



**1. Programme Title(s):**

MSc in Chronic Disease and Immunity

Postgraduate Certificate in Chronic Disease and Immunity (only available as an interim/exit award)

**2. Awarding body or institution:**

University of Leicester

**3. a) Mode of study**

Full time

**b) Type of study**

Campus-based

**4. Registration periods:**

The normal period of registration is **One Year** full time

The maximum period of registration is **Two Years** full time

**5. Typical entry requirements:**

- An honours degree (at least second class) in a biological science (e.g. Biochemistry, Biomedical Sciences, or Immunology), or
- A BTech with experience in a field related to chronic disease and inflammation, such as a health service or biopharmaceutical laboratory, or
- A medical or veterinary degree provided that the course included significant elements of molecular biology, cell biology and immunology

Students for whom English is not their first language are required to meet the minimum standard set by the University of Leicester (as laid down in [Senate Regulation 1: Regulations governing minimum entry qualifications and language requirements for taught programmes of study](#))

Acceptable evidence of this includes:

- A first degree at a UK university,
- GCSE/O Level English Language at Grade C or above.
- WASSCE (West African Senior School Certificate Examination) English Grade 6
- An overall score of 6.5 in the British Council IELTS test (International English Language Testing System)
- A score of 90 in the Internet-based Test (IBT)) in TOEFL (Test of English as a Foreign Language)

**6. Accreditation of Prior Learning:**

Accredited prior learning will not be accepted for exemptions from modules on this programme.

## 7. Programme aims:

The programme aims:

- i) To equip students with an understanding of the molecular and cellular biology of inflammation and its role in the progression of chronic disease, thus enhancing their career development opportunities in this internationally recognised area of need.
- ii) To give students sufficient direct experience of research (during a six-month project placement within a research laboratory) to prepare them for direct employment as research scientists or for entry to a higher research degree (e.g. PhD) in the field of inflammation research (MSc only)
- iii) To raise students' competence and confidence by providing a positive learning environment where they actively participate in their own academic development and develop their research skills.

## 8. Reference points used to inform the programme specification:

- Framework for Higher Education Qualifications
- QAA Master's Degree Characteristics Statement Sep 2015
- External Examiners' Reports
- Student destinations data
- Student feedback
- Periodic Developmental Review, May 2012
- University of Leicester Learning and Teaching Strategy 2016-20
- The WHO Global Burden of Disease Study highlighting global importance of inflammatory chronic degenerative diseases
  - [http://www.who.int/topics/global\\_burden\\_of\\_disease/en/](http://www.who.int/topics/global_burden_of_disease/en/)
  - [http://www.who.int/healthinfo/global\\_burden\\_disease/2004\\_report\\_update/en/index.html](http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html) (Section 2 "Causes of death").

## 9. Programme Outcomes:

Note:- Unless otherwise stated in the tables below, these outcomes apply to both the MSc and to the PGCert that is described in Section 13

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
<b><i>(a) Discipline specific knowledge and competencies</i></b>		
<b>Knowledge</b>		
Explain a wide range of theories and mechanisms that provide the basis of research on inflammation and chronic disease	Lectures, tutorials, poster presentations, laboratory based practicals, extended research project (MSc only).	Module examinations, short written reports, practical write-ups, presentations, tutorial performance, extended essay on pre-set topic, research project dissertation (MSc only).
<b>Concepts</b>		
Explain and exemplify the disease progression paradigm and pathological mechanisms that underlie a wide range of chronic degenerative human diseases	Lectures, tutorials, extended research project (MSc only).	Module examinations, short written reports, presentations, tutorial performance, extended essay on pre-set topic, research project dissertation (MSc only).

