Course Handbook

MRes in Clinical Research

Pathway: MRes Human Nutrition

Academic year 2015/2016

Division of Experimental Medicine
Department of Medicine
Imperial College London

Course website -
http://www1.imperial.ac.uk/departmentofmedicine/postgraduate/mresclinicalresearch/
The Graduate School
Welcome from Professor Sue Gibson, Director of the Graduate School

The Graduate School has several roles but our main functions are to provide a broad, effective and innovative range of professional skills development courses and to facilitate interdisciplinary interactions by providing opportunity for students to meet at academic and social events. Whether you wish to pursue a career in academia, industry or something else, professional skills development training will improve your personal impact and will help you to become a productive and successful researcher.

Professional skills courses for Master's students are called “Masterclasses” and they cover a range of themes, for example, presentation skills, academic writing and leadership skills (http://www3.imperial.ac.uk/graduateschool/currentstudents/professionalskillsmasters/masterclassprogramme). All Masterclasses are free of charge to Imperial Master’s students and I would encourage you to take as many as you can to supplement your academic training. The Graduate School works closely with the Graduate Students’ Union (GSU) and is keen to respond to student needs so if there is an area of skills training, or an activity that you would like us to offer, but which is not currently provided, please do get in touch (graduate.school@imperial.ac.uk).

The Graduate School also runs a number of exciting social events throughout the year which are an opportunity to broaden your knowledge as well as to meet other students and have fun. Particular highlights include the Ig Nobel Awards Tour Show, the Chemistry Show and the 3 minute thesis competition. You should regularly check the Graduate School's website and e-Newsletters to keep up to date with all the events and training courses available to you.

Finally, I hope that you enjoy your studies here at Imperial, and I wish you well.

Sue Gibson
Welcome from Dr Janet De Wilde, Head of Postgraduate Professional Development

I would like to welcome you to the graduate school courses for postgraduate professional development. The team of tutors here come from a wide variety of experiences and we understand just how important it is to develop professional skills whilst undertaking postgraduate studies and research. Not only will this development improve success during your time at Imperial College, but it will also prepare you for your future careers. We are continually working to develop and innovate the courses we offer and over this year you will see many new offerings both face to face and online. I encourage you to explore and engage with the diverse range of opportunities on offer from the team at the graduate school and I wish you well in your studies.

Janet De Wilde
As soon as you begin your postgraduate studies at Imperial College you automatically become a member of the Graduate School. Membership means you become part of a wider community, broadening and enriching your academic experience. http://www3.imperial.ac.uk/graduateschool

Graduate Students’ Association - https://union.ic.ac.uk/gsa/

The Graduate School offer a selection of skills programmes. During the introductory week, students are advised to attend the talk held by the Graduate School which will outline the opportunities and programmes available, further details at the following link - http://www3.imperial.ac.uk/graduateschool/currentstudents/professionalskillsmasters
This handbook is designed to provide students with key information on the MRes in Clinical Research offered by the Division of Experimental Medicine, Department of Medicine.

Please note that all dates are valid for the academic year 2015-16 and are subject to change. Please check your Imperial College email regularly to ensure that you are up to date with any changes. You should retain this handbook for future reference.
Part A – Overview / Introduction

Introduction

Welcome to the MRes Clinical Research programme (HN pathway) at Imperial College London.

The course comprises three pathways (MRes Translational Medicine, MRes Human Nutrition and MRes Diabetes and Obesity).

The principal intention of this course is to create a pathway into human nutrition research to enable the student to design and implement research and independently manage projects in the field of human nutrition. Nutrition is a root course of many chronic diseases and forms the cornerstone of many government policies to improve the health of the nation. There is a shortage of people with the skills and understanding to investigate nutritional problems, the demands of setting up, maintaining and completing human research projects in both a clinical and community setting is substantial. The design of this course provides a structured approach to developing the skills that will enable the student to develop their own clinical human nutrition research portfolio or assist in the management of an existing portfolio. Completion of this course will enable the individual to undertake a role based in human clinical research. The course will provide greater insight into the academic; clinical and practical; and regulatory requirements of human nutrition research. We foresee the course being a stepping stone to a PhD program of research, or to gaining a position in the food industry.

Programme aims:

- To provide students with the insight to start understanding the complexities of human nutrition research
- To provide students with the theoretical aspects of supporting and managing clinical research. To this end, the lecture programme will cover major aspects of clinical trial regulation and governance, study design and implementation, clinical skills across some therapeutic areas, and research dissemination skills.
- To enable students to put the underpinning theory into practice by contributing to clinical research, taking responsibility for a project and producing a project report.
- To give students the opportunity to obtain an understanding of research methodologies by studying in a World-leading clinical research environment.
- Familiarise students with the challenges facing research in healthcare and translating evidence into practice.

The programme has been deliberately designed to cover a broad spectrum of clinical specialities including oncology, metabolic medicine, cardiovascular medicine, and neuroscience. Whilst all students will be required to follow this broad curriculum they will be provided with the opportunity to specialise in human nutrition.
Students who successfully complete the course will have knowledge and understanding of:

- The whole research process from question definition to write up and dissemination.
- The need for a critical approach to all aspects of the process and specific critical appraisal skills for reviewing literature.
- The range of research methodologies available and how to decide which to use.
- How new interventions of all kinds, with therapeutic potential, are assessed in humans (volunteers and patients).
- Patient safety assessment.
- Good Clinical Practice.
- The critical pathway for drug development.
- Clinical trial design.
- Common statistical techniques.
- Detailed knowledge and understanding of the essential facts, concepts, principles and theories relevant to the student’s theme of subsequent research.
- Management and communication skills, including definition of research questions, project design, decision processes, critical thinking, teamwork, written and oral reports, scientific publications.
The course is structured along two complementary lines: the lecture programme and individual student research projects.

A list of course readings is appended at the back of this handbook.

http://www3.imperial.ac.uk/students
For more general information on College and Faculty student issues, please consult the online College Student pages in the link above. There is important information about start of session arrangements, student loans and Council Tax to which you should pay particular attention. Inevitably, a few of you will encounter situations that are not covered in the handbook; if so, you are invited to seek advice from your course administrator, course organiser or any appropriate College staff.
<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Email/Contact Information</th>
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</thead>
<tbody>
<tr>
<td>Course Director, Chair of Examiners</td>
<td>Professor Martin Wilkins</td>
<td><a href="mailto:m.wilkins@imperial.ac.uk">m.wilkins@imperial.ac.uk</a></td>
</tr>
<tr>
<td>Pathway Lead/Course Director Head of the Nutrition and Dietetic Research Group</td>
<td>Professor Gary Frost</td>
<td><a href="mailto:g.frost@imperial.ac.uk">g.frost@imperial.ac.uk</a></td>
</tr>
<tr>
<td>Pathway Lead, Therapy Research Lead, and Research Dietician</td>
<td>Dr Mary Hickson</td>
<td><a href="mailto:mary.hickson@imperial.nhs.uk">mary.hickson@imperial.nhs.uk</a></td>
</tr>
<tr>
<td>College Tutor</td>
<td>Dr Michael Jones</td>
<td><a href="mailto:m.d.jones@imperial.ac.uk">m.d.jones@imperial.ac.uk</a></td>
</tr>
<tr>
<td>External Examiner</td>
<td>TBC</td>
<td></td>
</tr>
<tr>
<td>MRes Course Committee</td>
<td>Prof Martin Wilkins</td>
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<td></td>
<td>Prof Gary Frost</td>
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<td></td>
<td>Dr Rohini Sharma</td>
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<td></td>
<td>Dr Marion Watson</td>
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<td></td>
<td>Dr Mary Hickson</td>
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<td>Dr David Lewis</td>
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<td>Dr David Owen</td>
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<td></td>
<td>Dr Les Huson</td>
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</tr>
<tr>
<td>Course Administration</td>
<td>Miss Fiona Bibby</td>
<td><a href="mailto:f.bibby@imperial.ac.uk">f.bibby@imperial.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Tel: 020 8383 6114</td>
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<tr>
<td></td>
<td>Office location: 173B Hammersmith House</td>
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<tr>
<td></td>
<td>(1st Floor).</td>
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</tr>
<tr>
<td>Education Manager Department of Medicine</td>
<td>Mr Chris Neill</td>
<td><a href="mailto:c.neill@imperial.ac.uk">c.neill@imperial.ac.uk</a></td>
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<td></td>
<td>Tel: 020 8383 1939</td>
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</table>

If you have any queries or concerns regarding the programme, please contact Fiona Bibby (course administrator) in the first instance.

