



## Programme Specification (PG)

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| Awarding body / institution:                | Queen Mary University of London                                       |
| Teaching institution:                       | Queen Mary University of London                                       |
| Name of final award and title:              | MSc/PgDip in Cancer Biology   |
| Name of interim award(s):                   | Pg Dip / Pg Cert in Cancer Biology                                    |
| Duration of study / period of registration: | 12 (FT) or 24 months (PT) for MSc; 9 (FT) or 18 months (PT) for PGDip |
| Queen Mary programme code(s):               | PSCBU - C2B1, C2B2, D2B3 & D2B4                                       |
| QAA Benchmark Group:                        | Medicine  |
| FHEQ Level of Award:                        | Level 7   |
| Programme accredited by:                    | NA  |
| Date Programme Specification approved:      | 20 March 2024   |
| Responsible School / Institute:             | Barts Cancer Institute  |

Schools / Institutes which will also be involved in teaching part of the programme:

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Collaborative institution(s) / organisation(s) involved in delivering the programme:

Universiti Sains Malaysia (Science University of Malaysia)

### Programme outline

This programme is provided by the Barts Cancer Institute (BCI) within the Faculty of Medicine and Dentistry, Queen Mary University of London

The Barts Cancer Institute is a Cancer Research UK Centre of Excellence, which forms part of a national framework to deliver world-leading research, improved patient care and greater public engagement.

We have a constellation of leading cancer scientists and clinicians involved in basic, translational and clinical research. This expertise allows us to offer you this exciting opportunity to study on the MSc/ Pg Diploma in Cancer Biology.

Cancer is the cause of over 25% of all deaths in the UK. Despite major advances in treatment over the last 25 years, over half of the 270,000 new cancer cases registered in the UK each year will go on to die of their disease. New treatment options are clearly required, a process that will require staff at all levels of the development process to be appropriately trained and skilled in cancer therapeutics and new treatment development.

This programme is designed to give you a detailed and thorough understanding of cancer biology and therapeutics, based on knowledge of cancer biology, pathology and research methodology. This will provide you with a good grounding in the use

and evaluation of cancer therapies which will enhance your career prospects in many areas of early phase clinical trials and clinical drug development in the cancer setting.

The programme can be studied either full-time and part-time, and will be delivered through our virtual learning platform using synchronous and asynchronous distance-learning provisions

This programme is offered the following awards:

- MSc award: 180 credits consisting of 120 credits of taught units and a 60 credit Lab-based project or Dissertation
- Postgraduate Diploma award: 120 credits of taught units

## Aims of the programme

The specific aims of the programme are to provide participants with a clear understanding of the scientific basis underlying the principles and practice of cancer biology, therapeutics and the development, evaluation and implementation of new treatments.

This will be underpinned by a thorough knowledge of cancer biology and pathology, research methodologies, drug development and regulatory issues.

This knowledge will provide you with a good grounding in the use and evaluation of cancer therapies which will enhance career prospects in many areas of early phase clinical trials and clinical drug development in the cancer setting.

## What will you be expected to achieve?

The learning outcomes are aligned to with the The Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies. On completion of the course students will:

### Academic Content:

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|-----|--|
| A 1 | be competent in applying knowledge in the molecular and cellular biology relevant to cancer, including critical awareness of current problems and new insights |
| A 2 | obtain and be competent in using systematic knowledge of the principles underlying the diagnosis and treatment of cancer                                       |
| A 3 | critically understand and be competent to apply the steps involved in developing and implementing new cancer treatments  |
| A 4 | critically and thoroughly understand and apply the regulatory framework underlying clinical research   |
| A 5 | understand and actively use the principles of relevant laboratory methodologies  |

### Disciplinary Skills - able to:

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| B 1 | emonstrate skills in gathering, recording, analysing and presenting information |
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| B 2 | be able to actively contribute to the research activity and knowledge base in improving cancer care   |
| B 3 | apply knowledge gained from the programme in their own professional role  |
| B 4 | make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences |
| B 5 | be able to evaluate methodologies and develop critiques of them to propose new hypotheses.  |

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| Attributes: |   |
| C 1         | be competent in clear and creative communication of research data   |
| C 2         | be competent in working as part of a research-active group  |
| C 3         | be competent to deal with complex cancer research related issues - both systematically and creatively.                                  |
| C 4         | possess the qualities and transferable skills necessary for employment requiring the exercise of initiative and personal responsibility |
| C 5         | obtain the independent learning ability required for continuing professional development.   |

### How will you learn?

Module and project teaching will comprise the following;

- USM students will primarily be studying asynchronously but may - if they wish - attend the online seminars which are run during UK teaching hours. They will be studying alongside other BCI DL students with the same teaching and assessment provisions.
- Whole-group seminars/lectures on specific topics, delivered by a Virtual Learning Environment. Tutors and students will be encouraged to develop a tutorial atmosphere in which dialogue and discussion can take place in real time.
- Whole-group practical classes in small groups to address a specific practical method or topic. These will be delivered online and recorded in the student's practical files.
- Whole-group demonstrations. These will take place in Institute laboratories or the class-room to address specific technologies (i.e. expression array technology) or methods (i.e. array data analysis). These demonstrations will be delivered live via VLE live and will be recorded for revision.
- Student presentations on specific topics.
- Individual supervision will take place for all students during the 60 credit project, or for students who require additional input in a particular topic area.
- Key generic skills will be acquired from each of the above.
- Teaching material will be available on the University virtual learning environment, QMPLUS
- The provision of key skills in the core module Research Methods will enable students to maximize their ability to understand and learn from other modules. Students will maintain a file of practical work carried out in the core module which will be useful during the project module.

### How will you be assessed?

All assessment will be online in a distance learning mode. Assessment of individual modules vary and are designed to test the module learning outcomes. Assessments include, but not limited to:

- \*presentations (oral and poster)
- \*viva
- \*written essays
- \*practicals

\*online examination, analytical in nature.

### How is the programme structured?

Please specify the structure of the programme diets for all variants of the programme (e.g. full-time, part-time - if applicable). The description should be sufficiently detailed to fully define the structure of the diet.

Programmes are taught over two, 12-week teaching semesters and final module assessment occurs in the relevant Semester exam period (Jan & May/Jun). MSc Students consider and prepare Project/Dissertation topics and complete research and writing up over the summer. Students on the PgDip are required to take 120 credit credits. Students on the MSc are required to take 180 credits

This includes:

- 30 credits of compulsory taught modules
- 90 credits of elective taught modules

For MSc students only:

- 60 credit core lab project or dissertation, based at USM and co-supervised and assessed by USM and BCI Faculty.

Students are required to take an even load across both teaching semesters.

For Full Time mode

Semester 1 (60 credits )

- CANM102 Cancer Biology. Compulsory - 15 credits
- CANM137 Research Methods. Compulsory - 15 credits.
- CANM103 Cancer Pharmacology. Elective - 15 credits.
- CANM121 Molecular Diagnostics and Therapeutics. Elective - 15 credits.
- CANM151 Pathology of Cancer and Imaging. Elective - 15 credits.

Semester 2 (60 credits)

- CANM107 Biological Therapies. Elective - 15 credits
- CANM135 Molecular Targeted Therapies - Elective - 15 credits
- CANM150 Clinical Cancer Treatment - Elective - 15 credits
- CANM112 Cancer Prevention and Screening - Elective 7.5 credits
- CANM106 Drug Development - Elective 7.5 credits
- CANM140 Genomic Approaches to Cancer - Elective 7.5 credits
- CANM111 Paediatric and Adolescent Oncology - Elective 7.5 credits
- CANM112 Cancer Prevention and Screening - Elective 7.5 credits
- CANM138 Research Lab Skills - Elective - 15 credits

Semester 3 (60 credits)

Lab-based research project or Dissertation (Delivered by USM and co-supervised and assessed by USM and BCI academic staff). The final project will be double marked by each institute and the final mark agreed. The students will be given an option which Semester 3 project to undertake.

Students are required to take an even load across both teaching semesters.

For Part Time Mode

Programme Title: Cancer Biology

Semester 1 Y1 (30 credits)

- CANM102 Cancer Biology. Compulsory - 15 credits
- CANM103 Cancer Pharmacology. Elective - 15 credits.
- CANM121 Molecular Diagnostics and Therapeutics. Elective - 15 credits.
- CANM151 Pathology of Cancer and Imaging. Elective - 15 credits.

Semester 2 Y1 (30 credits)

- CANM107 Biological Therapies. Elective - 15 credits
- CANM135 Molecular Targeted Therapies - Elective - 15 credits
- CANM150 Clinical Cancer Treatment - Elective - 15 credits
- CANM112 Cancer Prevention and Screening - Elective 7.5 credits
- CANM106 Drug Development - Elective 7.5 credits
- CANM140 Genomic Approaches to Cancer - Elective 7.5 credits
- CANM111 Paediatric and Adolescent Oncology - Elective 7.5 credits
- CANM112 Cancer Prevention and Screening - Elective 7.5 credits
- CANM138 Research Lab Skills - Elective - 15 credits

Semester 1 Y2 (30 credits)

- CANM137 Research Methods. Compulsory - 15 credits.
- CANM103 Cancer Pharmacology. Elective - 15 credits.
- CANM121 Molecular Diagnostics and Therapeutics. Elective - 15 credits.
- CANM151 Pathology of Cancer and Imaging. Elective - 15 credits.

Semester 2 Y2 (30 credits)

- CANM107 Biological Therapies. Elective - 15 credits
- CANM135 Molecular Targeted Therapies - Elective - 15 credits
- CANM150 Clinical Cancer Treatment - Elective - 15 credits
- CANM112 Cancer Prevention and Screening - Elective 7.5 credits
- CANM106 Drug Development - Elective 7.5 credits
- CANM140 Genomic Approaches to Cancer - Elective 7.5 credits
- CANM111 Paediatric and Adolescent Oncology - Elective 7.5 credits
- CANM112 Cancer Prevention and Screening - Elective 7.5 credits
- CANM138 Research Lab Skills - Elective - 15 credits

Semester 3 Y2 (60 credits)

Lab-based research project or Dissertation.

Academic Year of Study FT - Year 1

| Module Title     | Module Code | Credits | Level | Module Selection Status | Academic Year of Study | Semester   |
|------------------|-------------|---------|-------|-------------------------|------------------------|------------|
| Cancer Biology   | CANM102     | 15      | 7     | Compulsory              | 1                      | Semester 1 |
| Research Methods | CANM137     | 15      | 7     | Compulsory              | 1                      | Semester 1 |

Programme Title: Cancer Biology

| Module Title                                 | Module Code        | Credits | Level | Module Selection Status | Academic Year of Study | Semester   |
|--|--------------------|---------|-------|-------------------------|------------------------|------------|
| Cancer Pharmacology                          | CANM103            | 15      | 7     | Elective                | 1                      | Semester 1 |
| Molecular Diagnostic and Therapeutics        | CANM121            | 15      | 7     | Elective                | 1                      | Semester 1 |
| Pathology of Cancer and Imaging              | CANM151            | 15      | 7     | Elective                | 1                      | Semester 1 |
| Biological Therapies                         | CANM107            | 15      | 7     | Elective                | 1                      | Semester 2 |
| Molecular Targeted Therapies                 | CANM135            | 15      | 7     | Elective                | 1                      | Semester 2 |
| Clinical Cancer Treatment                    | CANM150            | 15      | 7     | Elective                | 1                      | Semester 2 |
| Cancer Screening and Prevention              | WIPMXXX            | 7.5     | 7     | Elective                | 1                      | Semester 2 |
| Drug Development                             | CANM106            | 7.5     | 7     | Elective                | 1                      | Semester 2 |
| Genomic Approaches to Cancer                 | CANM140            | 7.5     | 7     | Elective                | 1                      | Semester 2 |
| Paediatric and Adolescent Oncology           | CANM111            | 7.5     | 7     | Elective                | 1                      | Semester 2 |
| Research Lab Skills                          | CANM138            | 15      | 7     | Elective                | 1                      | Semester 2 |
| either<br>Dissertation,<br>or<br>Lab Project | CANM136<br>CANM139 | 60      | 7     | Core                    | 1                      | Semester 3 |

Academic Year of Study PT - Year 1

| Module Title                           | Module Code | Credits | Level | Module Selection Status | Academic Year of Study | Semester   |
|--|-------------|---------|-------|-------------------------|------------------------|------------|
| Cancer Biology                         | CANM102     | 15      | 7     | Compulsory              | 1                      | Semester 1 |
| Cancer Pharmacology                    | CANM103     | 15      | 7     | Elective                | 1                      | Semester 1 |
| Molecular Diagnostics and Therapeutics | CANM121     | 15      | 7     | Elective                | 1                      | Semester 1 |

Programme Title: Cancer Biology

| Module Title                       | Module Code | Credits | Level | Module Selection Status | Academic Year of Study | Semester   |
|------------------------------------|-------------|---------|-------|-------------------------|------------------------|------------|
| Pathology of Cancer and Imaging    | CANM151     | 15      | 7     | Elective                | 1                      | Semester 1 |
| Biological Therapies               | CANM107     | 15      | 7     | Elective                | 1                      | Semester 2 |
| Molecular Targeted Therapies       | CANM135     | 15      | 7     | Elective                | 1                      | Semester 2 |
| Clinical Cancer Treatment          | CANM150     | 15      | 7     | Elective                | 1                      | Semester 2 |
| Cancer Screening and Prevention    | IPH7116     | 7.5     | 7     | Elective                | 1                      | Semester 2 |
| Drug Development                   | CANM106     | 7.5     | 7     | Elective                | 1                      | Semester 2 |
| Genomic Approaches to Cancer       | CANM140     | 7.5     | 7     | Elective                | 1                      | Semester 2 |
| Paediatric and Adolescent Oncology | CANM111     | 7.5     | 7     | Elective                | 1                      | Semester 2 |
| Research Lab Skills                | CANM138     | 15      | 7     | Elective                | 1                      | Semester 2 |

Academic Year of Study PT - Year 2

| Module Title                           | Module Code | Credits | Level | Module Selection Status | Academic Year of Study | Semester   |
|--|-------------|---------|-------|-------------------------|------------------------|------------|
| Research Methods                       | CANM137     | 15      | 7     | Compulsory              | 2                      | Semester 1 |
| Cancer Pharmacology                    | CANM103     | 15      | 7     | Elective                | 2                      | Semester 1 |
| Molecular Diagnostics and Therapeutics | CANM121     | 15      | 7     | Elective                | 2                      | Semester 1 |
| Pathology of Cancer and Imaging        | CANM151     | 15      | 7     | Elective                | 2                      | Semester 1 |
| Biological Therapies                   | CANM107     | 15      | 7     | Elective                | 2                      | Semester 2 |
| Molecular Targeted Therapies           | CANM135     | 15      | 7     | Elective                | 2                      | Semester 2 |

| Module Title                       | Module Code        | Credits | Level | Module Selection Status | Academic Year of Study | Semester   |
|------------------------------------|--------------------|---------|-------|-------------------------|------------------------|------------|
| Clinical Cancer Treatment          | CANM150            | 15      | 7     | Elective                | 2                      | Semester 2 |
| Cancer Screening and Prevention    | IPH7116            | 7.5     | 7     | Elective                | 2                      | Semester 2 |
| Drug Development                   | CANM106            | 7.5     | 7     | Elective                | 2                      | Semester 2 |
| Genomic Approaches to Cancer       | CANM140            | 7.5     | 7     | Elective                | 2                      | Semester 2 |
| Paediatric and Adolescent Oncology | CANM111            | 7.5     | 7     | Elective                | 2                      | Semester 2 |
| Research Lab Skills                | CANM138            | 7.5     | 7     | Elective                | 2                      | Semester 2 |
| Lab Project or Dissertation        | CANM136<br>CANM139 | 60      | 7     | Core                    | 2                      | Semester 2 |

### What are the entry requirements?

The entry requirements will be similar to the BCI Taught Programmes for overseas students with a number of adjustments. Potential students are expected to have, or be expecting, an international equivalent of the upper second class degree in a relevant subject, such as genetics, biomedical sciences, biology, pharmacology or medicine. Applicants with a lower degree classification and strong supporting evidence may be considered on an individual basis. Students for whom English is a second language will also require a minimum IELTS 6.5, including 6.0 in reading, listening or speaking, and 6.5 in writing.