<b>Intended Learning Outcomes</b>	<b>Teaching and Learning Methods</b>	<b>How Demonstrated?</b>
<b>Techniques</b>		
Demonstrate practical and theoretical competence in key experimental methods in chronic disease & immunity, competent use of standard and specialized equipment, knowledge of safety procedures and safety assessment.	Lectures, tutorials, laboratory classes, laboratory project supervision (MSc only), practical demonstrations and supervision.	Module examinations, reports on practical classes, project progress reports (MSc only), and research project dissertation (MSc only).
<b>Critical analysis</b>		
Critically appraise complex theoretical and technical evidence accurately and rigorously.	Lectures, tutorials, research project (MSc only).	Examinations, short written reports, and research project dissertation (MSc only).
<b>Presentation</b>		
Demonstrate competence in written, oral and poster presentation methods, ability to discriminate between relevant and non-relevant material, prioritisation, and presentation in a logical sequence.	Tutorials, research project supervision (MSc only), specimen material on Blackboard virtual learning environment.	Oral and poster presentations, and research project dissertation (MSc only).
<b>Appraisal of evidence</b>		
Analyse and appraise scientific results critically in the context of the published literature.	Tutorials, laboratory based practicals and research project supervision (MSc only).	Short written reports, reports on practical classes, oral presentations and research project dissertation (MSc only).
<b>Other subject &amp; professional skills</b>		
In the Erasmus programme, demonstrate the capacity to work in a research laboratory and study in another European University	Research project placement in a research laboratory in another European University	Practical work and placement report in a European University.
<b>(b) Transferable skills</b>		
<b>Research skills</b>		
Perform literature review, experimental design, essential laboratory methods, problem solving, data analysis, and statistical analysis.	Lectures, problem solving in tutorials and practical classes, research project supervision (MSc only).	Tutorial performance, reports on practical classes, research project dissertation (MSc only).

<b>Intended Learning Outcomes</b>	<b>Teaching and Learning Methods</b>	<b>How Demonstrated?</b>
<b>Communication skills</b>		
Demonstrate competence at report writing, presentations, and poster creation.	Tutorials, practical classes, research project supervision (MSc only), peer marking, poster and oral presentations.	Tutorial performance, assessed practical reports, oral presentations, research project dissertation (MSc only).
<b>Data presentation</b>		
Synthesise and present subject-specific information by a variety of graphical methods appropriate to a given audience.	Laboratory classes, statistics lectures and support, data presentation training during research project supervision (MSc only).	Laboratory practical reports, oral and poster presentations, research project dissertation (MSc only).
<b>Information technology</b>		
Apply information technology (IT) to the processing, presentation and handling of bibliographic, analytical and statistical information.	Laboratory classes, statistics lectures and support, bibliographic software training, bioinformatics and IT training during research project supervision (MSc only).	Laboratory practical reports, oral and poster presentations, research project dissertation (MSc only).
<b>Problem solving</b>		
Solve problems in chronic disease & immunity research	Lectures, problem solving in tutorials and practical classes, research project supervision (MSc only).	Tutorial performance, reports on practical classes, research project dissertation (MSc only).
<b>Working relationships</b>		
Demonstrate ability to work in groups/teams.	Tutorial group problem solving, practical classes in groups or pairs, research project supervision (MSc only)	Assessment of performance in tutorial groups, peer-assessed laboratory reports.
<b>Managing learning</b>		
Organize laboratory work and perform project management, and time management.	Laboratory practical classes. Supervision by personal tutor and by research project supervisor (MSc only).	Laboratory practical reports, research project dissertation (MSc only).
<b>Career management</b>		
Apply knowledge and skills to long-term career goals and employability.	Supervision by personal tutor and by research project supervisor (MSc only).	Student evaluation of the course by questionnaire at the end of Semester 1 and oral and written feedback on graduate destinations data. Incorporation of career destination data into considerations during the Annual Development Review process within the College.

## 10. Special features:

A noteworthy feature of the programme is the combination of subjects studied i.e. chronic diseases are examined from the perspective of the immune system, especially the inflammatory response; and this is used to emphasise the important shared mechanisms that can be used to explain the progression of a wide range of chronic diseases.

Students may undertake an approved laboratory research project in a partner University under the Erasmus scheme as part of the Research Project module MB7316. Students are advised to avail themselves of the introductory language courses offered by the Language Centre and/or the intensive courses run by the host institution, prior to commencing the project. A mark for laboratory performance credits will be awarded by the partner institution: all other assessments will be marked by University of Leicester staff.