**Student representatives**

Representatives will be elected through the college union, they will attend the Staff-Student Committee meetings in order to voice concerns, provide feedback, and relay messages to all students. The minutes of the Committee Meetings will be circulated to the students.

For further details on student representation please see the following link - [https://www.imperialcollegeunion.org/your-union/your-representatives](https://www.imperialcollegeunion.org/your-union/your-representatives)

**College committee good practice guides** - [https://workspace.imperial.ac.uk/registry/Public/Procedures%20and%20Regulations/Quality%20Assurance/Staff-Student%20Committees%20Good%20Practice%20Guidelines.pdf](https://workspace.imperial.ac.uk/registry/Public/Procedures%20and%20Regulations/Quality%20Assurance/Staff-Student%20Committees%20Good%20Practice%20Guidelines.pdf)
**Important contact information**

**Course postal address**

MRes Clinical Research  
Imperial College London, Hammersmith Campus  
Division of Experimental Medicine, Department of Medicine  
(1st floor Hammersmith House – CPG6)  
Du Cane Road, London W12 0NS

**Other important contacts**

**General UK emergency contact**  
999 – dial in case of danger, crime or risk to life

**Hammersmith Campus security contacts**  
Ext 3333 - College emergency 24h  
Head of security at Hammersmith Campus: Cetin Avsar  
[avsar@imperial.ac.uk](mailto:avsar@imperial.ac.uk)  
Tel: 020 8383 2242

**ICT helpdesk**  
020 759 49000  
[service.desk@imperial.ac.uk](mailto:service.desk@imperial.ac.uk)
Programme Structure

*Programme specification is available to view on the course webpages* - https://www.imperial.ac.uk/medicine/study/postgraduate/masters-programmes/mres-clinical-research/programme-structure/

The course comprises of a taught element – 4 modules assessed by 2 exams and 1 piece of coursework and a research element (thesis and viva), please see the following assessment breakdown –

**Examination and Assessment**

<table>
<thead>
<tr>
<th>Elements</th>
<th>Weighting</th>
<th>Components</th>
<th>Assessment</th>
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</thead>
<tbody>
<tr>
<td>Taught element</td>
<td>30%</td>
<td>2 written papers (10% each)</td>
<td>Double marked internally and moderated by external examiner</td>
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<tr>
<td></td>
<td></td>
<td>1 piece of coursework (10%)</td>
<td></td>
</tr>
<tr>
<td>Research element</td>
<td>70%</td>
<td>Thesis (70%)</td>
<td>Double marked internally and approved by board of examiners after viva</td>
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<tr>
<td></td>
<td></td>
<td>Viva (30%)</td>
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*Taught element* –
The written examinations are designed to assess the taught part of the programme structured in 4 modules. There will be two written exams each of which will be 2 hours long.

- 1st Exam – the paper will cover material from modules 1&2 (approximately 1 hour per module).
- 2nd Exam – the paper will cover material from module 4 and the pathway specific module (approximately 1 hour per module).
- Critical appraisal coursework assignment - this will be completed in June, with students being required to appraise a given paper as structured essay (approximately 1 full week to complete).

*Research Element* -
A project report thesis and viva voce examination will constitute the final assessment. Students will also be asked to produce a poster for their Viva examination (the poster is not assessed but it is important to produce a clear poster to illustrate your work).

**Academic requirements for completion of programme** -
To qualify for the award of MRes students must complete all the course requirements and must achieve a pass mark in the both the taught element (average of the combined examinations and coursework) and in the research element (research project and viva voce), with the pass mark set at
50%. The weighting of marks contributing to the degree is 30:70, for the examinations and research project respectively.

Regarding the final result, please see below -

1) The Board of Examiners may award a result of merit where a candidate has achieved an aggregate mark of 60 per cent or greater across the programme as a whole AND has obtained a mark of 60 per cent or greater in each element with the exception of one element AND has obtained a mark of 50 per cent or greater in this latter element.

2) The Board of Examiners may award a result of distinction where a candidate has achieved an aggregate mark of 70 per cent or greater across the programme as a whole AND has obtained a mark of 70 per cent or greater in each element with the exception of one element AND has obtained a mark of 60 per cent or greater in this latter element.

Summary of grades, marks and their interpretation for module exams and final MRes degree classification:

GRADE | MARKS | INTERPRETATION
--- | --- | ---
A | 70% - 100% | Marks represent a distinction performance
B | 60% - 69% | Marks represent a merit performance
C | 50% - 59% | Marks represent a pass
D | 40% - 49% | Marks represent a fail performance at MRes level
F | 0% - 39% | Marks represent a critical fail performance (with major shortcomings)

- In order to pass the taught element of the programme, students must achieve an overall grade of 50% or higher. If a student obtains 40-49% (a D grade) in a module exam/coursework, this would be classed as a fail, but they could still pass the taught element if their overall average of was equal to or greater than 50%. Should students express a wish to re-sit a module exam/coursework for which they have obtained a D grade (40-49%), the decision would be made by the Board of Examiners.

- If students obtain a critical fail (0 – 39%), the mark cannot be included within the overall average and they will be required to re-sit the component(s) at the next naturally occurring sitting (usually the following year). Only one re-sit will be permitted for each component e.g exam/coursework. A critical fail of the same exam/coursework twice, will result in failure of the taught side of the course. This means that students will not be eligible for the full MRes award but may be eligible to obtain credits for the research side (thesis and viva) and vice versa regarding failure of the research side.

- If a student receives a D grade (40-49%), in both the first sit and the re-sit, on that occasion the higher of the two marks would be taken.

- Re-sits will be capped at 50%, the college will also charge a resit fee – currently this is recorded as a flat rate of £200. Re-entry candidates may also not normally be considered for a merit or distinction classification.
Exam/coursework feedback – students are able to obtain feedback on their exam papers through the course administrator. Students who receive D or F grades are encouraged to contact their course organiser to discuss. Students will be provided with mock questions/past paper(s) for each exam.

Upon completion of the course students will receive an overall result e.g pass, merit, distinction. They will also receive:

- Overall mark for the 2 exams and coursework
- Combined mark for thesis and viva

The course administrator can provide further guidance on this if requested e.g thesis B grade, viva A grade.

The Board of Examiners will comprise the course director as chair, a panel of internal examiners from the course management committee, and external examiners. The principal function of the external examiner is to ensure that standards achieved by students on this MRes course are satisfactory, and that recommended awards are consistent with similar courses across the UK.

Detailed information on all post-graduate examination rules and regulations including student progress, re-sits, failure, extensions, etc., can be found on the College Registry web pages at the following link – http://www3.imperial.ac.uk/registry/proceduresandregulations/regulations

**Mitigating Circumstances**

Extenuating circumstances can be outlined by students in relation to written exams/coursework or the written research project. Students must complete the appropriate paperwork which can be obtained from the course administrator (or on the Imperial College website - http://www3.imperial.ac.uk/registry/proceduresandregulations/policiesandprocedures/examination assessment) at least 5 working days prior to EACH assessment. You will be asked to supply reasoning for your request.

**Plagiarism**

Important notice: details of plagiarism guidelines are appended at the end of this document (page 33). Students are advised to read the College information on plagiarism at the following links –

http://www3.imperial.ac.uk/registry/exams/examoffences

http://www.imperial.ac.uk/admin-services/library/learning-support/plagiarism-awareness/

The coursework assignment and thesis are submitted through Turnitin by the course administrator. Students SHOULD NOT submit their work through Turnitin themselves.
Calendar of Important dates

Key Term Dates: academic year 2015-2016

**Autumn Term 2015**
- Start of Term: Saturday 3 October
- End of Term: Friday 18 December

**Spring Term 2016**
- Start of Term: Saturday 9 January
- End of Term: Friday 23 March

**Summer Term 2016**
- Start of Term: Saturday 23 April
- End of Term: Friday 24 June

Timelines for individual research and writing up during the summer period will be agreed between the student and the supervisor.

