EPSRC Centre for Doctoral Training

Mathematics
of Planet Earth

MRes Handbook 2018/2019

Imperial College
London

EPSRC
Engineering and Physical Sciences
Research Council

University of
Reading

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1. INTRODUCTION

Welcome from the Directors

Welcome to the EPSRC Centre for Doctoral Training in the Mathematics of Planet Earth (MPE), and congratulations on becoming part of the MPE community! This is already a large community, including Imperial College's Mathematics Department and Grantham Institute for Climate Change, and Reading University's Departments of Mathematics and Statistics and of Meteorology. The wealth and variety of expertise available within this community has been distilled into a unique programme that will train you as a mathematical scientist, able to work across the traditional disciplinary boundaries. The programme will prepare you to work in a team with the next generation of weather, oceans and climate scientists to answer the demands of the current climate crisis for humanity.

The first part of your experience is the MRes year. This handbook provides you with a detailed description of the MRes in the Mathematics of the Planet Earth. This edition of the handbook applies to the academic year 2018/19 and the most up to date version is available online via the MPE CDT website. Any significant changes will also be communicated to you separately. You should familiarize yourself with the contents of this handbook at the start of your course, and refer to it throughout your studies.

Over the next pages you will find all of the information you will need as a MRes student in the MPE CDT; from the contact information of key individuals, through to notes about programme regulations, and details about central support if you find yourself in difficult circumstances. We hope it contains all the information you need – but do let us know about any possible omissions as it is always under revision!
We wish you every success in your studies!

Prof Dan Crisan	Prof Jennifer Scott
Director at Imperial College London	*Director at the University of Reading*

2. THIS HANDBOOK

The purpose of this handbook is to provide current students and staff with a detailed description of the MRes Programme within the Mathematics of Planet Earth Centre for Doctoral Training (MPE CDT), including assessment and feedback mechanisms.

This handbook describes the framework of the course and its assessment. However, the Course Directors and/or Course Committee may make changes to detailed procedures if the circumstances indicate this is desirable. Similarly, the Board of Examiners has absolute discretion to modify criteria described in this handbook, although in practice this would only occur in exceptional circumstances. Any significant changes to its content will be communicated accordingly.

For the duration of the MRes, students will be registered at both the University of Reading and Imperial College London. Students will be based at one institution, but will have access to the facilities available at both. All information concerning students and their registration will be shared between the two institutions. For the duration of the PhD (years two to four), students will be registered and based at one institution, this will depend on offer they received after their interview and must correspond to where the PhD lead supervisor is based. During the PhD phase, students will still maintain access to facilities at the other site through visiting student status.

3. EPSRC CENTRE FOR DOCTORAL TRAINING IN THE MATHEMATICS OF PLANET EARTH (MPE)

The EPSRC Centre for Doctoral Training was established in response to the challenge of quantifying uncertainty in long-term climate prediction and the estimation of the potential strength of extreme meteorological events in the face of global warming.

The MPE CDT brings together two world class academic centres, Imperial College London and the University of Reading, linked together via the Grantham Institute for Climate Change. Along with external partners, including the Met Office, ECMWF, and more than 60 world-leading researchers with expertise in a wide spectrum of areas form the CDT.

3.1. Aims and objectives of the MRes in the Mathematics of Planet Earth

The MRes Programme forms the first part of the MPE CDT, offering an integrated Master's and PhD Programme with Imperial and Reading. The aims and objectives of the course are to:

1. Provide high quality training in research in Mathematics applicable to weather and climate, within an environment committed to excellence in both teaching and research.

2. Attract well-qualified students and to develop them as a cohort of Mathematicians with expertise in weather and climate applications.

3. Provide intellectual challenge in a structure containing an appropriate amount of flexibility, so that students can develop their specialist interests.

4. Teach and provide the opportunities to learn a core of interdisciplinary Mathematical topics that will bring them to the cutting edge of climate research, together with a range of more specialised options.

5. Introduce students to a wide range of applications of Mathematics in the field of weather, climate and ocean modelling.

6. Equip students with a range of mathematical skills – in problem-solving, extended project work, computation and presentation – to enable them to take prominent roles in a wide spectrum of employment and research.

7. Provide further breadth and depth of Mathematics and Statistics, at a level beyond the 4th year of an MSci, including an extended research project.

3.2. Lines of communication

The mechanism the course directors and other staff will provide information to the students is primarily through email to your primary institution email account. **It is imperative that you check email regularly.** Further channels that may be used, depending upon the nature of the information, include:

- MRes course Blackboard site;
- Letter to your home address;
- Personal communication before/after lectures or during laboratory sessions;
- SharePoint (https://share.imperial.ac.uk/fons/mathematics/mpecdt/students/SitePages/Home.aspx)
- Linkedin

(https://www.linkedin.com/groups?gid=8138635&trk=groups_management_submission_queue-h-dsc&goback=%2Egmr_8138635)

3.3. Cohort Mentors

Each MRes cohort has designated members of academic staff who act as mentors for the students on the course. Meetings with Cohort Mentors should take place regularly although on an informal basis as part of the MPE Wednesdays. Further, every student will have regular meetings with an individual Personal Mentor. The role of the cohort and personal mentors is to:

- Be a point of contact for the students throughout the course;
- Offer advice on the selection of options and projects;
- Help with career decisions;
- Monitor feedback;
- Be available for writing references and;
- Help with any matters of a non-academic nature that may arise.

3.4. Student representation

There is one elected student representative from each cohort in each institution on the staff-student committee and students are encouraged to raise general or specific matters through this channel. The cohort should elect their student representative in October and inform the CDT Director, Professor Dan Crisan as soon as possible. Any concerns of a more urgent or personal nature should be discussed with the Centre Manager, Cohort or Personal Mentors.

4. PROGRAMME INFORMATION

4.1. Programme learning outcomes

By the end of the MRes programme, all students are expected to:

- Acquire a broad and solid foundation on a range of foundational topics in Mathematics and Statistics that are relevant to weather and climate: analysis and solution on a computer of partial differential equations, statistical techniques for inference and data assimilation, deterministic and stochastic techniques for taking a systems view of earth systems and processes
- Gain an appreciation for the key processes in the earth system and their role in climate.
- Develop mastery of research techniques and skills in a specific area of Mathematics of Planet Earth, and to apply them in a research project.
- Write up, explain, and answer questions about this research.
- Acquire a comprehensive mastery of research techniques and skills applicable to their own intended doctoral research.

- Continue working in their research area towards a PhD.
- Develop transferable skills and attributes necessary for research or employment requiring both the exercise of initiative and personal responsibility and the independent learning and research ability required for continuing professional and intellectual development.
- Communicate their conclusions both orally and written in form clearly to specialist and non-specialist audiences.

4.2. Curriculum

MPE CDT students undertake a four year doctoral training programme. In their first year, students complete a 90 ECTS MRes in Mathematics of Planet Earth with Imperial College London and the University of Reading. On completion of the MRes course, students spend the next three years engaged in PhD research. Throughout this period the CDT continues to closely monitor the need for continuing training and support, tailored to each student, and provides ongoing training in Research Skills.

Kick Off Camp

Two weeks before Term 1, a Kick-Off residential camp is held at the University of Reading. As well as an induction programme describing the course and starting the project selection process, there are group activities, including background courses on the key processes in the climate system, and a series of computer labs introducing Python programming in the context of manipulating large climate datasets, leading to student presentations. The camp contributes 3ECTS towards the MRes.

Core courses

There are four compulsory core courses in the first term; Partial Differential Equations, Data and Uncertainty, Dynamical Systems, and Numerical Methods. Each course consists of 20 hours of lectures plus 6 hours of tutorials. Each course is worth **6 ECTS** and consists of an exam and several pieces of coursework.

Elective courses

There will be one elective course (**8 ECTS**) in the second term. The choice of course is subject to approval by the MRes Directors and is from an approved list of relevant courses from the Mathematics and Statistics MSc programmes at Imperial and Reading. Each elective course will normally consist of an exam and coursework.

MPE Wednesdays

MPE Wednesdays will take place each week during term-time. The full MRes cohort will meet, alternating between Reading and Imperial. The Mathematics of Planet Earth seminar will take place on this day. Specific arrangements vary from week to week but are always available on the MPE teaching calendar. The day will consist of:
- Tutorials - Students will work together on open ended tasks arising from the core courses.
- Journal club - Students are trained how to read journal papers and build up a bibliography.
- Progress reports from their MRes projects – Students gain experience in presenting their research topics.
- Bespoke transferable skills training - In collaboration with our Graduate Schools students will gain valuable presentation and communication skills.
- Seminar – The MPE Wednesday seminar is the core of the MPE Wednesday activity. These are broad seminars from internationally renowned scholars in a variety of Mathematical topics and applications. The students will have lunch with the seminar speaker to encourage discussion with the speaker.

MPE Wednesdays contribute **7 ECTS** towards the MRes.

MPE CDT Jamboree

This is an annual residential MPE CDT convention, in which students present work from their MRes projects in their first year, from their MRes and PhD projects in the second year, and from their PhD projects in the final year. Students will benefit from: increased professional opportunities as they will be encouraged to invite guest lecturers to the Jamboree, prospect for budget management as they will be in charge of controlling invited speakers' costs, gaining access to a large network of industry and affiliate partners through MPE industry day which will be part of the annual CDT Jamboree, opportunity to showcase their research and its impact.

Research project

From January, students will carry out a research project (**48 ECTS**) in the same subject area as the taught courses. Students are required to attend the project sandpit event in Term 1. There will be short talks from potential supervisors and industrial partners about their research interests. There will be break-out groups where supervisory teams can be created and links can be made with students, so that students have enough information to make a decision. The final allocation of MRes project will be made by the beginning of Term 2. The research project will consist of an interim report and final research project report with presentation, plus a presentation at the Jamboree (non-assessed).

Please see appendix 10 for guidance on MRes Thesis submission.

Module outlines

The course descriptions for the MRes in Mathematics of Planet Earth can be found here:
http://www.reading.ac.uk/modules/module.aspx?sacyr=1819&school=MPS

MAMCDTE – Partial Differential	MAMCPROJ – Research Project
MAMCDTS – Dynamical Systems	MAMCKC – Kick-Off Camp
MAMCDTU – Data and Uncertainty	MAMCWE – MPE Wednesdays
MAMCDTN – Numerical Methods	

A list of elective courses will be circulated during the first term.

Professional Skills

A series of transferable skills courses are already included in the MRes programme. Students wishing to undertake further courses offered by the Graduate Schools may do so. Details of the courses available can be found here:
http://www3.imperial.ac.uk/graduateschool/currentstudents/professionalskillsresearch
http://www.reading.ac.uk/graduateschool/skillstrainingprogramme/gs-rrdp.aspx

We strongly advise that you discuss your choices of Graduate School courses with your supervisors prior to attending, and make sure that these do not clash with any of the required MRes courses.

Note to MRes CDT students who will carry on to their PhD at Imperial College:

All research students are expected to complete a number of our Professional Skills courses as part of their research degree registration. Students are required to meet minimum attendance requirements by the 9 month (Early Stage Assessment or ESA) milestone.

For further information on Professional Skills Attendance Requirement please visit this website: http://www3.imperial.ac.uk/graduateschool/currentstudents/professionalskillsresearch/professionalskillsrequirement

Note to MRes CDT students who will carry on to their PhD at University of Reading:

Students are expected to participate in two courses from the Reading Researcher Development

Programme (or similar generic training courses offered by the School) in their first year of PhD registration, one in the second year and one in the third year. Attendance at the courses is registered and treated as part of your progression requirement by the University and some funding bodies (e.g. all Research Councils UK).

4.3. MPE CDT timetable

MRes Timeline – Events for the Academic Year 2018/19

Date	Event
Before arrival	Kick-off Camp
Term 1	Submission of MRes project proposals- **December 2018**
	Select Elective Course - **by end of Term 1**
	Sandpit events: **Imperial College London on October 24th and the University of Reading on October 25th.**
	Coursework deadlines for the Numerical Methods: *Students are required to read the lecture notes and watch videos before class. The timetable for this is:* • *Chapters 1-3, videos 1-4 by Wed 10 Oct* • *Chapters 4-5, videos 5-6.1 by Wed 17 Oct* • *Chapters 6-7, videos 7-8.5 by Wed 7 Oct* *The videos and lecture notes will be at: https://mpecdt.bitbucket.io/* *The coursework deadlines and marks out of 50 are:* • *Draft code, 5/50 by Wed 24 Oct* • *Draft report, 5/50 by Wed 7 Nov* • *Final code, 15/50 by Wed 21 Nov* • *Final report,25/50 by Wed 28 Nov* *Students should hand in work by sending an email to h.weller@reading.ac.uk and Centre Manager as a backup.* Coursework deadlines for the PDEs: **23rd November and 26th November** Coursework deadlines for the Dynamical Systems: **7th December** Coursework deadlines for the Data and Uncertainty: TBC
Term 2	Exams – Core Courses –**January 2019**
	Final allocation of MRes projects – **January 2019**
	Begin MRes Project (50% time commitment)
	Submit Provisional Research Report – **March 2019**
	Jamboree – **March 2019**
	Exams - Elective Course (UoR) – **April-May 2019**
Term 3	Exams - Elective Course (ICL)
	Oral presentation of the MRes Project during the MPE Wednesdays
	Submit PhD project choices – **May 2019**
	PhD projects assigned – **August 2019**
	Submit MRes thesis (project report) – **September 2019**
September 2017	Final presentation – **September 2019**

Further information on deadlines and relevant forms are available on the Registry website at: http://www3.imperial.ac.uk/registry/researchdegrees

There is a Google calendar for the MPE CDT, to which we have added important dates, major deadlines and other relevant events. The aim is to enable you to view this on a PC, mac or mobile device. https://calendar.google.com/calendar/render#main_7%7Cweek-2+23947+23953+23950

4.3. Travel between Reading and London

As part of the joint Centre for Doctoral Training, students will be required to travel to Imperial College London or Reading on alternating weeks to take part in the MPE Wednesdays, in addition to other events which may take place throughout the year. There is a frequent direct train service from Reading to London Paddington.

http://www.thetrainline.com/train-times/reading-station-to-london-paddington

5. ASSESSMENT

5.1. Overall assessment

The MRes in Mathematics of Planet Earth consists of two elements. The pass mark for all components is 50%.

Taught courses (32 ECTS and 38% of the total degree mark), consisting of the components:
a. 4 core courses (24 ECTS in total)
b. 1 elective module(8 ECTS)

Other taught elements (10 ECTS and 8% of the total mark)

These elements are graded PASS/FAIL and must be passed
a. MPE Wednesdays (7 ECTS)
b. Kick Off Camp (3 ECTS)

Project (48 ECTS and 54% of the total degree mark), consisting of:
a. Provisional research report submitted in March (40%)
b. Research Project report submitted in September (48%)
c. Research project presentation in September (12%)

Please note that the European Credit Transfer and Accumulation System (**ECTS**) **does not contribute** towards the final result for the MPE Wednesday and Kick-off Camp.

5.2. Assessment rules and degree classification

To achieve the MRes award, a mark of **50% or higher in the course element and the project element must be achieved.** Students are normally required to achieve a **minimum mark of 60% in the MRes Programme as a prerequisite for continuing onto the PhD programme**.

Examiners have the discretion to award a result of merit (achieved at least 60% in each element) or distinction (achieved at least 70% in each element) to students who have fulfilled the requirements for the award of the Master's degree as specified in the Examination Regulations.

Where appropriate, the Joint Board of Examiners may award a result of merit where a candidate has achieved an aggregate mark of 60% or greater across the programme as a whole AND has obtained a mark of 60% or greater in each element with the exception of one element AND has obtained a mark of 50% or greater in this latter element.

Where appropriate, the Joint Board of Examiners may award a result of distinction where a candidate has achieved an aggregate mark of 70% or greater across the programme as a whole AND has obtained a mark of 70% or greater in each element with the exception of one element AND has obtained a mark of 60% or greater in this latter element.

The programme will follow Imperial's procedure for determining degree classification for borderline students. Promotion to pass, merit or distinction should only be considered if the aggregate mark is within 2.5% of the relevant borderline. Nevertheless, students whom the Joint Board of Examiners deems to have exceptional circumstances may be considered for promotion even if their aggregate mark is more than 2.5% from the borderline. In such cases the necessary extra marks should be credited to bring the student's aggregate mark into the higher range.

Viva voce examinations may be held exceptionally and at the discretion of the Joint Board of Examiners to inform the Board's decision on the award of the MRes solely in cases where a student has extenuating circumstances.
https://www.imperial.ac.uk/about/governance/academic-governance/regulations/

Projects will be marked according to the joint marking scheme shown in **Appendix 1**.

6. ACADEMIC SUPPORT, ABSENCE AND ILLNESSES

6.1. General
Academic support comes primarily from the course lecturers, cohort and personal mentors, the other academic staff associated with the CDT and project supervisors. Students are actively encouraged to go directly to course lecturers and other staff with academic questions on an informal basis. Students with concerns about their Cohort Mentors, or about their project supervisor, should notify their co-Director of Studies (Dr Colin Cotter and Dr Tristan Pryer) at once. The Centre Managers will be your point of contact for all administrative or logistic issues. Once these channels have been exhausted, matters should be raised with the CDT Directors, Professor Dan Crisan and Professor Jennifer Scott.

6.2. Feedback
Students will obtain feedback via the following routes:
- Marked coursework,
- Tutorials and extended activities during MPE Wednesdays,
- Meetings with research project supervisors,
- Feedback on presentations from Kick Off Camp, MPE Wednesdays, Jamboree,
- Feedback on provisional project report,
- Meetings with Cohort Mentors as part of MPE Wednesdays,
- Meetings with the MRes Directors of Studies as necessary.

Any assessed coursework done as part of a course will be marked promptly and returned during MPE Wednesdays, when students are encouraged to discuss difficulties with the course lecturer. For the research project, students will meet their supervisor at least weekly to discuss their progress. If the Cohort Mentors, Personal Mentors or student supervisor should report any problems with the student's progress, either on the project work or on the other parts of the course, the Co-Directors of Studies will discuss these with them and the student.
The management team is keen to gather student feedback in order to improve the running and the content of the course. Students should therefore complete the course surveys at the end of each term. The core courses are assessed via the Imperial College online system PG Sole (http://www.imperial.ac.uk/students/academic-support/student-surveys/pg-student-surveys/pg-sole/).

6.3. Absence and illness
Students are reminded that the MRes course is a postgraduate course and as such is not following undergraduate timing. There is no term-free time in this course. **It is mandatory to attend all**

scheduled   lectures, tutorials, seminars, MPE Wednesdays, courses and exams.

Students are required to report any extended periods of absence or illness (three days or more) to the Course Director and Centre Manager. If the absence is prolonged, normally four weeks or longer, it will be necessary to request an interruption of studies. **This includes any absence during the summer term**. In the case where this may affect assessment of part of the course, a medical certificate is normally required. If an absence from an examination is to be taken into account by the Examiners, a medical certificate is essential. Students should also be aware that their bursary is for a full-time employment up to the end of September 2019.

If the illness or absence causes you to miss a coursework or exam deadline, please see **Appendix 2 and Appendix 3** for important instructions.

Any holiday leave will have to be taken at the discretion of the supervisors. Please see **Appendix 2** for more details regarding attendance requirements.

Leave of absence during term time needs to be kept to minimum. A leave of absence must be agreed in advance. When there is an absence of more than a week, the student is required to get permission from the MRes Directors of Studies.

6.4. Study leave
If you need to carry out research away from College for a period of time as part of your MRes you will need to complete form IC/D and submit this to the Centre Manager. Forms can be found on the Registry website at:
http://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/research-programmes/

https://www.imperial.ac.uk/media/imperial-college/administration-and-support-services/registry/academic-governance/public/academic-policy/attendance-requirements-for-pgr/Guidelines-for-External-Study-Leave.pdf

6.5. Interruption of studies
Students who experience a personal emergency or other circumstances arise which necessitate a break from their course, will need to apply for an interruption of studies. This will effectively suspend registration   until the student is able to return. No fees are payable during such a period and bursary payments will also be suspended. Students who may need to apply for an interruption should contact their supervisor in the first instance and then the Centre Manager, who can arrange the paperwork. Students should be aware that visa regulations normally require overseas students to return home during any interruption of studies   and should check with the International Office.
http://www.imperial.ac.uk/media/imperial-college/administration-and-support-services/registry/academic-governance/public/academic-policy/attendance-requirements-for-pgr/Guidelines-for-IoS-for-Research-Students.pdf

6.6. Processes for dealing with mitigating circumstances
During the course there may be exceptional times when your attendance, performance, ability to complete and submit work, sit exams or tests or otherwise meet your responsibilities as a student are adversely affected by circumstances beyond your control. Examples of these circumstances are serious illness or death of a close relative.

Any exams missed without any supporting medical documentation will count as failure. Any illness occurring in the preparation time towards examination times cannot be taken into account. It is the responsibility of the student to ensure that sufficient time is allocated for the exam and write-up preparation.

The programme will follow Imperial's procedure for dealing with mitigating circumstances. It is important that any such situations are disclosed to the supervisor or Centre Manager at the earliest opportunity.

The College's Mitigating Circumstances Affecting Academic Performance: Policy and Procedures **(Appendix 3)** makes provision for the Joint Boards of Examiners to use their discretion where extenuating circumstances are independently corroborated and are judged by the Mitigation Advisory Panel to be of sufficient severity to have substantially affected performance.

If you are in this situation please refer to **Appendix 3** which explains what you should do. It is important you inform us as soon as practicable when a circumstance has arisen.

7. STUDENT RESPONSIBILITIES

7.1. Work ethics
Students are expected to organise, conduct and present their research project in an independent fashion. The supervisory role is to guide and advise the student intellectually as well as technically, but it is not the supervisors' responsibility to do the thinking or the work for the student. All projects will have at least two supervisors who should be approached for guidance. **It is the student's responsibility to make an effort and seek contact with their supervisors on a regular basis.**

7.2. Cheating and plagiarism
Students should be aware of the need to give proper credit for the work of others when writing papers, reports, theses, etc. This is particularly important when the work is in collaboration with other persons.
Please see **Appendix 5** for more details regarding plagiarism.

Allegations of academic misconduct will be dealt with in accordance with Imperials' Cheating Offences   Policies and Procedures:
http://www.imperial.ac.uk/about/governance/academic-governance/regulations/

7.3. Complaints
Any complaint raised by a MRes Student shall be dealt with by the Party against whom the complaint has been raised, according to the appropriate procedures: the Student complaints procedure at Reading and the Procedure for Dealing with Complaints by Students at Imperial. Complaints relating to the overall programme will be dealt with jointly by Reading and Imperial in accordance with Imperial's Procedure for Dealing with Complaints by Students.
http://www.reading.ac.uk/internal/student/rules-and-regulations/student_complaints_procedure.aspx
http://www.imperial.ac.uk/admin-services/secretariat/college-governance/charters/ordinances/students/

7.4. Intellectual Property

Any intellectual property developed by an MRes student during the MRes programme will be governed by Imperial's policy on ownership of Intellectual Property.
http://www.imperial.ac.uk/research-and-innovation/research-office/ip/

7.5. Student withdrawals and appeals

Students must attend to the satisfaction of both the Head of Department of Mathematics and Statistics at Reading, and the Head of Department for the Department of Mathematics at Imperial. Students who have been asked to leave the programme due to unsatisfactory academic progress will have a right to appeal under Imperial's procedure Student Withdrawals and Appeals – Procedure for Dealing with Cases of Unsatisfactory Academic Progress
http://www3.imperial.ac.uk/registry/exams/studentappeals

7.6. Conduct

Students must behave in a reasonable way at all times on Campus. Allegations of non-academic misconduct will be dealt with under Imperial's Code of Student Discipline and Reading's Regulations for Conduct. For additional information, see **Appendix 6**.

https://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/complaints-appeals-and-discipline/
http://www.reading.ac.uk/web/FILES/calendar2013-14/Section_G_Regulations_for_conduct_2013-14.pdf

7.7. Use of calculators in written examinations

Only Imperial-owned approved non-programmable calculators can be used in written examinations. Students are advised to either purchase an appropriate calculator or practise on an Imperial College-owned calculator before the written examinations.

7.8. Laptops – warranty

Laptops have 4 year warranty with Academia Direct, from whom the MacBooks were purchased. Any problems with the laptops not covered by Apple should go to them. Please contact the Centre Manager in the first instance as you will need to have the invoice number to make a claim.
http://academia.co.uk/terms-and-conditions-of-sale/academia-care/

Imperial College London

## 8. GENERAL INFORMATION – IMPERIAL COLLEGE LONDON

How to find us

Imperial College is located south of the Albert Hall in South Kensington. The nearest tube station is South Kensington and Gloucester Road on the District/Circle Line and High Street Kensington on the Circle Line. South Kensington and Gloucester Road are also on the Piccadilly Line which goes directly to Heathrow airport.
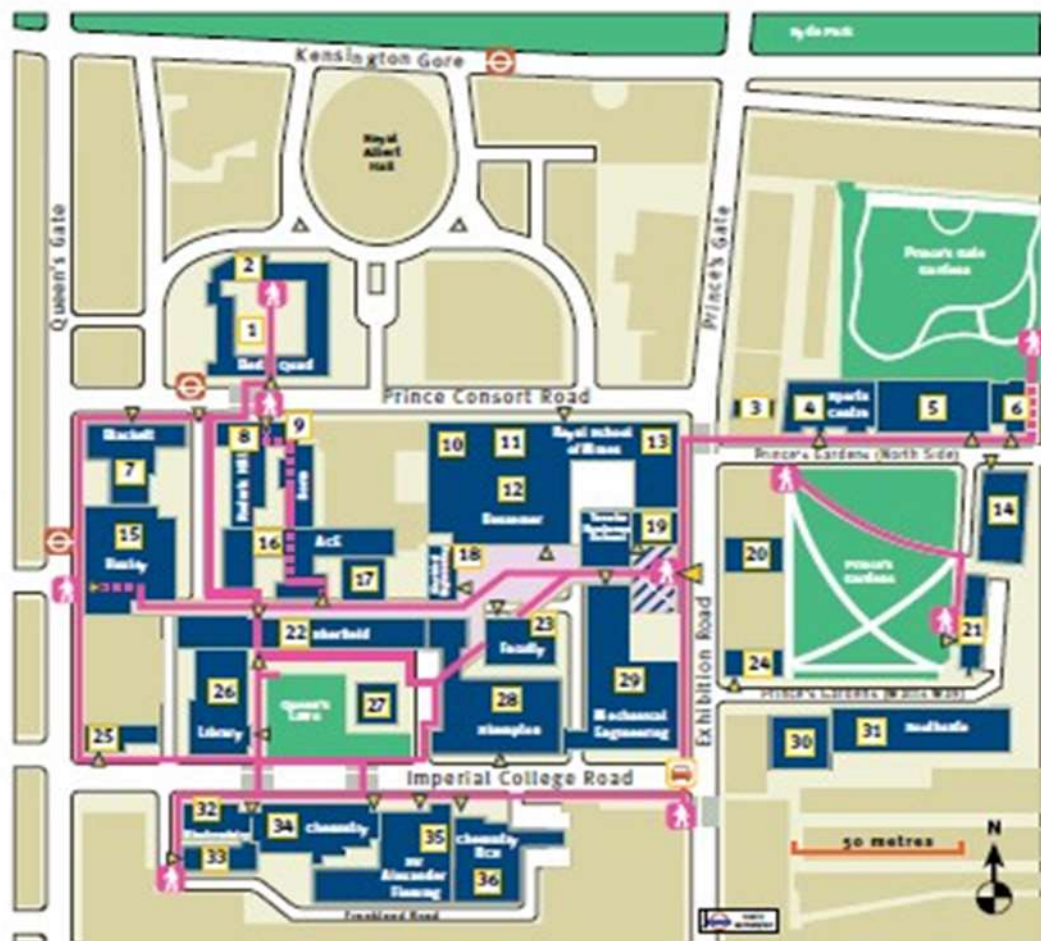
http://www.imperial.ac.uk/visit/campuses/south-kensington/

1	Bell Quadrangle	10	Royal School of Mines	20	53 Prince's Gate	29	Mechanical Engineering Building
2	Imperial College Union	11	Aston Webb	21	Linstead Hall	30	46-48 Prince's Gardens
3	College House	12	Bessemer Building	22	Sherfield Building	31	Southside (under construction)
4	Ethos Sports Centre	13	Goldsmiths Building	23	Faculty Building	32	Biochemistry Building
5	Student Accommodation Office / Garden Hall	14	Health Centre, Dentist	24	58 Prince's Gate Conference Link	33	Flowers Building
6	Weeks Hall	15	Huxley Building	25	170 Queen's Gate	34	Chemistry Building
7	Blackett Laboratory	16	ACE Extension	26	Imperial College and Science Museum Libraries	35	Sir Alexander Fleming Building
8	Roderic Hill Building	17	William Penney Laboratory	27	Queen's Tower	36	Chemistry RCS
9	Bone Building	18	Electrical Engineering	28	Skempton Building		
		19	Tanaka Business School				

The MPE CDT hub
The MPE CDT hub is housed mainly on the 4th floor of the Central Library building (number 26 on the South Kensington Campus Map). The entrance to the EPSRC Centres for Doctoral Training is through level 2 of Sherfield building lobby (number 22 on the Campus Map).