### How will the quality of the programme be managed and enhanced? How do we listen to and act on your feedback?

There will be formal and informal feedback opportunities for students. The Staff-Student Liaison Committee provides a formal means of communication and discussion between schools/institutes and its students. The committee consists of student representatives from each year in the institute together with appropriate representation from staff within the institute. It is designed to respond to the needs of students, as well as act as a forum for discussing programme and module developments. Staff-Student Liaison Committees meet regularly throughout the year.

Each school/institute operates a Learning and Teaching Committee, or equivalent, which advises the Institute Director of Education on all matters relating to the delivery of taught programmes at Faculty and University level including monitoring the application of relevant Queen Mary policies and reviewing all proposals for module and programme approval and amendment before submission to Taught Programmes Board. Student views are incorporated in the committee's work in a number of ways, such as through student membership, or consideration of student feedback and surveys.

All schools/institutes operate an Annual Programme Review of their taught undergraduate and postgraduate provision. APR is a continuous process of reflection and action planning which is owned by those responsible for programme delivery; the main document of reference for this process is the Enabling Plan which is the summary of the Institute's work throughout the year to monitor academic standards and to improve the student experience. Students' views are considered in this process through analysis of the sector wide Postgraduate Taught Experience Survey (PTES) and Institutional module evaluations.



### What academic support is available?

Over the last three years, BCI has developed a highly effective academic mentorship scheme which provides student support in terms of academic, career and pastoral guidance. Students are encouraged to interact with academic staff individually or during classroom teaching via VLE to foster a tutorial-like learning environment.

Members of the teaching staff, (typically the module lead and 1 other), mark all assessed work and provide written feedback on the in-course assessments. Students are able to view that written feedback at any time. Written feedback is designed to enable preparation for the next assessment and is mirrored with the opportunity to gain verbal feedback. Feedback on progress and performance is given to students individually at the end of each semester by the Programme Director.

If a student is having difficulty with a particular module, topic or practical, additional teaching support can be provided. Students also have access to named personal mentors who can advise on areas in which the student may be having difficulty, or an issues such as post-programme employment.

### Programme-specific rules and facts

### How inclusive is the programme for all students, including those with disabilities?

Queen Mary has a central Disability and Dyslexia Service (DDS) that offers support for all students with disabilities, specific learning difficulties and mental health issues. The DDS supports all Queen Mary students: full-time, part-time, undergraduate, postgraduate, UK and international at all campuses and all sites. All seminars and lectures are recorded and supplied with captioning providing a fully accessible material for Distance Learning, in accordance to QMUL DSA and VLE standards.

Students can access advice, guidance and support in the following areas:

- Finding out if you have a specific learning difficulty like dyslexia
- Applying for funding through the Disabled Students' Allowance (DSA)
- Arranging DSA assessments of need
- Special arrangements in examinations
- Accessing loaned equipment (e.g. digital recorders)
- Specialist one-to-one study skills tuition
- Ensuring access to programme and module materials in alternative formats (e.g. Braille)
- Providing educational support workers (e.g. note-takers, readers, library assistants)
- Access to specialist mentoring support for students with mental health issues and Autistic Spectrum Disorders.

### Links with employers, placement opportunities and transferable skills

This programme will provide students with the skills and experience necessary to pursue further academic research at PhD/MD level. It will also provide a strong foundation for those working in a clinical, pharmaceutical or diagnostic setting. Our graduate destinations include: PhD studentships (internal and external to the Institute), medical school, laboratory research positions. On competition there will be an opportunity for the top students to apply for one of the Institute's PhD studentships.

Programme Specification Approval

|  |                                      |
|--|--------------------------------------|
| Person completing Programme Specification:   | Andrejs Braun, Director of Education |
| Person responsible for management of programme:  | Pia Cronin, BCI Education Manager    |
| Date Programme Specification produced / amended by School / Institute Education Committee: | 14/1/2025 (for 2025/26)              |
| Date Programme Specification approved by Taught Programmes Board:                          | 20 March 2024                        |