**Project hand in & viva**

<table>
<thead>
<tr>
<th>Event</th>
<th>Full time students</th>
<th>Part time students</th>
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</thead>
<tbody>
<tr>
<td>Thesis hand in deadline</td>
<td>7th August 2015</td>
<td>5th August 2016</td>
</tr>
<tr>
<td>Poster hand in deadline</td>
<td>4th September 2015</td>
<td>2nd September 2016</td>
</tr>
<tr>
<td>Vivas are usually around 20th Sept</td>
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<tr>
<td>End of academic year (course ends)</td>
<td>end of September 2015</td>
<td>end of September 2016</td>
</tr>
</tbody>
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**Upon completion of the course**

Students completing each September will attend the graduation ceremony the following May. The college will contact students directly as the time approaches, for further information please view the graduation webpages - [http://www3.imperial.ac.uk/graduation](http://www3.imperial.ac.uk/graduation)

Students are encouraged to remain in contact with Imperial College after they have graduated, for further information regarding college alumni, please see the following link - [http://www3.imperial.ac.uk/alumni](http://www3.imperial.ac.uk/alumni)

Student’s Imperial email addresses will remain active for 1 year after the completion of the course.

**College closure dates and holidays**

Please refer to the College calendar when booking your holidays. Attendance at all lectures and journal clubs/group meetings is compulsory for all students. As your holidays should not interfere with your agreed project timeline, we recommend that you discuss your plans in advance with all of
your supervisors. All College closure dates can be found at:
http://www3.imperial.ac.uk/hr/procedures/leave/collegeclosures

Expectations

What to expect from the course and what is expected from you.

Attendance
Students are required to attend all lectures. If you are unwell, please let the course administrator know. Attendance is monitored throughout the lecture timetable.

Each pathway will have regular meetings to discuss and present their research and hold journal clubs. At the start of the course students are provided dates for the year. Attendance is monitored at each meeting.

Students will be required to submit regular reports outlining the status of their projects and will be provided with submission dates at the start of the year. Students will be expected to produce a report at each deadline. Reports need to be signed off by supervisors and emailed to the course administrator.

Please see further details regarding student attendance requirements in the appendix of this document (page 32).

Sickness
If you are unwell and unable to attend lectures/group meetings, please let the course administrator know. If you are unwell over a period of time and you are concerned that this may have an effect on the course, please inform the course administrator and you may be advised to obtain a doctor’s note. If you are unable to attend an exam due to illness – you will need to provide a doctor’s note.

Progress and performance
Staff will be happy to provide feedback on exam performance if requested. Your project progress will be monitored through regular meetings with your supervisors, group meetings with the course organisers and submission of a report.

Communication
Please ensure you check your ICL email account regularly as you will be informed of any important announcements or important messages via email.

Code of Student Discipline
This Code of Student Discipline provides for the hearing of complaints concerning breaches of discipline by students, and for rights of appeal where appropriate, and sets down the penalties that may be imposed, including termination of membership of the College
http://www3.imperial.ac.uk/secretariat/collegegovernance/provisions/ordinances/e2

Student Complaints and Appeals
http://www3.imperial.ac.uk/registry/proceduresandregulations/policiesandprocedures/complaintsappeals
Registering your Concern
As part of our continuing care to students, we would like to draw your attention to the charter and statutes which covers the course. Within this you will find the correct procedure for registering your concerns and the process for escalating it:
http://www3.imperial.ac.uk/secretariat/collegegovernance/provisions/ordinances/e3

Blackboard (VLE)
At the start of the course you will be set up with access details to Blackboard. Blackboard allows students to easily access course documents such as lectures slides, which are uploaded during the module weeks.

- Link to Blackboard https://bb.imperial.ac.uk/

For full details on how to use Blackboard, please refer to the guide provided in your welcome pack.

Campus Information

Location and other important sites

Campus maps - all Imperial College campus locations and relevant information can be found on the College website - http://www3.imperial.ac.uk/campusinfo

Hammersmith Campus
Reaching Hammersmith Campus
By bus: Buses No. 7, 70, 72, 272, 283 all stop in front of the hospital
By Tube: Take the Central Line to White City, East Acton or the Hammersmith and City line to Wood lane. The Campus is a 15 minute walk from any of these stations.

NIHR/Wellcome Trust Imperial CRF
This new Clinical Research Facility (which is part of the Wellcome Trust Clinical Research Network) has been completed within the Hammersmith Campus site and was opened in May 2012. As well as expanding the capacity for clinical research, the new Centre capitalises on existing academic-industry collaborations and provides extensive opportunities for undertaking more clinical trials, in both healthy volunteers and patients.

South Kensington Campus
Travel by tube (South Kensington is on the Circle, Piccadilly and District lines)
Please note bus number 70 from outside Hammersmith Hospital goes direct to the Imperial College South Ken campus and will take approx 45 mins – 1 hour depending on traffic.
Part B – What you can expect

Facilities

Library Facilities & Students lockers
Please consult the Library WebPages for detailed information on all Imperial College libraries.
http://www3.imperial.ac.uk/library

The Hammersmith Campus library is located on the 1st floor, Commonwealth Building. The library holds books and an excellent range of periodicals covering all of the themes of the MRes programme.

St Mary’s Campus
Travel by tube (Paddington is on the Circle, Hammersmith and City lines, District and Bakerloo)
Please note bus number 7 from outside Hammersmith Hospital goes direct to Paddington and will take approx 45 mins – 1 hour depending on traffic. It is then a very short walk to the campus buildings.

Among the collection’s strengths are:
Endocrinology, Genetics, Haematology, Immunology, Molecular biology, Neonatology, Obstetrics & gynaecology, Oncology, Pathology, Radiology. The library staff provide guided tours of the facilities and training in on-line literature searching.

Telephone: +44 (0)20 8383 3246
Email: lib.hamm@imperial.ac.uk
**Student lockers**

Are available in the Wolfson Building (1st floor, left of seminar rooms 3, 4, 5) – keys can be obtained from the Undergraduate Medicine Office (UMO) on the Ground Floor (Wolfson). A deposit is required. This may be useful for those of you who do not have an office to leave your project documents and personal belongings. More lockers are available on other campuses, do not hesitate to let us know if you need help finding out about these.

**IT Facilities, Email & IT Helpdesk**

Each new member of College is provided with a login name and password which provide access to the many IT and library facilities within the College. Your account is set up in advance and you can activate it using the online account activation page. Your login name and password are for your personal use only and must not be used to permit any other person to gain access to the College network or its attached resources, or through it the internet. Regulations on the use of IT facilities at Imperial are detailed on the website - [http://www3.imperial.ac.uk/students/](http://www3.imperial.ac.uk/students/)

You can access your College email account online via - [https://exchange.imperial.ac.uk](https://exchange.imperial.ac.uk).

**Wireless Service on Campus: Hammersmith Hospital**

Wireless access is current available throughout the Commonwealth Building and in the Wolfson Education Centre.

**Cluster Rooms**

Computers are available for student use in the Commonwealth building: 3rd floor computer lab & 1st / ground floor library training facility.

**3rd Floor Commonwealth Building**

This floor has recently been refurbished to include a computer room, study rooms and a student’s common room with Kitchen.

**ICT Service desk**

[www.imperial.ac.uk/ict/servicedesk](http://www.imperial.ac.uk/ict/servicedesk); Email: service.desk@imperial.ac.uk

Tel.: +44 (0)20 759 49000, or just 49000 from Hammersmith campus landlines.

The central service desk is available for telephone, email or online queries Monday to Friday 08.30 – 18.00 except during College closures. The Hammersmith ICT service desk office is located in the Basement, Commonwealth building and it offers drop-in lunchtime session. The central service desk, for all-day drop in sessions, is located on the 4th floor of the Sherfield building at South Kensington.

**The Principles**

You may be aware that the government’s White Paper, Students at the Heart of the System, published in June 2011, endorsed the recommendation made by a national Student Charter Working Group that each institution should have a student charter, or similar high level statement, to set out the mutual expectations of universities and students.

At its June 2012 meeting the Senate approved a Student Charter for the College, entitled Our Principles, and agreed that this would be launched during summer 2012. The Principles were developed by a College Working Group including representatives of all Faculties and undergraduate and postgraduate students.

The Principles define the guiding principles of the College community and cover all students, both undergraduate and postgraduate. They are not a legal contract but rather an easily accessible, concise source of information and a clear display of staff, student and ICU collaboration. The
Principles display the signatures of the College’s President & Rector and the ICU President. They will be reviewed annually by the Quality Assurance Advisory Committee.

The Principles are available at: [http://www.imperial.ac.uk/students/student-support/our-principles/](http://www.imperial.ac.uk/students/student-support/our-principles/)

Each Principle is accompanied by ‘drop-down’ text, which elaborates upon the overarching statements and provides links to further information. The Principles will also be made available to students on Imperial Mobile shortly.

**Teaching and Assessment - the lecture programme**

The taught element of the course is assessed by 2 exams covered in 4 modules (set across 4 full weeks across the year) and 1 piece of coursework focussing on critical appraisal, set and submitted in June. The remaining time will be allocated to projects and self-study.

Three of the modules will be compulsory for all MRes pathways. The remaining module will differ for each MRes pathway and will provide specialist knowledge in the chosen discipline. Topics covered in lectures will be reflected in the end of module exams.

Lectures will cover the principles of drug and biomarker discovery, clinical trial design and management, the role of biomarkers and surrogate endpoints, emerging technologies in medical research, clinical investigation paradigms, research governance and medical statistics. Lectures and practical sessions will be complemented by tutorials, journal clubs, student presentations and question and answer sessions.

In addition to the marked assessments, students will be required to submit some additional informative work including presentations, posters, regular project progress reports and invited to attend talks.
Core Module 1
12th - 16th October 2015

- Introduction to Clinical Research
- Medical Governance
- Critical Appraisal
- Medical Statistics

Exam 1
(10th Dec 2015)
To examine mod 1
& 2 (Excluding
critical appraisal)

Core Module 2
16th – 20th November 2015

- Bench to Bedside
- Clinical Trial Design and Implementation
- Clinical and Experimental Medicine Tools
in Clinical Research

Pathway specific Module
HN&DO 14th – 18th Dec 2015
TM -18th – 22nd January 2016

- Specialist Module

Core Module 4
7th - 11th March 2016

- Therapeutics (inflammatory,
cardiovascular, respiratory, metabolic,
oncology and neuro-psychiatric diseases.

Critical appraisal assignment
On-going monthly journal clubs
and project monitoring
throughout the year.

Appraise a given paper as a structured essay.
Assignment given out then to be submitted 1
week later.

Set and hand in
late June after all
other exams

We offer two options to part time students:

1. Recommended option: Attend all taught courses and sit all exams in the first year. Start project
work in year 1, but the majority of work will be in year 2 after taught modules are complete. The
critical appraisal assignment can be completed in either year 1 or 2.

2. Alternative option: Attend module 1 and 2 and sit exam 1 in the year 1, then module 3 and
specialist module and sit exam 2 in year 2. Start the project work in year 1 and progress
throughout the 2 years. The critical appraisal assignment can be completed in either year 1 or 2.

Core Module 1: Introduction to Clinical Research, Governance and Medical Statistics
Module convenors: Dr Marion Watson, Dr Mary Hickson, Dr Les Huson

The first three days of the module, along with a compulsory e-learning element, aims to provide
students with a thorough grounding in the methods required to design and implement a clinical
research study. The module also covers all aspects of Good Clinical Practice (GCP) and regulatory
requirements and provides students with the necessary tools to facilitate a clinical research project
from conception to end of study.

During the second part of the module (days 4 and 5) students will learn basic statistical skills to carry
out descriptive data analysis, to estimate parameters such as means and variances, and to carry out
and interpret hypothesis tests. Statistical concepts covered in this module will include randomisation
and blinding, sample size calculations and specific types of statistical significance test comparing
means and medians, proportions, type I and type II errors, p-values, confidence intervals, simple
linear regression and correlation analysis. Lectures will be complemented by a number of practical
classes on data analysis.
Core Module 2: Bench to Bedside, Clinical Trials and Experimental Medicine Tools
Module convenors: Professor Martin Wilkins, Dr Rohini Sharma, Dr Sonya Abraham, Dr David Owen

This module will focus on the key elements of clinical research and the role of surrogate markers and emerging technologies in drug development, from preclinical discovery through first-time-in-human (FTIH) studies and early phase clinical trials in patients. Advantages and limitations of animal models of diseases, principles of pharmacokinetics, prediction of likely therapeutic doses, extrapolation of preclinical findings to human diseases and the clinical applicabilityValidity of marker endpoints will be covered.

The module will cover a wide range of topics in the following areas:
- Preclinical Research (e.g. principles of drug discovery; gene expression pharmacogenomics and proteomics; animal models of diseases)
- Drug Development (e.g. target identification and candidate molecule selection; preclinical assessment of drug toxicity; FTH and proof-of-concept (POC) studies; patients selection; principles of pharmacokinetics; surrogate biomarkers and safety markers)
- Imaging and Experimental Medicine Technologies (e.g. magnetic resonance imaging; positron emission tomography and radiotracers; spectroscopy and other imaging modalities)

Core Module 4: Therapeutics
Module convenors: Dr Rohini Sharma, Prof Gary Frost and Dr Mary Hickson

This module will introduce students to the complexity of clinical trials in across a broad range of human diseases, including inflammatory, cardiovascular, respiratory, metabolic medicine, oncology and neuro-psychiatric diseases. The purpose is to allow students to gain a thorough understanding of the challenges in setting up clinical trials in these therapeutic areas. Alongside basic principles and challenges of diseases, emphasis will be put on the cutting edge of novel clinical endpoints, emerging platform technologies and clinical biomarkers.

Teaching is designed to allow students to gain a comprehensive understanding of the basic pathological processes and diagnostic techniques used in the assessment of the above diseases. The module will provide understanding of the main areas of investigation in clinical practice and on the use of morphological and molecular techniques in the understanding of human diseases. Among other topics, lectures will provide knowledge of tests and procedures used in the diagnosis, prognosis and treatment of cancer and their application to oncology trials. The objectives of these sessions are to prepare students for the planning and management of clinical trials and studies in the area of oncology while providing the necessary knowledge and skills to also meet the potentially complex and sensitive needs of the oncology patient.

By the end of the module, students will have an enhanced awareness of the challenges and complexity of specific human pathologies and will be able to recognise and exploit potential enabling technologies within the context of clinical trials.
Pathway Specific Module in Human Nutrition

Module convenor: Professor Gary Frost, Dr Mary Hickson

The aim of this module is to explore in detail research methods required to study human nutrition in controlled and free living situations. There will be an exploration of body composition and appetite regulation as a way of highlighting these techniques. Students will be exposed to the latest imaging, genetic, metabolic enquiry and nutritional epidemiology techniques.

During this module the students will gain skills in measuring diet, nutritional status, appetite and laboratory assay skills. They will also build on skills of critical appraisal, data interpretation and presentation in relation to nutrition research.

Learning objectives:
After this module the students will be able to:
1. List a variety of methods to measure:
   a) Dietary intake
   b) Nutritional status
   c) Appetite
   d) Systems of appetite regulation
   e) Metabolic response
2. Understand the advantages and disadvantages of each method.
3. Decide which method is appropriate to use when designing research.
4. Carry out a selection of these methods accurately and reliably.
5. Explain the use of epidemiological versus experimental methods when testing different nutritional problems, describe the advantages and disadvantages of these methods, and decide which are appropriate to use when designing research.
6. To understand how cutting edge technology may give insight into metabolic response to diet.

The timetable will focus on specialist areas critical to nutrition research:

1) Dietary Assessment, with a particular focus on the hospitalised patient
2) Nutritional Epidemiology
3) Measuring appetite and systems of appetite control
4) Measuring body composition: basic to sophisticated methods and relating these to the study of obesity and diabetes
5) Cutting edge technologies in nutrition research

Module details, including timetables will be available ahead of the module weeks.
Teaching and Assessment - the research project

During the research period (one-year or two-year programme for full-time and part-time students, respectively), students are expected to design and undertake a research project. The purpose of the project is to gain practical experience in supervised clinical and/or laboratory-based research.

Students will be provided training in academic research and acquisition of practical skills, including the design of a research project, planning of experiments, dealing with practical problems, recording, presenting and analysing data. Research projects will comprise a literature survey on an assigned research area, preparation of a written report and presentation of proposed experimental work in seminars, conduct of experimental work and finally writing up of the thesis/manuscript. Students are expected to make an original contribution to the chosen area of research within the time period allotted. Staff welcome project ideas from students, which will be implemented where possible.

For the majority of students, course organisers collate and provide students with a list of possible projects and encourage students to meet with the various supervisors to assess suitability and interest in the various projects. This is actioned in the introductory week. Examples of past project titles are available on the course webpages.

Part-time students undertaking projects in their place of work will be required to have a local clinical supervisor (providing assistance and direction to projects on a day-to-day basis) and an Imperial College academic supervisor who will oversee the successful and timely implementation of the project and will provide guidance on how to structure the final report.

For the entire duration of the programme (except during College closure dates and holidays and outside the 5-day blocks of lectures), students will be required to dedicate the equivalent of 5 days/week, or the equivalent of 2.5 days/week if part-time students to the implementation of their projects, as discussed and agreed with supervisors. Students who are in employment are expected to have arrangements agreed with their employer before committing to the course.
Project reporting and monthly work-in-progress research meeting

Students are required to meet regularly with their supervisors. Students are required to submit a progress report (approved by their supervisors).

Monthly work-in-progress student presentation sessions will be organised throughout the year. During these meetings, students will be required to provide updates on their projects to the rest of the class. Presentations can focus on:

- Research hypothesis
- Study design and endpoints
- Experimental paradigm and planned methodologies
- Data collected to date and anticipated timelines
- Identified risks/issues and mitigation plans

Final written thesis

In the last month of the programme, students will be expected to produce a thesis and a poster summarising the main objectives and outcomes of their projects. The thesis will be made up of one project report (10,000 words), will be assessed by two internal (College) examiners and will be formally evaluated through the viva voce examination. The poster (unassessed) will be displayed on the day of the viva and students will be asked to take the examiners through its content. It is expected that the quality of their work will be satisfactory to form the basis of a manuscript for submission to a peer-reviewed journal.

Journal Clubs

Students will be expected to participate with other higher degree students in journal clubs to review and discuss relevant research papers. Students will be encouraged to use PowerPoint presentations to present their data. The emphasis will be on critical evaluation of the scientific data and energetic discussion from the group. Students will be given the opportunity to chair these seminar sessions. Students may also be expected to attend college and departmental seminar programmes. This will include presentations provided by outside speakers. We will also identify distinguished speaker seminars in Imperial College, suitable for students to attend. Research seminars and journal clubs will continue through the period of the research project.

Detailed project and thesis report guidelines are appended at the back of this Handbook.

Pastoral and Academic Support

Student welfare is of particular concern to members of academic staff in departments and divisions, and to warden teams in Halls. As a student on the MRes Clinical Research course your first point of contact to raise queries or issues should always be your course team (please see staff list at the front of this handbook). However, all students also have confidential access - independent of department or division - to the College Tutors regarding academic issues, and all aspects of pastoral care and discipline within the College.

Counselling: Personal, Financial & Health

We hope that you do not have any problems during your time with us. However if you do, there are several places you can turn to:
- Counselling services are freely available for students. They act as a totally confidential service for students and staff to discuss any issues with a sympathetic, trained, counsellor. For further details please refer to the imperial college website: http://www3.imperial.ac.uk/counselling

- Dr Mick Jones is the Hammersmith College Tutor and can also be contacted for study related issues, pastoral care and mentoring. m.d.jones@imperial.ac.uk http://www.imperial.ac.uk/students/student-support/college-tutors-and-departmental-support/

- For health, welfare and financial issues, please refer to the Imperial College website at: http://www3.imperial.ac.uk/students/welfareandadvice

- If at any stage you have problems that interfere with your course of study please inform your course administrator and course coordinator. We may be able to help, but can only do so if we know that there is a problem.

The following link may be of use for good practice relating to pastoral care - http://www3.imperial.ac.uk/registry/proceduresandregulations/qualityassurance/goodpractice

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**Interruption of studies**

No one can be assured they will not encounter personal problems e.g. divorce or bereavement in the course of their studies. If a student’s life circumstances become such that they feel they would rather discontinue studying they must contact the course administrator as soon as possible to request an interruption of studies. Fees paid will be transferred to the next year of registration. If you need to suspend your studies you will be expected to provide supporting documentation e.g. medical certificates. It is important to begin the process as early as possible because unless absolutely unavoidable, requests very near to assessment deadlines may not be granted. Please note students can interrupt their studies for a maximum of 2 years.

**Safety**

You will need a “day one” safety induction on your first day - the basics on what to do if there is a fire, how to evacuate the building and how to get first aid. The course administrator will organise this induction for all new students. You will need to complete and sign a “Day One” Safety Induction Checklist. The Department keeps a copy for its records.

Your supervisor will be able to provide details of further formal safety training which you may need to undertake when you enter the clinical environment during the course of your project.

Further information on the Health and Safety guidelines and polices of ICL can be found on the following pages – http://www3.imperial.ac.uk/safety http://www3.imperial.ac.uk/facilitiesmanagement/healthandsafety
Details on the Occupational Health Service within ICL can be found on the following pages - http://www3.imperial.ac.uk/OCCHEALTH

The following links may be useful in relation to welfare and support within Imperial College:
http://www3.imperial.ac.uk/humanities/englishlanguagesupport
http://www3.imperial.ac.uk/students/welfareandadvice
http://www.imperial.ac.uk/study/international-students/
http://www.imperialcollegeunion.org/
http://www3.imperial.ac.uk/studenthub

**Evaluation and Quality Assurance**

All students are required to provide feedback on all lectures, and at the end the course students are also required to complete a full assessment of the course. Any issues or concerns highlighted within the feedback are reviewed by academic staff. This feedback is a key tool in helping to assess course content moving forward. All feedback provided is anonymous. Students will also be invited by the college to take part in college wide surveys. Please ensure that these are completed.

Your feedback is important to your department, the College and Imperial College Union. Whilst, there are a variety of means to give your feedback on your Imperial experience, the following College-wide surveys give you regular opportunities to make your voice heard:

- PG SOLE lecturer/module
- Student Experience Survey (SES)
- Postgraduate Taught Student Experience (PTES)

**The PG SOLE lecturer/module survey** runs at the end of the Autumn and Spring Terms. This survey is your chance to tell us about the modules you have attended and the lecturers who taught them.

Run at the same time as the Autumn Term PG SOLE is the Union’s **Student Experience Survey (SES)**. This survey will cover your induction, welfare, pastoral and support services experience. During December you will receive an email in your Imperial College account with a link to the survey.

The **Postgraduate Taught Experience Survey (PTES)** is the only national survey of Master’s level (MSc, MRes, MBA and MPH) students we do and so the only way for us to compare how we are doing against the national average and to make changes that will improve our Master’s students’ experience in future. PTES covers topics such as motivations for taking the programme, depth of learning, organisation, dissertation and professional development. During the spring term you will receive an email in your Imperial College account with a link to the survey.

All these surveys are anonymous and the more students that take part the more representative the results so please take a few minutes to give your views. As a result of previous feedback, in 2013 we removed the critical appraisal assessment from the first exam, into a piece of coursework and we welcome any future feedback to help with the development of the course moving forward.

If you would like to know more about any of these surveys or see the results from previous surveys, please visit: [http://www3.imperial.ac.uk/registry/proceduresandregulations/surveys](http://www3.imperial.ac.uk/registry/proceduresandregulations/surveys)

For further information on surveys please contact the Registry’s Surveys Team on surveys.registrysupport@imperial.ac.uk
**Part C – Important Links and Appendices**

**Appendix A - Template for student project report form**

**PROJECT PROGRESS – STUDENT REPORT FORM**
MRes in Clinical Research (all pathways)  
Department of Medicine, Imperial College London

<table>
<thead>
<tr>
<th>PROJECT PROGRESS REPORT FORM</th>
</tr>
</thead>
</table>
| This progress report form is designed to provide the course director, course organiser and your project supervisors with a regular account of progress made with regard to your current research project. Reporting must take place at least **every 6-8 weeks**. Please submit this form at the end of each reporting period. 
You are required to have the report agreed by your supervisor prior to each submission. |

<table>
<thead>
<tr>
<th>Student Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current reporting period:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research schedule (reporting periods) agreed for this project:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Supervisor 1:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Supervisor 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project title:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project progress: for the above stated reporting period, briefly comment on:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a/ Have you completed the objectives you set for yourself in the last reporting period? Indicate which aspects were fully met/ partially met/not met. If partially met or not met, please explain:</td>
</tr>
<tr>
<td>b/ progress of your research project / current concerns:</td>
</tr>
<tr>
<td>c/ objectives and milestones for the next reporting period:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>This report been agreed by my supervisor on ................ (date)</th>
</tr>
</thead>
</table>
### Appendix B - Marking criteria and template for dissertation

**Project Marking Sheet**  
**MRes Clinical Research**

**Examiner’s Name:**  
**Student’s Name:**  
**Title of Project:**

<table>
<thead>
<tr>
<th>Marked elements</th>
<th>Score</th>
<th>Max Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents: Research question &amp; use of literature search</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Written Presentation of thesis</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>(N.B not viva)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstration of understanding and knowledge</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Analysis</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Interpretation, application &amp; Innovation</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Final Score</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

