

Programme Information		
Programme Title	Programme Code	HECoS Code
Experimental Neuroscience	A3TZ	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
MRes	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	Brain Sciences
Associateship	N/A	Main Location(s) of Study	Hammersmith Hospital

External Reference	
Relevant <a href="#">QAA Benchmark Statement(s)</a> and/or other external reference points	Master's Degree Characteristics
<a href="#">FHEQ Level</a>	Level 7 - Master's
<a href="#">EHEA Level</a>	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	Professor Steve Gentleman
Student cohorts covered by specification	2022-23 entry
Date of introduction of programme	October 19
Date of programme specification/revision	September 22

## Programme Overview

The MRes Experimental Neuroscience programme is based in the Department of Brain Sciences. <https://www.imperial.ac.uk/brain-sciences/> It is designed to offer practical experience of neuroscience research, covering a wide range of skills which will prepare you for PhD studies and enable you to make a more informed choice for your research.

The Department has world class facilities with a wide range of research programmes in the areas of Neuroinflammation, Neurodegeneration, Restorative Neuroscience, Clinical Translation and Psychiatry. The Multiple Sclerosis Society and Parkinson's UK Tissue Banks are hosted by the Department. The Hammersmith campus also houses state-of-the-art facilities for PET/CT, MRI and optical imaging. There is a broad spectrum of research, "*from the bench to the bedside*", with a particular emphasis on the application of modern scientific techniques to questions relevant to understanding the pathogenesis of disease and developing new approaches to treatment. There is also opportunity for cross faculty collaborative research based in the UK Dementia Research Institute at Imperial <https://www.imperial.ac.uk/dementia-research-institute/>. Key research areas include: Ageing, environment and lifestyle; The microbiome and brain health; Novel bioelectronics technologies; Sleep as a protectant against dementia; Neural-circuit plasticity in neurodegeneration; Glial-neuronal interactions

The MRes programme is comprised of three modules and each module consists of a research project and coursework. The research projects will each be conducted within a different research group, in order for you to experience a variety of different laboratory environments and different practical techniques. Research projects are provided by academics who are internationally known leaders in their fields of research. Past projects have included:

- 1) an investigation of vascular damage and white matter integrity in traumatic brain injury
- 2) investigating the use of non-invasive brain stimulation to produce analgesic effects in different chronic pain syndromes
- 3) investigating neuronal cell death in progressive multiple sclerosis and potential targets for drug development
- 4) analysis of imaging and electroencephalography data to gain insights into disturbances of neural processing that underlie cognitive and behavioural impairments.

The coursework components (one component in each module) include the formulation of a PhD proposal, relevant since most students intend to follow this course with PhD studies, a problem solving team exercise to develop skills useful for group working and a mini dissertation, to address a topical question in neuroscience. The research skills acquired will provide excellent training for students who wish to pursue a PhD in neuroscience and many graduates of the course succeed in gaining entry to PhD programs. Other graduate destinations include careers in industrial research, in clinical service or scientific publishing.

## Learning Outcomes

Upon successful completion of the programme the student should be able to

- Apply knowledge obtained in a range of topics in modern neuroscience to real life problems.
- Critically assess and evaluate experimental approaches and their possible applications.
- Evaluate and use a range of experimental techniques used in modern neuroscience.
- Design experiments, generate novel data, and analyse experimental findings.
- Interpret and critically appraise research findings in the context of published literature.
- Use planning and project management skills required for completion of research projects
- Retrieve, review, and critique evidence in a systematic way
- Communicate science effectively in various formats and to different audiences
- Work constructively as part of a team to solve research problems
- Reflect on performance to address personal training needs, and identify evidence gaps in the wider scientific field

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](http://www.imperial.ac.uk/students/academic-support/graduate-attributes)

## 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 recognised by the College).

	For further information on entry requirements, please go to <a href="https://www.imperial.ac.uk/study/pg/apply/requirements/pgacademic/">https://www.imperial.ac.uk/study/pg/apply/requirements/pgacademic/</a>
Non-academic Requirements	None
English Language Requirement	<a href="#">Standard requirement</a> Please check for other <a href="#">Accepted English Qualifications</a>
Admissions Test/Interview	Places are offered on the basis of written applications and interviews where possible.

The programme's competency standards documents can be found at: **TBA**

## Learning & Teaching Approach

### Learning and Teaching Delivery Methods

You will conduct three 14-week research projects designed to provide training in research skills. The projects will be written up as a dissertation (Technical skills module and Critical appraisal module) describing the work you performed and a Journal article (Communication module). The research project will require you to demonstrate independent learning to explore the background literature pertaining to the project. Over the course of the year you will communicate your research as oral or poster presentations to both expert and lay audiences.

Focussing on transferable skills relevant to academic research, the coursework components will include the preparation of a PhD proposal in the first module, a problem-solving team activity in the second module and a mini dissertation in the third module.

You will be expected to attend departmental seminars and weekly work-in progress meetings where PhD students present their latest results. In the research groups where you will be conducting your projects you will participate in laboratory meetings where your experiments and research results are discussed.

