. These marks (out of 100) will be communicated to the Programme Administrator, in the form of an email. After the tutorial, each student will prepare a written assignment on the topic of the tutorial. The Programme Administrator will send the tutor the written
assignments from each student. The tutor will award an individual mark (out of 100) for the written assignment according to the scheme shown at the end of this section. Marks should be returned to the Programme Administrator, by email no later than 1 week after receiving the assignments. The students attend tutorials approximately every 3 weeks. Therefore it is important that the students receive informative feedback from tutors as soon as possible.

The mark awarded to each student for each tutorial is comprised of two parts. The first part (worth a maximum of 50% of the overall mark) is awarded for the student's performance in the tutorial. For each tutorial the written assignment will attract a maximum of 50% percentage points (the second part of the mark). The written assignment will be marked by the member of staff responsible for the tutorial using the criteria below.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Mark as %</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinction</td>
<td>100</td>
<td>Perfect critique with outstanding degree of originality. Provides novel insights, including the ability to apply concepts to related fields</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>Excellent, well organised critique with clear evidence of understanding. Contains examples of original ideas and supplementary reading</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>Outstanding. Shows clear understanding of topic, examples of supplementary reading and cross-referencing of material. Very well presented.</td>
</tr>
<tr>
<td>Pass</td>
<td>69</td>
<td>Very good. Well structured and presented report that is able to convey the central aspects of the tutorial material</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>Good. Comprehensive answer with accurate facts but largely limited to material covered in the tutorial class</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>Adequate answer with some errors or omissions. Limited to tutorial class material.</td>
</tr>
<tr>
<td>Unacceptable</td>
<td>49</td>
<td>Incomplete/inadequate answer with contains relevant information but demonstrates an incomplete understanding of tutorial material</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>Clearly incomplete/inadequate answer with sparse relevant information and poor understanding of tutorial material</td>
</tr>
<tr>
<td>Fail</td>
<td>39</td>
<td>Deficient answer with many inaccuracies and little evidence of understanding of the tutorial topic</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>No relevant material presented whatsoever</td>
</tr>
</tbody>
</table>

**Pass Mark**

The minimum pass mark for the tutorial course unit (i.e. all 3 tutorials) is 50%.

**Compensation**

Students who are awarded with less than 50% for the tutorial course unit overall can claim compensation if no individual tutorial (the average of the tutorial and written mark) is marked less than 45%.

**The Credit Rating of the Tutorial Course Unit**

MRes Tutorial Course Unit comprises 3 tutorials. Each tutorial comprises:
- 6 hours of orientation meetings
- 30 hours of directed reading and private study and tutorial preparation.
- 2 hours participation in Group Based Learning tutorial.
- 12 hours to complete the written assessment for each specific tutorial.
Hence 50 hours x 3 tutorials = 150 hours = 15 credits for the unit.
MRES RESEARCH PLACEMENTS

The MRes in Tissue Engineering for Regenerative Medicine at the University of Manchester requires students to complete 2 research placements. The duration of each research placement is: placement 1 for 10 weeks and placement 2 for 25 weeks. Note that the first placement runs alongside the Graduate Training programme, Teaching seminars unit and Masterclass course unit, so you should expect to spend at least 4–4½ days in the lab. The second placement runs alongside the Teaching Seminars unit and Tutorial unit between January and March but will be full-time thereafter. The placements will normally be in laboratories within the Faculty of MHS, Faculty of Life Sciences and School of Material Sciences. Placements may be linked between two collaborating laboratories so that different objectives of the same project may be addressed. The assessment of the two research projects constitute 120 credits of the 180 credits for the MRes course.

The selection of laboratory projects should be made in consultation with the Programme Director and the MRes committee members.

Aims of the course unit
1. Equip students with knowledge and practical skills to pursue a research career particularly focused on tissue engineering and regenerative medicine.
2. Provide presentation skills for both oral and written accounts of new research.
3. Develop practical research expertise in a chosen area of tissue engineering and regenerative medicine.

Learning Objectives of the course unit
1. Be familiar with the theoretical and practical basis of research methods and techniques.
2. Have acquired practical experience of developing research questions, and using research methods to answer these questions.
3. Have a detailed and systematic understanding of a chosen area of tissue engineering and regenerative medicine.
4. Have practical experience of presenting scientific research in both oral and written form.

Ethical and Research Governance Issues
Any research course unit that involves contact with human volunteers, either patients or the general public or human material must be subject to appropriate ethical approval. All such projects must be discussed with the Programme Director in consultation with the project supervisor at the earliest possible opportunity.

Health and Safety
In most laboratories, you will come across potential hazards. To minimise the risks to yourself and others you must follow the guidelines laid down in the laboratory Health and Safety Manual. Each student will receive a copy of the relevant document prior to the first laboratory session. Laboratory coats must be worn in laboratory areas. Project work must be carried out according to the particular guidelines and COSHH regulations for that piece of work or project in the laboratory in which the project is undertaken. Any accidents occurring in laboratories should be immediately reported to the Director of that laboratory and to your Health and Safety Advisor.

Out of Hours Working
You may need to work out of hours on occasion in the evening or at weekends. If this is the case, you should first consult your supervisor since any out of hours working occurs at their discretion. In addition, you should inform your supervisor of your intended experiments and the approximate times you will be in the laboratory and make sure that you have signed appropriate risk assessment forms.

Oral Presentations
The aim of these presentations is to help you to refine skills that are likely to be crucial in your future career, whatever it might be, such as, preparation of visual representations, oral communication, asking questions in public, and question fielding. There are two occasions during the course when you will be expected to present your work in the form of a formal oral presentation. One will be to members within your laboratory research group and the second will be in a final MRes in TERM Symposium. You will receive information about this presentation nearer the time. There is no formal assessment of this seminar, but feedback should be provided by your supervisor and MRes committee in the form of an assessment sheet. The purpose of these marks is merely to provide a level of feedback to you, and makes no formal contribution to your overall mark for each project. You are strongly advised to seek your supervisor’s help with your presentations. There may be smaller lab meetings at which you can practice, but if not, you should at least run through all your slides with your supervisor well in advance of the presentation. Each presentation will be scheduled for 10 minutes, with up to five minutes allowed for questions. Ensure that your presentation does not take longer than 10 minutes.
Writing an MRes Research Placement Report

Work done in each of the research placements is written into a research report, each of which contributes directly to your degree by providing a weighted contribution (based on either 30 credits for placement 1 or 90 credits for placement 2 out of a total of 180 credits) to the overall percentage mark for the MRes degree. Marks for placement 1 will be entered on your student record of achievement, but will remain provisional until ratified by the external examiner. Project 2 report will be submitted as a Dissertation. Two copies of research project report 1 should be printed, bound and submitted to Programme Administrator by the deadlines shown in LIST OF IMPORTANT DATES.

General Guidelines for writing an MRes Research Project Report

One aim of the MRes course is to provide you with training in communicating your work in writing. An essential skill is to be able to describe your work concisely to both an expert and broader readership. Note that your final dissertation is likely to include work that is not familiar to all your supervisors. Your project write-ups should be based broadly on the format for journal publications and you are advised to look closely at how these are laid out, picking the standard journal of your field. For example, Journal of Cell Biology is a good starting point for the molecular sciences or the British Medical Journal (BMJ.com) for clinical sciences. These papers are 5-6,000 words long. You should aim to have a rather longer and broader Introduction, perhaps a little more detail in the Methodology, but your Results and Discussion sections will inevitably be a little shorter. The precise balance here will obviously depend to some extent on how your project has progressed. Look closely at how Figures and Tables are designed and annotated. Try to identify the appropriate material for Results and Discussion sections.

You should be aware plagiarism software may be applied to all reports and dissertations

You should expect some help from your project supervisor in writing the report. Obviously, the extent of this help may be reflected in the final mark, but as a rule your project supervisor will be expected to read and comment on a first draft of the report. You should however provide your supervisor with adequate notice when submitting your draft report since they have many calls on their time. You will find it helps to prepare figures and to work on aspects of your report during the lab rotation, rather than waiting for the rotation to end before you start writing.

Keep in mind that an aim of the MRes degree is to provide research training. It should be clear to the examiners what training the placement has provided. The projects are short and the examiners will know that the students are unlikely to produce a finished piece of work or to have accumulated large quantities of data. There should, however, be a clear demonstration that new skills have been acquired.

It is important to remember that one of your markers will not be closely aware of your projects. It is therefore important to provide clear and concise write-ups. Given that projects will vary in the number and size of figures/images, the fairest and most consistent method to standardise the length is to impose a word limit. This is also excellent preparation for scientific writing; most journals impose strict and exacting word limits.

Detailed Format of the Project Report

The report should be typed double-spaced and fully-justified. Font should be Times New Roman 12 point, except where specialised fonts are required.

Title page: This should give (top of page top right):
Your name and student number
A word count, excluding tables of contents, bibliography, glossaries, appendices, tables and figure legends (the length of the report should be 6,500 words for placement 1: longer reports will be penalised).

Title; 20-30 word maximum that succinctly describes the work performed in the placement.

Abstract: This should be on a single page and contain a maximum of 200 words. It should present the aim of the project, indicate the nature and scope of the experiments performed and point out the major findings and conclusions. The abstract should be self-explanatory, without the need to refer to the main report. It should not contain references.

Introduction and Aims: This section should provide information about the background to the project. The main aim of the Introduction is to inform the reader of why the area of research is important, and how the project contributes to the research field. This section should end with one or two paragraphs that clearly state the overall aims of the project (e.g. what hypothesis will be tested?) and the key objectives (e.g. what reagents will be generated?, what experiments will be performed?). The Introduction should be self-contained and
should not require the reader to access additional material in order to understand it. Neither should it be a leisurely review of the field. It should be limited to around 6-8 pages of typescript. The referencing of reviews to cover large areas of literature is appropriate. However, research that is directly relevant to the project should be referenced in full as primary research papers. The use of figures to illustrate concepts or previous work is encouraged. It is best that figures are originals. Where unavoidable (e.g. for micrographs), figures may be copied or adapted from journals, in which case they must be cited in full within the legend.

In summary, it is important to identify in the Introduction:
- The research topic or area;
- The question or questions being addressed, and why they are important;
- The purpose of the project. In most cases, the project should seek to test a hypothesis, or at least to generate reagents that should allow the testing of a hypothesis. Some projects may be more observational, in which case it is important to identify how these observations will be utilised to advance the field.
- The aims of the work: what did you try to do, how would the experiments allow you to test the hypothesis?

Materials and Methods: This should provide a description of the experimental systems and designs employed to obtain data, the materials used (including suppliers), and the methods of data and statistical analysis. Detail should be sufficient for others to repeat the work and to demonstrate that the student has understood the methods used. The key here is to appreciate which methodologies require detailed descriptions and which standard procedures can be dealt with quickly by referencing previous publications or manufacturers’ instructions:
- There is no need to describe at length many standard laboratory procedures. For example, cell culture could be described by: “HeLa cells were grown in a 5% CO₂ environment, in DMEM supplemented with 10% FBS and containing penicillin (x U/ml) and streptomycin (x U/ml).” Methods of cell splitting etc. need not be referred to unless they are intrinsic to the design of experiments.
- Many standard protocols use kits (protein assays, mutagenesis kits, in vitro translation kits). These can be described by identifying the kit and stating that methods were followed according to the manufacturer’s instructions (with details of any modifications or specific information, such as the amount of radioactivity used for a translation, or the amount of DNA used for a transfection).
- The amount of detail also depends on the context. For example, transient transfections can be dealt with briefly by naming the kit, stating the DNA/cell ratio and stating how long after transfection were cells used for the experiment. The raising of stable cell lines will require more significant detail; selection basis, strategy for selecting clones etc. PCR reactions normally require no more description than the primer, polymerase, reaction cycle details but should be described at length if they are central to a project (quantitation of message, identification of polymorphisms etc.). Standard cloning strategies (digests, ligations, transformation) need only a brief description that identifies reagents and method (eg. electroporation/heat shock), but should include more detail if methodologies were adapted to overcome technical difficulties or if esoteric strategies were used.

Results: A detailed description of the results and findings. These should not endlessly restate the aims of the project but should provide sufficient information to allow the reader to ascertain the aim of each experiment/method development and what the result was. The reader should be able to do this without getting bogged down in details. Tables and Figures should be self-contained with appropriately detailed legends and it should normally not be necessary to describe every aspect of the table/figure in the text. There may however be occasions when you want to draw the reader to specific components of the Table/Figure (for example, “note differences between columns X and Y in Table II”, or “note the asterisked bands in lane 6 of Figure 4” etc). The results are often best divided into sections, each with a theme.

The text should be supported with figures and tables. These should be placed in the appropriate position within the main body of the report, i.e. immediately following the first reference to each table or figure, and not all put at the end of the report. Unless there are special reasons, do not present the same data in more than one form.

Tables should be numbered consecutively. They must have an informative heading and an explanatory legend. These should make the general meaning comprehensible without reference to the text. Consider the layout carefully so the significance of the data can be grasped readily. Statistics should be quoted where appropriate. Units in which the results are expressed should be given at the top of each column.

Figures should also be numbered consecutively and should contain appropriate headings, annotations and legends. Do not make the figures over complicated by presenting too many sets of data. On graphs, each line should have a separate symbol and error bars should be shown where appropriate. Gel lanes should be easily identified from the annotations. Micrographs should include scale bars.
Discussion: The Discussion should not be a paraphrasing of the results and is normally headed only by a brief summary of your findings. The Discussion should consist of a logical flow of arguments and reasoning that explains and expands upon the results in simple English, and identifies their relevance to published findings. You will be expected here to refer mainly to primary papers in the literature. The Discussion also provides an opportunity for you to defend your conclusions, identify how experiments could have been improved upon, and to discuss how the project might develop given more time.

Acknowledgements: You may wish to acknowledge the people who have helped you in your project.

References: References must be cited in full (all author names and initials, date, title, journal, volume, pages). References can be cited in the text either by author and date (e.g. Smith, 1996) or by numbering e.g. (34). You are encouraged to use a referencing software package such as Endnote or Reference Manager.

Appendices etc: Appendices are useful ways to include supplementary data (e.g. DNA sequences) without breaking the flow of the dissertation. Buffer compositions are best described in parentheses within the Methods section, but their inclusion in an appendix is acceptable. Abbreviations should be listed on a separate page, preferably after the Table of Contents. Terms that are abbreviated should be used 3 or more times in the text. They should be written in full the first time they are used, followed by the abbreviation in parenthesis.

Writing an MRes Dissertation
Dissertation submission is now set at 51 weeks after the start of teaching on your programme. The Ordinances and Regulations: Degree of Master, Postgraduate Diploma and Postgraduate Certificate (June 2007) can be found at the following link: http://www.campus.manchester.ac.uk/medialibrary/tlao/pgt-regulations-june2007.pdf

The MRes dissertation should incorporate work done in project 2. It should be no longer than 13,000 words. The report should be included as separate chapters, and in addition you must provide additional information in line with Dissertation guidelines for the University of Manchester. Page numbered throughout – apart from page 1 title page – start with page 2. Standard soft or hard-binding: sewn, with gold lettering on the spine. Two copies of the dissertation should be printed, bound and submitted to the Faculty of Medical and Human Sciences Graduate Office. A Notice of submission form has to be submitted 6 weeks before submission of the Dissertation. Further guidance on the presentation of dissertations is available from the Faculty Intranet: http://www.staffnet.manchester.ac.uk/documents/display/index.htm?id=102051&off=RegSec-%3EAcaReg-%3ETLSO

Detailed Format for Writing a Masters Dissertation
Additional information that needs to be provided with the Dissertation includes:

Title page: · the full title of the dissertation - Project 2 title
   · a statement as follows: ‘A dissertation submitted to the University of Manchester for the degree of Master of Research in Tissue Engineering for Regenerative Medicine in the Faculty of Medical and Human Sciences;
   · the year of submission (2010);
   · the candidate’s name (the same as the name under which he or she is currently registered, or was last registered, at the University); and
   · the name of the candidate’s School – School of Medicine

Contents: Demonstrating the layout of the dissertation.
   · List of Contents, List of Figures, List of Tables – all with page numbers and final word count
   · Abstract – abstract 200 words
   · Declaration:
   · Copyright statement
   · Other pages – dedication and acknowledgements, list of abbreviations etc
   · Introduction, Materials and Methods, Results, Discussion
   · References
   · Appendices
Electronic Submission of Dissertation
Masters-level students who register from September 2009 will be required to submit their dissertation electronically through the Manchester eScholar. Further information is available from the Faculty intranet http://www.escholar.manchester.ac.uk/etd/- see section for Masters level students.