## 11. Indications of programme quality:

In their reports the External Examiners have consistently commented on the high academic standard and excellent support for students on this course. Specific comments were:

“This is an excellent course that is well managed and enjoyed by the students. The course organisers should be congratulated .....This is a novel course which uses disease exemplars to explain difficult immunological concepts. The course will equip any biological scientist interested in clinical opportunities and should be commended for bridging the translational gap.

.....The success of the teaching is reflected by the excellent pass rates which have been consistent over the years I have been external examiner”

## 12. Scheme of Assessment

As defined in [Senate Regulation 6](#): Regulations governing Taught Postgraduate Programmes of Study

### Approaches to assessment

A varied approach to assessment is used which allows students to demonstrate their knowledge and their own particular strengths, independent of their cultural and language background. Modules are assessed by essays, short written reports, presentations, lecture reports, posters and examinations. The formal examinations include multiple choice and short answer questions.

Work is second marked and moderated where appropriate.

## 13. Progression points

As defined in [Senate Regulation 6](#): Regulations governing Taught Postgraduate Programmes of Study

### **Progression criteria to Semester 2 of the MSc.**

These will be in accordance with Senate Regulation 6.

### **Withdrawal or progression**

In cases where a student has failed to meet a requirement to progress, he or she will be required to withdraw from the course.

### **Exceptional exit from the course at the end of Semester 1.**

Students who pass the taught element of the course (the 60 credits of Semester 1), but are unable to undertake or complete the Semester 2 research project, are eligible for a Postgraduate Certificate in Chronic Disease & Immunity. This represents an exceptional exit route, and students are not permitted to register purely for this Postgraduate Certificate.

### **14. Rules relating to re-sits or re-submissions:**

As defined in [Senate Regulation 6](#): Regulations governing Taught Postgraduate Programmes of Study

Candidates will be deemed to have failed a module if their credit-weighted average mark for all assessments on the module (after rounding up to the nearest percentage point) falls below 50%. Candidates will be allowed to re-sit examinations or resubmit course work in relation to an individual module on one occasion only. The number of modules where re-sits or resubmissions are allowed will be in accordance with Senate Regulation 6. . The mark obtained for resubmitted work or an examination re-sit will be capped at 50%.

### **15. Additional information [e.g. timetable for admissions]**

There will be only one intake per year (in approximately September – the precise date to be agreed by the Board of Studies for the Life Sciences MSc Programmes in Biomedical Sciences).

### **16. External Examiners**

The details of the External Examiner(s) for this programme and the most recent External Examiners' reports can be found [here](#).

## **Appendix 1: Programme structure (programme regulations)**

MSc - Total credits = 180 Duration = 12 months

### Overview

The MSc in Chronic Disease and Immunity is a 1 year full-time course designed to provide detailed training both in the theory and practical techniques involved in studying the immunology and molecular and cellular biology involved in the initiation and progression of chronic inflammatory diseases. The 3 component modules of this programme are described in the attached module specifications (Appendix 2). The integration of these modules and the rationale behind them are described below.

Semester 1 comprises 2 compulsory taught modules:

<b>Module code</b>	<b>Module title</b>	<b>Credits</b>
MB7318	Theory & Techniques in Chronic Disease and Immunity	30
MB7319	Immunity & Inflammation	30

Examinations and continuous assessment for these modules are spread evenly throughout Weeks 3 – 12.

Semester 2 comprises a 6-month project placement in a research laboratory within the University of Leicester.

<b>Module code</b>	<b>Module title</b>	<b>Credits</b>
MB7316	MSc Laboratory Research Project	120

The overall structure of the programme is based on that of the successful MSc Infection and Immunity programme which is run by the Department of Infection, Immunity & Inflammation.

## **Appendix 2: Module Specifications**

See module specification database <http://www.le.ac.uk/sas/courses/documentation> and further detail is provided below: