

Programme Specification

BSc Medical Science

For students entering Part 1 in September 2022

UCAS Code: C750

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This document sets out key information about your Programme and forms part of your Terms and Conditions with the University of Reading.

Awarding Institution	University of Reading
Teaching Institution	University of Reading
Length of Programme	3 years
Length of Programme with placement/year abroad	BSc Medical Science with Professional Experience - 4 years (UCAS Code: C752)
Accreditation	N/A

Programme information and content

The programme aims to produce graduates who have the knowledge, skills and professional behaviours to work as medical scientists within life sciences- related industry, in medical research and/or to be prepared for further higher education postgraduate courses and academia and to have the personal and intellectual attributes necessary for life-long professional development. Such graduates will:

- Have knowledge of human anatomy and physiology in both health and disease including in-depth regional anatomy and appreciate how anatomical knowledge can be used in both diagnosis and treatment of disease.
- Have knowledge of medical device development including how medical devices can aid diagnosis, management and treatment of disease
- Have knowledge of a range of important human diseases including cancer, cardiovascular diseases, neurological disorders, endocrine disorders, genetic disorders and infectious diseases
- Understand the principles of drug action and how they relate to drug development and the treatment of disease
- Understand the techniques and principles of clinical biomedicine for diagnosis and management of disease.
- Understand the scientific method (hypothesis formulation, hypothesis testing, experimental design, experimental analysis) and be able to apply appropriate methods and the principles of experimental design in medical research
- Be able to apply statistical tools and analytical methods to interpret scientific data
- Be able to identify and use information from appropriate and reliable sources; integrate and critically evaluate information from a range of sources; analyse and interrogate large data sets; accurately record and reference source material

Be innovative and adaptive graduates who can respond to the challenge of a changing global scientific landscape and develop the skills for lifelong learning e.g. independence,

time management, organisation and planning, initiative, knowledge transfer; the ability to self-assess performance.

Part 1:	Students are introduced to core concepts of medical science, and to key experimental techniques to allow development of skills to collect and interpret clinical and scientific data. You are taught using a variety of teaching and assessment methods that enable you to develop independent and reflective learning skills. The year is made up of a range of 10 and 20 credit modules that provide you with core scientific knowledge whilst also introducing you to the skills and attitudes appropriate for medical science undergraduates. You will be able to specialise in one of four pathways depending on your interests. You will also learn with and from other students doing different healthcare degree programmes.
Part 2:	You will build on your knowledge foundation of Part 1 as your medical science knowledge is developed in a way that encourages you to further your basic knowledge and skills base. The year is made up of a range of 10 and 20 credit modules which will prepare you for the opportunity to spend a year working in industry and putting your knowledge into practice. You will be able to develop your specialised knowledge from the Part 1 pathway and choose a second specialised pathway if you wish.
Placement/Study abroad year:	Between the second and third year of the programme there is an optional professional experience year which will significantly enhance employability.
Part 3:	You will perform an extended laboratory-based or data analysis project which will develop practical skills sought by employers. You will also undertake modules on cutting edge areas built around areas of staff research expertise.

Module information

Each part comprises 120 credits, allocated across a range of compulsory and optional modules as shown below. Compulsory modules are listed.

Foundation modules:

Part 1 Modules:

Module	Name	Credits	Level
BI1AP12	Anatomy & Physiology	20	4
BI1BEC1	Building Blocks of Life	20	4
BI1BM12	Key Skills in Biomedicine	10	4
BI1BP2	Pathology	20	4

BI1S1	Introductory Microbiology	10	4
PM1MPAS1	Clinical and Metabolic Biochemistry	10	4
PM1PCOL1	Principles of Drug Action	10	4

Please note that for any students who intend to pursue graduate-entry Medicine after completing Medical Science, Key Skills in Biomedicine may be substituted for PM1MPAS2– Professional Skills for Healthcare A.

Students may wish to transfer to the MPAS Physician Associate programme at the end of Part 1. However, this will depend on availability of places, completion of required modules and performance. Any requests for transfer will be at the discretion of the MPAS programme director.

Optional modules

Students will choose further modules, to achieve a total of 120 credits. Your remaining credits will be made up of optional modules from selected modules from the School of Biological Sciences and across the University, subject to Programme Director approval.

Part 2 Modules:

Module	Name	Credits	Level
BI2AP12	Anatomy & Physiology 2	30	5
BI2BCB5	Clinical Biomedicine	20	5
BI2BM45	Key Skills in Biomedicine 2	10	5
PM2PCOL1	Molecular Drug Targets	10	5

Remaining credits will be made up of optional modules from selected modules from the School of Biological Sciences and across the University, subject to Programme Director approval and timetabling constraints.

Modules during a placement year or study year (if applicable):

Students on the 4 year version of the programme (BSc Medical Science with Professional Experience) will take one 120 credit module during their placement year. Students may be permitted to undertake a placement year between Part 2 and Part 3 of the programme. In such cases students will transfer to a 4-year programme.

If you take the 4 year degree with Placement Year, you are required to undertake a compulsory placement as part of your Programme. You will be supported in finding this placement. The placement year should not normally be shorter than nine months full-time.

Placement: You may be provided with the opportunity to undertake a credit-bearing placement as part of your Programme. This will form all or part of an optional module. You will be required to find and secure a placement opportunity, with the support of the University. If you take the four-year degree with Professional Experience, you are required

to undertake a compulsory placement as part of your Programme (see section above on Placement). You will be supported in finding this placement.

