Welcome from Professor Sue Gibson, Director of the Graduate School

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

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

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

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

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

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

Janet De Wilde
Introduction

A very warm welcome to Imperial College London and to the MRes in Molecular Plant and Microbial Sciences.

The Course Director and Degree Convenor is Dr Colin Turnbull (c.turnbull@imperial.ac.uk, Office 02075946437, mobile 07944151627). On behalf of all the staff involved in the course, we hope you will enjoy your time here at Imperial College and gain much from the course, as well as from interactions with staff and other students of the College. The resources at Imperial College are extensive and the staff contacts wide and varied, but don't think that the only resources available to you are to be found within the course itself. Many other useful contacts, literature and other facilities are available and may just be one question away. Don't be afraid to ask.

As Course Director, I am responsible for the programme. I have tried to set out as much information as possible in this handbook, but please bear in mind that there are other sources of information that you should consult regularly.

This Course Handbook includes information like timetables, examination procedures, referencing etc. Students can and should attend undergraduate lectures that are relevant to the MRes or use the Blackboard intranet system to access course materials. There are a number of seminar programmes, which provide a broadening perspective and help you to maintain contact with staff and students who are on other courses, both at undergraduate and postgraduate level. Most of them can be found on the college website http://www3.imperial.ac.uk/news. The best way to contact staff members is via e-mail (see listings on p.8) in the first instance, after which a meeting can be arranged at a mutually convenient time.

The College library has an extensive selection of books, periodicals and abstracts, in addition to extensive electronic resources. You should become computer literate early on in the course and attend the IT skills sessions in the first few weeks of term. This will allow you to access many additional resources and provide you with the tools and skills that you will need for the course.

Useful dates

College Closure dates 2016/2017
The MRes course is full time one year course. The college will be closed on the following dates, when you would not normally be expected to attend studies.

• College closed for Christmas: 24 December 2016 – 2 January 2017; College will re-open Tuesday 3 Jan 2017
• College closed for Easter: Wednesday 12 April 2017 – Tuesday 18 April; College will re-open on Wednesday 19 April 2017

Bank Holidays:
• Monday 1 May 2017
• Monday 29 May 2017
• Monday 28 August 2017
Course schedule

2016

3 October

10am onwards: **Welcome fair**, run by the College, drop in anytime from 10am – 4pm, held in the Queens Tower Rooms

**12.00: Introduction to the course**
Dr Colin Turnbull, Course Director, Room 213A, second floor Sir Ernst Chain (SEC) building.

**4.15 – 5pm: Welcome talk by the Provost** Great Hall, Level 2, Sherfield building

4 October

3.30 – 4.30pm: **Primary Safety Induction**, G34 Lecture theatre, Sir Alexander Fleming building Attendance is compulsory

11.00 onwards: **Freshers' Fair**, Great Hall and across campus

4.30 – 6pm: **Welcome event** - Drinks reception for all South Kensington Department of Life Sciences Masters students. G47A and G47B, ground floor, Flowers Building.

5 – 13 October

Read up on projects (see separate project listing document), meet with prospective supervisors, decide project preferences

10th – 14th October

9am start: **Molecular Laboratory Skills training**, Sir Alexander Fleming Building Lab 462 (Separate handbook to be provided)

14 October

10am deadline: Email 3 preferred project titles to Course Director.

14 October

5pm. Project allocations announced.

17 October

10am start: Visit to Sygenta, Jealott's Hill

18 – 21 October

Write two-page project proposal outline

18 October

3 – 4.30pm: Basic Lab Safety lecture, SAF G34. ATTENDANCE IS COMPULSORY

20 October

10 - 11am: **Library and information skills introduction**. Meet at Central Library front desk (Debbie Phillips)

21 October

1pm deadline: Submit proposal to Supervisor and Course Director

24 October

Start laboratory work, Project 1

24 Dec – 2 Jan

Christmas break (College closed)

2017

3 March

5pm deadline. Submit** Mini-report for formative feedback

17 March

12 Midday deadline. Submit** final report for Project 1

22 March

Oral presentations Project 1

22-23 March

Internal vivas Project 1.

27 -31 Mar

Read up on Project 2 options, meet with prospective supervisors; decide project preferences

31 March

10am deadline. Email 3 preferred project titles to Course Director.

3 – 7 April

5pm. Project allocations announced.

7 April

1pm deadline Submit proposal to Supervisor and Course Director

12 – 18 April

Easter break (College closed)

19 April

Start laboratory work Project 2

18 August

5pm deadline. Submit** Mini-report for formative feedback

1 September

12 Midday deadline Submit** report for Project 2

6 September

Oral presentations Project 2

6 – 7 September

Internal vivas Project 2

Week of 18 - 22 Sept: Viva by external examiners and Farewell Drinks (To be confirmed)

**Electronic versions of reports are to be uploaded via the student portal Blackboard site
Aims
The MRes programme aims to:

- Build on undergraduate knowledge and provide specialist theory and practical training in plant molecular biology and molecular microbiology subjects.
- Provide training in biological research methodology.
- Enable informed decisions to be made about future research directions.
- Provide training in the evaluation of scientific data and papers.

Basic structure
The program is offered as a full-time, one-year course and leads to the MRes degree. All students attend an induction week. In the second week, all students attend an intensive practical molecular biology skills training program within the Department of Life Sciences. Students discuss possible research projects (see project selection below) with individual academic-staff and indicate their preferred selections. Once the project is allocated, you carry out a literature survey and write a 2 page research outline. Please note that it may not be possible to get your first choice for a project because supervisors can only take a certain number of students at any one time. Laboratory work on Project 1 starts on 24th October. An informal mid-term progress presentation is given in early December to your research group. It does not count towards the overall mark but you will receive feedback from your supervisor(s). You will also submit a written Mini-report 2 weeks before the end of the project, and will receive feedback on scientific writing, formatting and general style. The final written report on Project 1 is submitted on 17th March, followed by an assessed oral presentation and an assessed viva with two independent assessors who have also evaluated the project report. During the following two weeks, students pick their 2nd research project, do a literature survey and write an outline proposal. The 2nd project must be on a different topic to the first project, and should normally have a different supervisory team. Lab work for Project 2 starts 19th April. In June. A mid-project presentation is again given to your research group, and a Mini-report submitted for feedback 2 weeks before end of project. On 1st September, the report for the 2nd project is submitted, then in the following week there is a final project presentation, and a viva with two academics from the department. A final viva will be held with the external examiner(s). This viva does not carry an individual mark but is used to assist in deciding the final overall grading.

In parallel with their research projects, students are encouraged to attend lectures from relevant advanced courses, such as Plant Biotechnology & Development (PBD) or Symbiosis, Plant Immunity & Disease (SPID), especially where you may wish to increase background knowledge. Students should attend all Departmental seminars organised by the Department of Life Sciences. Leading scientists and other expert speakers will visit College to give specialist talks to Life Sciences graduate students on a wide range of topics related to Biology, Biotechnology, careers, business etc. In addition, regular "journal club” type meetings for the whole class will be arranged to as a forum for discussing important new literature. All students will have regular progress and planning meetings with their supervisors, and these are arranged individually. Training in research methods and transferable skills is provided by the Graduate School’s MasterClass program:

www3.imperial.ac.uk/graduateschool/currentstudents/professionalskillsmasters/masterclassprogramme

and wider professional skills training:

www3.imperial.ac.uk/graduateschool/currentstudents/professionalskillsmasters/professionalskillsprogramme
Project selection

A wide range of projects is offered from the molecular plant and microbial sciences research groups at Imperial College. A separate list of possible projects is provided ahead of the start of each project rotation. Through discussions with potential supervisors, you will decide your top three project choices in order of preference. We cannot guarantee to allocate you to your first choice, and the Course Director will make the final decisions. You cannot normally do the 2nd project with the same supervisor as the first, the main reason being to ensure you experience a wide range of relevant research areas during the MRes year.