### Overall Workload

Your overall workload consists of face-to-face sessions and independent learning. While your actual contact hours may vary according to the optional modules you choose to study, the following gives an indication of how much time you will need to allocate to different activities at each level of the programme. At Imperial, each [ECTS credit](#) taken equates to an expected total study time of 25 hours. Therefore, the expected total study time is 2250 hours per year.

For each rotation you will typically spend about 25% (187 hours) of your time on coursework and 75% (563 hours) of your time on project work.

## Assessment Strategy

### Assessment Methods

At the end of each of the three modules the research project dissertation and the poster or oral presentations will be assessed. The research projects (dissertations and presentations) will comprise 75% of the overall marks and the coursework components 25% of the overall marks. Each project will be 20%, each presentation 5% and each coursework component 8.3% of the total marks. The research centres in the department each run a seminar series and journal club sessions and you will be required to attend at least three seminars/journal clubs in each rotation. There will also be formative assessments on project performance including feedback from supervisors and peers in the laboratory. Halfway through each module there will be a mid-project review which includes the completion of a student progress form on which you will answer questions on your perception of your progress in the project. There will also be a mid-project meeting with the course tutor during which any concerns you have can be discussed.

### Academic Feedback Policy

At the end of each module, after assessments have taken place, students will receive written feedback on their performance. In addition, individual meetings are arranged by the Course Tutor with each student halfway through each module, to discuss general progress or problems of any nature. Verbal feedback on formative assessments will be immediate. Feedback on written submissions will be provided within two weeks. Where this is not logistically possible students will be advised of a revised timescale.

The College's Policy on Academic Feedback and guidance on issuing provisional marks to students is available at: <a href="http://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/">www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/</a>
Re-sit Policy
The College's Policy on Re-sits is available at: <a href="http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/">www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/</a>
Mitigating Circumstances Policy
The College's Policy on Mitigating Circumstances is available at: <a href="http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/">www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/</a>

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
N/A	N/A	N/A

Programme Structure <sup>1</sup>					
Year 1 – FHEQ Level 7 Students study all core modules.					
Code	Module Title	Core/ Elective	Group*	Term	Credits
BRAI70001	Technical Skills	Core	N/A	1	30
BRAI70002	Critical Appraisal	Core	N/A	2	30
BRAI70003	Communication	Core	N/A	3	30
Credit Total					90

\* 'Group' refers to module grouping (e.g. a group of electives from which one/two module(s) must be chosen).

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<sup>1</sup> **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 Degree of Master of Research (MRes)**

To qualify for the award of Master of Research a student must have:

1. passed modules to the value of no fewer than 90 credits at credit level 6 or above of which no more than 15 credits may be from credit level 6.
2. no compensation may be included in the award.
3. met specific requirements for an award as outlined in the approved programme specification for that award.

#### **Classification of Postgraduate Taught Awards**

The College sets the class of Degree that may be awarded as follows:

1. Distinction: The student has achieved an overall weighted average of 70.00% or above across the programme.
2. Merit: The student has achieved an overall weighted average of above 60.00% but less than 70.00%.
3. Pass: The student has achieved an overall weighted average of 50.00% but less than 60.00%.
  - a. For a Masters, students must normally achieve a distinction (70.00%) mark in the dissertation or designated final major project (as designated in the programme specification) in order to be awarded a distinction.
  - b. For a Masters, students must normally achieve a minimum of a merit (60.00%) mark in the dissertation or designated final major project (as designated in the programme specification) in order to be awarded a merit
  - c. Modules taken at level 6 as part of the programme specification for a named postgraduate award will contribute to the determination of pass, merit or distinction for any taught postgraduate award and are included in the calculation of the overall weighted average.

Please find the full Academic Regulations at <https://www.imperial.ac.uk/about/governance/academic-governance/regulations/>

Please follow the prompts to find the set of regulations relevant to your programme of study.

#### **Programme Specific Regulations**

Distinction or merit awarded based on the average mark for the three modules.

Supporting Information
The Programme Handbook is available at: <b>TBA</b>
The Module Handbook is available at: <b>TBA</b>
The College's entry requirements for postgraduate programmes can be found at: <a href="http://www.imperial.ac.uk/study/pg/apply/requirements">www.imperial.ac.uk/study/pg/apply/requirements</a>
The College's Quality & Enhancement Framework is available at: <a href="http://www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance">www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance</a>
The College's Academic and Examination Regulations can be found at: <a href="http://www.imperial.ac.uk/about/governance/academic-governance/regulations">www.imperial.ac.uk/about/governance/academic-governance/regulations</a>
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". <a href="http://www.imperial.ac.uk/admin-services/secretariat/college-governance/charters/">www.imperial.ac.uk/admin-services/secretariat/college-governance/charters/</a>
Imperial College London is regulated by the Office for Students (OfS) <a href="http://www.officeforstudents.org.uk/advice-and-guidance/the-register/">www.officeforstudents.org.uk/advice-and-guidance/the-register/</a>
<b>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 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.</b>

Modifications			
Description	Approved	Date	Paper Reference
N/A	N/A	N/A	N/A