The space is shared with the other EPSRC funded CDTs. The EPSRC CDTs Hub facilities comprise: three mixed seminar/teaching/meeting rooms, lecture theatre (Imperial) with two-way video link via Access Grid technology, kitchen, common room area, support staff office (room 407) and office space for over 80 students. All MRes MPE CDT students will be allocated a desk and lockable filing cabinet in the open plan office space.

Most teaching in the Autumn Term takes place in the CDT Hub - notably in the Access Grid Room. Half of the lectures will be given at Imperial College, and the other half at the University of Reading, using a live video cast system so that students will be able to attend the lectures at either location.

MRes students, along with undergraduate and MSc students of the Department of Mathematics, also have access to a Mathematics Learning Centre located on Level 4 of the Huxley Building. Eating and drinking is permitted, away from the computer desks only.

The Department of Mathematics
The Department of Mathematics at Imperial College London is an internationally renowned department within one of the world's most prestigious universities. The principal aim of the Department is to train professional mathematicians to pursue the study of scientific and technological problems by mathematical methods, and to undertake research in various branches of the subject, for which it has achieved outstanding results in the most recent government research assessment exercise. The Mathematics Department at Imperial is an internationally leading research school comprising over 90 academic staff, 54 postdoctoral fellows and 110 PhD students.
http://www3.imperial.ac.uk/mathematics

The Grantham Institute for Climate Change at Imperial College
The Grantham Institute was founded with a mandate to drive forward climate change related research, translating this into real world impact and communicating our knowledge to help shape decision-making.

The Institute is already integrating researchers and capabilities from all areas of the College necessary to tackle the challenges of climate change and the environment, through which we will work to offer practical scientific and technical knowledge of the highest quality. The Institute is supported by a team of experts who provide authoritative analysis and assessment of research outputs, communicating it in a policy- relevant way to decision makers. The Grantham Institute offers an experience of large-scale interdisciplinary PhD training (currently a cohort of over 40 Grantham PhD students). http://www3.imperial.ac.uk/grantham

When you arrive
MRes students should first register in the support staff office in the EPSRC CDTs Hub (EPSRC CDTs administration office, room 407, level 4, Central Library building, ext. 48511).

College registration, ID cards and safety induction
You will need to register online via the Student e-Service facility as soon as possible after arriving, if you have not done so already. Instructions on how to do this should have been sent to you by the

Registry but if you have forgotten your password, or are unable to log on to Student e-Service, please email registry.support@imperial.ac.uk, providing them with your CID number.

One of the very first things you need to do when you arrive is obtain an identity card. The ID card is essential for a number of purposes, including: visible identification while you are on campus, access to your Department or EPSRC CDTs hub, discounts in College catering outlets and access to the Central Library. It is also used as a swipe card to get in and out of buildings when the College is locked (at weekends and after 6pm on weekdays). Within the Student e-Service facility you can upload a recent photograph of yourself (conforming to Passport standards) for your College Identity Card. If you cannot upload a photo, or do not have a suitable one, you should go to the ID unit (Security) on level 1 of the Sherfield Building to have your photograph taken. For more information on how to obtain college student card please go to:

http://www3.imperial.ac.uk/students/newstudents/yourfirstweek/collegeidcard

Take care of your ID Card:
- On the reverse of your card is a magnetic strip that can be corrupted when exposed to another magnet, like a Blackberry phone case. Two cards stored with the magnetic strips together could also corrupt each other
- There is a chip inside the card which can be affected by Oyster cards. In the same way that you keep all your magnetic cards separate, you must keep apart all the cards that are read by touching them on a reader.
- Plastic card holders and lanyards are available from the ID Card Office issued free to assist in extending the life of an ID card and keeping it safe.

Before you can be issued with your ID card you will need to complete the **Departmental Safety Induction**. Please take your completed induction form to the Centre Manager who will then issue your ID card, if it is ready.

Your security card will give you access to the EPSRC CDT Hub and the Department of Mathematics. In the interests of security do not prop doors open. You may normally work from 7am until 11pm and no later. However, you must inform College security if you will be working from 7am-8am and 6pm-11pm. This is so that they are aware of you being on the premises should a problem arise i.e. fire alarms. College Security is very strict about this and comes down heavily on students and staff who do not comply.

After obtaining your ID card, you should also obtain your library card from the front desk at the Central Library. This is needed for entry to the Central Library and for checking out books at all libraries.

Continuing postgraduates will need to re-register online each academic year, prior to the start of term, to confirm their attendance.

Accommodation
The College has a number of offices which may provide you with help in finding accommodation. Short-term accommodation, either in the form of a College guest room or a local hotel may be booked through the College Conference Office. For long-term accommodation, students should go to the Accommodation Office at 15 Prince's Gardens (ext. 59444, 59445, 59446 or from outside, 020 7594 9444). Other long-term visitors should go to the HUB at 255 Sherfield (ext. 4-8741). Outside of the College, two of the most useful sources of listings are The Evening Standard and Loot, both published on six days of the week.
http://www3.imperial.ac.uk/accommodation/currentstudents/currentpostgraduates

Information & Communication Technologies ICT

When you register online, you will be issued with a password and an e-mail address by the Information and Communication Technologies Department (ICT). They will also send you instructions on how to activate your account. Details of how to do this can also be found online on the ICT website. Any problems or queries relating to computing, including requests for new software, should be addressed to ICT (email service.desk@imperial.ac.uk or dial 49000). To avoid infringement of licensing arrangements and to prevent the introduction of viruses, you are forbidden to bring in programs from outside.

Your username and password will enable you to track your application via the Student e-Services applications and if successful will then remain unchanged for the duration of your stay at College. If activated prior to joining College it is not necessary to make any further changes on your arrival at College as this same Username will allow you access to the necessary College computing facilities.

Username activation can also be done by using the special 'activate' account on a Departmental or Library teaching cluster machine at any time in College. For details, look on posters in the ICT departmental computer rooms. If you have problems activating your College username please contact the ICT Service Desk in West Wing, Level 4, Sherfield Building, South Kensington campus

ICT has very strict rules regarding the downloading of illegal, inflammatory, pornographic or obscene material on to computers connected to the campus network. Infringement of these rules can have very serious repercussions, including expulsion or legal proceedings being brought against students. You should be aware that the content and level of network traffic is monitored continuously.

Imperial Mobile

Imperial Mobile is a mobile application enabling students to access College information and services anytime, anywhere. Students of Imperial College can download it onto any mobile device, phone,
Android, iPad, iPhone, or iPod:
http://www3.imperial.ac.uk/ict/services/softwarehardware/imperialmobile

You will be able to:
- Search campus maps,
- View current PC availability in the Central Library clusters,
- Find students and staff in the people search - call or email them directly, or add them straight to your address book,
- See where your friends are on campus and contact them to meet up,
- Get the latest College and Union news and find out what's on,
- Follow the College on Twitter and read the latest student blogs,
- Hear about student announcements and promotions,
- Explore a guide to College services and facilities,
- Alerts – receive alerts and information.

Postgraduate Welcome Week

Enjoy an official welcome to Imperial with a programme of activities to introduce you to College life. Check out what opportunities are available to meet academics, staff and other students, brought to you by the College and Imperial College Union. Postgraduate Welcome Week timetable can be found here: http://www.imperial.ac.uk/students/new-students/welcome-week/

Imperial College Principles

Imperial College London embodies and delivers world class scholarship, education and research in science, engineering, medicine and business. The College is diverse and international - it comprises academic staff, students and support staff of varied disciplines and backgrounds. It encourages collaboration, actively opposes discrimination and recognises the importance of making a positive impact in the wider community. Please visit http://www.imperial.ac.uk/students/our-principles/ for more information on the College's guiding principles.

Postgraduate English Requirement

All postgraduate research students who are not native speakers of English must demonstrate an appropriate level of English writing competence before the PhD is awarded. The requirement is as follows:

• Unless they qualify for exemption, students are required to take the Initial English Test soon after registering for their PhD. This is an internal Imperial College test, chiefly of writing skills. It is completely separate from the College English entry requirement (IELTS, TOEFL, etc). The purpose of the Initial English Test is to ensure that students who need language support are identified quickly and given support during the period before their Early Stage Assessment (ESA).

• If the score on the Initial English Test is below 60%, the student must take a second test, the English Test at ESA, at the time of their Early Stage Assessment.

• If an appropriate level is not reached at the ESA stage, the student will take a further test, the English Test at LSR, in the period leading up to their Late Stage Review.

Exemptions

Students in the following categories may be exempt from the English requirement subject to confirmation from the Department:

• Native-speakers.
• Students who are bi-lingual (by birth or domicile).
• Students with 1st degree in the medium of English (minimum 3 years).
• Students with extensive education or work experience in the medium of English (minimum 4 years).
• Exempted students should complete the form provided in the welcome pack and return to the Postgraduate Administrator.

Visit the English Language Support website for full details of requirements and tests:
http://www.imperial.ac.uk/academic-english

Security and emergencies

Emergencies of all types may be reported to Ext. 4444. There are First Aid boxes around the EPSRC CDTs Hub and the Department of Mathematics.

Petty theft happens from time to time. Don't leave valuables lying around and always close and lock the door, even if you go out for just a short time. More seriously, there have recently been a number of cases of large-scale computer theft from Imperial College. Please do not allow anyone to tail-gate you in to swipe card areas. Make sure that the doors to any rooms containing computers are properly locked if you are one of the last to leave in the evenings or at weekends. Unfortunately, some thefts have been from locked offices, so if you have a laptop, either take it home each night or lock it in a secure place. If you see anyone at all suspicious, call security at the above number.

Health and safety

Introduction

The Department of Mathematics considers the health and safety of staff, students, contractors and visitors to be of paramount importance. We expect staff, students, contractors and visitors to share our commitment to safety by complying with our policies and procedures and to understand that they too have legal and moral obligations to themselves and to one another. The department will provide, manage and maintain a work environment which is, so far as is reasonably practicable, safe and where risks to health are controlled. The department will offer training to all staff and students in safe methods of working and will foster responsible attitudes to health and safety. Health and safety within the department is organised and managed by the Departmental Safety Officer, Andrew Pope (Room 131, ext. 48544).

Information about health and safety can be found on the College website at:
http://www3.imperial.ac.uk/safety

Security and safety are closely linked. Please help us keep the building secure and safe by following the following simple rules:

• Always wear your College Security/ID card whilst at College. Neck lanyards (red for students, blue for staff) are available from Security.

• Do not allow strangers in the building out of hours.

• Never lend your ID card to anybody; if they cause damage or present a risk to security or safety, you will be liable.

Safety induction

All new students must receive Health and Safety Induction before they can be issued with a swipe card. Please also familiarise yourself with the Departmental safety website at:

http://www.imperial.ac.uk/mathematics/for-staff/safety/

Emergency Procedures

All emergencies

In an emergency, dial 4444 from any internal phone or 020 7589 1000. This line is supported 24 hours a day. State your exact location, your name and extension number. Security Control will immediately mobilise the required emergency services. **Do not ring 999**.

Fire

If you discover a fire, immediately press the nearest red alarm call point. Warn people in the vicinity. Evacuate the building and be ready to tell Security and Fire Officers where the fire is. The emergency evacuation alarm is a continuous siren. Leave the building immediately by means of the stairways. Do not attempt to tackle fires, chemical spillages or intruders yourself.

Building evacuation

Familiarise yourself with the various evacuation routes and use the nearest staircase. Do not always head for the main staircase regardless of where you are as this gets very congested. There are multiple fire evacuation signs throughout the building identified by a white arrow on a green background. From the main staircase the exit is to the Queens Tower (also the assembly point). In the event of a fire alarm all doors are automatically released from swipe card control and you will be able to access the corridors to the other stairwells. If the doors are not released automatically, press the green emergency exit button. Leave the building quickly. Never use the lifts. Do not return to

collect personal belongings.

First aid

Local emergency help is provided by qualified first-aiders. The names and locations of First Aiders are listed on the Health and Safety notice boards and are normally available Monday to Friday between the hours of 9am and 5pm. If no local help is available, ring Security on 4444 as above.

Books and Library facilities

The Central Library is next to the Sherfield Building (building number 25 on the map of campus). The Library has extensive electronic resources, including electronic databases, electronic books and full text electronic journals. Students are able to search for electronic resources, using the on-line library catalogue and web pages, and access them from anywhere on and off campus. The Library has extensive print and electronic collections on Mathematics and Earth Systems topics, which support related research and teaching within the College. The Central Library also houses the Haldane Library, with a good general collection (fiction and non-fiction) and a music library.

For more information, please visit: http://www3.imperial.ac.uk/library.

If you are using a computer connected to the Imperial College London network and have logged in with your College username and password, you will be able to access most e-journals, e-books and databases directly and will not need to sign in again.

For full access you must be a member of Imperial and have a current computer account (College username and password).

http://www.imperial.ac.uk/admin-services/library/find-books-articles-and-more/passwords-and-working-off-site/

Printing and photocopying

Printers are provided in the EPSRC CDTs hub and are activated using your ID card via the ICT print service – check the link below for information on using this service:

https://www.imperial.ac.uk/admin-services/ict/self-service/computers-printing/printing/

Research Students are also encouraged to use the ICT Printservice Printers located in the Maths Learning Centre on Level 4. Both a B/W and a Colour Printer are located there. Further printers are available in Huxley 212 (colour) Huxley 215 (mono), Huxley 516 (mono), Huxley 603 (mono A3) and Huxley 633 (colour). When the Huxley building is closed there are other printers in the Main College Library which are part of the ICT Printservice and the Main College Library is open 24/7 for most of the year.

All research students should be provided automatically with an allowance for printing/copying (a printing credit of £100 per year (3333 B/W sheets)). This credit may be topped up by making a payment online or in the Main Library where there are machines that take UK Bank Notes. If you have problems with these machines or your allowance, please contact the MPE CDT Manager. Please report any Problems with ICT machines directly to ICT - do not try to correct problems yourself.

Communication

The general College number is 020 7589 5111. The College operator may be obtained by dialling 0. Five- figure internal numbers may be dialled directly on the phone. All extension numbers prefixed with a 4 may be dialled directly by external callers using 020 7594 XXXX. Extension numbers prefixed with a 5 do not have the directly dialling facility. Use the "people" tab (top right next to the Search text box) on the College website to find telephone numbers and offices of the members of

College. Microsoft Outlook also has contact details for the staff and the students.

Please check your email regularly as important information will be communicated to you this way.

Any mail for research students should be collected from the pigeonholes located in the Department of Mathematics (mail room, Huxley Building, level 6).

Please make sure that your contact details are kept up-to-date both on Student e-Service: www.imperial.ac.uk/studenteservice and also in the College Directory: http://www.imperial.ac.uk/collegedirectory/

Welfare and pastoral care
We take the welfare of our students very seriously indeed and will try to provide all the help that we can if you encounter problems of any sort.

Support within the Department
If you have any difficulties, either with your research or with personal matters, the natural first contact would be your Centre Manager or Cohort Mentors.

College-wide facilities
Outside the Department, the College provides extensive services for health, counselling, English language support, etc. Details of these are given in the leaflet in your welcome pack "Who is here to help me?" and on the College website at:
http://www.imperial.ac.uk/study/ug/why-imperial/supportive-environment/health-and-wellbeing/

If there is anything you would prefer not to discuss with Departmental staff, the Academic Registrar is available to discuss academic matters and the College tutors are available to discuss personal matters.

College Tutors:
Dr Mick Jones   (+44 (0) 20 8383 1643)
Dr Simon Archer   (+44 (0) 20 7594 5368)
Dr Lynda White   (+44 (0) 20 7594 8527)

Student Counselling Service
At South Kensington, student counsellors are available to any student who would like to talk confidentially about any personal issue, e.g. study difficulties, loneliness, anxiety, depression, relationship issues, bereavement, sexuality. There are both male and female counsellors. Telephone +44 (0)20 7594 9637 or email counselling@imperial.ac.uk to arrange an appointment. If any problems do arise, consult someone as soon as possible.

Student Hub
The Student Hub, based on level 3 of the Sherfield Building, is the one stop shop for all key information and support that students need for everyday life at Imperial. All the student support departments are brought together here, so that you can get answers to your most frequent queries in one place, saving you from going all over the campus. http://www.imperial.ac.uk/student-hub/

International Office
The International Office at Imperial College London deals with all international issues, and all students

from outside the UK. http://www.imperial.ac.uk/study/international-students/

Chaplaincy

The Chaplaincy Centre offers opportunities to explore experiences of faith and belief, and space to ask questions about identity and meaning and to engage with contemporary issues. The Chaplains on campus come from different Christian traditions and work with Hindu, Jewish, Muslim and Sikh Chaplains and Faith Advisors in London. Inspired by our own faith, we work respectfully with people with beliefs different from our own. http://www.imperial.ac.uk/chaplaincy/

English Language Support

The English Language Support Unit (ELSU) offers classes to students and members of Imperial College London who are not native speakers of English. Most of the sessions are free.
http://www.imperial.ac.uk/students/new-students/international-students/english-language-support/

Imperial College Study Guides

The Imperial Study Guide gives advice on developing the skills that you will need to help you through your degree. As well as giving information on different teaching and examination methods at Imperial, the Imperial Study Guide is packed with advice, lessons, activities and questions to motivate and encourage you to take control of your own learning.
http://www.imperial.ac.uk/students/success-guide/

Food and drink

Lunch can be bought in the Student Common Room, or downstairs in the Main Dining Room. A number of sandwich shops, restaurants and pubs at a range of prices may be found on Gloucester Road (one block west of Queen's Gate) and around the tube station at South Kensington. Beit Quad, Eastside and Southside have student bars.

Health

The College Health Service may be found at Southside, watt's Way, Prince's Gardens. Their telephone number is Ext. 4-9375. For emergencies call Ext. 4444 or 0207 589 1000. Students, local residents and visitors from overseas may all use the Health Service free of charge. The Health Service is open from 8:30am to 6pm during term time, 8:30am to 5pm out of term (closed at lunch time from 12 till 1). Appointments may be made by calling the above number. More information is available on the College web site: http://www.imperialcollegehealthcentre.co.uk/

Otherwise, there is an open clinic (appointments not necessary) from 8:30am to 10am, Monday to Friday. In addition to General Practitioners, an extensive range of services are offered, including free condoms, physiotherapy, acupuncture, herbal medicine, osteopathy, massage, psychotherapy, vaccinations and treatment for sports injuries.

Dental treatment is also provided at the Health Service. It is open from 9am to 6pm. Appointments are usually necessary (call 020 7589 6623 or Ext. 4-9396). It is generally necessary to pay for dental treatment, although students and those on income support can obtain subsidies.

If travelling elsewhere in the European Union, you would be advised to obtain an EHIC card (http://www.ehic.org.uk) prior to your travel as this will enable you to receive medical treatment at reduced cost. The EHIC is available to all persons resident in the United Kingdom, but non-European Union students will need longer to apply.

Employment during studies

The College recommends that full-time students do not take up part-time work during term-time. If this is unavoidable we advise students to work no more than 10-15 hours per week, which should be principally at weekends and not within the normal working hours of the College. Working in excess of these hours could impact adversely on a student's studies or health. The full College policy is available at:

https://www.imperial.ac.uk/aeronautics/study/ug/current-students/student-employment/

Sports facilities

The College Sports Centre can be found at 7 Prince's Gardens. Details of facilities, opening time etc. can be found at: http://www.imperial.ac.uk/admin-services/ethos/

Students & Maternity

An early discussion should take place between the student and supervisor and a full risk analysis to determine whether or not there may be any possible adverse effects of the programme on the course of the pregnancy (e.g. programme of study, examinations or other hazards) leading to the development of an agreed action plan to mitigate all identified risks. More information on policy on maternity, adoptive and paternity leave provision for students can be found here:

http://www.imperial.ac.uk/mathematics/postgraduate/current-students/phd/mathematics-research-student-maternity-or-adoptive-leave-policy/

Students with children

Imperial College Early Years Education Centre is based at Numbers 8 & 9 Prince's Gardens for children of staff and students. The provision caters for children aged from six months to five years. The Centre is organised into three age groups and is operating at capacity with one hundred and forty children.

The popularity of the Centre is due to its excellent reputation, its convenient proximity to those working at South Kensington and its competitively priced fees. http://www3.imperial.ac.uk/eyec

Travel

All staff and students travelling on College business are automatically covered by the College's insurance policy. It is worth taking a copy of the cover note with you. This can be obtained from Centre Manager.

If you do plan to go away during term time, even if only for a few days, please speak to the Cohort Mentors or Centre Manager beforehand and leave details indicating where you can be contacted.

If you are travelling overseas, you must register your travel by completing the Insurance Travel Registration Form to be insured with the College.

Parking

Parking is extremely limited in the College. Permits for short visits (a day or so) can sometimes be obtained. More detail on car parking can be found here:

http://www.imperial.ac.uk/estates-facilities/travel/car-parking/

More detail on bicycle parking can be found here:

http://www.imperial.ac.uk/estates-facilities/travel/cycling/bike-parking/

Life in London

London is a vibrant, cosmopolitan, and welcoming city and there is no end to the opportunities that living here can give you. With vast numbers of restaurants, theatres, shops, cinema screens and museums all within easy reach, as a student in London you will never be short of something entertaining to do. Especially when there are so many free activities you can enjoy. The experience of living in London is one which cannot be matched.

Time Out London, published weekly magazine, has extensive listings of much that is going on in London. Get your weekly free Time Out magazine on a Tuesday morning at many tube and mainline stations within zones 1 and 2, and at larger stations within zones 3-5.

The Student Union organises many events, details of which can be found at:
https://www.imperialcollegeunion.org/ or from posters on the notice boards.

Useful links

Useful links to various College/departmental websites are shown below. Although these sites may repeat some of the information already discussed in this handbook, we strongly recommend you take a look at them, because some issues raised are actually important beyond the duration of your course.

- College information for new students http://www.imperial.ac.uk/students/new-students/
- Imperial College Registry http://www.imperial.ac.uk/admin-services/registry/
- Registry Information on Academic and Exam Procedures http://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/
- The Student Hub http://www.imperial.ac.uk/student-hub/our-services/
- The Department of Mathematics http://www.imperial.ac.uk/mathematics
- Grantham Institute for Climate Change http://www.imperial.ac.uk/grantham/
- Imperial Study Guide for Master's Students – College guidance and regulations http://www.imperial.ac.uk/about/governance/academic-governance/regulations/
- The Graduate School http://www.imperial.ac.uk/study/pg/graduate-school/
- College scholarships http://www.imperial.ac.uk/study/pg/fees-and-funding/scholarships/
- Postgraduate prospectus http://www.imperial.ac.uk/study/prospectus/
- Information and Communication Technologies (ICT) http://www.imperial.ac.uk/admin-services/ict/
- Alumni http://www.imperial.ac.uk/alumni/
- Careers Advisory Service http://www.imperial.ac.uk/careers
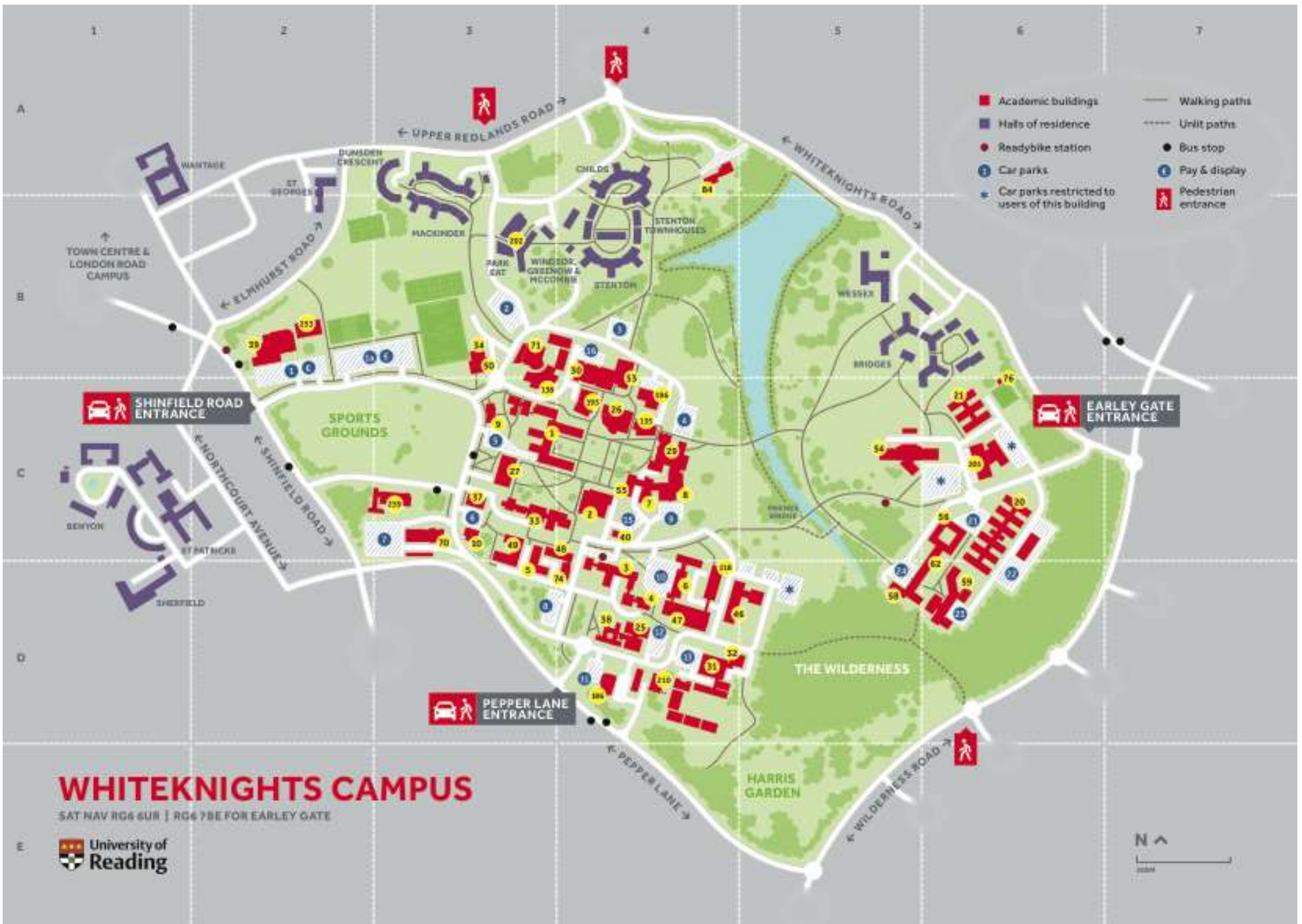
University of Reading

WHITEKNIGHTS CAMPUS

SAT NAV RG6 6UR | RG6 7BE FOR EARLEY GATE

University of Reading

N ^

WHITEKNIGHTS MAP KEY (A–Z)

Name and grid ref	Building
29 3sixty bar C4	Students' Union
135 Accommodation Office C4	Carrington
49 Admissions Office D3	Miller
59 Agriculture, Policy and Development D6	Agriculture
48 Allen Laboratory C4	The Allen Laboratory
10 Alumni Relations C3	Blandford Lodge
74 Archaeology D4	Archaeology
5 Archaeology, Geography and Environmental Sciences (SAGES) D3	Wager
20 Art C6	TOB 1
31 Biological Sciences D4	Harborne
118 Biological Sciences D4	Hopkins
32 Biological Sciences D4	Philip Lyle
53 Biological Sciences Microbiology B4	Knight
30 Biological Sciences Teaching Laboratories B4	AMS Tower
38 Biomedical Engineering D4	Systems Engineering
10 Blandford Lodge C3	Blandford Lodge
10 Campaigns and Supporter Engagement Office C3	Blandford Lodge
55 Campus Central (shop) C4	Cedars Hotel and Conference Centre
135 Careers, Placement and Experience Centre C4	Carrington
135 Carrington C4	Carrington
8 Catering, Hotel and Conference Services C4	Park House
55 Cedars Hotel and Conference Centre C4	Cedars Hotel and Conference Centre
186 Central Kitchen	Central Kitchen
59 Centre for Agricultural Strategy D6	Agriculture
59 Centre for Agri-Environmental Research D6	Agriculture
138 Centre for Entrepreneurship C3	Henley Business School
56 Centre for Integrative Neuroscience and Neurodynamics (CINN) C6	Harry Pitt
259 Chancellor's Building C3	Chancellors Building
40 Chaplaincy Centre C4	Park House Lodge
62 Charlie Waller Institute D6	Psychology
6 Chemical Analysis Facility (CAF) D4	Chemistry and Pharmacy
6 Chemistry D4	Chemistry and Pharmacy
1 Classics C4	HumSS
62 Clinical Language Sciences D6	Psychology
30 Cole Museum of Zoology B4	AMS Tower
27 Communications Office C3	Whiteknights House
38 Computer Science D4	Systems Engineering
33 Construction Management and Engineering C3	URS
25 Construction Management and Engineering D4	Engineering

Name and grid ref	Building
135 Counselling and Wellbeing C4	Carrington
59 Crop Protection Unit D6	Agriculture
21 Design and Print Studio C6	TOB2
135 Disability Advisory Service C4	Carrington
1 Economics C3	HumSS
3 Electron Microscopy Laboratory (EML) D4	JJ Thompson
210 Energy Centre D3	Energy Centre
1 English Language and Applied Linguistics C3	HumSS
1 English Literature C3	HumSS
56 ESSC (Environmental Systems Science Centre) C6	Harry Pitt
50 Estates and Facilities B3	Estates and Facilities
135 Examinations Office C4	Carrington
135 Faculty Offices C4	Carrington
59 Farm Management Unit D6	Agriculture
195 Film, Theatre and Televison C4	Minghella Studios
27 Finance and Corporate Services C3	Whiteknights House
47 Food and Nutritional Sciences D4	Food Biosciences
84 Foxhill House A4	Foxhill House
59 Graduate Institute of International Development and Applied Economics D6	Agriculture
9 Graduate School C3	Old Whiteknights House
27 Graduation Office C3	Whiteknights House
50 Grounds Maintenance Office B3	Estates and Facilities
34 Grounds Maintenance Yard	Estates and Facilities
31 Harborne D4	Harborne
56 Harry Pitt C6	Harry Pitt
N15 Health and Dental Centre	Health and Dental Centre
3 Health and Safety Services D4	JJ Thomson
138 Henley Business School C3	Henley Business School
1 History C3	HumSS
27 Human Resources C3	Whiteknights House
1 Humanities and Social Sciences (HumSS) C3	HumSS
71 ICMA Centre B3	ICMA Centre
138 Informatics Research Centre C3	Henley Business School
4 Information Technology D4	Mathematics and IT Services
54 Innovation Works C5	Science and Technology Centre
1 In-sessional English Support Programme (ISLI) C3	HumSS
10 Insurance Office C3	Blandford Lodge
31 Institute for Cardiovascular and Metabolic Research (ICMR) D4	Harbourne
27 International Office C3	Whiteknights House
135 International Student Advice C4	Carrington
1 ISLI (International Study and Language Institute) C3	HumSS
2 IT Helpdesk C4	Library
3 JJ Thomson D4	JJ Thomson

Name and grid ref	Building
135 Job Shop (students) C4	Carrington
38 Knowledge Transfer Centre D4	Systems Engineering
84 Law A4	Foxhill House
2 Library C4	Library
138 Management (School of) C3	Henley Business School
4 Mathematics and Statistics D4	Mathematics and IT Services
2 Mathematics Support Centre C4	Library (S@iL)
58 Meteorology D5	Meteorology
8 Meadow Suite C4	Park House
49 Miller C3	Miller
195 Minghella Studios C4	Minghella Studios
1 Modern Languages and European Studies C3	HumSS
37 Muslim Centre C3	Archway Lodge
21 National Centre for Biotechnology Education C3	TOB 2
58 National Centre for Earth Observation D5	Meteorology
196 Nursery C4	Nursery
26 Palmer C4	Palmer
8 Park House C4	Park House
135 Peer Support C4	Carrington
27 Pensions Office C3	Whiteknights House
6 Pharmacy D4	Chemistry and Pharmacy
47 Pharmacy D4	Food Biosciences
118 Pharmacy D4	Hopkins
1 Philosophy C3	HumSS
1 Politics and International Relations C3	HumSS
27 Postal Services C3	Whiteknights House
21 Pre-school C6	TOB 2
49 Procurement C3	Miller
62 Psychology and Clinical Language Sciences D6	Psychology
201 Reading Enterprise Centre C6	Reading Enterprise Centre
26 Reading Film Theatre C4	Palmer
138 Reading Real Estate Foundation C3	Henley Business School
46 Reading Scientific Services Ltd (RSSL) D6	The Lord Zuckerman Research Centre
138 Real Estate and Planning C3	Henley Business School
27 Receipts Office C3	Whiteknights House
27 Research and Enterprise C3	Whiteknights House
135 Room Bookings and Timetabling C4	Carrington
70 Russell C3	Russell
54 Science and Technology Centre C5	Science and Technology Centre
27 Security Office C3	Whiteknights House
8 Senior Common Room C4	Park House
76 Social Club (Employees) C6	TOB 2
54 Southern Universities Management Services (SUMS) C7	Science and Technology Centre
54 Southern Universities Purchasing Consortium (SUPC) C5	Science and Technology Centre

Name and grid ref	Building
62 Speech and Language Therapy Clinic D6	Psychology
39 SportsPark B2	SportsPark
253 SportsPark Pavillion B2	SportsPark Pavillion
56 Statistical Services Centre C6	Harry Pitt
135 Student Financial Support Team C4	Carrington
135 Student Helpdesk Team C4	Carrington
49 Student Recruitment and Outreach C3	Miller
135 Student Services Centre C4	Carrington
29 Students' Union C4	Students' Union Hub
21 Study@TOB2 C6	TOB 2
2 Study Advice C4	Library (Room 103)
800 Synthetic Turf Pitch	Synthetic Turf Pitch
3 Technologies for Sustainable Built Environments Centre (TSBE) D4	JJ Thomson
21 Typography and Graphic Communication C6	TOB 2
1 Ure Museum of Greek Archaeology C4	HumSS
8 Venue Reading C4	Park House
59 Veterinary Epidemiology and Economic Research Unit (VEERU) D6	Agriculture
27 Vice-Chancellor's Office C3	Whiteknights House
5 Wager D3	Wager
59 Walker Institute for Climate System Research D6	Agriculture
27 Whiteknights House C3	Whiteknights House

Catering venues

Cafés

Name and grid ref	Building
59 Agriculture snack bar D6	Agriculture
71 Café Index B3	ICMA Centre
2 Café Libro C4	Library
26 Dol.cHe Vita C4	Palmer
201 Eat at Enterprise C6	Reading Enterprise Centre
1 Eat at HumSS C3	HumSS
39 Eat at SportsPark B2	SportsPark
54 Fusion Café C5	Science and Technology Centre

Food and bar outlets

Name and grid ref	Building
7 Eat at the Square C4	Eat at the Square
8 Eat and Drink at Park House C4	Park House
202 Park Eat B3	Park Eat

Restaurants

Name and grid ref	Building
8 Blandford's C4	Park House

9. GENERAL INFORMATION – THE UNIVERSITY OF READING

How to find us
The University of Reading is in a prime location in the South-East of England and has excellent transport links. Reading's railway station has high speed links to and from London Paddington, as well as regular services to and from other cities around the UK. There are direct services to and from both London Heathrow and London Gatwick Airports. The University is close to the M4 motorway allowing easy access by car.
http://www.reading.ac.uk/about/visit-us.aspx

The MPE CDT Hub
The MPE CDT is located in the JJ Thompson (JJT) building (number 3 on the Whiteknights Campus Map). Reading students will be allocated a desk in the open plan office space. There is a small shared kitchen with Tea and coffee is available for a small fee.

The JJT building has open access between 08:00 and 18:00 each working day. Access outside these hours is by swipe access only, which you will have on your student card. If you are in the building outside of working hours then you must sign in and out in the Building Occupants Register Book in the entrance lobby. Please ensure that you also sign this book if you are in the Department but continue working after 6pm. The Departmental safety code can be found in each office. You should read this as all staff and students are required to follow this code.

The School of Mathematical, Physical and Computational Sciences
The School of Mathematical, Physical and Computational Sciences (SMPCS) is home to three leading Departments within the University of Reading – Meteorology, Mathematics & Statistics, and, since August 2016, Computer Science. This coming together of three disciplines makes us one of the largest and most successful clusters of mathematical and computational sciences departments in the UK. We are home to more than 300 staff: including over 90 core academic staff and over 100 research staff; and more than 1000 students across our undergraduate, masters and PhD programmes. The directorates of two Natural Environment Research Council (NERC) virtual centres are hosted within the School: the National Centre for Earth Observation (NCEO) and the National Centre for Atmospheric Science (NCAS) Climate division. In addition, Meteorology hosts several research groups from the Met Office, as part of the Met Office Academic Partnership. The main part of the department is located on the Pepper Lane (west) side campus, whereas the SSC is located in the Harry Pitt building at Earley Gate. The Meteorology Department is mainly located within the Meteorology, Harry Pitt and Agriculture Buildings on the Earley Gate (east) side of the lake bisecting the main Whiteknights campus. It also occupies the 3rd and 5th floors of the Philip Lyle Building on the Pepper Lane side of campus.

When you arrive
Registration and campus cards
On arrival, students should collect their starter pack and timetable from the MPE CDT Centre Manager, Samantha Williams. Students should have already completed their registration at the Kick-Off camp in September and received their Campus card and University username and password.
Students will need to re-register online each academic year, prior to the start of term, to confirm their attendance.

Accommodation

Information about accommodation can be found on the University's accommodation website:
http://www.reading.ac.uk/life/accommodation/life-accommodation.aspx

There is advice on living in University halls and private accommodation. The Student's Union runs its own lettings agency which advertises properties on behalf of local private landlords (http://www.rusulettings.com/). The Student's Union also provides housing advice to current and prospective students.

IT Services

Students will be issued with a password and University e-mail address by IT Services upon registration. Any problems or queries relating to computing, including requests for new software, should be addressed to IT Services (email its-help@reading.ac.uk or dial 6262). To avoid infringement of licensing arrangements and to prevent the introduction of viruses, it is forbidden to bring in programs.

IT Services have strict rules regarding the downloading of illegal, inflammatory, pornographic or obscene material on to computers connected to the campus network. Infringement of these rules can have very serious repercussions, including expulsion or legal proceedings being brought against students. The content and level of network traffic is monitored continuously.

The Reading Student Charter

Staff and students have worked together to develop this charter that clearly sets out what is expected. It recognises the importance of an effective partnership commitment, in which the University and its staff have professional obligations but where students are also responsible for themselves as learners and as individuals. The full Reading Student Charter can be found here:
http://www.reading.ac.uk/internal/student/OnlineStudentHandbook/osh-student-charter.aspx

English language skills

Students whose first language is not English may find themselves at a disadvantage. Students may be asked to attend additional English language classes if it is concluded that their performance is being adversely affected by their language standard.

International Study and Language Institute

The International Study and Language Institute specialises in providing a range of language courses and academic training to international students and the wider University community. The Institute offers in-sessional English support lessons, a one-to-one Writing Advisory Service and a one-to-one Speaking Advisory Service. More information can be found on their website:
http://www.reading.ac.uk/isli/

Self-Access Centre for Language Learning

The Self-Access Centre for Language Learning specialises in the provision of academic and language programmes. It is located on the 2nd floor of the HumSS building in room 230. The Centre offers a wide range of materials for students learning English and foreign languages. The English for Academic Purposes web pages have useful resources to help develop academic English and language skills.
http://www.reading.ac.uk/sacfll/SACLL-EAP.aspx

Security and Emergencies

Introduction

The University considers the health and safety of staff, students, contractors and visitors to be of paramount importance. Everyone is expected to comply with the University's policies and procedures, and to understand that they too have legal and moral obligations to themselves and to one another. The University will provide, manage and maintain a work environment which is, so far as is reasonably practical, safe and where risks to health are controlled. Information about health and safety can be found on the University website at: http://www.reading.ac.uk/internal/health-and-safety/ .

Security incidents occurring out of hours must be reported to the Security Office on extension 6300 (emergencies) or 7799 (minor). All students and staff must read the Area Safety Code supplied with this booklet.

Emergency procedures

As part of their induction processes, all MRes students will have a Health & Safety walk round after term starts.

In an emergency; summon the emergency services Dial 0-999 from an internal phone, or 999 from a mobile phone. State the service required (fire, ambulance or police) and give your location as The University of Reading, JJT, Whiteknights Campus, University of Reading. Give your name and telephone number and information about the emergency. Then dial Ext. 6300 from any internal phone to alert University Security Control (0118 378 6300 from a mobile phone).

First aid

The names and locations of First Aiders are listed on the Health and Safety notice boards and are normally available Monday to Friday between the hours of 9am and 5pm.

Fire

A continuous siren from the fire alarm must always be regarded as a genuine emergency and the building must be evacuated immediately. If you discover a fire, sound the fire alarm and follow the emergency procedure above. Do not attempt to tackle a fire yourself.

Building evacuation

Familiarise yourself with the various evacuation routes and the nearest staircase. The assembly point is outside the Philip Lyle Building on the grass area opposite. Leave the building quickly. Never use the lifts. Do not return to collect personal belongings.

Security

Bicycles are also vulnerable, so make sure that you lock it securely and remove items such as lights which can be easily taken. You can register your bicycle with Security – ring extension 7799 for a card to record details of your cycle.

Petty theft happens from time to time, please be careful and make sure that you do not leave valuables lying around. Please do not allow anyone to tail-gate you in to swipe card areas. Make sure that the doors to any rooms containing computers are properly locked if you are one of the last to leave in the evenings or at weekends. Unfortunately, some thefts have been from locked offices, so if you have a laptop, either take it home each night or lock it in a secure place. If you see anyone at all suspicious, call security.

Library

The Library is located in the centre of the Whiteknights campus (building number 2 on the campus map). Across its three sites, the library holds over a million volumes, subscribes to around 4000 periodicals, has a range of electronic sources of information, and houses the Student Access to Independent Learning (S@il) computer-based teaching and learning facilities. It contains around 5,500 volumes on mathematical topics. The Department of Meteorology Library holds many textbooks on atmospheric physics relevant to the programme, and also contains a Learning Resource Centre containing additional material such as course notes, reprints of important papers, and past examination papers. The meteorology department librarian, two PhD student assistants, together with the main library liaison officers for Mathematics and Statistics and Meteorology, provide support and guidance for students.

Printing and photocopying

Multi-purpose printers are provided throughout the Mathematics department, which has printing, photocopying and scanning facilities. At the moment there is no charge for normal use of these printers; however its use is recorded and monitored and quotas may be implemented if unreasonable use occurs. If you experience any problems with the printer, please contact Sam Williams.

Communication

Students are expected to check their University email account regularly as important information will be communicated this way. Staff contact details can be found on the 'Staff search' function of the University website (http://www.reading.ac.uk/search/search-staff.aspx). The University switchboard can be reached by dialling '100' from any internal telephone. To gain an outside line, prefix any number with '9'.

All students are required to maintain their student record via the RISISweb Portal (www.risisweb.reading.ac.uk). This includes entering up to date local contact address (i.e. term-time address) and (where possible) mobile phone numbers. It is very important that we have these details in case of an emergency and to send, or forward, correspondence if needed.

The School's website is: http://www.smps.reading.ac.uk/

A list of Mathematics and Statistics staff contact details can be viewed at:
http://www.reading.ac.uk/maths-and-stats/about/maths-staff.aspx

A list of Meteorology staff contact details can be viewed at: http://www.met.reading.ac.uk/about/met-staff.php

Welfare and pastoral care

For students experiencing any difficulties, either personally or academically, should contact their Cohort Mentor in the first instance. Students are actively encouraged to go directly to course lecturers and other staff with academic questions on an informal basis. Students with concerns about their Cohort or Personal mentor, or about their project supervisor, should notify their co-Director of Studies at once. The Centre Manager, Samantha Williams (University of Reading), will be your point of contact for all administrative or logistic issues. Once these channels have been exhausted, matters should be raised with the CDT Directors, Professor Dan Crisan (Imperial) and Professor Jennifer Scott (Reading).

Health
The University has a wide range of support services to support students:
http://www.reading.ac.uk/life/life-health.aspx

The University medical practice
The University has a purpose-built medical practice and dental surgery located just a ten-minute walk from the centre of the main Whiteknights campus. The University Medical Practice has a dedicated staff of doctors, nurses and supporting ancillary staff providing all aspects of a general practice. Additional facilities outside the NHS include the services of a consultant psychiatrist.

Counselling and wellbeing
The Counselling and Wellbeing team runs talks on issues such as coping with stress, finding motivation and gaining confidence. The team also offers short-term counselling which is completely confidential. And, at your request and with your permission, our experts can work closely with colleagues across the university to provide coordinated support specifically for you. For more information, visit the Counselling and Wellbeing website:
http://www.reading.ac.uk/internal/counselling/cou-home.aspx

Students Union Advice Team
The Students' Union team is familiar with the particular needs and issues of mature, postgraduate and international students. Through its Membership Services Centre, advisors provide information and confidential advice on personal, social, academic, financial and welfare matters. The advisors work closely with a number of departments across the University such as the Counselling Service, Accommodation Office and central administration.

Disability Support
The School Disability Representative is Kate Shaw (JJ Thomson Building, room 210, tel: 8541) who is the first point of contact for students with any disability (physical, learning, developmental or long-standing health conditions), whether previously declared or not. In addition there is a University Disability Co- ordinator in Room 210, Whiteknights House (tel: 8115). The Disability Office web site can be found at www.reading.ac.uk/disability

International Student Advice
The University's International Student Advisor provides cross-cultural support of all kinds to new international students with a particular focus on developing support networks and new learning skills. Drop-in sessions are available every week and longer appointments are available by arrangement.

Peer Support
The University's Peer Support Network is a friendly, informal and confidential means of one-to-one support, offered by students, to students. Pear supporters are training to be a listening ear. More information can be found on the Peer Support website:
http://student.reading.ac.uk/essentials/_support-and-wellbeing/support-from-your-peers.aspx

Students with children
The University has excellent childcare facilities on campus to make life as easy as possible for students with children. The Little Owl Pre-School has places for children aged 2½ to 5 years, while Little Learners – a nursery run by the Student Union – caters for children from 3 months to 5 years. Further information on childcare in the Reading area is available from the Reading Children's Information Centre on 0118 950 9499.

Money matters, costs and budgets
The Student Financial Support Team can provide help and advice on:
- Statutory (Government) funding from Student Finance England (SFE),
- Loans (e.g. Professional Career Development Loans [PCDL], US Federal loans, Canadian loans,
- Bursaries (e.g. Reading Bursary, National Scholarship Programme [NSP]) and scholarships,
- Budgeting and money management.

Religious life
The University of Reading is a welcoming community for people of all faiths and none. Religious life on campus is diverse and includes a Christian chaplaincy, a Muslim Centre and various student faith societies. http://www.reading.ac.uk/life/life-religious.aspx

Reading University Students Union (RUSU)
Reading University Students' Union (RUSU) is run by students, for students, and provides facilities, entertainment and opportunities to make the most of time spent at University. https://www.rusu.co.uk/freshers2014/

Sport
The University offers access to extensive sports facilities, both indoors and outdoors. The campus contains courts, pitches and playing fields for a wide range of sports, as well as a fully-equipped sports centre with gym. The University's outstanding sports facilities include; the University sports park, a wide range of football pitches and world-class rowing. http://www.reading.ac.uk/life/life-sport.aspx

Societies, clubs and activities
There are over 100 clubs and societies at the University of Reading waiting to welcome new members. Joining a group is a great way to meet people and to develop new talents. http://www.rusu.co.uk/activities/

Student Maternity Policy
The Student Maternity Policy offers signposts to advice about health and study management should a student become pregnant at University: http://www.reading.ac.uk/internal/student/rules-and-regulations/stdserv-maternity-policy.aspx

Overseas travel
Before travel you are required to fill out a short online risk management form for students that is available on the web link here: http://www.reading.ac.uk/internal/finance/TravelandInsurance/fcs-ins-business.aspx

Students are also required to complete the university's online insurance form on Blackboard https://www.bb.reading.ac.uk/webapps/login/#

Non-EU students are required by the UK Foreign Office to notify the University when they plan to spend time away from Reading. Please tell the Centre Manager the dates when you will be absent from the UK, before you leave on a trip for any reason, not just work. Also, please tell us the dates of trips elsewhere in the UK for prolonged periods (more than a week). The University is responsible for recording this information for the UK Government during your stay in Britain and it is a condition of your visa for entry into the UK. Flights, hotel deposits and registration fees that you need to pay before any trip may be paid for using the Departmental University credit card. This should be arranged via the Centre Manager. You should ensure that all receipts from your trip are kept as you

may need these to claim back money spent on food/travel etc. on your return.

Travel to and from the Campus
The University endeavours to be as environmentally friendly as possible and access to the Campus in environmentally friendly ways are encouraged. Further information can be found on the 'Clean and Green' webpages:
http://www.reading.ac.uk/cleanandgreen/Whatcanyoudo/TravelandTransport/cag2-whatcanyoudo-travelandtransport.aspx

Parking
Car parking spaces at the University are severely limited, so parking is restricted to those with a permit. Permits are only usually awarded to students with mobility issues or with other extenuating circumstances that meet the qualifying criteria. Those who are eligible to apply can be submit a request using the online form: http://www.reading.ac.uk/parking/students/park-student-parking.aspx

Pay and Display parking is available in Car Park 1a.

Life in Reading
With a population of around 235,000, Reading itself is big enough to offer a wide range of shops, restaurants, sports venues and bars, but is still easy to navigate as you settle in. The town has a proud history of welcoming people from across the globe, and international students often comment on the warm atmosphere and multicultural vibe found here. The town centre is within walking distance of the University's Whiteknights and London Road campuses, or via a bus from the Whiteknights campus which run frequently.

Useful links
- Information for new students: http://www.reading.ac.uk/welcome/
- Student webpage http://www.reading.ac.uk/internal/student/stdserv-home.aspx
- Academic support
http://www.reading.ac.uk/internal/student/academic-support/stdserv-academic-support.aspx
- Rules and regulations
http://www.reading.ac.uk/internal/student/rules-and-regulations/stdserv-rules-and-regulations.aspx
- Graduate School http://www.reading.ac.uk/graduateschool/gs-home.aspx
- Examinations and Assessment handbook http://www.reading.ac.uk/internal/exams/staff/exa-handbook.aspx
- Department of Mathematics and Statistics http://www.reading.ac.uk/maths-and-stats/
- Department of Meteorology http://www.met.reading.ac.uk/
- IT Services http://www.reading.ac.uk/internal/its/

Further info on Reading can be found in **Appendix 10.**

10. APPENDICES

APPENDIX 1: MASTER'S PROJECT MARKING SCHEME

Master's project marking

STUDENT:	
PROJECT	
SUPERVISO	
SECOND	

Part 1: **Please tick which of the following mark ranges and criteria you believe best applies to this project:**

[ ] 90-100 Written to a publishable standard as it stands – contains good original work, with a significant result, explained very well, with very good account of and references to existing work. Presentation excellent.

[ ] 80-89 Written almost to publishable standard – containing good original work, with a significant result, explained very well, with very good account of and references to existing work. Good presentation.

[ ] 70-79 Good original work, completing a significant result; explained well, with good account of, and good references to, existing work.

*Below 70 is below the **Distinction** threshold, and the criterion for this should be the presence or absence of original work or insights, and the significance of the result(s) obtained. If a mark is just above or below 70, the reason for this should be stated **clearly**.*

[ ] 65-69 Some good original ideas, developed independently, but not far enough to complete a significant result; the work still explained well and with good account of and references to existing work. Close to Distinction but not quite there.

[ ] 60-64 Some good ideas, developed independently, but not far enough to reach a significant result; fair explanation of the work and with some account of and references to existing work.

*Below this point the project would not be of **Merit** standard. Below here we are looking at projects which only review the problem without seriously attempting or obtaining anything new. If a mark is just above or below 60, the reason for this should be stated **clearly**.*

[ ] 55-59 An explanation of the problem and the work of others on it, but without much independent work of the candidate's own.

[ ] 50-54 As above but in some way defective – for example one from: few references, some unclear text, poorly presented; however still showing some understanding.

*Below 50 is a **Failing** mark – this should only be for projects where there is strong doubt as to whether the student is in command of the material. If a mark is just above or below 50, the reason for this should be stated **clearly**.*

[ ] 40-49 Poor understanding; several of - few references, some unclear text, poorly presented. If significant material is quoted, verbatim, from a cited source, without evidence that the student understands it, no mark higher than 49 should be given.

[ ] 20-39 Very poor understanding; few references, unclear text, poorly presented.

[ ] 0-19 No evidence of understanding; scant references, unclear text, very poor presentation.

Notes:
- While original research is desirable wherever feasible, in some areas a suitable project might be to apply, implement or explain a known result. A report which clarified a known cited result, presenting it more clearly than the published source, might deserve a mark in the 80-89 range, and a higher mark would be justified if there were evidence of a new insight, e.g. if the relationship between known results was clearly discussed.
- A report which was written in the candidate's own words, to the standard of a chapter of an undergraduate textbook, would be regarded as 'publishable' with regard to its presentation.
- While original work is not needed for a Pass, some original ideas are needed for a Merit, and they should be well developed to justify a Distinction. All project topics   should be of such a level that a Distinction mark could be justified for excellent work on them.

Of course verbatim quotes from uncited sources are treated as plagiarism, or at best, as poor academic practice. Such cases will generally be referred to the institution where the lead supervisor for the project is employed.

APPENDIX 2: ATTENDANCE, HOLIDAYS, LEAVE AND ABSENCE

Attendance
Students are permitted to proceed with their course of study only if they maintain regular attendance and make acceptable academic progress. While students are responsible for their own learning there is an expectation that they will take full advantage of the learning opportunities provided, attending all timetabled sessions of the degree programme. Should a student choose to absent his/her self from the degree programme without authorisation they should be aware that they would be missing valuable teaching 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 degree programme 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 experience than their fellow students is not going to stand in their favour.

Teaching staff are expected to keep students' attendance under constant review and warn them if they feel it is inadequate. Problems of non-attendance will be reported to the Director of Postgraduate Studies who will inform students' Cohort Mentors and together will make recommendations on any remedial action that might be appropriate. Cohort Mentors 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 Director of MPE CDT may, at their discretion and following investigation, require the student to repeat part of the degree programme; or, should they decide that the student's academic record and/or application is inadequate or that the student is unable to profit from continuing the programme, they may require the student to withdraw. Students have the right of appeal.

Holidays
Timetables for most years include breaks at Christmas and Easter. However, before arranging holiday's students should check the timing of examinations, bearing in mind the possibility that a resit might be necessary – it is not always possible for examinations to be timetabled during term time.

Absence due to illness
If you are absent from the College due to illness for more than three consecutive days, you should contact Centre Manager as soon as possible. If you have been absent for more than seven consecutive working days, documentary evidence should be obtained - e.g. an official doctor's certificate – and submitted to the Centre Manager.

Illness can only be taken into account in assessing the significance of poor attendance, work or examination results if the illness has been reported to the student's doctor at the time it happened, and a medical certificate submitted to the department.

If your illness affects a coursework or exam deadline you must fill out a mitigation form - please see **Appendix 3** for important instructions.

Special or Compassionate Leave
If it is necessary for a student to be absent from the College for any reason other than illness, permission must be sought from the department, via an absence request form available from the Centre Manager. This might include a period of absence where a student has suffered a close

family bereavement, or to enable a student to participate in a major cultural or sporting event. Requests should normally be submitted in writing using the form. In circumstances where there is a strong precedent for approval to be given and absence is necessary at very short notice (e.g. in the case a close family bereavement) and here the period of absence will be less than three days, approval may be given following a telephone call to the Centre Manager. This request form must be submitted along with any evidence to the Centre Manager in advance of Absence, leaving enough time for it to be considered and a decision made on whether the absence is accepted or not. In all but extreme cases, requests made after the absence will not be considered and the absence may count against the student and lead to disciplinary measures.

Student Records
Details relating to unsatisfactory attendance may be placed on a student's confidential file and made available to supervisors, taken into consideration by and at the discretion of Boards of Examiners, used as evidence in cases of student appeals and complaints.

APPENDIX 3: MITIGATING CIRCUMSTANCES POLICY AND PROCEDURES

This Policy and Procedure is concerned with mitigating circumstances affecting academic performance in relation to examinations, major pieces of coursework and projects, and difficulties impacting upon a substantial part of the academic year. Issues relating to minor pieces of coursework can be dealt with at the discretion of the Senior Tutor/Postgraduate Tutor.

Principles
The policy embodies the following principles:

• The extent of discretion which may be exercised by Boards of Examiners in relation to mitigating circumstances should be consistent throughout the College.
• Students presenting mitigating circumstances in mitigation of poor academic performance should receive a fair hearing.
• Procedures for consideration of mitigating circumstances should be consistent throughout College to ensure equity of treatment.
• Student confidentiality should be respected as far as possible.
• Decisions regarding what evidence is presented to a Board of Examiners should be made by more than one member of staff. The group making this decision is referred to as "the advisory panel" throughout this document. The actual title used may vary between departments.
• Procedures should be backed by adequate documentation, i.e. in their promotion to students, in confirmation of evidence and in the recording of decisions.

Extent of discretion
Boards of Examiners may use their discretion where mitigating circumstances are independently corroborated and are judged by the advisory panel to be of sufficient severity to have substantially affected performance as follows:

• To allow candidates who miss an examination or major element of coursework an opportunity to sit/submit and receive an uncapped mark.
• To allow candidates to sit but who are considered by the advisory panel to have performed significantly below their normal ability (based on prior performance) to resit the assessment and receive an uncapped mark or to complete an alternative SQT (the latter option may not be offered to any student on a course where the external accrediting body demands that all graduates have met a minimum standard in all major assessments e.g. medical students).
• In exceptional circumstances, where the above options cannot be used without disadvantage to a student, the Board has the option to raise to a pass mark a candidate who has achieved marginally less (as defined by Senate) than the pass mark in order to allow them to progress.
• In the consideration of the award of degree classification/distinction where a student's marks are close to a class/distinction boundary.

Procedures for the Implementation of Policy
The following procedures are based on current best practice and should be followed by all departments:

• Students should be informed of welfare arrangements in their written induction material and should be specifically advised at induction meetings to inform the Senior Tutor/Personal Tutor of any problems affecting their academic performance. Information about the welfare arrangements should also be clearly accessible from relevant departmental teaching websites.

- The procedure for requesting mitigation, including details about the type of independent evidence required to support requests and the possible outcomes of successful requests for mitigation should be made clear to students.
- Students should be written to a few weeks before the examination inviting them to submit details of any problems affecting their academic performance to the Senior Tutor or other designated member of staff in writing on the appropriate form. They should also receive a final reminder when they are emailed with information about examination arrangements.
- All requests for mitigation should be made on the relevant form and accompanied by any independent corroborative evidence. This evidence and details of the outcome should be kept on the individual's file.
- Submissions by students should be considered prior to the meeting of the Board of Examiners by an advisory panel consisting of a small group of key staff (e.g. Head of Department, Senior Tutor, DUGS, Chairman of Board, year coordinators), at least one of whom should be a member of the relevant Board of Examiners, which makes recommendations to the full Board. The advisory panel should determine the amount of information which may be released to the Board subject to the wishes of the student (see below).
- A simplified process should be adopted for students to report any mitigating circumstances resulting in missed or late coursework where the work makes only a minor contribution to the end of year mark. Students should complete a standardised form to document the circumstances. The amassing of several forms for an individual student should trigger an investigation by a Senior or Personal Tutor to establish whether further action should be taken.

Note: The College Health Centre can certify illness only for absence from College lasting more than one week or absence from an Examination. They cannot certify an illness if the student has not been seen at the Health Centre during the illness. Likewise, the College Student Counselling Service can only provide a letter on request by a student who is already attending counselling. The College Disability Advisory Service can only help students to obtain appropriate evidence of disability prior to examinations taking place and are not able to certify for absences due to disability.

- It is essential that Boards of Examiners minute both the recommendations on mitigation received from advisory panels and the justifications for any action taken in consideration of mitigating circumstances.
- A written record of submissions by students and the outcomes recommended by advisory panels should be kept with the examination records.
- Students are normally required to submit requests for mitigation in accordance with the prescribed procedure. However, on exceptional occasions, advisory panels may receive late submissions. In such cases, students should be required to provide a written explanation for the late submission, for consideration by the advisory panel, which will need to consider each request on its merits. Late submission for mitigation to the advisory panel will only be accepted if it is clear that the evidence, for example, diagnosis of an illness, was not available earlier.

Student confidentiality

The more information that is revealed to the advisory panel, the more able they will be to make an informed recommendation to the Board of Examiners. However, it is acknowledged that requests for mitigation may require a student to reveal information of a highly personal and sensitive nature. In order to balance these conflicting needs:

- It is expected that students will release sufficient details of their circumstances to the advisory panel.
- Advisory panels should take all revealed information and corroborating evidence into account when making their recommendation to the Board of Examiners.
- Advisory Panels should report their recommendations and the nature of the evidence provided to

Boards of Examiners. Where a student has requested the withholding of specific information, his or her wishes must be respected. For this reason, advisory panels should always include one or more members of the Board of Examiners.

Senate October 20124
http://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/

http://www.reading.ac.uk/internal/student/rules-and-regulations/std-serv-extenuating-circumstances.aspx

APPENDIX 4: DISABILITY STATEMENT

Information for Students with disabilities, specific learning difficulties or long-term health issue
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 (Tony Bellotti, tel: 020 7594 8521)
He 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. You need to contact him without delay if you think that you may need extra time or other adjustments for your examinations.
http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/

2. Disability Advisory Service: http://www.imperial.ac.uk/disability-advisory-service/
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: http://www.imperial.ac.uk/disability-advisory-service/

Students who are home for 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.

Disability Advisory Service, 2013

APPENDIX 5: PLAGIARISM

With ready access to electronic data sources and the internet, all universities are concerned with ensuring that work submitted by students, whether it be tutorial material, laboratory reports, coursework assignments or research projects, is not plagiarised. Despite the fact that this is a particularly serious issue, it is often not clear how plagiarism is defined. Some students commit plagiarism when preparing written pieces of work without being aware of it. Therefore, please take the time and carefully read the following extract from the College communication on plagiarism which can be found online at: http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/plagiarism-academic-integrity--exam-offences/

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

Plagiarism, which is the presentation of another person's thoughts , words or images and diagrams as though they were your own and which is a form of cheating, must be avoided, with particular care in coursework, essays, reports and projects written in your own time and also in open and closed book written examinations. You are encouraged to read and criticise the work of others as much as possible, and you are expected to incorporate this into your thinking and in your coursework and assessments. But you must be sure to acknowledge and identify your sources.

Direct quotations from the published or unpublished work of others, whether from the internet or from any other source, must always be clearly identified as such by the use of quotation marks, whether in coursework or in an open or closed book examination. A full reference to their source must be provided in the proper form. 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.

Where plagiarism is detected this is most usually in project work or coursework i.e. work that is submitted in the candidate's own time but plagiarism can also occur in closed book written examinations. Such situations can arise where candidates have been able to learn text by heart [by rote] and simply reproduce what they have learnt without attribution. Where the examination is based on technical knowledge this may be acceptable and not regarded as plagiarism. In other subjects where candidates are asked to write essays the examiners may regard text reproduced without reference or critical analysis as plagiarism. Boards of Examiners are encouraged to clarify where appropriate in examination rubrics how sources should be acknowledged in those examinations.

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 and referenced, with individual contributions recorded, in the convention appropriate to your discipline. You should therefore consult your personal or senior tutor or course director if you are in any doubt about what is

permissible. You should be aware that you have a collective professional responsibility as a group for the integrity of all of the work submitted for assessment by that group. If you become aware that a member or members of the group may have plagiarised part of the group's submission you have an obligation to report your suspicions to your personal or senior tutor or the course director. http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/plagiarism-academic-integrity--exam-offences/

The use of the work of another student, past or present, also constitutes plagiarism. Where work is used without the consent of that student, this will normally be regarded as a major offence of plagiarism. Giving your work to another student to use (other than in a group assessment) may also constitute an offence.

The College may submit your work to an external plagiarism detection service, and by registering with the College you are automatically giving your consent for any of your work to be submitted to such a service.

The College will investigate all instances where an examination or assessment offence is reported and apply appropriate penalties to students who are found guilty. These penalties include a mark of zero for the assessment in which the examination offence occurred or a mark of zero for all the assessments in that year or exclusion from all future examinations of the University (i.e. expulsion from the university)."

Submission for most coursework is through the TurnItIn submission system in Blackboard (http://www.imperial.ac.uk/admin-services/ict/self-service/teaching-learning/elearning-services/).
This is a system that reads the submission and compares it with a very large library of existing material, and also with other submissions of the same piece of coursework. TurnItIn is a highly effective tool in identifying attempts at plagiarism.

Cheating Offences Policy and Procedures http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/plagiarism-academic-integrity--exam-offences/

TurnitinUK Plagiarism Detection Service at Imperial College http://www.imperial.ac.uk/admin-services/library/learning-support/plagiarism-awareness/

APPENDIX 6: IMPERIAL COLLEGE REGULATIONS FOR STUDENTS

1. All registered students of the College are subject to the provisions of these Regulations for Students, the College Academic Regulations, and such other Regulations and Instructions for Students as the College may from time to time approve.

2. Any student whose sessional fees or whose residence charges (including charges made by the Du Cane Housing Association) have not been paid in full will not be allowed to proceed to the next year of the course and will be required to withdraw from the College. If any fees or charges are still unpaid at the time when a student enters for the last examination necessary to qualify for the award of a degree/diploma, the award will not be conferred and no certificate in respect of the award will be issued until the debt has been paid in full.

3. Any student wishing to occupy residential accommodation provided by, or on behalf of, Imperial College will be required to abide by the terms and conditions of the Licence. Acceptance of an offer of accommodation will signify acceptance of such terms and conditions.

4. Every registered student of the College is automatically a member of Imperial College Union unless, under the provisions of the Education Act 1994, a student has formally opted out of student union membership by recording that decision with the Academic Registrar in the manner prescribed.

5. Student disciplinary offences of a non-academic nature are dealt with under a code of procedure agreed by Imperial College Union and approved by the Governing Body. In the case of serious offences, this may involve the suspension and/or expulsion of the student from the College. Students must not engage in any conduct which causes harm or unreasonable disturbance to students, staff, neighbours or visitors to the College, or damage to any property of the College or its students, staff, neighbours or visitors, or engage in any activity or behaviour which is likely to bring the College into disrepute. Illegal acts on or near College may also constitute offences under these College Regulations for students.

6. Candidates for the PhD or MPhil degrees are required by the College regulations to give conditional authority for their thesis or dissertation to be made available for public reference. Candidates who wish to retain personally, for a limited period, the sole right to grant permission to consult, borrow or copy their work must obtain the agreement of their supervisor and the Graduate School Committee. Approval will be given only in special circumstances and for a period not exceeding two years. Acceptance of a place as a research student at the College is deemed to imply acceptance of these conditions.

7. Undergraduates must inform their Senior Tutor and postgraduates their Postgraduate Tutor if they are absent from College for more than three days during term. If the absence is due to illness a medical certificate must be produced after seven days. If an examination is missed on account of illness a medical certificate must be produced immediately.

8. A student who contracts an infectious or contagious disease may be required to present a medical certificate acceptable to the College Health Service, indicating freedom from infection, before resuming attendance at the College.

9. The College may require a student to be assessed by the College Health Service, or other appropriate medical practitioner approved by the Health Service, if there is reason to believe that the

student's state of health makes him/her unable to pursue his/her studies, or causes disruption to other members of the College, or causes or has the potential to cause harm to him/herself or others. If the medical assessment confirms that it is not in the interests of the student or the College that the student should continue his/her programme of study the Head of Department shall consult the College Tutors and, taking into account their advice, may suspend the student until he/she is fit to continue his/her studies or require the student to withdraw from the College. A student who refuses to undergo assessment may be suspended until such time as a medical practitioner acceptable both to the student and the College has assessed the student and confirmed in writing that the student is fit to resume study.

A student who is required to withdraw has the right to appeal against the withdrawal decision but not against the results of the medical assessment on which the decision is based. The student may, however, request that a second medical assessment be obtained from a medical practitioner approved by the College Health Service. The responsibility for hearing and deciding upon appeals is vested in the Senate and is delegated by the Senate to Appeal Committees, whose decisions are final.

A student who is suspended will be regarded as having taken an interruption of studies, and will be required to provide medical evidence as to fitness to return to study in accordance with the conditions attached to the granting of interruption of studies.

10. No work involving ionising radiation may be carried out in any part of the College except in accordance with the current edition of the Imperial College Local Rules for Safe Working Practices with Ionising Radiation (Second Edition Spring 1991).

11. Students who make use of College Computing facilities are required to familiarise themselves with and to abide by the current edition of the Imperial College Information Systems Security Policy and Codes of Practice and Guidelines.

12. Computer misuse will be regarded as a serious offence and will be dealt with under the College Disciplinary Procedure or, where appropriate, under the provisions of the Computer Misuse Act 1990.

13. Students who are authorised, as part of their studies, to make use of 'data' and 'personal data' as defined under the Data Protection Act 1998 are required to familiarise themselves with, and to observe the provisions of, the Act. Further details are available from the College Data Protection Officer.

14. All students must familiarise themselves and comply with the College's Student Intellectual Property Policy.

15. Students must ensure that their personal data on student e-service is kept up to date at all times including any change in their home or term time address or their emergency contact details.

16. Where a student has a pre-existing relationship, or develops a relationship during the course of study, with a member of staff such that there is a potential conflict of interest, especially with regard to the student's assessment, the student and member of staff must declare this in confidence to the Head of Department at the start of the course of study or at the point at which the relationship has started if this is during the course.

Council, July 2017
https://www.imperial.ac.uk/students/terms-and-conditions/student-regulations/

https://www.imperial.ac.uk/media/imperial-college/administration-and-support-services/registry/academic-governance/public/regulations/Regulations-for-Students.pdf

APPENDIX 7: MEMBERSHIPS AND TERMS OF REFERENCE OF THE JOINT MANAGEMENT COMMITTEE (JMC)

Membership:
- CDT Directors: Prof Dan Crisan, Chair (Imperial) and Prof Jennifer Scott (Reading)
- Co-Directors: Dr Colin Cotter (Imperial), Dr Jochen Broecker (Reading), Dr Hilary Weller, Dr Tristan Pryer
- Chair of Steering Committee: Prof Simon Chandler-Wilde (Reading)
- Recruitment Officers: Prof Pavel Berloff (Imperial) and Dr Hilary Weller (Reading)
- External Liaison Officer: Dr David Brayshaw (Reading)
- Equality and Diversity Officer: Dr Hilary Weller (Reading)
- Imperial-Reading Liaison Officer: Prof Ted Shepherd (Reading)
- Internal Liaison Officers: Dr David Ham (Imperial) and Prof Peter Jan van Leeuwen (Reading)
- Reading's School Director of Teaching and Learning: Dr Robert Plant
- Imperial's Director of Postgraduate Studies: Prof Henrik Jensen

Terms of Reference:
1. To reaffirm the commitment of Imperial College London and University of Reading to the provision of the MRes Mathematics of Planet Earth (MPE).

2. To confirm that a Memorandum of Agreement (MoA) is in place which embodies that commitment to the satisfaction of both Parties and is compliant with the UK's Quality Assurance Agency for Higher Education's **UK Quality Code for Higher Education**, and in particular **chapter B10: Managing Higher Education Provision with Others**. To make amendments to the Memorandum of Agreement as and when required.

3. To agree on an annual basis, subject to the MoA, the ongoing resource commitments of both Parties to the MPE Programme in relation to student numbers, finance, human resources and physical resources. To review and amend these commitments as and when required.

4. To monitor and assess the academic health of the Programme by considering:
a. the following issues:
- How to keep the programme current and valid in the light of developing knowledge in the discipline, and practice in its application.
- The extent to which the intended learning outcomes are being attained by students.
- The continuing effectiveness of the curriculum and of assessment in relation to the intended learning outcomes.
- How recommendations for appropriate actions are followed up to remedy any identified shortcomings.
b. the evaluation of the programme by the Master's Quality Committee (Business, Engineering and Physical Sciences) and/or Registry of Imperial, and the Reading Joint Faculty Board for Teaching and Learning in Science and Life Science (FBTL) and University Board of Teaching and Learning (UBTL).

5. To advise on changes that may be needed in any aspect of provision or resourcing in order to maintain the quality of the student experience at a level appropriate to the qualifications awarded. To advise also on ways in which the academic provision and other activities within the Programme could be enhanced or extended.

6. To agree the list of Approved Staff and Academic Leads for the programme, including consultation of all staff's *curriculum vitae*.

7. To ensure that Approved Staff are aware of the operational details of the programme, including (but not limited to) assessment timetables and methods and the required teaching style as set out in the Operational Handbook.

8. To oversee minor changes in existing programme curricula, examination structures and marking schemes and report these annually to the Master's Quality Committee (Business, Engineering & Physical Science) at Imperial and the FBTL at Reading.

9. To review major changes in the curriculum for the programmes and make recommendations to Master's Quality Committee (Business, Engineering & Physical Science) at Imperial and FBTL and UBTL at Reading.

10. To maintain an overview of the statistics on admissions, student progress, completion and withdrawal rates, distribution of awards, destination statistics for students, examination irregularities (including cases of plagiarism), student appeals and disciplinaries and report onwards as necessary.

11. To receive a summary of all special cases for admission and/or registration issues for the previous academic year.

12. To endorse the membership of the Recruitment Panel this includes representatives from Imperial and Reading.

13. To maintain an overview of student satisfaction with the programme and to consider mechanisms for enhancing student welfare, experience and representation.

14. To elicit and consider stakeholder (student, industry, professional bodies, etc) views of the programme for enhancement purposes.

15. To ensure the methods for assigning projects to students are transparent and communicated to the students.

16. To receive details of the appointment of the external examiners and to consider external examiner reports.

17. To receive details of the membership of the Joint Board of Examiners.

18. To receive the Pass List of those students who have successfully completed the programme.

19. To review the MPE programme documentation and approve the annual updates, including but not limited to, the programme specifications and student handbook.

20. To be responsible for signing off all advertising materials relating to the Programme.

21. To allow business of the Joint Management Committee (JMC) to be carried out via email between meetings and to authorise the Chair and Deputy Chair to take Chair's Action when needed.

22. To receive a report of Chair's Action taken since the last meeting.

23. Where appropriate, appoint sub-committees to carry out the above responsibilities. (Sub-committees to normally have equal representation from Imperial and Reading). To review minutes from sub-committees.

24. Further terms of reference and responsibilities of the Joint Management Committee shall be arranged in writing between the Partners.

25. To report to the Master's Quality Committee (Business, Engineering & Physical Sciences) at Imperial and School Postgraduate Board of Studies (Mathematical and Physical Sciences as well as the FBTL at Reading.

APPENDIX 8: MEMBERSHIPS AND TERMS OF REFERENCE OF THE JOINT EXAMINATION BOARD

The Joint Examination Board is (at the minimum):

- CDT Director, Prof Dan Crisan, Imperial(Chair)
- CDT Director, Jennifer Scott, Reading
- CDT Co-Director, Dr Jochen Broecker, Reading
- MRes Co-Director of Studies, Dr Colin Cotter, Imperial
- At least one other member of the CDT academic staff team from both Reading and Imperial, with normally an equal balance of staff from Reading and Imperial
- External examiner appointed jointly by Imperial and Reading
- Normally, at least one external examiner in each of the principle fields of study concerned appointed jointly by Imperial and Reading
- A representative from Imperial's Registry
- A representative from Reading's Examination Office

A Chairman and External Examiners for the programme shall be appointed annually by jointly by the Master's Quality Committee (BEPS) for Imperial and the School Postgraduate Board of Studies (Mathematical and Physical Sciences) from University of Reading from the beginning of the Academic session for twelve months or for such time as is sufficient to cover all the necessary work. Examiner Examiners must satisfy the requirement of both institutions as described in Imperial's Regulations for the Examination of Taught Courses and Reading's Code of Practice on the External Examining of Taught Programmes. External Examiners must be appointed from outside the Faculty of both Imperial and Reading.

The location of the final examination board will be alternated between Imperial and Reading. Examination Boards will be conducted according to Imperial's "Conduct of Master's Level (MSc, MRes, MBA, Med, MPH, Postgraduate Diploma and Postgraduate Certificate) Board of Examiners' Meeting policy.

Examinations for the core courses will take place in parallel at both Imperial and Reading. Examinations for elective courses will take place at the location where the elective was taught. Re-sits will normally take place at the campus where the student originally sat the examination.

http://www.imperial.ac.uk/media/imperial-college/administration-and-support-services/registry/academic-governance/public/regulations/2015-16/exam-regs/BSc,-BEng,-MSci,-MEng,-MBBS.pdf

https://www.reading.ac.uk/web/FILES/exams/CPEE_2012-13.pdf

APPENDIX 9: GUIDANCE FOR MRES THESIS

General presentation and formatting

The thesis must be written in English. It should be printed in black ink using double or one and a half spacing on medium-weight (70-100 gsm) white A4 paper. Double-sided printing is recommended. A high quality printer should be used. Margins should be not less than 3.5cm on the binding edge, 1.5cm on the opposite edge and 1.5cm at the top and bottom. The text size should be equivalent to 12pt Times New Roman. Pages should be numbered sequentially.

Internal layout of the thesis

The layout will generally follow the following pattern:

- A title page.
- A table of contents.
- A summary (abstract) of not more than 300 words.
- A statement signed by the candidate to the effect that the work has not been submitted for a higher degree at any other university or institution.
- Acknowledgments (if applicable).
- Abbreviations.
- MAIN TEXT: Appropriately divided and with chapters and sections continuously paginated.
- Appendices.
- Bibliography.

Thesis Length

A thesis should be written as concisely as possible. The maximum length for an MRes thesis is 50 pages (including any appendices). If a thesis is above the indicated page limit, then the student should discuss editorial action with his/her supervisors before submission.

Title Page

The title page must contain the following information:

- The approved title and any subtitle;
- The full name of the student;
- The text "Submitted to Imperial College London and the University of Reading in fulfilment of the requirements for the Degree of Master by Research"
- Date of Submission.

Summary (Abstract)

A brief description of the work: its aims, methods and conclusions.

Students should bear in mind, when writing the summary, that this may be the only part of the thesis that is read by other research workers. It should be written in such a way as to help researchers in the same field decide whether to read the thesis. The summary should consist of a self-contained (abbreviations should be avoided) piece of connected prose and should not be more than 300 words in length.

Contents Page

Details of the division of the thesis, with page numbers.

Acknowledgements

If the student wishes to include a dedication or acknowledgement in the thesis this should be inserted on a page following the Contents Page.

Abbreviations

All abbreviations used in the thesis should be clearly defined.

The Main Text - appropriately divided into parts, chapters and sections
The student should seek the advice of his/her supervisors about the appropriate form of division to be used in the main text. The main text should be a self-supporting document in its own right and not require the reader to refer to the appendices.

Appendices
Any appendices (which are optional and are not generally recommended) allow the student to further illuminate the main text and can act as a repository of raw data.

Bibliography
The bibliography should list all works referred to in the thesis and should also include works that have informed the thesis even if not directly referred to.

It is an expectation in any thesis is that the student **will** relate his/ her own work to that of other researchers. The student must **clearly and unambiguously** distinguish between his/her own thoughts, conclusions and results and those of other scholars.   References must be sufficiently precise to enable the reader to obtain and consider the original work.

Relationship between the MRes thesis and PhD
The research project undertaken in the Master of Research (MRes) may be a pilot study or preliminary work for a PhD project. However, since it is not acceptable to be awarded two degrees for a single piece of work, no part of the MRes thesis may be included as an examinable part of the PhD thesis.
It is inevitable in all academic research that a researcher's work may draw on similar background materials, and apply similar methodology, so some consistency between the two theses is to be expected.
Where the topic of a subsequent PhD thesis is related to the topic of the MRes thesis, the candidate should include in the PhD thesis a clear statement outlining the work undertaken and the data collected for the MRes. It is acceptable for background literature discussed in the MRes thesis to be discussed again in the PhD. However, this cannot be merely copied over from one thesis to the other. The literature must be reconsidered in the light of the way the PhD project has developed on from the MRes to more advanced conclusions.
If a candidate needs to include parts of the MRes thesis in the PhD, for reasons of clarity or completeness, the candidate should clearly identify any MRes work or material that has been incorporated.

Despite its' modern and somewhat architecturally dull exterior Reading has plenty of interesting history and places to explore, here are just a few to distract you from the hard work during your MRes year…

Transport:
Cycling info: https://sites.reading.ac.uk/sustainability/travel/cycling/ - at the start of autumn term there is usually a secondhand bike sale organised by Dr Bike or the Students Union – look out for "On your Bike" events during Fresher's Week.
Official Reading cycle routes with links for maps and national cycle routes: http://www.reading-travelinfo.co.uk/cycling/routes.aspx
Sustrans national cycle network – Reading is the meeting point of routes 4, 5 & 23 https://www.sustrans.org.uk/ncn/map
ReadyBike cycle hire scheme (several stations on campus and approx. 30 stations in and around Reading: https://www.readybike.co.uk/
Buses: http://www.reading-travelinfo.co.uk/bus.aspx or https://www.reading-buses.co.uk/
Car Club: http://www.co-wheels.org.uk/uor

Exploring Reading and a bit of history:
Finding your way about: https://livingreading.co.uk/map
Reading Museum – worth checking out for the biscuit related history of Reading, the Faux Bayeaux tapestry and the Silchester Roman Galleries: https://www.readingmuseum.org.uk/
Reading Abbey Quarter – the Abbey Ruins have opened recently after a long period of restoration, they run from one end of Forbury Gardens down to the side of the Kennet Canal – you can join tours organised by the museum here: https://www.readingabbeyquarter.org.uk/
Terry's Reading Walkabouts   2- 3 hour walking tours exploring Reading and its' history https://www.facebook.com/terrysreadingwalkabouts/ a popular local tour guide who runs several different tours in aid of charity.
MERL – one of 3 University Museums, the Museum of English Rural Life is home of the absolute Unit and site of regular @MERL Late nights.
There are loads of really lovely walks and cycle trails along the river, canal and nearby countryside and further afield by train and bus, here is a good starting point: https://www.getreading.co.uk/whats-on/whats-on-news/15-most-beautiful-walks-reading-9002742
Other places of interest accessible by train and/or bike include: Henley-on-Thames, Windsor & Windsor Great Park, Pangbourne & Goring Gap, Beale Wildlife Park (by boat from Caversham), Swinley Forest Bracknell (Mountain bike terrain, high ropes course, woodlands, by train and bike).

Parks and open spaces: http://www.reading.gov.uk/parks
In addition to the lovely *Harris Gardens* at Whiteknights Campus, there are plenty of green spaces in and around Reading, as well as along the Thames, and the Kennet & Avon Canal including:
Forbury Park in the town, next to the Abbey Ruins & Reading Gaol.
Christchurch Meadows & Thames Valley Park – both just about walking distance from the town centre, large areas of cut grass on the banks of the Thames – the cycle path/footpath runs alongside these two parks from the town, and don't miss *Whittingtons Tea Barge* at Hill's Meadows, George St, Reading RG4 8DH https://whittingtons-teabarge.co.uk/
A little further out try *Caversham Court Gardens* (runs down to the Thames), and *Prospect Park*.

Indie shops & food:

Harris Arcade, 15 Friar St, Reading RG1 1DN – a small arcade of unusual and whacky small shops from comics to vintage clothes and a popular Beer & Cheese delicatessen The Grumpy Goat. http://www.harris-arcade.com/

Smelly Alley – Union Street RG1 1EU once full of fresh food stalls, now it has a range of shops including health foods and the Eclectic Games Store (a really great board games store), but really you come here for Dudmans fruit and veg, and the Smelly Alley Fish company which claims to sell the freshest fish in Reading…

Reading International Solidarity Centre (RISC http://w3.risc.org.uk/main) which also has a café mentioned below, has a shop selling fair trade goods, including toiletries, household products, food items, as well as books and gifts.

Reading Market Hosier Street Reading RG1 7QE – open Wednesday – Saturday 9am – 4pm

Farmers' Market: twice a month at Great Knollys St, Reading RG1 7HD, for details of stallholders and the dates see here: https://tvfm.org.uk/category/markets/

The True Food Co-op 61 Grove Road, Emmer Green, Reading RG4 8LJ Organic Loose Food (take your own containers) and ethical goods https://www.truefood.coop/ 25 Bus from the station, or hire a car from the Car Club.

Chinese Supermarket, 132 Friar St, Reading RG1 1EP

Polskie Delicatesy "Smaczek" Broad Street Mall, 3 Oxford Rd, St Marys Butts, Reading RG1 7QE

German Bakery now has a shop in Tilehurst (train or bus) https://thegermanbakery.co.uk/ and also has a stall at Reading Market

Wednesday Street Food market, Market Place Square, RG1 2EQ Weds 10am – 4pm http://www.bluecollarreading.co.uk/blue-collar-street-food---market.html

A fairly comprehensive list of independent shops is here: https://www.getreading.co.uk/whats-on/whats-on-news/best-independent-shops-reading-town-10421608

Eating (& drinking) out:

There are hundreds of restaurants in Reading, Oracle Riverside has lots of commercial restaurants and is centrally located, part of the Oracle Shopping Centre, here are a few independent places to eat and drink:

Sweeney & Todd Pie Shop and restaurant, 10 Castle St, Reading RG1 7RD – a Reading institution, they have a deli counter selling pies and cooked meats, as well as a pub/restaurant where they serve the hot pies. http://www.sweeneyandtodd.co.uk/

Yolk – egg based breakfasty café, on Erleigh Rd (near the Whiteknights campus), a great place for Brunch if you can find a table. http://www.cafeyolk.com/

Pepe Sale Broad Street Mall, 3 Queens Walk, RG1 7QF http://www.pepesale.co.uk/

Papa Gees – Good Neapolitan café in Caversham, the pizzas get great reviews! 5 Prospect St, Caversham, Reading RG4 8JB https://www.papagee.co.uk/

Miah's - Garden of Gulab – very popular Indian restaurant and takeaway, near Palmer Park so fairly close to campus, 130-134 Wokingham Rd, Reading RG6 1JL https://www.miahs.co.uk/

Tutu's Ethiopian Table at The Global Café, 35-39 London St, Reading RG1 4PS http://www.tutus-ethiopian-table.com/

Piwnica Restaurant, 81 London Rd, Reading RG1 5BY

Bel & the Dragon, Blakes Lock, Gas Works Road, Reading RG1 3EQ - on the side of the Kennet Canal, just behind the old Huntley & Palmers biscuit factory – they also look after the Riverside annex of Reading Museum. https://belandthedragon-reading.co.uk/

Shed Merchants Place, 8 Merchants Pl, Reading RG1 1DT – nice sandwiches and cakes http://www.theshedcafe.co.uk/

Picnic, 5 Market Place - http://www.picnicfoods.co.uk/ good cakes and coffee

Nomad Bakery, 10 Prospect Street, Caversham - https://www.nomadbakery.co.uk/ good cakes & lunches

Milk Bar, Merchants Place, Reading – bar above Shed, with regular live music and stand up http://www.milkreading.com/

Bier Haus – German beer and food, 8 Queens Walk, Reading RG1 7QF http://www.bierhauspub.co.uk/

The Nags Head – Huge choice of real Ale and craft beer, 5 Russell St, Reading RG1 7XD http://www.thenagsheadreading.co.uk/

Riverside pubs:

Fisherman's Cottage & Bel & the Dragon (walk), The Cunning Man (on Kennet & Avon Cycle path), Coppa Club in Sonning (cycle along the Thames path) are all within walking or cycling distance. The Bull Inn at Sonning is also a lovely pub and you might even meet George Clooney… or take a Thames side walk/cycle/train to Pangbourne, where there are several lovely pubs and nice cafes.