Assessment

To obtain an MRes in Molecular Plant and Microbial Sciences:

You must attend the course. This sounds obvious, but absences do occur for personal and other reasons. You must inform the course administrator Lucy Barron (l.barron@imperial.ac.uk) if difficulties arise that necessitate your absence for more than three days. Failure to attend the course can result in a request from the Board of Examiners for you to re-take part of the course, this being justified on the grounds that the formally assessed elements cannot adequately cover all aspects of the training provided. There is no substitute for attendance.

You must achieve a pass mark in the two elements (projects) of the course: Each element includes (a) a laboratory-based research project, (b) a written report, (c) one assessed oral presentation and (d) an oral examination (viva voce) on the subject of each report. The elements of this course cannot be sub-divided further, i.e. no credit will be given for any element if a student fails any of the parts constituting that element.

You must complete a high-quality research project in the chosen laboratory, as directed by your supervisor(s). Students are expected to carry out their research work on a daily basis. Hours of work will be discussed with the supervisor and the Course Director. Absence from seminars or other elements of the study program must be notified to the Course Director. Documentation in support of the reasons for absence may be requested.

You must submit a satisfactory report for each project. Here, the emphasis is on quality of the research and the report, and less on the quantity of data obtained. You will be expected to demonstrate a competent grasp of your subject and to submit a highly professional report. Attention must be given to standard of presentation – students may not be awarded their MRes because of careless presentation, e.g. poor spelling, inadequate use of grammar, poorly drawn figures, captions or tables, etc. Your performance as a professional scientist is being assessed; unprofessional work is not acceptable at MRes level. The report must be written and submitted by the appropriate deadline. Late submission is not permitted and will be penalized. The report is marked by two examiners appointed by the MRes course committee and by your supervisor. Your supervisor also assesses your lab performance.

You must make a formal oral presentation to your appointed examiners, supervisor, other MRes students, and members of staff. The presentation will be marked by the two examiners and the supervisor.

You must attend a viva, on the research work submitted. This takes place following the submission of each report, soon after the oral presentation. Dates are on p.4 of this handbook. You will be examined orally by two examiners other than your supervisor. It is the students’ responsibility to arrange the time and date of their viva with the appointed examiners, within the days allocated for the vivas. Your supervisor(s) will not be present during the examination. Each examiner independently mark your viva performance.
The marks from the different components will be combined as follows to calculate your final grade.

**Project 1 (50%)**
- Final project presentation: 5%
- Project report (max 7000 words, see guidance on p.11) and lab performance: 35%
- Viva examination with internal examiners: 10%

**Project 2 (50%)**
- Final project presentation: 5%
- Project report (max 7000 words, see guidance on p.11) and lab performance: 35%
- Viva examination with internal examiners: 10%

<table>
<thead>
<tr>
<th>GRADE</th>
<th>MARKS</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>70% - 100%</td>
<td>Marks represent a distinction performance</td>
</tr>
<tr>
<td>B</td>
<td>60% - 69%</td>
<td>Marks represent a merit performance</td>
</tr>
<tr>
<td>C</td>
<td>50% - 59%</td>
<td>Marks represent a pass</td>
</tr>
<tr>
<td>D</td>
<td>40% - 49%</td>
<td>Marks represent a fail performance at MRes level</td>
</tr>
<tr>
<td>E</td>
<td>0% - 39%</td>
<td>Marks represent a fail performance (with major shortcomings)</td>
</tr>
</tbody>
</table>

For more detailed information about grades and special cases please consult the relevant information on the college website.

http://www3.imperial.ac.uk/registry/proceduresandregulations/policiesandprocedures/examinationassessment

A **final oral (viva) examination** (September), covering aspects of your two projects and wider relevant knowledge of molecular plant and/or microbial sciences, will be conducted by the external examiner(s). The *external viva is not marked* and is used to assess the student’s overall performance and the course. Students with borderline marks, who perform well in such a viva, may be promoted to a higher grade with the agreement of the Degree Exam Board.

**Role of external examiners:**
- see all research project dissertations;
- viva each student;
- attend the Board of Examiners Meetings;
- advise on appropriateness of final gradings
- complete a report to the College.

**Absence from oral presentations or viva examinations:** A candidate who is scheduled to give an oral presentation or has arranged a viva, but is not able to attend it because of illness or some other serious matter (e.g. the death of a close relative) should notify the Course Director and the examiners immediately. The candidate must submit a medical certificate or other statement confirming the circumstances of the absence to the course administrator or director immediately. In these circumstances, the candidate would normally be allowed to give the oral or take the viva within seven days of the first appointment.
Imperial College Staff Members offering Projects, with Contact Details

Dr Tolga Bozkurt t.bozkurt@imperial.ac.uk, SAF*
Professor Martin Buck m.buck@imperial.ac.uk, SAF
Dr Patrik Jones, p.jones@imperial.ac.uk, SAF
Professor Peter Nixon, p.nixon@imperial.ac.uk, SEC
Professor Bill Rutherford a.rutherford@imperial.ac.uk, SEC
Dr Giovanni Sena, g.sena@imperial.ac.uk, SAF
Dr Jie Song, j.song@imperial.ac.uk, SAF
Prof Pietro Spanu, p.spanu@imperial.ac.uk, SAF
Dr Colin Turnbull, c.turnbull@imperial.ac.uk, SAF

*SAF, Sir Alexander Fleming Building; SEC, Sir Ernst Chain Building
Most of these staff members have research web pages accessible from
www.imperial.ac.uk/life-sciences/research/research-themes/molecular-plant-and-microbial-systems/

Course Administration / Course Committee

The course will be overseen by a committee comprising the Course Director, the Chair and Deputy Chair of the Board of Examiners and two other members of academic staff, and will have overall responsibility for the management and running of the course.

The Course Committee confers throughout the year, to monitor admissions, student progress and achievement, student feedback, the conduct of examinations and quality assurance, and will liaise with the Graduate School of Life Sciences and Medicine.

The members of the Course Committee are:

Course Director & Degree Convenor Dr Colin Turnbull
Chair of Examiners & Co-Director Prof Pietro Spanu
Deputy Chair of Examiners Prof Peter Nixon
Committee members Dr James Murray, Dr Patrik Jones

Administrative Support

Lucy Barron is the Course Administrator for six of the Masters courses run by the Department of Life Sciences at the South Kensington Campus. Email: l.barron@imperial.ac.uk; Office: Room 202, 2nd Floor, Sir Ernst Chain Building.

Student-Staff committee

Student-staff committees provide a formal means of communication on academic matters between the teachers involved in fields of study and student representatives from those fields of study. Meetings give you the opportunity to feedback and comment constructively on course content and delivery, as well as any proposed changes to the organisation of the degree programme. The meetings are normally held once per term. Times and dates will be published by e-mail.

This committee consists of your representative, elected by you, the Course Director (or their nominee) as representative of the teaching staff, the Chair of Examiners and the Course Administrator. You will be asked to nominate and elect your representative in the Autumn term.
Board of Examiners
The Board of Examiners comprises the Course Committee, academic staff associated with the course and the external examiner(s). The current external examiner is Prof Brian Forde (Lancaster University).

Pastoral Care
The Director of Postgraduate Studies (Dr Niki Gounaris) and the Postgraduate Tutor (Professor Neil Fairweather) will if necessary provide additional guidance to students at any stage throughout the course, dealing with both academic and personal matters. Further help is available from the Student Union. The following website provides an overview of the available services http://www3.imperial.ac.uk/students/welfareandadvice
When planning a project, you may wish to consider some of the following strategies:

- Draw a spider diagram or concept map of the topic and its ramifications and connections.
- Beware of being over ambitious and try to focus down as far as possible onto a specific testable question or hypothesis.
- Then prepare a preliminary structure for the project, with section headings and a summary of key issues and concepts for each.
- Early in the project you should make every effort to get up to speed on relevant literature for your project—otherwise you run the risk of missing important information that could improve your project design, or possibly you end up repeating experiments that have already been published. By having read key papers, you will be in a much better position to engage in scientific discussion and debate with your supervisors and other lab members. It is highly beneficial to draft a critical review of the literature within the first few weeks, as this helps you to draw together your own thoughts by seeing how others have treated the subject. The final version of your report Introduction may best be written last when you know where your research has taken you, and what your conclusions are.
- It can save a lot of time if you generate a list references as you write the first draft—software such as EndNote can greatly facilitate this task. This will allow you more time at the final stage for incorporating your supervisor’s comments in the revised draft of your Report, and doing any editing required.
- Finally, do not mistake quantity for quality. The principle of economy in presenting evidence, arguing a case and communicating it to others, is to be highly valued.

A few reminders

- While the project will benefit from your professional and work experience, it should not draw substantially from work produced individually or jointly in a different context (e.g., already submitted for another degree, or for consultancy, etc).
- If you intend to draw from such work, you must provide clear references and declare the extent of use made. If in doubt, you should seek advice at the stage of submitting your proposal.

A first draft is a “work in progress” document. Be prepared to revise it substantially! Avoid spending too much time on cosmetic appearance of drafts, only to realise that things may have to change at a later stage.

Feedback on drafts

To ensure that all students have the opportunity to improve their scientific writing and professional presentation skills in good time for report submission deadlines, you will each prepare a well-polished Mini-report, max 1000 words, submitted to your supervisor 4 weeks before the deadline for each project report. Your supervisor will give detailed feedback on this report. Note that this is a formative learning exercise and does not count towards your project mark. However, if you wish, you may re-use the material written in the mini-report in the final assessed report. The mini-report should contain all the sections normally found in research papers: succinct introduction, methods, results, discussion, references. Here, you will present only one Figure (or Table), correctly and fully annotated. You will receive feedback within two weeks of providing the mini-report, and will have the opportunity to discuss areas for improvement with your supervisors. Note that supervisors will not read full drafts of your reports.
Guidelines for Project Writing

1. Project Aims
   The project aims to provide students with the opportunity to:
   • develop and demonstrate in-depth knowledge about a particular research issue;
   • critically appraise the existing theory and literature in the subject area and synthesise arguments;
   • collect, analyse and interpret information;
   • make recommendations about complex problems in the subject area.

2. Project Outcomes
   A successful project offers several outcomes:
   • completion of the requirements for the MRes qualification;
   • expertise in the subject matter concerned;
   • experience in academic and applied research;
   • potentially publishable research output;
   • a stronger CV;
   • personal satisfaction.

3. The Project Reports should conform to the following requirements:
   Reports should be a maximum of 7,000 words plus diagrams, graphs, photographs, figure legends and references. Note: legends should be informative and self-contained as in normal journal formats, and should not be seen as an opportunity to excessively extend the total words used in the report.
   • Reports should be printed single-sided, with a minimum 25 mm left margin to facilitate binding.
   • It is important to ensure that the report is concise and well laid-out.
   • The project report must include the word count on the title page (the number of words will be checked and failure to comply with the word limit will incur penalties).
   • The format should broadly follow that of a scientific paper (Plant Journal is the preferred model) but must include all the following sections: Title page, Abstract, Contents page, Abbreviations, Introduction, Results, Discussion, Materials and Methods and References.
   • The abstract should be structured (i.e. aims, experimental procedures, results, conclusion), be no more than one side of paper and should include your name, project number and project title.
   • The Introduction should provide the necessary background to understand the relevance and topicality of the research. The research aims and objectives must be clearly stated.
   • The Results should report all the necessary data, including negative results, to justify the conclusions drawn and to demonstrate the amount of experimental work carried out. Figures should be fully labelled, with standalone explicit legends.
   • The Discussion section should place the results in the context of published knowledge and understanding (the “wider picture”). It should include details of future experimental objectives and coverage of wider applications of the knowledge gained from the project. Avoid simply repeating the Results section.
   • The Materials and Methods should be sufficiently (but not excessively) detailed, such that the reader can fully understand how the experiments were performed.
   • Full reference citations must be given at the end in the style of Plant Journal.
4. **Project Report Submission**

Three hard copies of the project report and an electronic copy must be submitted to the Course Administrator Lucy Barron on the date specified in the course schedule (p. 4) before 12 midday.

The electronic version should be uploaded to Blackboard. The hard copies are to be handed in to Lucy Barron in room 202 Sir Ernst Chain building. The project reports should have comb binding and a front cover of PVC. It is the responsibility of the student to bind the reports.

**Penalties for Late Submission of Projects**

Unauthorised late submission WILL normally lead to a 1% reduction of the original mark for each hour that the report is overdue (e.g. a project scoring 65% will be reduced to 60% when five hours overdue). This will increase to a maximum of 10% per day of late submission. No reports will be accepted 4 days or more after the final submission date, unless agreed in writing with the Course Director, and this would only be granted in exceptional circumstances.

If, for compelling reasons, a project is likely to be delayed, it is the student’s responsibility to inform the MRes Course Director and Course Administrator at the earliest possible opportunity.
Procedures and responsibilities

Getting help
One or more Supervisor will be appointed for each student. The responsibilities of the Supervisor(s) are instruction, encouragement and assessment.

Instruction
The Supervisor will not prescribe the research objectives, but will help in suggesting and discussing appropriate fields of work. The Supervisor will provide guidance in effective written communication, primarily by commenting on plans and a partial draft of the project report, as described above. The Supervisor will not write or re-write the project report. If a student fails to respond to important advice, it may be repeated in writing and kept on record.

Encouragement
Encouragement is an important aspect of supervision. Constructive criticism and questioning will be the primary mechanism. Instruction or demonstration will be considered as a last resort if individual professional skills, such as independent research ability, are to develop.

Students should keep in regular contact with their Supervisor. The primary responsibility lies with the student. Students should be aware that staff are busy with other teaching, research and administrative duties throughout much of the year. During the summer months especially, they may often be away from the office for periods of research, conferences and holidays. Supervisors will arrange appropriate cover if they are to be absent. Students should not approach other staff for services without consulting their own Supervisor. Students not receiving adequate supervision and unable to resolve the issue with the Supervisor should contact the Course Director in the first instance.

Assessment
Assessment and marking will be done by the Supervisor and two internal examiners. The ultimate arbiters of the MRes standard are the External Examiner(s), working in conjunction with the rest of the Board of Examiners.
Continuous Assessment: Plagiarism

The College requires all Masters students to take a compulsory online plagiarism course. Details will be circulated to students in the Autumn term. Further information can be found here: http://www.imperial.ac.uk/study/pg/graduate-school/professional-skills/masters/online/

You are reminded that all work submitted in part requirement for any examination (including coursework) must be expressed in your own words and incorporate your own ideas and judgements.

Plagiarism, that is, the presentation of another person’s thoughts or words as though they were your own, must be avoided, with particular care in coursework, essays and reports written in your own time. Note that you are encouraged to read and criticise the work of others as much as possible. You are expected to incorporate this in your thinking and in your coursework and assessments. But you must acknowledge and label your sources. Direct quotations from the published or unpublished works of others, from the internet or from any other source, must always be identified as such. A full reference to their source must be provided in the proper form and quotation marks used where the wording is the same. 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, judgements, figures, diagrams or software, you must refer to that person in your text and include the work referred to in your bibliography. We are able to give advice about the appropriate use and correct acknowledgement of other sources in your own work (see the section on referencing).

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 represented in a way approved by your department. You should therefore consult your tutor or course director if you are in any doubt about what is permissible. You should be aware that you have a collective responsibility for the integrity of group work submitted for assessment.

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

Failure to observe any of these rules may result in allegation of cheating. Cases of suspected plagiarism will be dealt with under the College’s Procedure for Dealing with Examination Offences and may result in a penalty being taken against any student found guilty of plagiarism. You are warned that plagiarism detection software will be used to check the sources of the material that you present.

NOTES:
1) A photocopy of your Practical Laboratory Notebook(s) is not required. However, all marked continuous assessment work, including Practical Laboratory Notebooks, must be retained by the student and available for inspection by External Examiners on request. (See Degree Programme Handbook)

2) Penalty for infringement of word limits: There will normally be a pro rata reduction in marks for students who exceed the word limit as follows, eg
10% over word limit – mark of 60% to be reduced by 6% to 54%,
20% over word limit – mark of 70% to be reduced by 14% to 56%.

In cases where students fail to declare the word length of the piece of assessed work on this form, the work and form will be returned to the student for completion.

Appendix 1: Relevant College Websites

New Students website

You are reminded of the following website that contains relevant information for all new students:

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

Welfare and advice

You are reminded that the video introducing welfare and advice is on line at:

http://www3.imperial.ac.uk/students/welfareandadvice

Relevant Undergraduate Courses possibly of interest:
https://bb.imperial.ac.uk (access via college login, request via MRes Course Director)
Plant Development & Biotechnology
Symbiosis, Plant Immunity & Disease
Applied Molecular Biology
Appendix 2: PhD Funding Opportunities

Finding a scholarship or fellowship to fund a PhD is possible. Most of the time finding funding depends on being organised and having good timing. For example, for the PhD studentships that start in autumn 2017, quite often the advertisements and interviews happen during autumn 2016 and winter 2016/17. There are different places / websites to look for positions available. Below is a short list of websites, which are worth checking out when looking for a PhD. Note that some scholarships in the UK funded nationally (e.g. BBSRC, NERC, EPSRC) may be restricted to certain nationalities and/or require a period of residency (often 3 years).

If you have more specific questions and/or need advice please contact the Course Director.

Find a PhD
http://www.findaphd.com/

Jobs.ac.uk
http://www.jobs.ac.uk/

EU-funded PhD scholarships (so-called ESR, Early Stage Researcher) widely available through Marie Curie Sklodowska ITN projects. Search EURAXESS:
http://ec.europa.eu/euraxess/index.cfm/jobs/index. ITN-based PhD projects have several advantages including: (1) Higher salary than most standard national PhD scholarships, (2) Fees can not be charged to students, (3) They include a comprehensive training and research-network and (4) They are open to any nationality.

GARNet/ARABUK. The UK Arabidopsis (and wider plant sciences) community run a user group which advertises PhD scholarships, jobs and events. Subscribe at https://www.jiscmail.ac.uk

Imperial college PhD studentships:
http://www.imperial.ac.uk/job-applicants/opportunities/phd-vacancies/

John Innes Centre, Norwich
http://students.jic.ac.uk/

Rothamsted Research, Harpenden
http://www.rothamsted.ac.uk/studentships

Institute Pasteur, Paris
http://www.pasteur.fr/doctoralpositions

Max Planck Society PhD Network, Munich
http://www.phdnet.mpg.de/pages/about.html

Nature
http://www.nature.com/naturejobs/index.html

Vitae - realising the potential of researchers
https://www.vitae.ac.uk/
Appendix 3: Department of Life Sciences safety contacts and advice

The Dept of Life Sciences receives professional safety advice from Faculty Safety Managers (FSMs). FSMs are assisted in their role by trained personnel within the buildings and environs that the Dept of Life Sciences operates.

The Dept has a Health and Safety committee that meets each term. The committee has a Post graduate (PG) representative who attends the meetings and ensures that PG views and concerns are discussed and where appropriate action taken.

Faculty Safety Manager
Mr Stefan Hoyle (s.hoyle@imperial.ac.uk) Extension 45020

Useful websites for safety information, guidance, and training:
Dept of Life Sciences safety information: http://www3.imperial.ac.uk/lifesciences/safety
Faculty of Natural Sciences Safety webpage: http://www3.imperial.ac.uk/naturalsciences/safety
Imperial College Safety webpage http://www3.imperial.ac.uk/safety
Imperial College Occupational Health website: http://www3.imperial.ac.uk/occhealth
Imperial College Security, Fire and Post webpage: http://www3.imperial.ac.uk/facilitiesmanagement/security

Summary

The College OH Service provides the same clinical services to taught and research postgraduates as we do to staff. However students do not go through pre-employment health screening so we are unaware of students who need vaccinations, health clearance or health surveillance unless they contact us. Course organisers or supervisors need to instruct new students needing these services to contact the College OH service. More specific information is below.

Health clearance for work with pathogens, GMOs or unfixed human tissue.
Postgraduate students who will be handling human pathogens, GMOs of class 2 or higher or unfixed human tissue, including blood, in a laboratory environment must be health cleared for this activity.

Students should be instructed to complete a Biological Agents Health Questionnaire and to send this to the College OH Service at South Kensington. The questionnaire is available for download from our on health clearance web page. Most will be cleared through submission of the questionnaire. We will only call them in for a clinic attendance if they need a vaccination or they declare a health problem that requires a further assessment. After the student is cleared they will be sent an e-mail confirming this. This is copied to whoever is named as the Principal Investigator on the questionnaire and to the College Biological Safety Officer.

Students who will not be directly handling and screened blood do not need health clearance or vaccination.

Health surveillance enrolment for work with laboratory animals.
Any student who will be working with live laboratory animals must enrol for health surveillance with the College OH Service before commencing their research programme. Enrolment is not required prior to licensee training.
Students should be instructed to complete a health surveillance enrolment questionnaire and to arrange an appointment with the College OH Service for a mask fit test and lung function testing. They should only arrange the appointment when they are within 2 to 3 weeks of commencing their research work.

Once student has completed enrolment an e-mail confirming this will be sent to the student and copied to the manager of the CBS facility in which it will be working and their Principal Investigator.

**NHS health clearance**

All postgraduate students who will have contact with patients in clinical environment have to complete NHS infection control clearance. This health clearance is carried out by the College OH Service.

Students should be instructed to complete a Postgraduate Health Clearance Form and arrange an appointment with an OH Adviser at the College OH clinic at South Kensington. They should bring copies of any of vaccination records and relevant serology tests to the appointment. The form is available for download from our [forms and checklist](#) web page. When the student complete health clearance the certificate on page 2 of the questionnaire will be stamped and given to the student to pass on to their course organiser or principal investigator.

**Health clearance for travel**

Postgraduate students travelling abroad for study or research have the same health clearance requirements as for staff. Clearance is compulsory for any travel to a tropical country. Information on arrangements for health clearance can be found on this [web page](#). If any vaccinations are required for the destination country then an appointment with the OH Service should be sought at least four weeks in advance of travel. Students will need to provide evidence that their trip is directly related to their study or research activity. Clearance will be notified to the Principal Investigator/supervisor named on the health clearance questionnaire.

**Emergency assessment and treatment of laboratory accidents**

Postgraduate students based on hospital campuses can attend the hospital OH clinic for emergency assessment and treatment of inoculation accidents involving human blood or unfixed tissues. Any other emergency assessment will be carried out by the College OH Service at South Kensington. For information on the urgency and form for assessment consult the laboratory accident guide issued by the OH Service last year. A new edition of this has just been published. If you would like to receive some copies contact [occhealth@Imperial.ac.uk](mailto:occhealth@Imperial.ac.uk)
Appendix 4: College and Departmental Facilities

**Computer Facilities**

There are three teaching clusters available for students in the Faculty, all of which contain PCs with an identical set of installed software. The main teaching cluster is in Room G27 in the SAF Building (5). Within the Biochemistry Building there are two clusters in Rooms 310 and 311 (South corridor, level 3). All three rooms will normally be available from 9.00am to 10.30pm on every day of the week. If the door is locked, the security guard at the security lodge will usually be able to open the door if you have your security pass with you. The rooms will not be available at times announced on the door of the room when they are needed for specific teaching sessions or system maintenance.

Computers are also available for use in the Life Sciences section of the College Library as well as in several other locations such as in the Mechanical Engineering Building. These all have common printing facilities using the same system as those in the faculty labs.

All the printers in the computer labs and central library work on the same system. All the printers offer photocopying and scan to email functions as well as printing options. You use your College ID card to swipe in and print out the documents that you wish from your list of pending documents. To add credit to your account you should use the money loaders on the ground floor of the Library outside the Haldane Collection. Further information is available at [https://www.imperial.ac.uk/ict/printservice/](https://www.imperial.ac.uk/ict/printservice/). From this link you can log in and check your account as well as view animations on how the service works.

Usernames and information on how to enable your account will be provided at the start of term. You will need your College ID card before you can enable your account. Passwords must adhere to College policy and be “strong” – this means that they should use *at least three* of the following conditions: Capital letters, lower case letters, numerical characters and special characters ($ ! %). Do not let anybody know your password. To do so is a very serious disciplinary offence.

These facilities are managed by the ICT Faculty Support Team (Biochemistry Room 323 and SAF, G31). The conditions for their use are as follows: The primary use of these computers is for classwork, data analysis and reports. Anyone using the machines for these purposes has priority over recreational or e-mail users.

Installation of unlicensed software is not permitted.

**No eating, drinking** or smoking is permitted in the computer room and laboratory coats should be left outside. Notices are posted in all the computer rooms and failure to adhere to these conditions may result in removal of access and / or fines / disciplinary action.

Please leave the room tidy and use the rubbish bins provided. Only put paper in the recycle bins!

Please keep noise levels down, remember that other people will be trying to work.

The continued availability of the facilities, especially out of normal college hours, will depend on how users treat it.

When a room is used for teaching those not in the class must use another room. Whenever possible, times of classes will be displayed in advance on the noticeboards outside the rooms and users are requested to arrange their work accordingly.

Any problems should be reported to Room 323 Biochemistry Building or Room G31 SAF as soon as possible. Alternatively e-mail to service.desk@imperial.ac.uk or the web site [https://servicedesk.ict.imperial.ac.uk/](https://servicedesk.ict.imperial.ac.uk/).

Misuse of the computer facilities will result in students being denied access. Be warned: the use of the computers is monitored and video camera surveillance is operated.
Conditions of use of information technology (IT) facilities

The User agrees and accepts that:

1. Use of the IT facilities, and their use to access non-college IT facilities, must be for the purpose of University research, teaching, coursework, associated administration or other authorised use. No 'private/commercial' work is permitted without prior authorization. College IT facilities include the network, the virtual private network (VPN), computers, printers and the associated services e.g. software, data, email, Web, E-journals, bulletin boards, data bases but do not exclude any part of the college IT facilities.

Occasional personal use of the Desk top computer, email and Web access is permitted provided such use does not disrupt the conduct of College business or other Users. When using college IT facilities the User must comply with the College Information systems security policy and all relevant statutory and other provisions, regulations, rules and codes of practice. Specifically, but not exclusively, the User must:

2.1 Not disclose to others her/his College login name/password combination(s) or access or attempt to access IT facilities at College or elsewhere for which permission has not been granted or facilitate such unauthorised access by others.

2.2 Not use or produce materials or resources to facilitate unauthorized corruption, changes, malfunction or access to any IT facilities at the College or elsewhere.

2.3 Not display, store or transmit images or text which could be considered offensive e.g. material of a sexual, pornographic, paedophilic, sexist, racist, libellous, threatening, defamatory, of a terrorist nature or likely to bring the College into disrepute.

2.4 Not forge email signatures and/or headers, initiate and/or forward 'chain' or 'junk' or 'harassing' email.

2.5 Not play unauthorised games.

2.6 Respect the copyright of all material and software made available by the College and third parties and not use, download, copy, store or supply copyright materials including software and retrieved data other than with the permission of the Copyright holder or under the terms of the licence held by the College.

2.7 When holding data about living individuals, covered by the College Data protection Policy, register that data and its uses, and treat it in accordance with the Principles, as required by the DATA PROTECTION ACT. Student users must not construct or maintain computer files of personal data for use in connection with their academic studies/research without the express authority of an appropriate of the Departmental/Divisional Data Protection Co-ordinator.

2.8 When responsible for INFORMATION SERVERS or the information held thereon abide by the COLLEGE CODE OF PRACTICE for INFORMATION SERVERS and be aware that a User may be considered in law to be a Publisher in certain circumstances. All data/programs, including email, created/owned/stored by the user on or connected to College IT facilities may, in the instance of suspected wrong doing, be subjected to inspection by College or by statutory authorities. Should the data/programs be encrypted the User shall be required to provide the decryption key to facilitate decryption of the data/programs.

Other than any statutory obligation, the College will not be liable for any loss, damage or inconvenience arising directly or indirectly - from the use of, or prevention of use of, any IT facility provided and/or managed by the College.

Whilst the College takes appropriate security measures against unauthorised access to, alteration, disclosure, destruction or accidental loss of personal and other data it cannot and does not give any warranties or undertakings to the USER about security, confidentiality or integrity of data, personal or other. The same applies to other IT material submitted to or
processed on facilities provided or managed by the College or otherwise deposited at or left on its premises.

His/Her name, address, photograph, status, email name, login name, alias, College Identifier (CID) and other related information will be stored in computerised form for use for administrative and other purposes e.g. monitoring system usage.

As provided by The Telecommunications (Lawful Business Practice) (Interception of Communications) Regulations 2000, made under the Regulation of Investigatory Powers Act 2000, the College will intercept and monitor electronic communications for the purposes permitted under those Regulations in accordance with the Code of Practice on Monitoring Electronic communications in the College Information Systems security Policy.

These conditions apply to non-College owned equipment e.g. personal Laptops, home PCs when connected to the College network, directly and/or via the VPN, for the duration that the equipment is using the College network.

**Breach of these conditions may lead to College disciplinary procedures being invoked, with penalties which could include suspension from the use of all College computing facilities for extended periods and/or fines. Serious cases may lead to expulsion or dismissal from the College and may involve civil or criminal action being taken against the User.**

If you have any difficulty, please contact your Departmental Computing Representative or the ICT Service Desk (Ext. 49000) or the ICT Customer Registration Office (Ext. 46933).

---

**Library**

**On-line instructions and information** [http://www3.imperial.ac.uk/library/](http://www3.imperial.ac.uk/library/)
Appendix 5: Other useful information

Absence
Should students find they are absent for three days or longer through illness or any other reasons, they are required to tell the Course director and their Supervisor immediately and notify the Registry, giving a reason for their absence. The Registry should also be informed in the case of complete withdrawal from a course.

Addresses
Students must notify both the Registry and the Course Director of any change in their home or term-time addresses. Students are also reminded of the importance of notifying the Registry of any change to either their next-of-kin or their next-of-kin's address.

Statements of attendance
Statements or letters confirming your student status at the College, as described in the Freshers' Handbook, are available, on written request, from the Registry. Please note that straightforward statements will take a minimum of two days to prepare and you should allow for this delay when you call in to request the document. Due to the heavy demand for such statements during the first week of term, the waiting period may need to be extended. Semi-formal letters may be written by Course Director.

Verification of name and qualifications
This documentation will be checked at registration. Students who change their name during their course of study, through marriage or another reason, should inform the Registry. If the College records are to be amended, documentary evidence of the change must be produced. Students are reminded that any qualifications for which they may be eligible will be awarded in the name appearing in the College records. Overseas students enrolled on a course are eligible for free National Health Service care. However, there are some charges towards the cost of medicines, eye sight tests, glasses and dental care. It is very important that you register with a doctor as soon as you have moved into your accommodation; don't wait until you become ill. A list of local doctors and dental practitioners is available from the School Registry. Further lists may also be obtained from local main Post Offices and Libraries.

The Council Tax replaced the Community Charge (Poll Tax) on 1 April 1993. Full-time students enrolled on a course of nine months or more may be eligible for a discount on the Council Tax Bill. For further details regarding payment of Council Tax, you should contact the local authority in the area in which you will be living.

Student services and entitlements
There are various sources where you can obtain help if you need it during your studies at College. It is important to remember that there is always someone who can help. You should read the respective pages of the Freshers' Handbook carefully, as all of the sources listed are available to students studying on the South Kensington campus.

Other information is available from the Careers Advisory Service website at:
http://www3.imperial.ac.uk/careers/pg

Advice from Departments
You should consult your supervisor, Course Director or Postgraduate Tutor.

Advice from the Registry
The Registry on the South Kensington campus deals with the administration of student records, registration, tuition fees, examination entries, notification of changes of address, certificates of attendance (including visa letters) and Council Tax certificates. The office is located on the Level 3 of the Sherfield Building, and is open normally from 9.30 a.m. to 5.15 p.m. from Monday to Friday. Contact Students Records Assistant, Laura Haines (020 7594 8035). The Registry service is provided by members of the College's Central Administration.
Advice from the Student's Union
The Imperial College Union's Advice office employs a professional member of staff to advise students. The service is free, and provides independent, impartial and absolutely confidential advice. The Union Advisor, is able to advise on practically any matter, including:
- student loans - benefit entitlement
- legal matters - employment law
- immigration rights - consumer rights
- council tax - landlord & tenant issues (housing rights)
- financial advice (includes debt & related issues)
The Union Advisor stresses that all consultations with students will remain confidential, and that details of any consultation will not be divulged to any third party without a student's express permission. You can make appointment with the Advisor yourself by telephoning the Welfare Advice line (020 7589 5111 ext. 48067) or the Union office (020 7594 8060). Imperial College Union's Advice Office is located on the first floor of the Union Building in Beit Quad which is situated in Prince Consort Road, London, SW7 2BB. If you have any difficulty in making an appointment or experience any other problems with the service, please contact the Registry.

Careers advice
All full-time IC students may use the careers advisory service at the South Kensington Campus, telephone 020 7594 8024. Information is also available in the following website at: http://www3.imperial.ac.uk/careers/pg

General welfare advice
Sources of general welfare advice listed in the Freshers' Handbook (020 7589 5111 extension 48067).

Health
Sources of general welfare advice listed in the Freshers’ Handbook (020 7589 5111 extension 48067). If you have health problems, you should either make an appointment with your local GP or the Occupational Health Service on South Kensington campus 020 7594 9401.

Counselling service
Counselling services are also freely available for students. They act as a totally confidential service for students to discuss any sort of problem with a sympathetic, trained, counsellor. They can be reached at: Student Counsellor at Imperial College of Science, Technology and Medicine, South Kensington. http://www3.imperial.ac.uk/counselling

English for overseas students
The College offers English classes free of charge to international students and details of these can be found in the Freshers' Handbook. International students who would be interested in attending such classes should enquire at the Registry after registration.

International student centre of London
International Students House (ISH) https://www.ish.org.uk/, in Central London, is a social and welfare centre for international students, providing accommodation, services and facilities and a full programme of social, cultural and sports activities. Its main aims are to promote social and cultural awareness and to facilitate the interaction of students with a view to enhancing international friendships. ISH offers an advice service which aims to provide support to international students facing personal or practical difficulties whilst studying in London it is open to all students at London's academic institutions, and appointments can be made between 10.00 am and 5.00 pm, from Monday to Friday. The ISH can be contacted at 229 Great Portland Street, London, W1N SHD or by telephone on 020 7631 8300.
Appendix 6: Forms
(The forms below are included here to give you an insight into how performance is assessed.)

DEPARTMENT OF LIFE SCIENCES - IMPERIAL COLLEGE

ASSESSMENT OF PROJECT in MRes in Molecular Plant and Microbial Sciences
2016/2017

by: Examiners

STUDENT'S NAME: .....................................................    DATE:........................

PROJECT TITLE: ...........................................................

Examiner 1: Please ensure that this form is completed fully and returned to the course
organiser as soon as possible

Examiner 1 marks:

Written Report ______ %  (use “Criteria for thesis marking”)  
Viva ______ %  (use “Assessment criteria for Presentations”)

Name Examiner 1: _______________________and signature

Examiner 2 marks:

Written Report ______ %  (use “Criteria for thesis marking”)  
Viva ______ %  (use “Assessment criteria for Presentations”)

Name Examiner 2: _______________________and signature

EXAMINERS' ASSESSMENT (if necessary, attach a separate sheet)
A. Written report

Presentation:  (messy)          (publication standard)
Abstract (wholly inadequate) (publication standard)
Introduction (trivial)            (publishable)
Literature coverage (very shallow) (extensive and deep)
Materials and Methods (wholly inadequate) (perfectly clear)
Description of strategy (wholly inadequate) (perfectly clear)
Description of results (wholly inadequate) (perfectly clear)
Figures/legends/tables (wholly inadequate) (perfectly clear, complete)
Quality of data (poor) (new and publishable)
Analysis of data (very shallow) (full stats, etc)
<table>
<thead>
<tr>
<th>Aspect</th>
<th>Rating</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion</td>
<td>(very shallow)</td>
<td></td>
</tr>
<tr>
<td>References</td>
<td>(wholly inadequate)</td>
<td></td>
</tr>
<tr>
<td>Understanding/insight</td>
<td>(very little)</td>
<td></td>
</tr>
<tr>
<td>Scientific rigour</td>
<td>(weak)</td>
<td></td>
</tr>
<tr>
<td>Originality</td>
<td>(none)</td>
<td></td>
</tr>
</tbody>
</table>

**B. Performance in viva**

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Rating</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion of aims of the project</td>
<td>(confused)</td>
<td></td>
</tr>
<tr>
<td>Discussion of results</td>
<td>(shallow)</td>
<td></td>
</tr>
<tr>
<td>Understanding of methods</td>
<td>(shallow)</td>
<td></td>
</tr>
<tr>
<td>Understanding of theory associated with project</td>
<td>(shallow)</td>
<td></td>
</tr>
<tr>
<td>Broader understanding of the subject area</td>
<td>(shallow)</td>
<td></td>
</tr>
<tr>
<td>Scientific rigour</td>
<td>(weak)</td>
<td></td>
</tr>
<tr>
<td>Ideas for further research</td>
<td>(none)</td>
<td></td>
</tr>
</tbody>
</table>

The Examiners are asked to give a clear statement on the achievements of the student and include consideration of factors such as understanding and appreciation of: the background to the subject, relevant literature, practical techniques, results and the significance of the results. The relative weighting of these and other factors will vary with different projects. Examiners are asked to note any special emphasis they have given to different aspects of the assessment in the Examiners’ written report and give comments on any special problems that seem to have been encountered by the student.

**EXAMINERS’ ASSESSMENT (continued if necessary)**

Name of Examiner 1: ______________________________

Name of Student: ______________________________

Comments

**EXAMINERS’ ASSESSMENT (continued if necessary)**

Name of Examiner 2: ______________________________

Name of Student: ______________________________

Comments
DEPARTMENT OF LIFE SCIENCES - IMPERIAL COLLEGE

ASSESSMENT OF PROJECT in MRes in Molecular Plant and Microbial Sciences 2016/2017

by: Supervisor

STUDENT’S NAME: .....................................................    DATE:........................

PROJECT NUMBER AND TITLE:
_________________________________________________________________________

Please ensure that this form is completed fully and returned to the course organiser

Name of Supervisor: ________________________________________

Mark for: laboratory performance _____ % (use “Criteria for laboratory work”)
written report        _____ % (use “Criteria for thesis marking”)

Signature: ________________________

SUPERVISOR’S ASSESSMENT (if necessary, attach a separate sheet)

A. The Nature of the Project

How likely was the project to produce analysable results (almost
guaranteed) □□□□□ (speculative)
How difficult were the techniques used for the research project? (very easy) □□□□□ (very difficult)
How demanding was the analysis of the data? (very easy) □□□□□ (very demanding)
How much practical help did the student receive? (none) □□□□□ (a lot)

Please mention any special problems encountered:

................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................

B. Laboratory performance

How diligently did the student work? (indolently) □□□□□ (intensively)
<table>
<thead>
<tr>
<th>Question</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>How well did the student plan/design the experiments</td>
<td>(slapdash)</td>
</tr>
<tr>
<td>How well were the experimental methods and results documented?</td>
<td>(research level)</td>
</tr>
<tr>
<td>How well did the student observe the relevant safety procedures?</td>
<td>(always)</td>
</tr>
<tr>
<td>How accurate was the student’s experimental technique?</td>
<td>(research level)</td>
</tr>
<tr>
<td>How well did the student interpret the data?</td>
<td>(research level)</td>
</tr>
<tr>
<td>Quantity of work done</td>
<td>(very little)</td>
</tr>
</tbody>
</table>

**C. Written report**

<table>
<thead>
<tr>
<th>Section</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation</td>
<td>(messy)</td>
</tr>
<tr>
<td>Abstract</td>
<td>(wholly inadequate)</td>
</tr>
<tr>
<td>Introduction</td>
<td>(trivial)</td>
</tr>
<tr>
<td>Literature coverage</td>
<td>(very shallow)</td>
</tr>
<tr>
<td>Materials and Methods</td>
<td>(wholly inadequate)</td>
</tr>
<tr>
<td>Description of strategy</td>
<td>(wholly inadequate)</td>
</tr>
<tr>
<td>Description of results</td>
<td>(wholly inadequate)</td>
</tr>
<tr>
<td>Figures/legends/tables</td>
<td>(wholly inadequate)</td>
</tr>
<tr>
<td>Quality of data</td>
<td>(poor)</td>
</tr>
<tr>
<td>Analysis of data</td>
<td>(very shallow)</td>
</tr>
<tr>
<td>Discussion</td>
<td>(wholly inadequate)</td>
</tr>
<tr>
<td>References</td>
<td>(fully accurate)</td>
</tr>
<tr>
<td>Understanding/insight</td>
<td>(very little)</td>
</tr>
<tr>
<td>Scientific rigor</td>
<td>(weak)</td>
</tr>
<tr>
<td>Originality</td>
<td>(none)</td>
</tr>
<tr>
<td>How much help did the student receive in writing the report?</td>
<td>(none)</td>
</tr>
</tbody>
</table>

**Other comments on Lab performance and written report:**
MRes Molecular Plant and Microbial Sciences
PROJECT PRESENTATION ASSESSMENT 2016-2017

Student Name .................................................................

Assessor Name ..............................................................

Supervisor/1st marker/2nd marker (Circle One)

Project Title .................................................................

<table>
<thead>
<tr>
<th>Planning and Preparation</th>
<th>A*</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Disorganised, insubstantial; poor timing – rushed or over-long</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talk is of professional standard; evidence of preparation and strong research effort</td>
<td>A*</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subject Matter</th>
<th>A*</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Not so</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content is well focused on topic</td>
<td>A*</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voice and Body Language</th>
<th>A*</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Couldn’t hear, tense posture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good strong voice, good pace, relaxed posture</td>
<td>A*</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Visual materials</th>
<th>A*</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Slides unprofessional, messy, unclear or excessively cluttered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slide quality clear, appropriate and professional</td>
<td>A*</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question response</th>
<th>A*</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>A*</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>

| Overall Comments | |

<table>
<thead>
<tr>
<th>% MARK:</th>
<th>based on presentation marking criteria</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Grade/%</th>
<th>Band equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A* 80-100</td>
<td>Distinction</td>
</tr>
<tr>
<td>A 70-79</td>
<td>Distinction</td>
</tr>
<tr>
<td>B 60-69</td>
<td>Merit</td>
</tr>
<tr>
<td>C 50-59</td>
<td>Pass</td>
</tr>
<tr>
<td>D &lt;50</td>
<td>Fail</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AGREED % MARK:</th>
<th>Based on moderation meeting</th>
</tr>
</thead>
</table>

INITIALS: 28
### MRes PROJECT ASSESSMENT – CRITERIA for THESIS MARKING

<table>
<thead>
<tr>
<th>Literal Grade</th>
<th>% Grade</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>A* Distinction</td>
<td>100</td>
<td>Exceptional. Thesis is of a publishable standard**. It is an exceptionally well presented exposition of the project, showing: (i) command of the relevant concepts and facts, (ii) a high level of analysis, (iii) originality in thought and experimental design, and (iv) mastery of the relevant literature.</td>
</tr>
<tr>
<td>A Distinction</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td></td>
<td>90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>B Merit</td>
<td>80</td>
<td>Excellent. Thesis is written to a publishable standard** with minor revision. It is a very well presented exposition of the project, showing most of the above features, but falling short in one of them.</td>
</tr>
<tr>
<td></td>
<td>76</td>
<td></td>
</tr>
<tr>
<td></td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>C Pass</td>
<td>58</td>
<td>Very Good to Good. Thesis contains potentially publishable material**, but needs revision of the text and further research. It is otherwise a well presented exposition of the project, showing: (i) a clear grasp of the relevant concepts and facts, (ii) appropriate, though not highly sophisticated analysis, and (iii) a sound knowledge of the relevant literature.</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td></td>
</tr>
<tr>
<td></td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>D Fail</td>
<td>48</td>
<td>Adequate. Thesis is not written to a publishable standard and requires major revision and substantially more research. It is an adequately presented exposition of the project, showing: (i) a grasp of the basic concepts and facts, (ii) an adequate use of statistics in its analyses, and (iii) sufficient knowledge of the relevant literature to set its results in a scientific context.</td>
</tr>
<tr>
<td></td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>Unsatisfactory. Thesis is an incomplete presentation of the project and is marred by major errors or gaps, missing analysis, lack of references, misconceptions, excessive brevity, etc, at most showing a weak grasp of the basic concepts and facts.</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>Thesis not produced.</td>
</tr>
</tbody>
</table>

** This publishability assumes that the data are per se worth publishing.
<table>
<thead>
<tr>
<th>Literal Grade</th>
<th>% Grade</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
<td>100</td>
<td>Quality and quantity of data comparable to that in research articles published in the best journals. All procedures thoroughly understood and applied correctly, including (where applicable) statistical analysis. Shows an understanding of the limits of the experimental procedures, and possible alternative strategies and techniques. Shows an appreciation of possible sources of errors and significance of results. Shows evidence of outside reading, independent thought and originality.</td>
</tr>
<tr>
<td></td>
<td>95</td>
<td></td>
</tr>
<tr>
<td></td>
<td>90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>80</td>
<td>Experimental procedures understood and applied correctly, with most experiments successfully completed. Shows the above features, but not fully achieving one of them. No significant deficiencies.</td>
</tr>
<tr>
<td></td>
<td>76</td>
<td></td>
</tr>
<tr>
<td></td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>68</td>
<td>Most experimental procedures understood and applied correctly with some experiments successfully completed. Only minor problems.</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td></td>
</tr>
<tr>
<td></td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>58</td>
<td>Some experimental procedures understood and applied correctly with a few experiments successfully completed.</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td></td>
</tr>
<tr>
<td></td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>48</td>
<td>Weak understanding of experimental procedures. Some significant experimental errors. Very few experiments successfully completed.</td>
</tr>
<tr>
<td></td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>Confused understanding of experimental procedures. Major experimental errors. Only one or two experiments successfully completed.</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Vague understanding of experimental procedures. No experiments successfully completed.</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Few experiments attempted. No understanding of experimental procedures. Failure to follow protocols properly.</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>One or two experiments attempted, but without any understanding or success. Experiment not attempted. Mark given where the work presented is discovered not to be that of the candidate (plagiarised). Further disciplinary action is usually taken in cases of plagiarism</td>
</tr>
</tbody>
</table>
MRes assessment criteria for Presentations

These criteria are used to assess all oral presentations during your degree course. Account is taken of the nature of the degree programme, the instructions provided for the work and the type of presentation. Allowance is made for what is reasonably achievable under the conditions of the presentation (resources available, time allowed, etc.).

<table>
<thead>
<tr>
<th>Class</th>
<th>%</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>A* Distinction</td>
<td>100</td>
<td>Presentation does an excellent professional job of communicating a very substantial body of scientific information. The presenter held the audience’s attention, showed command of the relevant concepts and facts, spoke authoritatively and without obvious notes, showed evidence of substantial background knowledge, provided a consistently analytical*, critical* and/or synthetic* treatment of the topic, gave excellent answers to questions. Audio-visual aids prepared and used at conference-level.</td>
</tr>
<tr>
<td></td>
<td>95</td>
<td></td>
</tr>
<tr>
<td></td>
<td>90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>A Distinction</td>
<td>80</td>
<td>Presentation does an excellent job of communicating a very substantial body of scientific information. It meets all the criteria for a mark of 68 as well as meeting one or a few of the qualities of a 90+ presentation.</td>
</tr>
<tr>
<td></td>
<td>76</td>
<td></td>
</tr>
<tr>
<td></td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>B Merit</td>
<td>68</td>
<td>Presentation successfully communicates a significant body of scientific information. It is a mostly accurate and lucid account of the topic, showing evidence of thorough background knowledge and adequate preparation. One or more of the following may apply: errors or confused explanation in places, over-run, some hesitation, reading from notes, irrelevance (e.g. slides that do not add value).</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td></td>
</tr>
<tr>
<td></td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>C Pass</td>
<td>58</td>
<td>Presentation covers research topic adequately but displays limitations in effective communication of scientific information, containing obvious errors or lack of clarity, at a standard that is marginally sufficient for Masters level. Presenter shows a generally weak understanding of background material, and/or inadequate preparation (poor timing, slides that are poorly laid out, hesitation, reliance on reading notes).</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td></td>
</tr>
<tr>
<td></td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>D Fail</td>
<td>48</td>
<td>Presentation fails to communicate significant scientific information at level expected for Masters. Presenter demonstrates weak understanding of subject material and poor organisation and presentation skills, through errors, through lack of preparation, or by omission.</td>
</tr>
<tr>
<td></td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>38</td>
<td>Presentation fails to communicate scientific information and is on balance misleading. It shows understanding of very little of subject. Presentation is so inaccurate and/or irrelevant that it succeeds only in misinforming and confusing the audience.</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>Presentation includes very little that is correct and relevant.</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>Presentation not given.</td>
</tr>
</tbody>
</table>

Footnotes: Analytical = breaking a concept down into its parts and examining their inter-relationships, e.g. comparing and contrasting two models. Critical = judging a hypothesis or conclusion by examining the validity of the evidence presented for it, e.g. evaluating two competing models. Synthetic = integrating concepts from several sources. e.g. discussing relevant background reading, or combining material across several lectures or courses into a coherent or original whole.
**MRes assessment criteria for internal vivas**

These criteria are used to assess oral examinations (vivas) of MRes research project students.

<table>
<thead>
<tr>
<th>Class</th>
<th>%</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinction</td>
<td>90+</td>
<td>The student did an outstanding job of discussing in depth scientific issues centred on their project. The student gave accurate and logical answers, showed command of the relevant concepts and facts, spoke authoritatively, showed abundant evidence of knowledge and understanding beyond that which had been provided in the dissertation and/or presentation, provided a consistently analytical*, critical* and/or synthetic* treatment information in their answers. The student demonstrated an appreciation of the limitations of the experimental or other procedures, and showed clear and possibly novel insight into the subject. The student was able robustly to defend criticism of the strategy, ideas or information provided in the dissertation and/or the presentation.</td>
</tr>
<tr>
<td></td>
<td>80-89</td>
<td>The student did an excellent job of discussing in depth scientific issues centred on their project. They met all of the criteria for a mark of 69, as well as meeting most but not all of the criteria for a mark of 90+.</td>
</tr>
<tr>
<td></td>
<td>70-79</td>
<td>The student did an excellent job of discussing in depth scientific issues centred on their project. They met all the criteria for a mark of 69 as well as meeting one or a few of the qualities of a 90+ presentation.</td>
</tr>
<tr>
<td>Merit</td>
<td>60-69</td>
<td>The student effectively discussed scientific issues centred on their project, enabling the examiner to appreciate the significance of the material presented. Vivas in this range would generally be expected to show the following characteristics: good evidence of knowledge and understanding beyond that which had been provided in the dissertation and/or presentation, good critical*, analytical* or synthetic* ability in developing answers to questions, no evidence of significant errors of understanding during answers to questions, sound knowledge of how the study fits in to the relevant literature and some ability to defend criticism of the strategy, ideas or information provided in the dissertation and/or presentation.</td>
</tr>
<tr>
<td>Pass</td>
<td>50-59</td>
<td>The student successfully discussed some of the scientific issues centred on their project. The viva revealed a mostly accurate understanding of the material presented in the dissertation and/or presentation, showing evidence of adequate preparation, but was marred by some confused answers, omissions, errors, hesitation or irrelevance. There was little evidence of knowledge and understanding beyond that which had been provided in the dissertation and/or presentation.</td>
</tr>
<tr>
<td>Fail</td>
<td>40-49</td>
<td>The student discussed a limited range of scientific issues centred on their project, but with major errors or omissions. The student demonstrated a weak understanding of much of the material presented in the dissertation and/or presentation, and showed little evidence of preparation. There was no evidence of knowledge and understanding beyond that which had been provided in the dissertation and/or presentation.</td>
</tr>
<tr>
<td>Fail</td>
<td>&lt;40</td>
<td>The student failed to communicate any significant scientific information. The student demonstrated almost no understanding of the material presented in the dissertation and/or presentation (either through errors, or by omission). Answers were so inaccurate and/or irrelevant that they succeeded only in largely misinforming and confusing the examiner.</td>
</tr>
<tr>
<td></td>
<td>&lt;20</td>
<td>The student provided few or no answers that were correct and relevant.</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>Viva not attended.</td>
</tr>
</tbody>
</table>

**Footnotes:** Analytical = breaking a concept down into its parts and examining their inter-relationships, e.g. comparing and contrasting two models. Critical = judging a hypothesis or conclusion by examining the validity of the evidence presented for it, e.g. evaluating two competing models. Synthetic = integrating concepts from several sources. e.g. discussing relevant background reading, or combining material into a coherent or original whole.