Programme Title: MRes Translational Biomedical Sciences

Programme Specification (PG)

Awarding body / institution: Queen Mary University of London
Teaching institution: Queen Mary University of London
Name of final award and title: MRes Translational Biomedical Sciences
Name of interim award(s): PgDip
Duration of study / period of registration: 12 months
Queen Mary programme code(s): PMRF-QMCANC1 - PSTIM - A4VG
QAA Benchmark Group:
FHEQ Level of Award: Level 7
Programme accredited by:
Date Programme Specification approved:
Responsible School / Institute: Barts Cancer Institute

Schools / Institutes which will also be involved in teaching part of the programme:
School of Medicine and Dentistry

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

Programme outline

This programme is provided by the Barts Cancer Institute (BCI) within Barts and the London School of Medicine and forms part of a MRC Doctoral Training Partnership Programme, offered together with The University of Southampton. On successful completion of the MRes students will progress to a PhD.

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.

This course is designed to give you a detailed and thorough understanding of research and laboratory methodologies and techniques, with the opportunity to apply these through a series of projects in translational immunology.

The projects form a key component of the MRes programme, where students will be fully integrated into one of the School of Medicine and Dentistry's many research centres.

All teaching is delivered by research active scientists and clinicians.
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Aims of the programme

This programme aims to provide students with a clear understanding of research in the area of translational immunology.

The compulsory taught modules will provide a thorough knowledge of research methodologies and laboratory techniques, whilst the optional module will offer students the opportunity to explore an area of interest in more theoretical detail.

The project modules form an integral component of the course and will provide students with valuable experience of the research process, including reviewing current literature and completing a lab write-up, thus forming a solid foundation upon which a future career in scientific research can be built.

What will you be expected to achieve?

On completion of the course students will be able to:

- Demonstrate a core understanding and knowledge of research methods and techniques
- Be proficient in experimental design, data mining and interpretation.
- Demonstrate skills in oral and written presentation and in critical review of literature.
- Contribute to the research process through experience of laboratory project placements.
- Understand the ethical framework of the research process.

Academic Content:

A1 The student will have a thorough understanding of the science behind Cancer Immunology, Infection and Immunity or Cancer Inflammation.

A2 The student will be able to explain how laboratory science is translated into clinical trials, the different stages of clinical trials and be aware of the current status of pre-clinical and clinical trials.

A3 The student will be able to apply the principles and application of data analysis, a range of statistical methods, and understand the legal and ethical framework in which research is undertaken.

A4 The student will be able to extract and process data from a range of high-throughput experimental sources.

Disciplinary Skills - able to:

B1 Critically appraise and evaluate scientific literature.

B2 Apply research techniques and methodologies within the field of translational immunology and demonstrate a sound understanding of the use of research methods.

B3 Analyse and solve research problems and compare experimental results, test the strength and validity of results and hypotheses.

B4 Undertake high quality research projects safely, ethically, and effectively using the most appropriate lab techniques and equipment.

Attributes:
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| C1 | By the end of this programme the student will be able to keep clear records of experimental protocols, procedures and results, utilizing electronic lab books. |
| C2 | The student will be able to effectively communicate and defend their research findings to a wide range of audiences. |
| C3 | The student will be able to participate effectively and constructively as part of a research team. |
| C4 | The student will be able to work independently and manage their time effectively to work to competing deadlines. |

How will you learn?

Module and project teaching will comprise the following:
- Whole-group seminars/lectures on specific topics. Tutors and students will be encouraged to develop a tutorial atmosphere in which dialogue and discussion can take place.
- Whole-group practical classes in small groups to address a specific practical method or topic.
- Whole-group demonstrations. These will take place in Institute laboratories or the class-room to address specific technologies or methods.
- Student presentations on specific topics.
- Individual tuition will take place for all students during the project modules, 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 for BCI taught modules will be available via the University's Virtual Learning Environment (QMPlus).

BCI Modules:
- The majority of the teaching rooms, the practical lab and the computer room are on the Charterhouse Square campus.

University of Southampton Modules:
- These will be undertaken at the Southampton campus
- A travel fund will be available to subsidise cost of travel to Southampton.

The provision of key skills in the compulsory Research Methods and Quantitative Cell Biology modules will enable students to maximise their ability to understand and learn from other modules and provide students with the basic knowledge required for the project modules.

As self-directed learning is the major component of each module students will be encouraged to identify their own learning needs as modules progress.

Students will have full access to the University/Medical School library and student computing facilities, in addition to the computer room provided. Course materials are made available on the University’s virtual learning environment. This enables lecture notes and handout material to be available electronically, provides space for discussion and question boards and allows assessed work to be uploaded remotely.

Classroom teaching will also involve real time assessment of the group’s understanding of the topic being covered using special software and mini-quizzes.

How will you be assessed?

BCI taught modules are assessed through a combination of coursework and examination.

The University of Southampton taught modules are assessed through multiple pieces of coursework.

