Programme Information		
Programme Title	Programme Code	HECoS Code
Molecular Plant and Microbial Sciences	D8U8	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
MRes	1 year	Full time	October	90	180

Ownership			
Awarding Institution	Imperial College London	Faculty	Faculty of Natural Sciences
Teaching Institution	Imperial College London	Department	Life Sciences
Associateship	Diploma of Imperial College (DIC)	Main Location(s) of Study	South Kensington Campus
External Reference			
Relevant QAA Benchmark Statement(s) and/or other external reference points		N/A	
FHEQ Level		7	
EHEA Level		2nd Cycle	
External Accreditor(s) (if applicable)			
External Accreditor 1:	N/A		
Accreditation received:	N/A	Accreditation renewal:	N/A
Collaborative Provision			
Collaborative partner	Collaboration type	Agreement effective date	Agreement expiry date
N/A	N/A	N/A	N/A
Specification Details			
Programme Lead		Professor Colin Turnbull	
Student cohorts covered by specification		2025-26 entry	
Date of introduction of programme		2003-04	
Date of programme specification/revision		August 23	

Programme Overview

The backbone of the MRes in Molecular Plant and Microbial Sciences is a 12-month period of research starting in the first week of October.

It consists of two research projects performed in research groups focusing on plant genetic engineering, plant development, photosynthesis, molecular microbiology, plant-microbe and -pest interactions, metabolic engineering, transcriptomics, proteomics and bioinformatics. It is not possible for projects to be carried out partly or wholly at an external organisation, however requests for internal placements in another academic department may be approved on a case by case basis.

Career opportunities continue to expand as the potential of molecular sciences related to plants, microbes and biotechnology is realised by employers, research companies and governments. A high proportion of our graduates enter further research leading to a PhD degree.

Some graduates may gain employment in the food industry and agrochemical companies, which are increasingly focused on modern approaches to plant breeding. New developments in metabolic engineering research offer further employment opportunities.

Learning Outcomes

At the end of this course you will be able to:

Knowledge and Understanding:

- At the conclusion of the programme, students should have experienced research encompassing a range of topics and techniques relevant to pursuing a career in molecular plant and/or microbial sciences.
- They should have developed their abilities in experimental design, critical assessment of results and conclusions, written and verbal presentations and the use of relevant software and statistics tools for data analysis and display.

Intellectual Skills:

- Analyse and solve plant and microbial science problems using an integrated multidisciplinary approach.
- Integrate and evaluate information.
- Formulate and test hypotheses using appropriate experimental design and statistical analysis of data where appropriate.
- Plan, conduct and write a programme of original research.
- Critically evaluate scientific publications.

Practical Skills:

- Plan and execute safely a series of experiments.
- Use laboratory and information technology based methods to generate data.
- Analyse experimental results and determine their strength and validity.
- Prepare technical reports.
- Give technical presentations.
- Use the scientific literature effectively.
- Use relevant computation tools and packages.

Transferable Skills:

- Communicate effectively through oral presentations, written reports, scientific publications and electronic publishing.
- Devise experimental methodologies for plant science and biotechnology problems.
- Use management skills: decision-making processes, objective criteria, problem definition, project design and evaluation, risk management, teamwork and coordination.
- Integrate and evaluate critically information from various sources.
- Transfer techniques and solutions from one discipline to another.
- Use modern information and communications technologies.
- Manage resources and time.
- Learn independently with open-mindedness and critical enquiry.
- Learn effectively for the purpose of continuing professional development.

The Imperial Graduate Attributes are a set of core competencies which we expect students to achieve through completion of any Imperial degree programme. The Graduate Attributes are available at: https://www.imperial.ac.uk/about/education/our-graduates/

Entry Requirements	
Academic Requirement	Normally a 2.1 UK Bachelor 's Degree with Honours in a Biosciences-based subject (or a comparable qualification recognised by the university).
Non-academic Requirements	N/A
English Language Requirement	Higher requirement IELTS score of 7.0 overall (minimum 6.5 in all elements)
Admissions Test/Interview	Applications are reviewed by Course Directors in conjunction with Director of Postgraduate Studies. Offers are made based on combination of prior or predicted Academic Grades, relevance of studies to degree subject area, quality of personal statement and strength of academic references. No interviews or admission tests are required

The programme's competency standards documents can be found at: www.imperial.ac.uk/media/imperial-college/faculty-of-natural-sciences/department-of-life-sciences/public/postgraduate/masters/Life-Sciences-Competence-standards-PG.pdf

Learning & Teaching Approach

Learning is centred on two major full-time research projects, with students typically embedded with two different research groups to enhance breadth and depth of learning and training. Training is given for all techniques relevant to the allocated project topics. Mentoring is provided throughout the project, by the academic supervisor(s) and also often by more senior members of the research group such as post-docs and PhD students. The research projects have substantial components of independent learning, in researching relevant literature, designing experimental work, analysing data and preparing oral or written presentations

Overall Workload
Your overall workload consists of face-to-face sessions and independent learning. While your actual contact hours may vary according to the optional modules you choose to study, the following gives an indication of how much time you will need to allocate to different activities at each level of the programme. At Imperial, each ECTS credit taken equates to an expected total study time of 25 hours. Therefore, the expected total study time is 2250 hours per year, for the 90 ECTS of credit.

In the MRes MPMS course, each project comprises an estimated total of 1125 hours, of largely independent study. This includes laboratory research and/or computer-based data research, critical reviewing of literature, data analysis, report writing and presentations to research groups and to internal examiners.

Learning can be supplemented by accessing online lecture material from relevant advanced taught modules offered by the Department.
Students also attend regular departmental seminars, providing learning on a wider range of Life Sciences topics

Assessment Strategy

Assessment Methods

Each of the two research projects is assessed on the following elements (with weightings given in brackets)

- Individual research project report (55%)
- Laboratory performance (15%)
- Oral or poster presentation (10%)
- Oral exam with two independent examiners (20%)

Academic Feedback Policy
Research project reports and seminar presentations are marked by the research supervisor and two independent assessors. Research lab performance is marked by the research supervisor. Internal oral exams are conducted and assessed by the two independent examiners. 1:1 feedback sessions for all students are provided by the course director after the first project, covering performance in report, presentation and oral exam. Staff-student meetings are held two to three times a year to communicate general feedback between student representatives and the course directors. Imperial's Policy on Academic Feedback and guidance on issuing provisional marks to students is available at: www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/
Re-sit Policy
In line with the university's policy, students who are unsuccessful in any of their examinations may be allowed an opportunity to re-sit at the discretion of the Board of Examiners. Imperial's Policy on Re-sits is available at: www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/
Mitigating Circumstances Policy
Students may be eligible to apply for mitigation if they have suffered from serious and unforeseen circumstances during the course of their studies that have adversely affected their ability to complete an assessment task and/or their performance in a piece of assessment. Imperial's Policy on Mitigating Circumstances is available at: www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/

Additional Programme Costs		
This section should outline any additional costs relevant to this programme which are not included in students' tuition fees.		
Description	Mandatory/Optional	Approximate cost
N/A	N/A	N/A

Important notice: The Programme Specifications are the result of a large curriculum and pedagogy reform implemented by the Department and supported by the Learning and Teaching Strategy of Imperial College London. The modules, structure and assessments presented in this Programme Specification are correct at time of publication but might change as a result of student and staff feedback and the introduction of new or innovative approaches to teaching and learning. You will be consulted and notified in a timely manner of any changes to this document.

Programme Structure[1]					
Year 1 - FHEQ Level 7 **You will take two research projects that comprise the core studies for the degree**					
Code	Module Title	Core	Group	Term	Credits
LIFE70033	Research Project 1 in Molecular Plant & Microbial Sciences	Core		Autumn-Spring	45
LIFE70034	Research Project 2 in Molecular Plant & Microbial Sciences	Core		Spring-Summer	45
				Credit Total	90

[1] **Core** modules are those which serve a fundamental role within the curriculum, and for which achievement of the credits for that module is essential for the achievement of the target award. Core modules must therefore be taken and passed in order to achieve that named award. **Compulsory** modules are those which are designated as necessary to be taken as part of the programme syllabus. Compulsory modules can be compensated. **Elective** modules are those which are in the same subject area as the field of study and are offered to students in order to offer an element of choice in the curriculum and from which students are able to select. Elective modules can be compensated.

Progression and Classification

Award of a Masters Degree (including MRes)

To qualify for the award of a postgraduate degree you must have:

1. accumulated credit to the value of no fewer than 90 credits at level 7 or above of which no more than 15 credits may be from credit level 6;
2. and no more than 15 credits as a Compensated Pass;
3. met any specific requirements for an award as outlined in the approved programme specification for that award.

Classification of Postgraduate Taught Awards

The university sets the class of Degree that may be awarded as follows:

1. Distinction: 70.00% or above.
2. Merit: 60.00% or above but less than 70.00%.
3. Pass: 50.00% or above but less than 60.00%.

Your classification will be determined through the Programme Overall Weighted Average and the designated dissertation or final major project module meeting the threshold for the relevant classification band.

Your degree algorithm provides an appropriate and reliable summary of your performance against the programme learning outcomes. It reflects the design, delivery, and structure of your programme without unduly over-emphasising particular aspects.

Programme Specific Regulations

N/A

Supporting Information
The Programme Handbook is available at: www.imperial.ac.uk/life-sciences/postgraduate/masters-courses/mres-in-molecular-plant-and-microbial-sciences/
The Module Handbook is available from the department.
Imperial's entry requirements for postgraduate programmes can be found at: www.imperial.ac.uk/study/pg/apply/requirements
Imperial's Quality & Enhancement Framework is available at: www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance
Imperial's Academic and Examination Regulations can be found at: www.imperial.ac.uk/about/governance/academic-governance/regulations
Imperial College London is an independent corporation whose legal status derives from a Royal Charter granted under Letters Patent in 1907. In 2007 a Supplemental Charter and Statutes was granted by HM Queen Elizabeth II. This Supplemental Charter, which came into force on the date of the College's Centenary, 8th July 2007, established Imperial as a University with the name and style of "The Imperial College of Science, Technology and Medicine". www.imperial.ac.uk/admin-services/secretariat/university-governance-structure/charters/
Imperial College London is regulated by the Office for Students (OfS) www.officeforstudents.org.uk/advice-and-guidance/the-register/
This document provides a definitive record of the main features of the programme and the learning outcomes that you may reasonably be expected to achieve and demonstrate if you take full advantage of the learning opportunities provided. This programme specification is primarily intended as a reference point for prospective and current students, academic and support staff involved in delivering the programme and enabling student development and achievement, for its assessment by internal and external examiners, and in subsequent monitoring and review.