Please note that students will still need to hand in 2 bound copies of their dissertation to the School / programme office by the published programme deadline. These bound copies should be printed from the eScholar version and include the automatically generated cover page.

Assessment of an MRes in TERM Research Report
The project one report will be assessed by the project supervisor and 2nd marked by a member of the programme committee. The Dissertation is marked by the project 2 supervisor and 2nd marked by a member of the programme committee (based on the criteria in the Table below). These marks are moderated by the external examiner.

Criteria for Assessing Project Reports and Dissertations

<table>
<thead>
<tr>
<th>Category</th>
<th>Mark</th>
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<tr>
<td>General understanding and relevance (mark out of 25%):</td>
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<tr>
<td>• Is there sufficient information in the Introduction for the reader to understand the topic of the report? Is the literature covered accurately and in a focussed fashion?</td>
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<tr>
<td>• Does the report make it clear what question(s) is(are) being addressed, what hypothesis is being tested and what experimental approaches will be used?</td>
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<td>Description of the project (30%):</td>
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<tr>
<td>• Does the report adequately describe the methods used, and is there appropriate balance between the description of generic methods and those that are crucial to the reader understanding the experiments?</td>
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<td>• Do the results represent a logical series of experiments?</td>
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<tr>
<td>• Are the results/data adequately described and supported by appropriate illustrations (figures, tables, schematic diagrams etc).</td>
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<tr>
<td>Interpretation of the project (30%):</td>
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<td>• Are the conclusions drawn from the results correct, are the data over interpreted? Are appropriate statistical methods used?</td>
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<td>• Are the results described in context of published observations?</td>
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<td>• Does the Discussion demonstrate a detailed understanding of the research topic?</td>
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<td>• Does the student provide critical appraisals of the design of the project and experimental outcomes? Does the student suggest how the project could be modified/continued?</td>
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<tr>
<td>Presentation of the project (15%):</td>
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<tr>
<td>• Is the general presentation of the report of a high standard?</td>
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<td>• Are illustrations and tables of a high standard?</td>
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<tr>
<td>• Does the report over use jargon, are abbreviations listed, does the report have typographical errors, and is the standard of English acceptable?</td>
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<tr>
<td>• Is the reference list up to date and does it contain relevant citations?</td>
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<tr>
<td>Overall mark and recommendation</td>
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APPENDIX I : Guidance to students on plagiarism and other forms of academic malpractice

Student name: _____________________________________________________________________

Signature: _____________________________________________________________________

Date: ________________

Introduction
1. As a student, you are expected to cooperate in the learning process throughout your programme of study by completing assignments of various kinds that are the product of your own study or research. For most students this does not present a problem, but occasionally, whether unwittingly or otherwise, a student may commit what is known as plagiarism or some other form of academic malpractice when carrying out an assignment. This may come about because students have been used to different conventions in their prior educational experience or through general ignorance of what is expected of them.
2. This guidance is designed to help you understand what we regard as academic malpractice and hence to help you to avoid committing it. You should read it carefully, because academic malpractice is regarded as a serious offence and students found to have committed it will be penalized. At the very least a mark of only 30% would be awarded for the piece of work in question, but it could be worse; you could be awarded zero (with or without loss of credits), fail the whole unit, be demoted to a lower class of degree, or be excluded from the programme.
3. Academic malpractice includes plagiarism, collusion, fabrication or falsification of results and anything else intended by those committing it to achieve credit that they do not properly deserve. In addition to the advice that follows, your School will give you advice on how to avoid academic malpractice in the context of your discipline. It will also design assessments so as to help you avoid the temptation to commit academic malpractice. Finally, you should take note that work you submit may be screened electronically to check against other material on the web and in other submitted work.

Plagiarism
4. Plagiarism is presenting the ideas, work or words of other people without proper, clear and unambiguous acknowledgement. It also includes selfplagiarism’ (which occurs where, for example, you submit work that you have presented for assessment on a previous occasion), and the submission of material from ‘essay banks’ (even if the authors of such material appear to be giving you permission to use it in this way). Obviously, the most blatant example of plagiarism would be to copy another student’s work. Hence it is essential to make clear in your assignments the distinction between:
   • the ideas and work of other people that you may have quite legitimately exploited and developed,
   and
   • the ideas or material that you have personally contributed.
5. To assist you, here are a few important do’s and don’ts:
   • Do get lots of background information on subjects you are writing about to help you form your own view of the subject. The information could be from electronic journals, technical reports, unpublished dissertations, etc. Make a note of the source of every piece of information at the time you record it, even if it is just one sentence.
   • Don’t construct a piece of work by cutting and pasting or copying material written by other people, or by you for any other purpose, into something you are submitting as your own work. Sometimes you may need to quote someone else’s exact form of words in order to analyse or criticize them, in which case the quotation must be enclosed in quotation marks to show that it is a direct quote, and it must have the source properly acknowledged at that point. Any omissions from a quotation must be indicated by an ellipsis (…) and any additions for clarity must be enclosed in square brackets, e.g. “[These] results suggest… that the hypothesis is correct.” It may also be appropriate to reproduce a diagram from someone else’s work, but again the source must be explicitly and fully acknowledged there. However, constructing large chunks of documents from a string of quotes, even if they are acknowledged, is another form of plagiarism.
   • Do attribute all ideas to their original authors. Written ‘ideas’ are the product that authors produce. You would not appreciate it if other people passed off your ideas as their own, and that is what plagiarism rules are intended to prevent. A good rule of thumb is that each idea or statement that you write should be attributed to a source unless it is your personal idea or it is common knowledge. (If you are unsure if something is common knowledge, ask other students: if they don’t know what you are talking about, then it is not common knowledge!)
6. As you can see, it is most important that you understand what is expected of you when you prepare and produce assignments and that you always observe proper academic conventions for referencing and acknowledgement, whether working by yourself or as part of a team. In practice, there are a number of acceptable styles of referencing depending, for example, on the particular discipline you are studying, so if you are not certain what is appropriate, ask your tutor or the course unit coordinator for advice! This should ensure that you do not lay yourself open to a charge of plagiarism inadvertently, or through ignorance of what is expected. It is also important to remember that you do not absolve yourself from a charge of plagiarism simply by including a reference to a source in a bibliography that you have included with your assignment; you should always be scrupulous about indicating precisely where and to what extent you have made use of such a source.

7. So far, plagiarism has been described as using the words or work of someone else (without proper attribution), but it could also include a close paraphrase of their words, or a minimally adapted version of a computer program, a diagram, a graph, an illustration, etc taken from a variety of sources without proper acknowledgement. These could be lectures, printed material, the Internet or other electronic/AV sources.

8. Remember: no matter what pressure you may be under to complete an assignment, you should never succumb to the temptation to take a ‘short cut’ and use someone else’s material inappropriately. No amount of mitigating circumstances will get you off the hook, and if you persuade other students to let you copy their work, they risk being disciplined as well (see below).