The project modules will be assessed through a project write-up.
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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.

The MRes is made up of 180 credits:
- 2 compulsory taught modules (15 credits each)
- 1 elective taught module (15 credits)
- 3 project modules (45 credits each)

The MRes is offered as a full time programme with the following structure:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Module Title</th>
<th>Credits</th>
<th>Level</th>
<th>Module Selection Status</th>
<th>Academic Year of Study</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CANM937 - Research Methods (compulsory, 15 credits) delivered by BCI</td>
<td>15</td>
<td>7</td>
<td>Compulsory</td>
<td>1</td>
<td>Semester 1</td>
</tr>
<tr>
<td>1</td>
<td>Quantitative Cell Biology (compulsory, 15 credits) delivered by the University of Southampton</td>
<td>15</td>
<td>7</td>
<td>Compulsory</td>
<td>1</td>
<td>Semester 1</td>
</tr>
<tr>
<td>1</td>
<td>Research Project 1 (45 credits) completed within QMUL SMD</td>
<td>45</td>
<td>7</td>
<td>Compulsory</td>
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<td>Semester 1</td>
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<tr>
<td>2</td>
<td>One elective module (15 credits) from the following options:</td>
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<td></td>
<td>Option 1: CANM907 - Biological Therapies delivered by BCI</td>
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<td></td>
<td>Option 2: Cancer Immunology delivered by the University of Southampton</td>
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<td></td>
<td>Option 3: Immunity and Infection delivered by the University of Southampton</td>
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<td></td>
<td>Research Project 2 (45 credits) completed within QMUL SMD</td>
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<tr>
<td>3</td>
<td>Research Project 3 (45 credits) completed within QMUL SMD</td>
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A PGDip exit award of 120 credits will be available.

Academic Year of Study      FT - Year 1

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<thead>
<tr>
<th>Module Title</th>
<th>Module Code</th>
<th>Credits</th>
<th>Level</th>
<th>Module Selection Status</th>
<th>Academic Year of Study</th>
<th>Semester</th>
</tr>
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<tr>
<td>Research Methods</td>
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<td>15</td>
<td>7</td>
<td>Compulsory</td>
<td>1</td>
<td>Semester 1</td>
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<td>Quantitative Cell Biology</td>
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<td>Translational Immunology - Project 1</td>
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<td>45</td>
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<td>45</td>
<td>7</td>
<td>Compulsory</td>
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<td>Semester 2</td>
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<td>CANM946</td>
<td>45</td>
<td>7</td>
<td>Compulsory</td>
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<td>Semester 3</td>
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<td>Biological Therapies</td>
<td>CANM907</td>
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<td>7</td>
<td>Elective</td>
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<td>Semester 2</td>
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<tr>
<td></td>
<td>CANM941</td>
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**What are the entry requirements?**

Applicants must hold a 1st class or upper second class degree in a subject within the life-sciences or physical sciences. For applicants with a background in life-sciences, Maths, Statistics or Computing modules at A Level or undergraduate level are desirable but not essential. For applicants with a background in physical sciences, Biological Sciences modules at undergraduate level are essential.

Residential eligibility

Residence requirements as detailed in the Research Council UK (RCUK) conditions of research council training grants.

http://www.mrc.ac.uk/skills-careers/studentships/studentship-guidance/student-eligibility-requirements/

Students for whom English is a second language will also require a minimum IELTS 7.0 with 6.5 in writing (or equivalent approved test/qualification).

Selection will be based on competitive application and interview.

4 places are available each year.

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

The Staff-Student Liaison Committee provides a formal means of communication and discussion between the Institute and its students. The committee consists of student representatives from each programme of study 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 once a semester.

Each school/institute operates a Learning and Teaching Committee, or equivalent, which advises the School/Institute Director of Taught Programmes on all matters relating to the delivery of taught programmes at school level including monitoring the application of relevant QM 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 surveys.

All schools/institutes operate an Annual Programme Review (APR) 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 Taught Programmes Action Plan (TPAP) which is the summary of the school/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 Postgraduate Taught Experience Survey and module evaluations.

**What academic support is available?**

Students are encouraged to interact with academic staff during classroom teaching to foster a tutorial-like learning environment. Members of the teaching staff (typically the module leader and 1 other) mark all assessed work and provide written feedback on coursework. Students are able to view the written feedback at any time.

Students will be allocated a supervisor for each of their project modules. The supervisor, or a member of their research team, will provide one to one support at regular intervals throughout the project.

The Programme Director can provide individual feedback on progress and overall performance throughout the course of the MRes.

**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.

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 course 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 will the skills and experience necessary to pursue further academic research at PhD/MD level.

Programme Specification Approval

Person completing Programme Specification: Mariann Jakab

Person responsible for management of programme: John Marshall

Date Programme Specification produced / amended by School / Institute Education Committee: 15 Dec 2022

Date Programme Specification approved by Taught Programmes Board: