

MRes Medical Research

Application Handbook



MRes Medical Research

PGCert Medical Research

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Introduction



The **MRes Medical Research** and the **PGCert Medical Research** are postgraduate qualifications offered by Brighton & Sussex Medical School. The MRes is designed for part-time or full-time study to meet the educational needs of those whose career might have medical research as a substantial component, or as the basis for entry into a PhD or MD degree.

The aims of the Medical Research MRes are:

- to provide robust education on research to complement and support research exposure and experience for medical students, medical and dental trainees, and those working in (or wishing to work in) the field of medical research
- to develop independent researchers of the future, able to compete for a research training fellowship (this may lead to a PhD and further postdoctoral research)
- to contribute to the NHS drive to develop the vibrant academic community essential for first class healthcare.

Please take the time to read this handbook as it will answer many of your current and future queries as well as providing ongoing information on assessment, referencing, student support and other topics that will prove useful at various stages of your course.

Aims and Objectives

The MRes in Medical Research aims to address the gaps in the educational needs of medical students, doctors and others working in a medical setting who are planning a career in research. It offers the opportunity to engage with a range of scientific and clinical research methodologies and statistical methods. It is research-based, with core materials drawn from active research projects within BSMS and from our visiting lecturers.

The course objectives are:

- to provide robust, advanced education and training in research theory and practice;

- to develop independent researchers of the future, who are able to progress to independent research, to a PhD, and to further postdoctoral research;
- to promote the ethos of safe and ethical research;
- to promote research awareness and activity in health care.
- to contribute to the NHS and HEKSS drives to develop an able and research-active clinical community with advanced levels of knowledge and skills which will drive future healthcare research and informed practice.

Learning Outcomes

MRes Award

By the conclusion of the Master's programme students will be able to demonstrate all of the Learning Outcomes from the Mandatory modules to date plus those of their Optional modules, plus the dissertation module.

Learning outcomes for each module are detailed below:

Knowledge and theory

1. An advanced, critical understanding of major research designs and methodologies and the ability to apply these to develop high quality research proposals (MDM10, MDM12, MDM34, MDM165);
2. An advanced level of knowledge and ability to use statistics in the design of research and to analyse data appropriately for different research methodologies (MDM10, MDM12, MDM34, MDM66, MDM112, MDM165)
3. Originality and advanced knowledge in the design and conduct of a research study, whilst assuring compliance with current guidelines for ethical conduct and good practice in research (MDM10, MDM112, MDM165)
4. A critical understanding of research governance and ethical issues and requirements, and a demonstration of applying these appropriately within a research project (MDM10, MDM112, MDM165)
5. A high level of commitment to, and an advanced ability to prepare research findings for publication and dissemination in appropriate arenas (MDM10, MDM34, MDM112, MDM165).

Skills

1. Critical and systematic development, justification and submission of a research proposal (MDM10, MDM112, MDM165);
2. Effective and appropriate data collection and analysis methods (MDM10; MDM12, MDM66, MDM165);
3. In-depth critical analysis and synthesis and evaluation of data from a wide variety of complex sources (MDM10, MDM12, MDM34, MDM66, MDM112, MDM165)
4. Autonomous project management through time management, goal and deadline setting (MDM10; MDM112, MDM165);
5. Critical analysis of their own and others' research work and advanced scholarship in their discipline (MDM10; MDM12, MDM34, MDM112, MDM165);
6. Effective communication of project plans and results to peers, seniors and juniors (MDM10; MDM112; MDM66; MDM165; BSMS research seminars).

7. Appropriate practical skills for the conduct of their research. (MDM10, MDM12, MDM34, MDM66, MDM112, MDM165, DME Research Skills programme)

Entry Requirements

The MRes is primarily aimed at BSUH Academic Clinical Fellows. Applications from other NHS staff, research registrars, doctors in the pharmaceutical industry and others employed in a setting in which research is a function of their everyday activity will also be considered. The PGCert is open to all who wish to enhance their research knowledge and skills.

Minimum entry requirements for the MRes:

BSMS Academic Clinical Fellowship or evidence of involvement in an ongoing research programme, award of a research grant or employer support for a locally-funded research project intended for publication.

All applications will be subject to the University Equal Opportunities Policy. Students for whom English is not a first language must demonstrate an acceptable standard of comprehension and communication in the English Language (IELTS: minimum overall score of 7.0 and 7.0 for the writing element).

Course Structure

The PGCert and MRes courses can be studied on a full time or part time basis. Both of the courses include mandatory and optional modules, therefore please see the tables below for further details:

PG Certificate in Medical Research (60 credits)

Module	Status
MDM10 Research Methods and Critical Appraisal	Mandatory (20 credits)
PLUS TWO of the 20 credit modules listed below	
MDM66 Essential Statistics for Medical Research	Optional (20 credits)
OR	
MDM12 Epidemiology	Optional (20 credits)
OR	
MDM112 Clinical Trials Management	Optional (20 credits)
OR	
MDM34 Evidence-based Practice	Optional (20 credits)
OR	
MDM201 Advanced Qualitative Research	Optional (20 credits)

MRes in Medical Research (180 credits)

Module	Status
TWO CORE 20-credit MODULES:	
MDM10 Research Methods and Critical Appraisal	Mandatory (20 credits)
PLUS	
MDM66 Essential Statistics for Medical Research	Mandatory (20 credits)
OR	or
MDM201 Advanced Qualitative Research	Mandatory (20 credits)
PLUS TWO of the 20-credit modules listed below	
MDM112 Clinical Trials Management	Optional (20 credits)
OR	
MDM34 Evidence-based Practice	Optional (20 credits)
OR	
MDM12 Epidemiology	Optional (20 credits)
OR	
MDM201 Advanced Qualitative Research (for students who take MDM66 as a core module)	Optional (20 credits)
OR	
MDM66 Essential Statistics for Medical Research (for students who take MDM201 as a core module)	Optional (20 credits)
OR any other module agreed by the course leader	Optional (20 credits)
PLUS	
MDM165 Dissertation	Mandatory (100 credits)

As high levels of critical analysis and originality in research is required throughout the course of study, students are encouraged to undertake MDM10 early on in their studies as this module provides both consideration of the appropriateness and the quality of the research designs used in primary and secondary research articles.

Module Descriptions

MDM10: Research Methods and Critical Appraisal

This module aims to provide students with an understanding of how to conduct research in their specialist area. It will provide students with an understanding of research methods in health and social care and the ability to relate appropriate methods to research questions. Students will be equipped to search and critically review the literature, to develop and justify a research proposal, and to anticipate potential ethical issues in their research proposal.

On successful completion of this well-established module you will be able to:

- demonstrate a critical understanding and evaluation of major research designs and their relative strengths and limitations;
- systematically develop and justify a chosen research approach and methodology to investigate a specific topic within their subject;
- produce a research proposal which demonstrates appreciation of scientific methods appropriate to their specialist area;
- critically appraise a variety of research papers across a range of study designs;
- carry out an appropriate, rigorous review of the literature;
- be aware of ethical and governance issues in research.

MDM12: Epidemiology

This module promotes the understanding of epidemiological theory and practice as a basic science in public health. It provides fundamental concepts and essential analytical methods pertaining to design, analysis, interpretation, implementation and evaluation of epidemiological and health services research.

On successful completion of the module participants will be able to critically:

- describe, examine and analyse the role of epidemiology in investigating health issues;
- evaluate various measures with which to describe the health status of populations and critically describe the range of routine and non-routine data sources of public health and health outcomes data;
- apply appropriate measures and tests in the analysis of public health data;
- understand the criteria for establishment of screening programmes, and assess existing programmes against these (including issues of sensitivity and specificity of tests);

- compare and contrast the use of study designs commonly used in epidemiological research and to explore current issues in practical study design and execution;
- describe, examine and analyse the role of epidemiology as the basic science of public health in investigating public and environmental health issues.

MDM66: Essential Statistics for Medical Research

This module is specifically designed for doctors and other health professionals who wish to improve their understanding and use of statistical methods and techniques. It is a pragmatic module and participants will be able to apply their learning immediately to practical applications using SPSS. They will produce reports demonstrating their ability to manipulate, interpret and apply data in real life and research situations.

On successful completion of the module participants will be able to:

- set up a database for research data;
- differentiate between different types of data, choose and implement appropriate descriptive methods;
- interpret raw output from data analysis packages (SPSS);
- formulate hypotheses and test them using appropriate statistical procedures;
- interpret and accurately summarise the results of such tests in journal report format.

MDM34: Evidence Based Practice

This module is suitable for those engaged in any health or social care setting such as hospital doctors, general practitioners, nurses, physiotherapists, etc. who are undertaking clinical duties in daily lives, or those students in a master's programme who wish to enhance their skills in applying research literature, policies and guidelines. The module aims to provide students with an appreciation of the elements of evidence based practice and its role in decision making.

