Imperial College London

MRes Cancer Biology
MRes Cancer Biology (Cancer Informatics)

This document provides a definitive record of the main features of the programme and the learning outcomes that a typical student may reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities provided. This programme specification is intended as a reference point for prospective students, current students, external examiners and academic and support staff involved in delivering the programme and enabling student development and achievement.

Programme Information

Programme Title	Cancer Biology	Cancer Biology (Cancer Informatics)
Award(s)	MRes	
Programme Code	A3CB	A3CBI
Associateship	None	
Awarding Institution	Imperial College London	
Teaching Institution	Imperial College London	
Faculty	Faculty of Medicine	
Department	Department of Surgery and Cancer	
Main Location of Study	Hammersmith Campus	
Mode and Period of Study	1 academic year, full time (12 months)	
Cohort Entry Points	Annually in October	
Relevant QAA Benchmark Statement(s) and/or other external reference points	N/A	

Total Credits	ECTS:	90	CATS:	180

FHEQ Level	Level 7
EHEA Level	2nd cycle

Specification Details

Student cohorts covered by specification	2018-19 entry
Person responsible for the specification	Dr Olivier E Pardo
Date of introduction of programme	2009
Date of programme specification/revision	May 2018

Programme Overview

The course comprises an initial eight week taught component in which the cellular and molecular basis of cancer biology is covered plus an introduction to the clinical and pathological aspects of carcinogenesis. Within this period will also be a series of workshops covering key transferable skills such as oral presentation of scientific data and grant writing.

This is followed by two separate 19-week research placements within the recently created Imperial College Cancer Research UK Centre, the Faculty of Medicine at the Hammersmith Hospital campus of Imperial College and other collaborating institutes across London (Sciences, Cancer).

Some of the laboratories within the Division of Cancer in which you can do your research project can be found under "Cancer Research" at the Department of Surgery and Cancer.
The course comprises both theoretical and practical elements, embracing cutting-edge developments in the field. Students will experience some of the most technologically advanced approaches currently being applied to the broad field of cancer research.

This course offers an additional stream, Cancer Informatics. The format of the stream and assessment method is the same for all students, but the core programme and choice of research projects are determined by stream, i.e. Cancer Biology or Cancer Informatics.

Learning Outcomes

The Imperial Graduate Attributes are a set of core competencies which we expect students to achieve through completion of any Imperial College degree programme. The Graduate Attributes are available at: www.imperial.ac.uk/students/academic-support/graduate-attributes

Knowledge and Understanding of:

- Issues that are currently topical in molecular, cellular and physiological science;
- Management and communication skills, including problem definition, project design, decision processes, teamwork, written and oral reports, scientific publications;
- Ethics of animal and human experimentation;
- Intellectual property issues;
- The principles and practice of modern molecular, cellular and physiological science through both theory and practical exposure;
- Advanced practical techniques of molecular, cellular and physiological science;
- Research techniques including information retrieval, experimental design, statistics and laboratory safety.

Intellectual Skills:

- Critically evaluate current developments in the fields of molecular, cellular and physiological science using an integrated multidisciplinary approach involving a number of scientific disciplines;
- Integrate and evaluate information;
- Formulate and test hypotheses using appropriate experimental design and statistical analysis of data;
- Plan, conduct and write-up two independent programmes of original research.

Practical skills:

- Plan and execute safely a series of experiments;
- Use laboratory 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 computational tools and packages.

Transferable Skills:

- Communicate effectively through oral presentations, computer processing and presentations, written reports and scientific publications;
- Apply statistical and modelling skills;
- Management skills: decision processes, objective criteria, problem definition, project design and evaluation, risk management, teamwork and coordination;
- Integrate and evaluate information from a variety of sources;
- Transfer techniques and solutions from one discipline to another;
- Use Information and Communications Technology;
- Manage resources and time;
- Learn independently with open-mindedness and critical enquiry;
- Learn effectively for the purpose of continuing professional development.

Entry Requirements

Academic Requirement	Normally a 2:1 UK Bachelor's Degree with Honours (or a comparable qualification recognised by the College)
Non-academic Requirements	Relevant lab experience
English Language Requirement	Standard requirement IELTS 6.5 with a minimum of 6.0 in each element or equivalent.

The programme's competency standards documents can be found at:
http://www.imperial.ac.uk/students/academic-support/graduate-attributes/

Learning & Teaching Strategy

Scheduled Learning & Teaching Methods	• Lectures • Seminars • Tutorials • Technical workshops
Project and Placement Learning Methods	• Research projects

Assessment Strategy

Assessment Methods	• Coursework

	• Practical

Academic Feedback Policy

Both individual and group feedback is provided following all coursework, practical and project viva involving all internal examiners. Personal tutors will be able to assist students to monitor progress throughout the course based on this feedback.

Students will receive literal grades for their assignments within a month of the assignment deadline.

The research projects will be assessed at different stages with the academic supervisors providing input into methodologies and interpretation of results. Also, for the first research project, a mock viva is organised a month and a half prior to the real viva in order to provide feedback to the students prior to the first course viva.

Re-sit Policy

In line with College policy, students who are unsuccessful in any of their examinations may usually be allowed an opportunity to re-sit at the discretion of the Board of Examiners.

Specific information regarding re-sits for Taught Master's degrees can be found in the relevant Academic Regulations available at: https://www.imperial.ac.uk/about/governance/academic-governance/regulations/

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.

The College's Policy on Mitigating Circumstances is available at: https://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/

Assessment Structure

Marking Scheme

Final Degree Classifications

In order to be awarded a result of **pass**, a candidate must obtain an aggregate mark of at least 50%.

In order to be awarded a result of a **merit** a candidate must obtain an aggregate mark of 60% or greater. Where appropriate, a Board of Examiners may award a result of merit where a candidate has achieved an aggregate mark of 60% or greater across the programme as a whole AND has obtained a mark of 60% or greater in each component with the exception of one component AND has obtained a mark of 50% or greater in this latter component.

In order to be awarded a result of a **distinction** a candidate must obtain an aggregate mark of 70% or greater. Where appropriate, a Board of Examiners may award a result of distinction where a candidate has achieved an aggregate mark of 70% or greater across the programme as a whole AND has obtained a mark of 70% or greater in each component with the exception of one component AND has obtained a mark of 60% or greater in this latter component.

Module Weightings (MRes Cancer Biology)	
Module	% Module Weighting
Statistics	0% (P/F)
Poster presentation	9%
Grant Writing Exercise	9%
Project 1 - Cancer Biology	41%
Project 2	41%

Module Weightings (MRes Cancer Biology (Cancer Informatics))	
Module	% Module Weighting
Statistics	0% (P/F)
Bioinformatics	8.2%
Poster presentation	9%
Grant Writing Exercise	9%
Project 1 - Informatics	32.8%
Project 2	41%

		Indicative Module List									

Code	Title	Core/ Elective	L&T Hours	Ind. Study Hours	Place-ment Hours	Total Hours	% Written Exam	% Course-work	% Practical	FHEQ Level	ECTS
	General Lectures	CORE	68	0	0	68	0%	100%	0%	7	0
	Statistics Training	CORE	4	0	0	4	0%	0%	100%	7	0
	Informatics	ELECTIVE	60	100	0	160	0%	100%	0%	7	7.5
	Tutorials	CORE	8	2	0	10	0%	0%	0%	7	0
	Book Chapter presentations	CORE	20	20	0	40	0%	100%	0%	7	0
	Poster presentation	CORE	0	12	0	12	0%	100%	0%	7	8
	Grant Writing Exercise	CORE	1	12	0	13	0%	100%	0%	7	8
	Project 1 - Informatics stream	ELECTIVE	0	640	0	640	0%	100%	0%	7	29.5
	Project 1 - Cancer Biology stream	ELECTIVE	0	800	0	800	0%	100%	0%	7	37
	Project 2	CORE	0	800	0	800	0%	100%	0%	7	37

Supporting Information
The Programme Handbook is available at: http://www.imperial.ac.uk/medicine/study/postgraduate/masters-programmes/mres-cancer-biology/
The Module Handbook is available at: http://www.imperial.ac.uk/medicine/study/postgraduate/masters-programmes/mres-cancer-biology/
The College's entry requirements for postgraduate programmes can be found at: www.imperial.ac.uk/study/pg/apply/requirements
The College's Quality & Enhancement Framework is available at: www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance
The College's Academic and Examination Regulations can be found at: https://www.imperial.ac.uk/about/governance/academic-governance/regulations
Imperial College 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 the College as a University with the name and style of "The Imperial College of Science, Technology and Medicine". http://www.imperial.ac.uk/admin-services/secretariat/college-governance/charters/
Imperial College London is regulated by the Office for Students (OfS) https://www.officeforstudents.org.uk/