**PROJECT REPORT APPRAISAL**  
Please provide a short written appraisal of the project.
<table>
<thead>
<tr>
<th>Percentage mark</th>
<th>Grade given to student</th>
<th>40 – 49% D Refer</th>
<th>50 – 59% C Pass</th>
<th>60 – 69% B Pass</th>
<th>70 – 79% A Distinction</th>
<th>&gt;80% A* Distinction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research question &amp; use of literature search</strong></td>
<td>Failure to identify research question or demonstrate any strategy for literature search.</td>
<td>Clear research question identified and articulated. Evidence that a well-formed search strategy was applied.</td>
<td>Clear research question identified and well-articulated. Well referenced background supporting importance of question.</td>
<td>Clear research question identified, justified and well-articulated. Evidence that a comprehensive search strategy was undertaken with appropriate filtering.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Presentation</strong></td>
<td>Work is illegible, poor use of English. Presentation does not meet criteria stated.</td>
<td>Work is clearly presented with good use of English. Presentation meets the stated criteria well.</td>
<td>Work is clearly presented with good use of English. Presentation meets or exceeds the criteria required. Appropriate presentation of illustrated material.</td>
<td>Work is clearly presented with good use of English. Presentation exceeds the criteria required. Sophisticated presentation of illustrated material.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Demonstration of understanding &amp; knowledge</strong></td>
<td>Content shows inadequate knowledge of the contextual subject and little understanding of the relationship of the material presented to the subject area.</td>
<td>Content shows good knowledge of the contextual subject and a good understanding of the relationship of the material presented to the subject area.</td>
<td>Content shows advanced knowledge of the contextual subject and a thorough understanding of the relationship of the material presented to the subject area.</td>
<td>Content shows extensive knowledge of the contextual subject and a thorough and original understanding of the relationship of the material presented to the subject area.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Analysis</strong></td>
<td>Work is descriptive in nature with no or limited evidence of analysis.</td>
<td>Good evidence of analysis.</td>
<td>Shows ability to analyse material well in a clearly realistic and logical way.</td>
<td>Describes options for analysis and justifies and applies correct analytical methods.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Interpretation &amp; application</strong></td>
<td>Wrong or no interpretation of data. No application to practice.</td>
<td>Clear interpretation of data. Evidence of well-formed, logical application to problem-solving relevant to chosen context.</td>
<td>Good interpretation of data. Evidence of incisive and logical application to problem-solving relevant to chosen context.</td>
<td>Excellent interpretation of data. Evidence of clear, innovative and logical application to problem-solving relevant to chosen context. Describes logical next steps</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C - useful links.

The College’s Regulations for Students –
http://www3.imperial.ac.uk/registry/proceduresandregulations

Study guide for Master’s students
http://www3.imperial.ac.uk/students/studyguide

The Registry Department (for help with opening a bank account etc, also results, transcripts....)
http://www3.imperial.ac.uk/registry/abouttheregistry

Imperial college London – policy on employment

Examinations and Religious Obligations
https://workspace.imperial.ac.uk/registry/Public/Exams/Exams%20and%20Religious%20Obligations.pdf

Careers Advisory Service
http://www3.imperial.ac.uk/careers

Codes of Practice for MRes Courses
http://www3.imperial.ac.uk/registry/proceduresandregulations/qualityassurance/codesofpractice/codeofpracticeformresprogrammes

College good practice guides –
http://www3.imperial.ac.uk/registry/proceduresandregulations/qualityassurance/goodpractice

Postgrad open day –
http://www3.imperial.ac.uk/visit/pgopenday

Centre for Academic English –
http://www3.imperial.ac.uk/academic-english

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Please visit the following links for college regulations affecting students’ academic progress –

Academic and Examination Regulations
http://www3.imperial.ac.uk/registry/proceduresandregulations/regulations#regstud

Examination and Assessment
http://www3.imperial.ac.uk/registry/proceduresandregulations/policiesandprocedures/examinationassessment
Academic Integrity
https://workspace.imperial.ac.uk/registry/Public/Procedures%20and%20Regulations/Policies%20and%20Procedures/Examination%20and%20Assessment%20Academic%20Integrity.pdf

Disciplinary Procedures
http://www3.imperial.ac.uk/registry/proceduresandregulations/policiesandprocedures/disciplinary

Appendix D - Student Attendance

While students are responsible for their own learning there is an expectation that they will take full advantage of the learning opportunities provided on the MRes in Clinical Research programme, attending all timetabled sessions of the course.

Should a student choose to absent him/herself from the course without authorisation they should be aware that they would be missing valuable teaching and/or clinical experience which they will require in order to prepare fully for future examinations. This might mean that they find themselves in a situation where they are in danger of being required to withdraw from the course as a consequence of examination failure. Should they find themselves in this situation, the fact that they have by their own action received less teaching and clinical experience than their fellow students is not going to stand in their favour.

Teaching/support staff and supervisors will keep students’ attendance under constant review and warn them if they feel it is inadequate. Attendance problems will be reported to the Course Director and the Director of Education. Academic staff and supervisors may wish to investigate whether the poor attendance is a symptom of personal or academic difficulties that the student may be having. In the event of there being insufficient improvement following a warning, the case will be reported to the Assistant Registrar. Upon discussion with the course team it could possibly be decided that the student’s academic record and/or application is inadequate or that the student is unable to profit from continuing the course, and the student may be required to withdraw from the course, in accordance with College withdrawal procedures. Students have the right of appeal.
Appendix E: Policy on Scientific Misconduct

The College considers any allegation of scientific misconduct to be a matter of great concern and will investigate any such allegation fully. Given its international reputation and status, the College has a responsibility to the scientific community and to the public at large and therefore, where appropriate, will make public the outcome of any such investigation.

Definitions
The College has adopted the Royal College of Physicians’ definitions of scientific misconduct as including piracy, plagiarism and fraud. The following definitions give indicative descriptions of the types of activity covered by this regulation. These descriptions are neither exclusive nor exhaustive:

a. Piracy is the deliberate exploitation of ideas and concepts from others without acknowledgement.

b. Plagiarism is the copying of ideas, data or text (or a combination of these) without permission or acknowledgement.

c. Fraud involves deception—usually, but not exclusively, the invention of data. This could also include the omission from analysis and publication of inconvenient components of a data set.

Other types of scientific misconduct may be separately defined, but the College views them as combinations or sub-types of those defined above. In addition to scientific misconduct, these procedures will also apply to cases of scientific negligence.

Statement on Plagiarism

You are reminded that all work submitted as part of the requirements for any examination (including coursework) of Imperial College and the University of London must be expressed in your own words and incorporate your own ideas and judgements.

Plagiarism, that is, the presentation of another person’s thoughts or words as though they were your own, must be avoided, with particular care in coursework, essays and reports written in your own time. Note that you are encouraged to read and criticise the work of others as much as possible. You are expected to incorporate this in your thinking and in your coursework and assessments. But you must acknowledge and label your sources.

Direct quotations from the published or unpublished work of others, from the internet, or from any other source must always be clearly identified as such. A full reference to their source must be provided in the proper form and quotation marks used. Remember that a series of short quotations from several different sources, if not clearly identified as such, constitutes plagiarism just as much as a single unacknowledged long quotation from a single source. Equally, if you summarise another person’s ideas or judgements, figures, diagrams or software, you must refer to that person in your text, and include the work referred to in your bibliography. Departments are able to give advice about the appropriate use and correct acknowledgement of other sources in your own work.
The direct and unacknowledged repetition of your own work which has already been submitted for assessment can constitute self-plagiarism. Where group work is submitted, this should be presented in a way approved by your department. You should therefore consult your tutor or course director if you are in any doubt about what is permissible. You should be aware that you have a collective responsibility for the integrity of group work submitted for assessment.

The use of the work of another student, past or present, constitutes plagiarism. Where work is used without the consent of that student, this will normally be regarded as a major offence of plagiarism.

Failure to observe these rules may result in an allegation of cheating. Cases of suspected plagiarism will be dealt with under the College’s Examination Offences Policy and may result in a penalty being taken against any student found guilty of plagiarism.

Cheating Offences Policy and Procedures
http://www3.imperial.ac.uk/registry/exams/examoffences
Appendix F: Students with disabilities, specific learning difficulties, long-term health issues

At Imperial College we recognise that studying at university can be a challenge, especially if you have a disability. We are keen that you have every opportunity to fulfil your potential and graduate with the degree you deserve. It is therefore important that you let us know about any disability, specific learning difficulty or health problem as soon as possible so that we can give expert advice and support to enable you to do this.

Some people never think of themselves as having a disability, but students who have experienced any of the issues listed below have found that a little extra help and support has made all the difference to their study experience.

- Specific learning difficulties (such as dyslexia, dyspraxia, AD[H]D)
- Autistic spectrum disorder (such as Asperger’s)
- Deafness or hearing difficulties
- Long term mental health difficulties (such as chronic anxiety, bipolar disorder, depression)
- Medical conditions (such as epilepsy, arthritis, diabetes, Crohn’s disease)
- Physical disabilities or mobility impairments
- Visual difficulties

Where to find help:

1. **Your Disability Liaison Officer** (DLO) Dr Michael McGarvey
   (m.mcgarvey@imperial.ac.uk, Variety Wing Floor D, Room 3, St Mary’s Campus, Norfolk Place, London W2 1PG, Tel: 020 7594 9035) is your first point of contact within your department and is there to help you with arranging any support within the department that you need. The DLO is also the person who will apply for Special Examination arrangements on your behalf. You need to contact him without delay if you think that you may need extra time or other adjustments for your examinations.
   [http://www3.imperial.ac.uk/registry/exams/specialexamarrangements](http://www3.imperial.ac.uk/registry/exams/specialexamarrangements)

2. **Disability Advisory Service**: [http://www3.imperial.ac.uk/disabilityadvisoryservice](http://www3.imperial.ac.uk/disabilityadvisoryservice)
   The Disability Advisory Service works with individual students no matter what their disability to ensure that they have the support they need. We can also help if you think that you may have an unrecognised study problem such as dyslexia. Our service is both confidential (information about you is only passed on to other people in the university with your agreement) and individual in that any support is tailored to what you need.

   Some of the sorts of things we can help with are:

   - Being an advocate on your behalf with others in the College such as your departmental liaison officer senior tutor or exams officer, the accommodation office or the estates department
   - Checking that your evidence of disability is appropriate and up-to-date
   - Arranging a diagnostic assessment for specific learning difficulties
- Help with applying to the College for the cost of an assessment
- Help with your application for the Disabled Students Allowance (DSA) see below
- Helping students not eligible for the Disabled Students Allowance in obtaining support from other sources
- Help with arranging extra Library support
- Supporting applications for continuing accommodation for your second or later years

3. **Disabled Students Allowance:**
Students who are classified for home fees and who have a disability can apply for a grant called the Disabled Students Allowance which can pay any extra costs that are a direct result of disability. This fund is not means-tested and is also a grant not a loan so any home student with a disability can apply and will not be expected to pay it back. Remember students with unseen disabilities such as mental health difficulties, dyslexic type difficulties or long term health problems are also eligible for this fund.
Student Wellbeing and Student Support

Hall Warden system
Personal Tutors / Senior Tutors
Departmental Disability Officers
College Tutors (extra-departmental advice)
International Student Support
Student Hub (College advice centre)
Student Advice Centre (Student Union)
‘Exam Performance’ and other workshops
Mindfulness sessions
Chaplaincy
Centre for Academic English
Maths Support (METRIC)
Student Support Fund

NHS Health Centre
NHS Dentist
(Princes Gardens)

Disability Advisory Service
(Sherfield)

Student Counselling Service
(Sherfield)

External health services
Appendix G - Guidelines for MRes research and final research reports (MRes Thesis)

General Guidance

All students will design and undertake a research project which will run for the duration of the two-year programme for part time students or for one year for full time students. Your research project constitutes a significant proportion (70%) of your MRes degree, and therefore having a clear understanding of what is expected is essential. Firstly, you need to be clear about exactly what is involved in undertaking a Master’s dissertation and by what criteria it will be judged. Your study should make a contribution to the body of knowledge in your chosen field, or may replicate existing studies. However, the time limits on your dissertation are such that, whilst this contribution can be important, it will, of necessity, be modest but worthwhile. Your dissertation should generally demonstrate:

- Clear aims appropriate to a Master’s level dissertation and to your professional situation
- High levels of autonomy and responsibility in planning and executing research
- The ability to present and justify a well structured research question
- Extensive knowledge of and justification for the appropriate choice of methodology
- Comprehensive understanding of and justification for application of the methods relevant to the chosen methodology
- Evaluation and management of confounding, bias, chance, and measures of association (quantitative study)
- Issues of truthfulness and reliability (qualitative study)
- The ability to analyse critically and interpret the results and findings of your study in the context of existing literature
- Critical awareness of the limitations of the study and the impact of these on the results
- Appropriate ethical and governance awareness both in planning and execution of the study
- A depth of knowledge in the field of study appropriate for Master’s level
- Critical evaluation of the implications of your research for future practice and research

Planning and organising your work

In the first month students will select a research area and narrow down project plans (slightly later for part time students). Students will be required to have the relevant supervision-

**Academic Supervisor:** The academic supervisor will oversee the project, ensure that it is running on course in a systematic and academically sound fashion to yield a successful thesis, and provide additional support as necessary.

**Clinical Supervisor (if required):** The role of the clinical supervisor is to assist and direct the research on a day-to-day basis. The clinical supervisor will be named as the Chief Investigator on ethics applications as they will oversee the project and have knowledge of the research area. The responsibility for the ethical aspects of the study therefore lies with them.

Although this may vary, it is expected that supervisors will be able to provide up to ten hours of supervision and so you should ensure that time spent with your supervisors is carefully planned.

The research process consists of a number of stages which will vary according to the type of study you are carrying out. To help with planning we have included deadlines (see table below). These
should be discussed with your supervisors within the first two months of your course to ensure that you are able to complete your study within the required timelines.

<table>
<thead>
<tr>
<th>Event</th>
<th>Suggested deadline (Part-time students)</th>
<th>Suggested deadline (Full-time students)</th>
<th>Agreed deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final project agreed</td>
<td>End of November 2015</td>
<td>Early November 2015</td>
<td></td>
</tr>
<tr>
<td>Confirmation of deadlines with supervisors</td>
<td>End of December 2015</td>
<td>Early November 2015</td>
<td></td>
</tr>
<tr>
<td>Protocol and supporting documentation finalised</td>
<td>February 2016</td>
<td>December 2015</td>
<td></td>
</tr>
<tr>
<td>Ethics submission</td>
<td>March 2016</td>
<td>January 2016</td>
<td></td>
</tr>
<tr>
<td>Data collection</td>
<td>May-October 2016</td>
<td>March-May 2016</td>
<td></td>
</tr>
<tr>
<td>First draft</td>
<td>April 2017</td>
<td>End May 2016</td>
<td></td>
</tr>
<tr>
<td>Final draft</td>
<td>June/July 2017</td>
<td>July 2016</td>
<td></td>
</tr>
<tr>
<td>Submission of final project</td>
<td>August 2017</td>
<td>August 2016</td>
<td></td>
</tr>
</tbody>
</table>

_Examination of your thesis_
Your research project counts for 70% of the overall course grade. Your thesis will be marked by two internal examiners, based on the marking criteria included within this handbook. This will constitute 70% of the total marks for your research project. The remaining 30% of the marks will be awarded for your performance in a viva voce. During your viva, the panel of examiners (2 people) may consist of the course external examiner and one member of the MRes course team.

_Guidance for the completion of the dissertation_
On the day of submission, please present:
Three copies of soft-bound report
Electronic copy (memory stick or via email to the course administrator) at the time of submission (containing a word and Pdf copy).
Your word copy will be used to submit to Turnitin and to check your word count.

Reports must have a Title Page stating the following:

- Full title of the report
- Student’s full name and CID number
- Month and year of submission
- Name of Supervisor and student’s workplace/laboratory
- A statement “This research report is submitted in partial fulfilment of the requirements for the degree of MRes in Clinical Research (add your pathway)”

Electronic Copy: It is crucial that the files are saved in **WORD AND PDF** format.

File names must be in the following format:
Surname_name of document.pdf e.g Bibby_clinicalresearchthesis.pdf

Ensure that your appendices are named and numbered in the correct order.
MRes_appendix1_informed consent.pdf e.g Bibby_appendix2_timesheet.pdf

This will allow your markers to follow the logic of your paper.

Examiners are able to mark using hard or electronic copies. Those who prefer reading your digital version will value it if you make your documents simple to use.

You are able to either include your appendix documents within the main electronic copy of the thesis e.g 1 file, or separate the appendix documents in a separate file.

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**General Article Organisation and Text Specifications**

Research reports should contain the following sections in this order: Initial submission page (see above), title, authors, affiliations, summary / abstract, keywords, introduction, methodology, results (including tables and figures with legends), discussion, acknowledgements, references, and supplemental data / appendices.

*The total word count of the main text should not exceed 10,000. This includes all sections but excludes abstract, contents list, glossary, references and appendices. Non-standard abbreviations should be defined when first used in the text. Use of abbreviations should be kept at a minimum. 5% will be deducted from the overall thesis mark per 250 words over the agreed word count.*

*Figures legends can be excluded from the word count, providing they are relatively short!*

*A deadline for submission of the final thesis is provided. Students submitting late without confirmation of an extension from the course administrator will result in the following penalty – 5% deducted from the overall thesis mark for each 24 hour period after the submission date has passed. (For example - if the submission date is Wednesday at 4pm, from 4.01pm on Wednesday,*
a submission within the next 24 hours would incur a 5% decrease and this would continue each day).

Please include a word count on the front page of the thesis.

Formats and Style
Please compile the document using Microsoft Word. The text should be set in Arial, 11 or 12pt, 1.5 or double-spaced and pages should be numbered. Left and right-hand margins should be 3cm wide.

For figures that have multiple panels, the labels should be set in uppercase Arial letters and should not contain periods or parentheses. Please do not include separate panels on multiple pages. Micrographs should be provided with a scale bar instead of magnification.

Instructions for the Preparation of Specific Sections

Title
The title should convey the conceptual significance of the paper to a broad readership.

Authors/Affiliations
Author names should be spelled out rather than set in initials. Authors should be footnoted to corresponding affiliations. Affiliations should contain the following core information: department(s)/subunit(s); institution; city, postal code; country.

Include your name as the author but also list both your supervisors and their affiliations

Running Title
Text must include a running title of maximum 50 characters incl. spaces.

Summary or abstract
The summary consists of a single paragraph of fewer than 500 words. It should clearly convey the conceptual advance and significance of the work to a broad readership. In particular, the abstract should contain a brief background of the question, a description of the results without extensive experimental detail, and a summary of the significance of the findings. References should not be cited in the summary.

Introduction
The introduction should establish the importance of the present study with reference to previously published research and opinion.

Methodology
The Methodology section needs to include sufficient detail so that readers can understand how the experiments were done, and so that all procedures can be repeated, in conjunction with cited references. This section should also include a description of any statistical methods employed in the study. A more detailed version of the parts of the methodology can be included in Supplemental Data e.g. standard operating procedures, questionnaires used, details of assays etc, but it is not appropriate to move the majority of the methodology to Supplemental Data in order to shorten the text.
Results
The results should describe the data concisely and should avoid excessive elaboration or repetition of data already given in tables and figures. Extensive interpretation of the results should be presented in the discussion section, not the results. The results may be divided by subheadings. Explicit citation of each figure or table is necessary, and each figure or table should stand alone in that is it understandable without reading the accompanying text.

Figures should be embedded within the results section. Each figure legend should have a brief title that describes the entire figure without citing specific panels, followed by a description of each panel. For any figures presenting pooled data, the measures should be defined in the figure legends (for example, data are represented as mean ± SEM, n=x).

When creating a table, please use the Microsoft Word table function and do not place an Excel table in a Word document. Word tables should not be tab or space delineated. Tables should be embedded within the results section and should include a title. Footnotes and/or legend should be concise.

Discussion
The discussion should present conclusions drawn from the data and new questions raised by the study without repeating materials already presented in the results section. For purely qualitative research the discussion may be integrated with the results in a single section. The discussion section should be finished with a conclusion that summarises the main findings of the study. Ensure you conclusion is supported by all your data and does not over interpret your results.

Acknowledgments
You may acknowledge contributions from non-authors or departments. This section may be used to list the contributions of individual authors.

References
References should include only articles that are published or in press. Unpublished data, submitted manuscripts, abstracts, and personal communications should be cited within the text only. Footnotes should not be used. Submitted articles should be cited as unpublished data, data not shown or personal communication. In-text citations should include first author name and year of publication, e.g., (Adams et al. 1976). References should be arranged alphabetically by author surname(s). References by the same author(s) should be arranged chronologically. Note: "et al." should only be used after 5 authors.

Please use the Harvard style for references (choose the style definition in your reference managing software – minor differences to the style shown below are acceptable): (please note a library PowerPoint on Harvard referencing can be found in Blackboard).


Supplemental Data / Appendices
Supplemental data are restricted to items that are directly pertinent to the conclusions of the paper e.g. questionnaires, patient information sheets, Ethics approval letters, SOPs. In general, supplemental files (movies, databases, tables, etc.) must each be less than 10 MB. All figures/tables should have titles and legends. Generally, Supplemental Data should be supplied in a composite Word file. Movies can be supplied on CD.

Appendices should only include additional information to illustrate or enhance the main text (e.g. copies of questionnaires, patient information sheets, standard operating procedures etc)

NB: Always back up your work every time you leave your computer, using a CD, external hard drive, or USB memory stick, and keep it separate from the main computer hard drive. Always date copies so you can identify easily which are the most recent. Do not rely on 1 main copy of your thesis (e.g just 1 copy saved on memory stick), ensure you have additional copies in case of any technical problems ahead of the submission date.
Appendix H - Key Course Reading

MRes Clinical Research – Recommended Reading List 2015/16

General


Research Design


Critical Appraisal


Statistics


Clinical Pharmacology


Questionnaires

Informed consent

Additional reading list

Additional reading on Clinical Governance, Critical Appraisal and Statistics


EU COMMISSION DIRECTIVE 2005/28/EC  


Getting Involved and Influencing Research. (Macmillan, 2007)


How to write medical information in plain English: Plain English campaign 2001.  
www.bsuhealth.nhs.uk/EasySiteWeb/GatewayLink.aspx?alld=308953
https://www.myresearchproject.org.uk/ELearning/IRAS_E_learning.htm


Additional reading on Bench to Bedside, Clinical Trials and Experimental Medicine


How industry is approaching the search for new diagnostic markers and biomarkers. Zolg JW, Langen H. Mol Cell Proteomics. 3(4), 345-54. 2004


Human Tissue Act: www.hta.gov.uk

NRES guidance on information sheets and consent forms v3.5 May http://www.nres.nhs.uk/EasysiteWeb/getresource.axd?AssetID=338&type=full&servicetype=Attachment

NRES guidance on research involving adults unable to consent for themselves (incorporating guidance on the Mental Capacity Act 2005).


The Importance of Pharmacovigilance - Safety Monitoring of Medicinal Products. WHO. 2002.

Understanding Cancer Clinical Trials. (Cancer Backup, 2006)


Additional reading on Therapeutics/module 4


Toward clinical risk assessment in hypertrophic cardiomyopathy with gadolinium cardiovascular magnetic resonance. Moon JC, McKenna WJ, Mccrohon JA, Elliott PM, Smith GC, Pennell DJ. J Cm Coll Cardiol. 2003 May 7; 41(9):1561-7

Drug induced QT prolongation and torsades de pointes. Yap YG, Camm AJ. Heart. 2003 Nov; 89(11):1363-72

Cardiac physiology investigated by new methods of imaging. Neubauer S. Clin Med. 2007 Apr; 7(2):189-91


NHS Breast Screening Programme:
☑http://www.cancerscreening.nhs.uk/breastscreen/publications/nhsbsp61.html


Press release. European Medicines Agency recommends suspension of marketing authorisations for sibutramine
Williams G. Withdrawal of sibutramine in Europe. Another sign that there is no magic bullet to treat obesity BMJ 2010;340:c824

Pope C, Mays N. Qualitative Research: Reaching the parts other methods cannot reach: an introduction to qualitative methods in health and health services research BMJ 1995; 311 : 42

Malterud K Qualitative research: standards, challenges, and guidelines Lancet 2001; 358: 483–88


http://www.ajcn.org/cgi/content/full/91/3/547

Summary of NICE guidelines:
http://www.nice.org.uk/guidance/index.jsp?action=byTopic&o=7238&set=true

Nice guidelines on obesity http://guidance.nice.org.uk/CG43/Guidance


Appetite regulation:
http://www.foresight.gov.uk/OurWork/ActiveProjects/Obesity/KeyInfo/Index.asp
http://www.nature.com/ijo/journal/v32/n7s/abs/ijo2008235a.html


Other


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