Study Abroad: You may have the opportunity to undertake a Study Abroad/Placement year during your Programme. This is subject to you meeting academic conditions detailed in the Programme Handbook, including obtaining the relevant permissions from your School, and the availability of a suitable Study Abroad placement. If you undertake a Study Abroad placement, further arrangements will be discussed and agreed with you.

If you take a year-long placement or study abroad, Part 3 as described below may be subject to variation.

Part 3 Modules:

Module	Name	Credits	Level
BI3DIR1	Diagnostic Imaging and Radiotherapy for Cancer	20	6
BI3RP3	Research Project	40	6

The remaining 60 credits will be made up of optional modules from selected modules from the School of Biological Sciences or modules from an approved list, subject to timetabling constraints.

Optional modules:

The optional modules available can vary from year to year. An indicative list of the range of optional modules for your programme can be found online in the Course Catalogue. Details of optional modules for each part, including any additional costs associated with the optional modules, will be made available to you prior to the beginning of the Part in which they are to be taken and you will be given an opportunity to express interest in the optional modules that you would like to take. Entry to optional modules will be at the discretion of the University and subject to availability and may be subject to pre-requisites, such as completion of another module. Although the University tries to ensure you are able to take the optional modules in which you have expressed interest this cannot be guaranteed.

Additional costs of the programme

- 1) Required text books: A wide variety of text books is available from the library. Students are advised to purchase own copies of some core texts at varying costs.
- 2) Specialist equipment or materials: You will require a laboratory coat which you can bring with you or purchase from the University when you arrive (£12)..
- 3) Printing facilities are available on campus at approximately £0.05 per page
- 4) Travel, accommodation and subsistence: Students may need to travel to placements in the community and this will incur additional travel costs if they visit venues geographically further away.

Costs are indicative and are subject to inflation and other price fluctuations. The estimates were calculated in 2021.

Placement opportunities

Teaching and learning delivery:

You will be taught through lectures, seminars/tutorials, laboratory practicals and supervised project work. The contact hours for your Programme are dependent on module choice. Information about module contact hours can be located in the relevant module description.

Total study hours for each Part of your programme will be 1200 hours. The contact hours for your programme will depend upon your module combination; an average for a typical set of modules on this programme is Part 1 - 324 hours, Part 2 - 300 hours, Part 3 – 276 hours. In addition to your scheduled contact hours, you will be expected to undertake guided independent study. Information about module contact hours and the amount of independent study which a student is normally expected to undertake for a module is indicated in the relevant module description.

Accreditation details

N/A

Assessment

Assessment methods used will be according those stated in the module descriptors to align to the learning outcomes. This means the programme is assessed through a combination of written examinations, coursework, oral examinations, and practical examinations.

Progression requirements

The University-wide rules relating to 'threshold performance' as follows

Part 1

(i) obtain an overall weighted average of 40% in 120 credits

(ii) obtain a mark of at least 30% in individual modules amounting to at least 100 credits taken in Part 1.

In order to progress from Part 1 to Part 2, a student must achieve a threshold performance.

The achievement of a threshold performance at Part 1 qualifies a student for a Certificate of Higher Education if they leave the University before completing the subsequent Part.

Part 2

To gain a threshold performance at Part 2, a student shall normally be required to:

- (i) obtain a weighted average of 40% over 120 credits taken at Part 2; and
- (ii) obtain marks of at least 40% in individual modules amounting to at least 80 credits; and
- (iii) obtain marks of at least 30% in individual modules amounting to at least 120 credits

In order to progress from Part 2 to Part 3 in the 3 year programme, a student must achieve a threshold performance.

In order to progress from Part 2 to Part 3 in the 4 year programme, a student must achieve a threshold performance and obtain a pass in the professional/work placement or study abroad year.

Students who fail the professional/placement year transfer to the non-placement year version of the programme.

The achievement of a threshold performance at Part 2 qualifies a student for a Diploma of Higher Education if they leave the University before completing the subsequent Part.

In order to be eligible for Honours, students must gain;

- (i) an overall weighted average mark of 40%, at least 40% in modules amounting to 80 credits in Part 3; and
- (ii) must gain a mark of at least 40% in the Research Project module.

For a Pass degree, candidates must have an average of at least 35% and at least 35% in modules amounting to 80 credits in Part 3, and must gain a mark of at least 35% in the Research Project module.

Classification

Bachelors' degrees

The University's honours classification scheme is based on the following:

Mark	Interpretation
70% - 100%	First class
60% - 69%	Upper Second class
50% - 59%	Lower Second class
40% - 49%	Third class
35% - 39%	Below Honours Standard
0% - 34%	Fail

The weighting of the Parts/Years in the calculation of the degree classification is: Three year programmes:

Part 2: one-third

Part 3: two-thirds

Four year programmes, including professional/work placement or study abroad:

Part 2: one-third

Placement/Study Abroad Year abroad not included in the classification

Part 3: two-thirds

For further information about your Programme please refer to the Programme Handbook and the relevant module descriptions, which are available at <http://www.reading.ac.uk/module/>. The Programme Handbook and the relevant module descriptions do not form part of your Terms and Conditions with the University of Reading.

BSc Medical Science for students entering Part 1 in session 2022/23

17 July 2023

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