Collusion

9. Collusion is any agreement to hide someone else’s individual input to collaborative work with the intention of securing a mark higher than either you or another student might deserve. Where proved, it will be subject to penalties similar to those for plagiarism. Similarly, it is also collusion to allow someone to copy your work when you know that they intend to submit it as though it were their own and that will lay both you and the other student open to a charge of academic malpractice.

10. On the other hand, collaboration is a perfectly legitimate academic activity in which students are required to work in groups as part of their programme of research or in the preparation of projects and similar assignments. If you are asked to carry out such group work and to collaborate in specified activities, it will always be made clear how your individual input to the joint work is to be assessed and graded. Sometimes, for example, all members of a team may receive the same mark for a joint piece of work, whereas on other occasions team members will receive individual marks that reflect their individual input. If it is not clear on what basis your work is to be assessed, to avoid any risk of unwitting collusion you should always ask for clarification before submitting any assignment.

Fabrication or falsification of results

11. For many students, a major part of their studies involves laboratory or other forms of practical work, and they often find themselves undertaking such activity without close academic supervision. If you are in this situation, you are expected to behave in a responsible manner, as in other aspects of your academic life, and to show proper integrity in the reporting of results or other data. Hence you should ensure that you always document clearly and fully any research programme or survey that you undertake, whether working by yourself or as part of a group. Results or data that you or your group submits must be capable of verification, so that those assessing the work can follow the processes by which you obtained them. Under no circumstances should you seek to present results or data that were not properly obtained and documented as part of your practical learning experience. Otherwise, you lay yourself open to the charge of fabrication or falsification of results.

Finally...

12. If you commit any form of academic malpractice, teaching staff will not be able to assess your individual abilities objectively or accurately. Any short-term gain you might have hoped to achieve will be cancelled out by the loss of proper feedback you might have received, and in the long run such behaviour is likely to damage your overall intellectual development, to say nothing of your self esteem. You are the one who loses.

Further guidance for students can be found at:
www.campus.manchester.ac.uk/medialibrary/tlao/plagiarism-guidance-for-students.pdf
APPENDIX II. EXTRACTS FROM THE CODE OF PRACTICE FOR RESEARCH

General principles
This code is written to preserve the highest professional standards, while striving to maintain an environment that values creativity and flexibility.

- All work must be carried out in accordance with the highest standards of scientific practice. Policies on safeguarding good scientific practice are available from the BBSRC (http://www.bbsrc.ac.uk/funding/overview/good_practice.pdf) and MRC (http://www.mrc.ac.uk/PolicyGuidance/EthicsAndGovernance/GoodResearchPractice/index.htm)

Conduct of research projects
- All research projects should have a written plan with clear objective and milestones.
- All research projects should have a clearly defined experimental design. If appropriate, sample sizes should be determined to ensure sufficient statistical power. Advice on experimental design and on statistics is available from the Faculty of Life Sciences Biostatistician.
- The research group should review objectives and milestones regularly. This would normally form part of regular lab meetings although other forms of review may be appropriate. As a consequence of these reviews staff should be clear of their responsibilities in the project.

Handling of samples and material
- All samples should be clearly labelled and stored in an appropriate location using specialised storages facilities. Where appropriate this information may contain the originator, date, contents and safety information.
- The location of samples and appropriate information to allow their identification should be stored in proper records. This information should allow any sample to be traced to its original source. Where records are maintained by computer, efforts should be made to ensure that they are protected against unauthorised modification.
- All samples should have a well defined disposal route that complies with current health and safety regulations. In many cases, such as for radioactive samples or those containing solvents, well established procedures for disposal are in place. In all cases disposal routes should be identified in COSHH, risk assessments etc. Further information is available in the Faculty health and safety manual, copies of which are available in every laboratory.
- Stored samples should be audited regularly and disposed of when appropriate. Storage facilities such as freezers should be checked regularly and defrosted when appropriate.
- In the case of -80°C freezers, which may contain important perishable samples, it is advised that such freezers are locked and have an alarm that alerts the portering/security staff in the case of an out of hours malfunction.

Record keeping, storage, maintenance and review
- There must be a primary record of all research carried out, in most instances this is generally the laboratory notebook.
- Records of research carried out will remain the property of the Supervisor's department. As such, group leaders may wish to exercise their right to retain notebooks or other primary record of research when individuals leave the Faculty. Staff and postgraduate students may be copy all or part of their data for their own use.
- Other records such as images and data collected on computer from analytical equipment must be clearly labelled and cross-referenced with laboratory notebooks.
- Sensible steps should be taken to prevent unauthorised modification of computer records. Similarly sensible steps should be taken to maintain data security. This might include the duplication of critical entries that are stored elsewhere.
- Information stored on computer records should be backed up regularly. Computers should be kept up to date with software updates, especially for anti-virus software. Under normal circumstance this is carried out as a matter of routine following instructions from the computer helpdesk.
- Data should be stored in accessible and secure locations. In some circumstances it may be prudent to make duplicate copies of very important data.
- All methods and procedures should be clearly documented. Researchers are encouraged to have written standardised procedures that may be cross-referenced with their laboratory notebook. All records must be sufficiently detailed to ensure that, if necessary, all experiments could be repeated within a reasonable timeframe and in a reproducible manner.
- A formal record of the work carried out during the course of a project should be recorded. In many cases the final or interim reports to granting bodies may be appropriate.
Training and competence
- All researchers should have a job description defining their duties and responsibilities. In normal circumstances this would constitute the job description that accompanies all appointments.
- For many activities such as working with radioactivity and genetic modification training courses are compulsory. In some cases courses run by the University Training and Development Unit may be appropriate. For highly specialised work, properly supervised on the job training by appropriately qualified personnel must be provided.
- For post-graduate students, compliance with the Code of Practice for Research should be confirmed at the prescribed meetings (as laid out in the Graduate Training Programme) between the post-graduate student, the supervisor and the advisor.
- An induction course should be compulsory for all new research staff and part of this course should cover their responsibilities under the Code of Practice for Research. For post-graduate students this should be incorporated into the Graduate Training Programme.

Health and Safety
- All work carried out must comply with the relevant health and safety legislation. All risk assessments (including COSHH assessments) MUST be completed/read and signed BEFORE any lab work begins. Supervisors have the initial responsibility to ensure that this happens, not the students.
- University health and safety policy documents are stored at the following web site: [http://manchester.ac.uk/policies](http://manchester.ac.uk/policies)
- The Management of Health & Safety at Work Regulations 1999 (MHSW) include regulations that protect the health and safety of new and expectant mothers who work. This includes female employees who are, or in the future could be, a new or expectant mother i.e. women of childbearing age who are or in the future could be pregnant, have given birth within the previous six months, or are breast feeding. While such staff do not have to inform their Programme Director that they are pregnant or breast feeding, it is important that do so. Once informed, Programme Directors must provide a specific risk assessment in the light of the new circumstances. This will mean reviewing all existing risk assessments and taking appropriate measures dependant upon the work concerned.
- The Faculty health and safety manual is available in every laboratory with further copies available on request.
- Laboratories are subject to regular inspections by the local safety committee to ensure compliance with all relevant regulations.
- Information on Health and Safety may be obtained from the local Safety Officer. For work involving GM or Biological samples, further information may be obtained from the local Biological Safety Officer or from the University Biological Safety Officer.

Facilities and equipment
- It is the responsibility of the individual to ensure that they have received the appropriate training/guidance in how to operate items of equipment.
- All pieces of equipment should be assigned to a member of staff who is responsible for maintaining it in a good working order. The name of the staff member responsible should be displayed on or close to a piece of equipment together with instructions on what to do in the event of a breakdown.
- In cases of anyone finding broken or faulty equipment, it is essential that they immediately inform those responsible for ensuring its repair.
- Equipment should be checked regularly to ensure that it is working properly. Testing of some equipment, such as fume hoods and biological safety cabinets, as well as electrical testing of all electronic equipment, is carried out on a regular school wide basis.
- In some instances, such as the use of ultracentrifuges, it is compulsory to attend a training course prior to using the equipment.
- For major pieces of complex equipment, such as confocal or electron microscopes and cell sorter it may be appropriate to maintain a list of appropriately trained users and restrict unsupervised access to other researchers.

Responsibility and credit
- All staff and graduate students are responsible for maintaining the highest standards of scientific practice.
- Group leaders are responsible for the validity of the data that arises from their laboratory and for ensuring proper auditable procedures are in place to ensure the quality and reproducibility of all data.
- All researchers must be given proper credit for the work that they produce. This may be in the form of authorship/acknowledgements on papers or with regard to discoveries that may have commercial importance. Further information on University policy with regard to intellectual property and commercial exploitation can be obtained from Manchester Innovation.
APPENDIX III.  ILL HEALTH

1) It is a requirement of your registration with the University of Manchester that you register with a local general practitioner. A list of GP practices can be obtained from the Student Health Centre, any University hall of residence or a local Pharmacy. According to guidance issued by the General Medical Council it would not be regarded as good practice for a family member to be the registered GP or to offer treatment except in the case of an emergency.

2) You should always consult your GP (or for emergencies the Accident and Emergency Department of a hospital) if your illness is severe, if it persists or if you are in any doubt about your health. You should also consult your GP if illness keeps you absent from the University for more than seven days including weekends. If you do consult a GP and they consider that you are not fit for attendance at the University, then you should obtain a note from the doctor to that effect or ask them to complete Part III of the University form ‘Certification of Student Ill Health’ copies of which are available at local GP surgeries. You should hand this certificate to your Programme Director, tutor or departmental office as appropriate at the earliest opportunity.

3) If your condition is not sufficiently serious to cause you to seek medical help, then the University will not require you to supply a doctor’s medical certificate unless you are absent from the university due to illness for more than seven days (in which case see b) above). You must, however, contact your department as soon as possible and self-certify your illness (that is complete and sign the ‘Certification of Student Ill Health’ form to state that you have been ill) as soon as you are able to attend your department. You should do this if your illness means you are absent from the University for any period up to seven days (see d.i) or if you are able to attend the University but your illness is affecting your studies (see d.ii and iii).

4) The following sub-paragraphs explain what you should do if your illness affects your attendance at compulsory classes or if you consider that your performance in your studies/ examinations has been impaired.

   a) If you are unwell and feel unable to attend the University to take a compulsory class, assessment or examination then you must seek advice by contacting your department immediately, in person, through a friend or family member, by telephone or by email. This is to ensure that you understand the implications of being absent and the consequences for your academic progress, which might be quite serious. You must do this as soon as possible so that all options can be considered and certainly no later than the day of your compulsory class, assessment or examination. If you do not do this then you will normally be considered to have been absent from the class without good reason, or to have taken the assessment or examination in which case you will be given a mark of zero. You must also complete and hand in a “Certification of Student Ill Health” form on your return.

   b) You may be unwell but are able to proceed with an assessment or examination and yet you feel that your performance will have been impaired. If you wish this to be taken into account as an extenuating circumstance, you must inform your department about this on the day of the assessment or examination and hand in to your department a completed “Certification of Student Ill Health” form. If you leave this until later it will not normally be possible to take your illness into account when assessing your performance.

   c) If, as a consequence of your illness, you wish to seek an extension to a deadline for submitting assessed coursework, you must complete a “Certification of Student Ill Health” form and discuss it with the appropriate person in your department. The application for extension must be made BEFORE the deadline and retrospectively.

   d) You may be under occasional and ongoing medical attention which affects your studies. If so, you should obtain a letter from your physician which should be given to your department before the end of January, May/June or August/September examination period, as appropriate, if you wish your condition to be taken into account as an extenuating circumstance.

Notes:

i) Certifications of Student Ill Health forms are available in all departments and Halls of Residence and a copy is reproduced in this handbook.

ii) Your department will give you guidance on the effect of any absence from your studies or if you consider your illness has affected your studies. If you have repeated episodes of ill health which is affecting your studies, your department may refer you to the Student Health Centre.

iii) If you are found to have been deceitful or dishonest in completing the Certification of Student Ill Health form you could be liable to disciplinary action under the University’s General Regulation XX: Conduct and Discipline of Students.

iv) The use of the “Certification of Student Ill Health” forms by GPs as described above has been agreed by the Manchester Local Medical Committee. A GP may make a charge for completing the form.
THE UNIVERSITY of MANCHESTER

CERTIFICATION OF STUDENT ILL HEALTH

PLEASE READ NOTES OVERLEAF

This form may be used:
(i) For Self Certification by the student (complete Part I only)
(ii) To record advice by a tutor or other appropriate member of staff (complete Part I and II)
(iii) For Formal Certification by a Medical Practitioner (complete Parts I and III). NB: It is not part of your GP’s duties to provide routinely certification for short term illness. If asked to do so, the GP may charge a fee. Read notes overleaf.

Part I  To be completed by the student

Name ____________________________ Date of Birth ________
Student Registration No ________________ Programme _______________________

Details of Medical Condition including times and dates:

Way in which work is affected:

I declare that the above statement is an accurate, complete and honest representation of the facts.

Signed by Student ________________________ Date __________

Part II  To be completed by a member of staff

(To record advice given and/or that the student appeared to be unfit to attend and/or to perform to his/her potential).

Signed by Member of Staff ________________________ Date __________

Part III  To be completed by Medical Practitioner

Name of Doctor ______________________
The above named student is registered with my practice/is or was under my professional care (delete as appropriate). He/she consulted me in relation to the medical condition described on (dates/times, etc):

Further Comments:

Signed ________________________________ Practice Stamp: ______________________
Date ________________
CERTIFICATION OF STUDENT ILL HEALTH – GUIDELINES

These guidelines set out the procedures to be followed by students who fall ill and are absent from the University for brief periods and/or who believe their illness may have affected their academic performance. Students are reminded that they must register with a local GP and must visit their GP for treatment of ill health where necessary. Students should always consult their GP if their illness is severe, if it persists or if they are in any doubt about their health.

Self-Certification – THIS WILL NORMALLY BE THE USUAL PROCEDURE

i) You should use self-certification to explain absences through illness for up to one week (i.e. Seven days including the weekend). You should complete Part I of this form to give the exact dates of the absence and a clear explanation of the reason for it. The form should be handed in to the appropriate office or person in the department immediately after the absence.

ii) You should do all you can to inform your department at the time of your illness and to seek advice. Although you may feel too ill to attend classes or you believe your illness is affecting your performance, you may be able to visit your department. You should give this form to your tutor or other appropriate member of staff and they can use Part II to record the advice given to you and/or that you appeared to them to be unfit to perform to your potential.

Repeated self-certification will normally result in the student being referred to the University Student Health Service for assessment.

Medical Certification

For illness of more than one week:
The university will accept self-certification, as above, for illness of up to one week but if you are ill for longer than this you should obtain a consultation with your GP and ask for your illness to be certified using Part III of this form. Copies of this form are available in local GP practices.

When you visit your GP for treatment or because you are concerned about your health:
As stated above, you should always consult your GP if your illness is severe or if you are in any doubt about your health. If you do this you may ask your GP to certificate your illness and Part III may be used for this purpose. Some practices may make a charge for this.

Illness prior to/or during Examinations

If you are ill immediately prior to or during examinations you must inform your Department immediately and discuss the situation with your personal tutor or other appropriate person in the department. Depending on the circumstances, you may be advised to proceed with the examinations or, instead, to sit the examinations at the next opportunity. You may be asked to self-certify your illness using this form and the appropriate person in the Department will use Part II to record advice given and/or that you appeared to be unfit to perform to your potential. This should be handed in, or posted, to the appropriate office or person in the department as soon as possible.

If you are taken ill during an examination, you should be referred to the University Student Health Centre. The doctor or nurse at the Student Health Centre who sees you will, at your request, complete this form and send it to the department to confirm the visit and ill health.
APPENDIX IV : ACADEMIC APPEALS REGULATION XIX

(i) The purpose of this Regulation is to safeguard the interests of all students. It may be used only when there are adequate grounds for doing so (as specified in paragraph 2 below) and may not be used simply because a student is dissatisfied with the outcome of his or her assessment or other decision concerning their academic position or progress.

(ii) Any reference in these procedures to named officers should be read also as a reference in each case to a delegated nominee.

Scope

1. The Procedure set out herein may be used by students who wish to appeal against a decision of a board of examiners, or a progress committee, or a graduate committee or equivalent body which affects a student’s academic status or progress in the University, including (but not limited to) the following:
   (a) a recommendation to the Senate, pursuant to the provisions of Statute XXI.3, that the student be expelled from the University or be excluded from his or her programme, or element of programme, of study on grounds of unsatisfactory progress or failure to meet academic or professional requirements, or arising from unsatisfactory work and attendance;
   (b) a requirement that the student interrupt his or her studies on grounds of unsatisfactory progress or failure to meet academic or professional requirements;
   (c) a requirement that the student transfers to a programme offering a qualification of lower rank, for example:
      (i) Doctor to Master’s degree;
      (ii) Master’s degree to Diploma;
      (iii) Honours degree to Ordinary degree;
   (d) a decision not to allow the student to progress from Diploma to Master’s degree or from a Master’s to a Doctoral degree;
   (e) a decision not to award a postgraduate qualification and, if appropriate, not to allow resubmission of a thesis or dissertation for a Doctor or Master’s degree;
   (f) the result of a formal assessment or the award of a particular degree classification.

Grounds for Appeal

2. An appeal may be made only on grounds alleging:
   (a) that there exists or existed circumstances affecting the student’s performance of which, for good reason, the board of examiners or committee may not have been made aware when the decision was taken and which might have had a material effect on the decision [Note: if students wish to appeal on such grounds, they must give adequate reasons why this information was not made available prior to the decision being made.];
   (b) that there had been a material administrative error or procedural irregularity in the assessment process or in putting into effect the regulations for the programme of study of such a nature as to cause significant doubt whether the decision might have been different if the error or irregularity had not occurred;
   (c) that there is evidence of prejudice or bias or lack of proper assessment on the part of one or more of the examiners;
   (d) that the supervision or training of the student in respect of research for a dissertation or thesis or equivalent work was unsatisfactory to the point that his or her performance was seriously affected.

An appeal which questions the academic or professional judgement of those charged with the responsibility for assessing a student’s academic performance or professional competence shall not be permitted.

Procedure

3. Before initiating an appeal, a student is strongly advised to discuss the matter with his or her personal tutor, supervisor, programme director or other appropriate person in the School. If the matter remains unresolved, the student may invoke the formal appeal procedure. The student may seek advice and guidance in preparing the appeal from the Students’ Union Advice Centre, or from his or her Faculty or School Office, or from the Office of Student Support and Services.

4. A student may submit an appeal only on his or her own behalf; an appeal submitted by a third party shall not be accepted unless accompanied by written authorisation from the student.

5. An appeal, in the form of a written statement which sets out the grounds of appeal, must be submitted to the appropriate Faculty Office within twenty working days of notification of the result or decision. The student should submit with the statement any documents relevant to the appeal.
6. On receipt of the appeal, a nominated member of staff in the Faculty Office shall initially consider whether it is made on one of the grounds specified in paragraph 2 above. If this test fails, the student shall be notified within ten working days of the appeal being received that the appeal has been rejected, with reasons given. There shall be no opportunity for the student to appeal against this decision within the University.

7. If the appeal is shown to have been made on one or more of the grounds set out in paragraph 2, then the Faculty Officer shall obtain comments on the appeal from the Head of School, Programme Director, Supervisor or other appropriate person. [Note: if, at any time during these initial enquiries, the School or other appropriate body decides, on the basis of the information contained in the appeal, to reconsider the matter about which the appeal has been made and to substitute an alternative outcome, the student shall be notified accordingly and the appeal procedure shall cease.] The student shall be sent a copy of the comments obtained by the Faculty Officer and invited to submit a response. The appeal shall then be considered by the Dean of the Faculty and a senior administrative officer in the Faculty who may determine:

(a) that the appeal does not have substance within the accepted grounds as set out in paragraph 2, in which event the student shall be informed of this decision in writing, normally within twenty working days of the appeal having been received. The student shall be given reasons for the decision. The student has the right of appeal against that decision and may do so in writing to the Registrar and Secretary. The Registrar and Secretary shall review the documents relating to the case in order to determine whether the case has been handled properly and the decision is reasonable in the light of the available evidence. The decision of the Registrar and Secretary shall be final;

(b) that the appeal has identified relevant matters that were not known to those making the original decision or that there had been procedural or administrative errors which might have affected that decision, in which event the case shall be referred back to the original board of examiners or committee for reconsideration taking into account any new information, or any guidance from the Faculty officers. The reconvened board of examiners or committee shall have the power to confirm or alter its original decision. Where the original decision is confirmed, the student shall be given reasons for that decision. There shall be no opportunity for the student to appeal against the decision of the reconvened board of examiners or committee;

(c) that the appeal has raised serious or complex matters which require further investigation and enquiry, in which event the case shall be referred to an Appeal Panel.

[Note: in situations where the Dean was party to the original decision against which the student is appealing, his or her role in considering the appeal shall be taken by another senior academic officer in the Faculty or, if necessary, from another Faculty.]

Appeal Panel

8. The Appeal Panel shall have the following composition, the members being appointed by the Senate and being drawn from Faculties other than those in which the appellant is or has been registered:

A Dean of a Faculty or an Associate Dean (in the Chair);
A chair of a Graduate Committee, a Research Degrees Committee, or an Undergraduate Committee, or equivalent as appropriate;
One other member of academic staff drawn from a panel of such staff appointed from time to time by the Senate.

9. The student shall be given ten working days notice of the date and time of the Appeal Panel meeting and shall be invited to attend the meeting of the Appeal Panel to present his or her case. Where the student decides not to attend, the Panel may proceed in his or her absence. The student may be accompanied at the meeting by a fellow student, a member of staff or a Students’ Union Officer. The student shall be sent copies of all documents to be made available to the Appeal Panel. The Appeal Panel is empowered to call members of staff with knowledge of the case to attend the meeting to give evidence and to correspond with external examiners. The student and the accompanying person shall be permitted to speak and to question any persons giving oral evidence to the Panel.
10. Having considered the evidence, the Appeal Panel may:
   (a) reject the appeal, in which case the student shall be given reasons for the decision. If the appeal is rejected, there is no further right of appeal within the University; or
   (b) refer the matter back to the original board of examiners or committee for reconsideration taking into account the new information or any guidance from the Appeal Panel. The reconvened board of examiners or committee shall have the power to confirm or alter its original decision. Where the original decision is confirmed, the student shall be given reasons for that decision. There shall be no opportunity within the University for the student to appeal against the decision of the reconvened board of examiners or committee; or
   (c) revoke the original decision of the board of examiners or committee and, as appropriate, require the appropriate School to allow the student a further opportunity to satisfy the requirements for continuation on the programme or element of the programme; or
   (d) revoke the original decision not to award a postgraduate research degree or not allow resubmission for a Doctor or Master's degree and to direct that the examiners reconsider their decision for reasons stated; or direct that a fresh examination be held with new examiners to be appointed in accordance with new procedures; or direct that the student be given permission to resubmit the thesis for examination following revision.

Conclusion of the Appeal Process

11. There are no other appeals procedures beyond those detailed above. Students who believe that their case has not been dealt with properly by the University or that the outcome is unreasonable may be able to complain to the Office of the Independent Adjudicator for Higher Education (OIA) if the complaint is eligible under its rules and once all internal procedures have been concluded.

[Note: information about the role of the OIA and the procedure for submitting complaints can be obtained from the Office of Student Support and Services, from the Students' Union Advice Centre or from the OIA website: www.oiahe.org.uk.]

Annual Report

Each year, the Registrar and Secretary shall prepare a report for the Senate on the number and nature of appeals, identifying any general issues that may have arisen.

Further guidance for students can be found at:
http://www.campus.manchester.ac.uk/medialibrary/policies/academicappeals.pdf
APPENDIX V: ADDITIONAL INFORMATION FOR ALL POSTGRADUATE STUDENTS

Policies
Faculty Alcohol & Drugs Policy
www.mhs.manchester.ac.uk/intranet/admingroups/teachingandlearning/usefulguidance/dap.doc

Faculty Communication and Dress Code for Students
www.mhs.manchester.ac.uk/intranet/admingroups/teachingandlearning/usefulguidance/dresscode.doc

Regulation XIX - Academic Appeals
http://www.campus.manchester.ac.uk/ssc/sscforms/pdfdocuments/regulationxix/thefile,19770,en.pdf

Code of Good Research Conduct
http://www.campus.manchester.ac.uk/medialibrary/policies/code-of-good-research-conduct.pdf

Code of Practice for Dealing with Allegations of Misconduct in Research
http://www.campus.manchester.ac.uk/medialibrary/policies/allegations-misconduct-research.pdf

Information Governance Policy
http://www.staffnet.manchester.ac.uk/policies/display/?id=137124&off=RegSec->Risk->Governance

Work and attendance policy
http://www.campus.manchester.ac.uk/medialibrary/policies/workattendancesstudents.pdf

Harassment, Discrimination and Bullying Policy Guidance and Procedure for Students
http://www.staffnet.manchester.ac.uk/policies/display/index.htm?id=101958&off=RegSec->HR->EqualityDiversity

Health & Safety Policy
http://www.campus.manchester.ac.uk/healthandsafety/h&s_policy_current/current_health_and_safety_policy.pdf

Other information
Sickness reporting
http://www.mhs.manchester.ac.uk/intranet/admingroups/postgraduate/research/pgrforms/StudentIll-HealthForm.doc

Research governance / CRB checks – where applicable
If there is a nominated person within your School dealing with this area, please provide their contact details here, plus any specific local guidance.

Security
http://www.staffnet.manchester.ac.uk/personalsupport/security/

Student Support Issues
http://www.staffnet.manchester.ac.uk/personalsupport/disability/

Counselling Service
http://www.staffnet.manchester.ac.uk/personalsupport/counselling/

Careers Service
http://www.careers.manchester.ac.uk/

Careers Blog for International Students @ Manchester
Recently launched, a Careers Blog dedicated to keeping international students at The University of Manchester informed with regular news and upcoming events.
http://manchesterinternationalcareers.wordpress.com/
Occupational Health Services for Students
http://www.campus.manchester.ac.uk/healthandsafety/studentOH.htm

Personal Development Planning
http://www.campus.manchester.ac.uk/tlso/learning/pdp/

International Advice Team
http://www.campus.manchester.ac.uk/ssc/internationalteam/

A Personal Safety Guide for International Students
http://www.studentnet.manchester.ac.uk/medialibrary/study/safety-international-student-guide.pdf

Crucial Guide Live for PG Students
www.studentnet.manchester.ac.uk/crucial-guide/

Mature Students Guide
http://www.manchester.ac.uk/medialibrary/study/maturestudentshandbook.pdf

Students Union
http://www.umsu.manchester.ac.uk/

Health & Fitness
http://www.staffnet.manchester.ac.uk/personalsupport/health/

Policy on mitigating circumstances
http://www.campus.manchester.ac.uk/tlso/map/teachinglearningassessment/assessment/sectionc-reachingdecisionsfromassessment/policyonmitigatingcircumstances/

Academic appeals
www.campus.manchester.ac.uk/medialibrary/policies/academicappeals.pdf
APPENDIX VI: LEARNING RESOURCES INFORMATION

Your MRes Administrator and/or the MRes Programme Director will brief you on available learning resources. However, useful information on some of these is provided here.

Learning Resources within the School
Access to computers, printers, email and the internet is available at several computer clusters within the School including the Multiuser laboratories on the ground floor of Stopford or in the new medical teaching block. Additionally, there are postgraduate computing clusters in each Research Section.

University Learning Resources
With over 3.5 million books, some 7,000 current periodical subscriptions and a wide range of electronic resources, the John Rylands University Library of Manchester (JRULM) http://www.library.manchester.ac.uk/ is one of the largest academic libraries in the UK. Turnstiles operated using your University swipcard - which also serves as your Library card, control admission to the Library, which is located at the end of Burlington Street. The computer catalogue of the Library provides details of the books and periodicals available and can be used to reserve and renew books. It can be accessed using dedicated terminals distributed throughout the Library and through the Library’s World Wide Web site. Graduate students may borrow 12 books plus additional books from a Short Loan collection that contains duplicate copies of books in heavy demand. The majority of periodicals are restricted to the Library to ensure ready availability. Any material that is not available in the Library may be ordered through the Document Supply Unit. The Main Information Desk is at the top of the escalator where staff will be pleased to help you to make best use of the Library and the computing facilities. Additional information desks are distributed throughout the Library together with self-service photocopiers. A range of guides is available including a general Library guide and Bookmark Guides, which contain basic information specific to individual subjects and a series of General Guides which cover various Library services and facilities. In addition, a series of Information Sources Guides, which describe the printed and electronic information sources relevant to particular subjects are available, together with leaflets describing the content and use of particular electronic databases. Nearly 200 electronic services, including the main scientific, engineering, biological and medical databases, are available through a Library web-based service called Rybase. About 250 computers in the Library can be used to access these services and the other resources available through the University network, including word-processing and other software, e-mail and the Internet. The electronic databases provided by the Library may also be accessed from elsewhere on the University network. The Library WWW site provides information and news about the Library and its services, access to the Library catalogue and links to electronic publications and the catalogues of other libraries. A section on navigating the Internet provides access to Internet subject guides and links to a wide range of information resources and Internet search tools. Each year sessions are arranged to introduce new students to the Library and the information resources that are available. A Training Suite in the Library is used to provide hands-on training in the use of electronic databases. Course directors normally arrange these sessions, however, Library Subject Specialists can provide additional tours and training as required.

Guide to Referencing
How to reference: - adapted by Faculty of Humanities with permission from The University of Manchester School of Nursing, Midwifery and Health Visiting Study Skills Workbook by Steven Pryjmachuk http://www.humanities.manchester.ac.uk/studyskills/assignments/reference/

Available Software
A new system opened over the summer which gives you access to download software from a catalogue of site-licensed software packages – such as SPSS and Reference Manager. The system, called the Electronic Software Distribution system, has an intuitive, on-line-shopping-style web interface, and may be accessed day or night from on-campus machines or from off-campus machines which are securely connected to the campus network using the Virtual Private Network service. Site-licensed software is now available free-of-charge without having to wait for the media to be copied. For quick and convenient access to software, visit: http://www.software.itservices.manchester.ac.uk/
APPENDIX VII: ORDINANCES AND REGULATIONS

THE UNIVERSITY OF MANCHESTER REGULATIONS FOR THE PRESENTATION OF DISSERTATIONS CAN BE OBTAINED FROM THE FACULTY GRADUATE OFFICE OR AT

http://www.campus.manchester.ac.uk/medialibrary/tlao/Presentation-of-dissertations.pdf

THESE REGULATIONS MUST BE ADHERED TO AND THEREFORE A COPY MUST BE READ BEFORE SUBMISSION

NOTICE OF SUBMISSION FORMS CAN ALSO BE COLLECTED FROM THE FACULTY GRADUATE OFFICE OR FROM

http://www.mhs.manchester.ac.uk/intranet/pg/taught/examinations/

A NOTICE OF SUBMISSION FORM MUST BE HANDED INTO THE FACULTY GRADUATE OFFICE 6 WEEKS BEFORE YOU SUBMIT YOUR DISSERTATION

CONTACT:

THE FACULTY OF MEDICAL AND HUMAN SCIENCES GRADUATE OFFICE

Telephone: 0161 275 1437

Email: mhspg-submissions@manchester.ac.uk  http://www.mhs.manchester.ac.uk

PGT Regulations:

http://www.staffnet.manchester.ac.uk/documents/display/index.htm?id=102051&off=RegSec-%3EAcReg-%3ETLSO

Ordinances and Regulations:

Dissertation submission is now set at 51 weeks after the start of teaching on your programme, The Ordinances and Regulations: Degree of Master, Postgraduate Diploma and Postgraduate Certificate (June 2007) can be found at the following link:


An exert from the Ordinance and Regulations is found below:

5. Progression and Assessment

a. Regulations for work and attendance are outlined in the University’s General Regulations, XX.

b. Students for the Degree of Master, Postgraduate Diploma or Postgraduate Certificate will present themselves for assessment of their progress as required in the programme handbook.

c. Students will normally successfully complete the taught component of the Degree of Master before they can progress to the dissertation (or equivalent), and must successfully complete the taught component before submission of the dissertation (or equivalent).

d. The pass mark for a Degree of Master will be 50%.
e. The pass mark for a Postgraduate Certificate and a Postgraduate Diploma will be 40%. A pass mark of 50% may be approved by the Faculty where required on discipline-specific grounds or for some professionally accredited programmes.

f. A student who fails to satisfy the Examiners in any assessment of taught units may be permitted to resubmit the assessment or retake the examination on one further occasion, up to a maximum of 45 credits. The student will take this opportunity during the next available University examination period or within a period as published in the programme handbook.

g. The maximum mark to be awarded for resubmitted coursework or retaken examination will normally be 50% for the Degree of Master and 40% for the Postgraduate Diploma (or 50% where the higher pass mark has been approved). This mark will be used in computing the overall mark for the course unit.

h. All Degrees of Master will normally have exit points for the award of a Postgraduate Certificate and a Postgraduate Diploma. These will be clearly defined in terms of level of achievement and will correspond to 60 and 120 credits respectively. Students who do not achieve the required pass mark in the taught element for the Degree of Master, but who do achieve the required pass mark for a Postgraduate Diploma or Certificate, may be awarded a Postgraduate Diploma or Certificate, as appropriate, provided they have successfully completed the requisite number of credits including no more than the maximum number of credits allowed as APL for the exit award under 4b.

i. Students may, in exceptional mitigating circumstances, and with prior permission of the Faculty, be allowed to re-take the entire programme subject to all outstanding fees being paid.

j. Students may be awarded a compensated pass for a Degree of Master when they fail in units of the taught component totalling no more than 30 credits and receive a mark of at least 40% but less than 50% for those failed units. The student must also have gained an overall mark, calculated as an average of the numerical marks awarded for each unit weighted by the credits for that unit (referred to subsequently as “weighted average”), for all taught units of 50% or more in order to be granted the compensated pass.

k. Students may be awarded a compensated pass for a Postgraduate Diploma programme when they fail in units totalling no more than 30 credits and receive a mark of at least 30% but less than 40% for those failed units. The student must also have gained an overall weighted average for all taught units of 40% or more in order to be granted the compensated pass. Where the pass mark is set at 50% the compensatable units must receive a mark of at least 40% but less than 50%.

l. Students may be awarded a compensated pass for a Postgraduate Certificate programme when they fail in units totalling no more than 15 credits and receive a mark of at least 40% but less than 50% for those failed units. The student must also have gained an overall weighted average for all taught units of 40% or more in order to be granted the compensated pass.

m. 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 in units at the first attempt exceed 45 credits will be deemed to have failed the programme.

n. Students who fail in units totalling more than 45 credits at Masters level will be judged against the requirements for a pass on the Postgraduate Diploma programme. If this results in their failing units totalling fewer 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 a Postgraduate Diploma.

o. Faculties may allow Schools on discipline-specific grounds to adopt more stringent requirements, including (but not restricted to):

- specifying core units for which no compensatable fail mark will be available;
- increasing the proportion of the total credit that must reach the pass mark (ultimately to the total credits available, thus allowing no compensatable fails);
- setting a higher pass mark overall.
6. Dissertation (or equivalent)
   a. Dissertations should be submitted in accordance with the information set out in the University’s Guidance Notes for the Presentation of Dissertations.
   b. Dissertation (or equivalent) submission dates will normally be 51 weeks after the start of the programme and will be published in programme handbooks. Submission dates for part-time students will reflect the length of the programme (pro-rata compared to a full-time programme).
   c. At the recommendation of the Board of Examiners, students will normally be allowed one resubmission of a failed dissertation (or equivalent), project or extended essay 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% (where the pass mark is 50%), or 30% (where the pass mark is 40%).
   d. Students who achieve a dissertation (or equivalent) mark of at least 40% but less than 50% may accept the award of Postgraduate Diploma with no further work required or resubmit the dissertation (or equivalent) on one occasion, at the discretion of the Board of Examiners, for the award of the Degree of Master. A student achieving a mark below 50% for a resubmitted dissertation (or equivalent) will be awarded a Postgraduate Diploma.
   e. The maximum mark to be awarded for resubmitted dissertation (or equivalent), project or extended essay will normally be 50% for the Degree of Master and 40% (or 50% where the pass mark is 50%) for the Postgraduate Diploma.
   f. A student may exceptionally be required to attend an examination, orally or otherwise, in the subject of their dissertation (or equivalent), project or extended essay, or a related matter.

7. Recommendation for Award
   a. Pass Marks
      • To obtain a pass for a Degree of Master, the student is required to obtain both a weighted average of 50% or more on the taught element (after compensation or reassessment as necessary), and 50% or more on the dissertation (or equivalent) (after reassessment as necessary).
      • To obtain a pass for a Postgraduate Diploma or Certificate, the student is required to obtain a weighted average of 40% or more on the taught element (after compensation or reassessment as necessary). If there is a project or extended essay a mark of 40% or more (after reassessment as necessary) on this element is also required to pass. A pass mark of 50% for a Postgraduate Diploma may be approved by the Faculty where required on discipline-specific grounds or for some professionally accredited programmes.
      • The Faculty will, on report from the Examiners, recommend to Senate the award of the Degree of Master or Postgraduate Diploma or Postgraduate Certificate for those students who have completed all requirements of the regulations and satisfied the Examiners. The awarding certificate will include the title of the programme.
   
   b. Distinction
      • A student on a Degree of Master or Postgraduate Diploma programme who has satisfied all the following criteria will be awarded a distinction:
        A. A weighted average at first assessment of 70% or more in the taught component of the programme with no mark below 50% in any course unit.
        B. A mark of 70% or more for the dissertation (or equivalent), project or extended essay where this is part of the programme.
        C. A Pass at first assessment in components of the programme where only a Pass/Fail is recorded.
      • Students who have been reassessed in any unit(s), or individual components of any unit(s), or have been granted a compensated pass will not be eligible for the award of distinction.
      • Students on Postgraduate Certificate programmes will not be eligible for the award of distinction.
   
   c. Merit
      • A student on a Degree of Master or Postgraduate Diploma programme who has satisfied all the following criteria will be awarded a merit:
A. A weighted average at first assessment of 60% or more in the taught component of the programme with no mark below 50% in any course units.
B. A mark of 60% or more on the dissertation (or equivalent), project or extended essay where this is part of the programme.
C. A Pass at first assessment in components of the programme where a Pass/Fail is recorded.

- Students who have been reassessed in any unit(s), or individual components of any unit(s), or have been granted a compensated pass, will not be eligible for the award of merit

- Students on Postgraduate Certificate programmes will not be eligible for the award of merit.