

Programme Information		
Programme Title	Programme Code	HECoS Code
Cancer Biology Cancer Biology (Cancer Informatics) Cancer Biology (Cancer Innovation)	A3CB A3CBI A3CBN	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
MRes	1 Calendar Year (12 months)	Full-time	Annually in October	90	180

Ownership			
Awarding Institution	Imperial College London	Faculty	Faculty of Medicine
Teaching Institution	Imperial College London	Department	Surgery and Cancer
Associateship	Diploma of Imperial College (DIC)	Main Location(s) of Study	Hammersmith Hospital
External Reference			
Relevant QAA Benchmark Statement(s) and/or other external reference points		N/A	
FHEQ Level		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		Dr James Flanagan	
Student cohorts covered by specification		2025-26 entry	
Date of introduction of programme		October 2009	
Date of programme specification/revision		Jan 2023	

Programme Overview

Key

MRes MRes Cancer Biology programme
CB Cancer Biology stream
CI Cancer Informatics stream
CN Cancer Innovation stream

The programme is aimed at students interested in furthering their understanding of and proficiency at experimental and computational research in the field of Cancer biology. While this Master will provide foundations of theoretical knowledge in area relevant to Cancer, it is heavily research-oriented as underscored by the 10 months spent by students in research laboratories or carrying out original research and analysis. Students completing this course will be able to continue a career in biological research (e.g. PhD, biotech industry) or join career paths where an advance knowledge and understanding of cancer research is advantageous (e.g. journalism, patent office, financial institutions).

Module 1 – all streams

Blended learning taught module, covering the cellular and molecular basis of cancer biology, as well as an introduction to the clinical and pathological aspects of carcinogenesis and treatment. Includes workshops, and advanced research career skills such as peer review other transferable skills.

Module 2 – specialized/elective

- **CB** – Blended learning taught module, covering wet lab skills, lab etiquette, data analysis, and communicating science to expert and lay audiences.
- **CI** – Blended learning taught module utilizing demonstrations and workshops to train students in fundamental computational and bioinformatics techniques, ethics, and communicating science to expert and lay audiences.
- **CN** – Blended learning taught module utilizing demonstrations and workshops to train students in the translation of a biotechnology platform from concept to realization and onward to application in the clinical/commercial environment. This will include critical analysis of current literature and performance data and the communication of technology concepts to both scientific and commercial audiences

Projects 1 + 2

You will conduct two project modules based on your stream choice.

Wet-lab/dry lab projects (as appropriate) undertaken primarily within the [Cancer research theme](#) at Imperial College London. It is possible for projects to be carried out partly or wholly at an external organisation. Some opportunities will be available for projects at other organizations such as the Bart's Cancer Institute, the Francis Crick Institute, GlaxoSmithKline, the Institute of Cancer Research, and the Medical Research Council.

Learning Outcomes

By the end of this programme, you will be able to:

1. Expertly apply the principles and practice of modern molecular medicine, cellular, and physiological science to promote the prevention, diagnosis and treatment of cancer;
2. Critique research within a wider scientific/clinical context;
3. Formulate a sound research hypothesis and design a research plan to address this hypothesis and collect experimental data to propose follow-on work;
4. Identify novel research opportunities within the field of cancer biology/oncology;
5. Communicate their science effectively to peers, experts in the field, and lay audiences;
6. Assess how to conduct scientific research ethically and with integrity;
7. Interpret complex research data accurately and synthesize appropriate conclusions;
8. Produce research reports to a standard suitable for peer-reviewed publication;
9. Integrate effectively into a team of professional scientists, often in a multidisciplinary environment.

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	The minimum requirement is normally a 2:1 UK Bachelor's Degree with Honours in an appropriate science subject (or a comparable qualification recognized by the university).
Non-academic Requirements	Cancer Biology stream only: relevant lab experience (e.g. Bachelor's Degree wet-lab project and dissertation).
English Language Requirement	Standard requirement (PG) IELTS score of 6.5 overall (minimum 6.0 in all elements)
Admissions Test/Interview	Generally, offers are made based on the strength of the application and following discussion by the two stream admissions tutors. Should the admissions tutors require additional information in order to make a decision, the applicant will be contacted in order to arrange a phone/skype call with one of the admissions tutors.

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

Learning & Teaching Approach

Modules 1 and 2 are blended learning taught modules, which will make use of pre-sessional tasks, supported workshops, practical sessions, student-lead learning, active learning techniques, as well as more traditional lectures. Working with collaborators (e.g. The Crick, Imperial Clinical Trials Unit), field trips and shadowing may also be available.

Work-based learning is the focus of the programme when you undertake the two research project modules.

Assessment Strategy

Assessment Methods

Module	Name	% of Module	Module ILOs
Module 1	Book Chapter Presentation	30%	1
	Online Outreach Task	70%	1, 2
Module 2	Stream Assignment	100%	See below
Project 1 (A stream)	Thesis	60%	1 to 5, 8, 9
	Viva	20%	1 to 4, 6, 8
	Poster	20%	6, 7
Project 1 (B stream)	Mock Grant Application	40%	4 and 7
	Oral presentation	20%	1 to 4, 6, 8
	Poster	40%	6, 7
Project 2 (A stream)	Thesis	60%	1 to 5, 8, 9
	Viva	20%	1 to 4, 6, 8
	Mock Grant Application	20%	4 and 7
Project 2 module (B stream)	Thesis	75%	1 to 5, 8, 9
	Viva	25%	1 to 4, 6, 8

Stream	Stream Assignments(s)	Module 2 ILOs
CB	1. Study design	1 to 4
	2. Critical literature review	1 to 4
CI	Informatics Assignment	2 to 4, 6, 7
CE	1. Business concept presentation	1, 4, 5
	2. Literature review/ product evaluation	1 - 5

Each assessment is designed to test your appropriate acquisition of separate skills required for the furthering of a career in cancer biology research and associated professional paths.

The Book Chapter presentation assess your ability to condense a body of knowledge on a subject treated in the course textbook and orally present this summary clearly with the help of visual tools.

The Online Outreach Task tests your skills at conveying a threshold concept of Cancer Biology to a lay audience using a short video presentation designed for online publishing.

The Study Design assignment will test your ability to design a study coherently based on a sound experimental plan supported by adequate statistical considerations and grasping of technical limitations.

The Critical Literature Review will assess your aptitude to critically analyze a piece of published scientific literature, highlighting the likely scope of the findings and limitations of the work including ethical considerations.

The Informatics assignment will test your ability to implement bioinformatic analyses on cancer-related datasets.

The Literature Review/Product evaluation will assess your aptitude to critically analyze a platform technology or therapeutic approach, highlighting the current innovation landscape and technical limitations.

The Business Concept presentation will test your ability to design a coherent plan for science innovation supported by adequate market considerations and technical limitations.

The Project Thesis will judge your skills at presenting, describing and critically discussing your own experimental data in the format typical of an article published in peer-reviewed journals.

At the Viva, you will be assessed on your ability to present your research to your examiners with the help of visual tools in a clear, concise fashion, summarizing your findings and their relevance. You will also be tested on your ability

to answer questions directly relevant to your project, including on theoretical and practical knowledge of the subject area, of the experimental techniques used and their limitations as well as the proposed follow-on work. Additionally, progress between the Viva for project modules 1 and 2 will be assessed in terms of clarity of the oral presentation, confidence of the student in answering questions and mastery of the research subject.

Academic Feedback Policy

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

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

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
Programme Textbook: The Biology of Cancer, Robert A. Weinberg	Mandatory	Provided
Printing of poster for assessment	Mandatory	Provided
Travel to project lab location	Mandatory	As applicable

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 study all core modules. You will choose your electives based on your stream.					
Code	Module Title	Core/ Compulsory/ Elective	Group	Term	Credits
SURG70024	The Molecular Basis of Cancer	Core	N/A	Autumn	5
SURG70025	Cancer Biology	Elective	N/A	Autumn	5
SURG70026	Cancer Informatics and Machine Intelligence	Elective	N/A	Autumn	5
SURG70088	Cancer Innovation	Elective	N/A	Autumn	5
SURG70027	Cancer Biology Project 1A	Elective	N/A	Autumn - Summer	40
SURG70086	Cancer Biology Project 1B	Elective	N/A	Autumn - Summer	20
SURG70028	Cancer Biology Project 2A	Elective	N/A	Spring - Summer	40
SURG70087	Cancer Biology Project 2B	Elective	N/A	Autumn - Summer	60
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.

Award and Classification for Postgraduate Students

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
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%.

For a Masters, your classification will be determined through the Programme Overall Weighted Average 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 overemphasising particular aspects.

Programme Specific Regulations

N/A

Supporting Information

The Programme Handbook is available upon enrolment.

The Module Handbook is available upon enrolment.

Imperial's entry requirements for postgraduate programmes can be found at:
www.imperial.ac.uk/study/apply/postgraduate-taught/entry-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

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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.