On successful completion of the module students will be able to demonstrate:

- comprehensive evidence-searching skills;
- critical appraisal of research and other evidence for its validity and usefulness;
- ability to evaluate evidence and to incorporate findings into decisions in clinical practice;
- critically appraise the roles of governmental and other bodies in their guidance for best practice;
- an advanced level of knowledge of and commitment to principles of equity in service evaluation and provision.

MDM112: Clinical Trials Management

The aim of this module is to enable health practitioners and specialist researchers to develop their knowledge and ability to participate in and conduct clinical trials research with the aim of catering for professionals from a wide range of backgrounds. The emphasis is on Multidisciplinary working for all staff in clinical trials. It is intended that this education and training should be delivered at multiple sites to enhance its accessibility. It is intended to provide training to equip participants with knowledge to be future CIs/PIs of clinical trials.

One of the aims is to bring to life what might appear to be a very dreary subject – by incorporating real life examples of successes and catastrophes, and to engage expert speakers from practice who can tell their tales.

On successful completion of the module participants will be able to:

- have a comprehensive understanding of the design and management of clinical trials;
- Implement principles and strategies of trial management;
- understand the relationship between researchers and industry in clinical trials;
- have an advanced level of understanding of Good Clinical Practice (GCP) Guidelines, and research ethics and governance in clinical settings;
- conform to statutory requirements when conducting clinical trials in medicine and surgery.

MDM201 Advanced Qualitative Research Methods in Health

The aim of this module is to equip students with in-depth understanding of a range of key principles, approaches, methods and challenges in qualitative healthcare research in order to expand their field of study and to enable them to have a positive potential impact professionally. The module is aimed at students with an introductory understanding of qualitative research and will be organised around the exploration of different modes of qualitative enquiry.

On successful completion of this module students will:

- Be able to critically examine and synthesise key features of different qualitative research approaches in healthcare, including their strengths and limitations, and their possible areas of application;
- Have acquired confidence and skills to select, engage with, critically examine, adapt and plan the application of theoretical tools and frameworks from the social sciences that are central to qualitative research in healthcare;
- Have developed and be able to demonstrate critical awareness of ethical and professional issues in the conduct of qualitative research, including ethical governance, code of conduct, reflexivity and researcher responsibility;
- Be able to critically examine the value, forms and challenges of patient and public involvement in healthcare research;
- Be able to systematically consider, select and apply the methodological approaches examined during the module to the study of their professional practice.

MDM165: The Dissertation

In order to be able to progress to the dissertation level you must first have the proposal agreed.

It is important to start thinking about your dissertation early on in the course:

- **Full-time students** should take the MDM10 module at the start of their course (Semester 1) as this is necessary preparation for the dissertation. The dissertation proposal should ideally be submitted by the end of Semester 1.
- **Part-time students** should take the MDM10 module in the first year of their course as this is necessary preparation for the dissertation. The dissertation proposal should be submitted by year 2, Semester 1.

You are advised to attend a Dissertation Day prior to submitting your Dissertation Proposal; these are scheduled a few times each year and dates can be found on the main timetable.

You will be able to choose a dissertation that is relevant to your professional interests and practice, or ongoing research interests. Your choice of topic must be discussed with the course leader and then agreed by the DME Dissertation Panel after a formal presentation of your proposal to the Panel. Once your dissertation has been agreed you will be assigned a dissertation supervisor. Other regulatory requirements can be found in the Dissertation Handbook.

Assessment Regulations

It is important that you become familiar with the regulations for assessments which can be found in the BSMS Student Handbook and the BSMS Postgraduate Taught Examination and Assessment Regulations (PGTEAR) which is found in the BSMS Postgraduate Medicine area of Student Central.

The University does not normally permit computer failure or workload as reasons for extension to hand-in dates. Failure to submit an assignment on the due date will result in a 'fail' result for the module. Retrieval of any failure is decided by a Course Exam Board. Work submitted within 2 weeks after the deadline for submission (**late Submissions**) may be accepted for the consideration of the Area Examination Board. The mark for that component will then be capped at the minimum pass mark of 50%.

Extensions to submission dates are rarely given and only in *extraordinary* circumstances where evidence is provided and must be agreed in advance with the Course Leader.

Assessment of modules

Assessments are intended to ensure that you have achieved the learning outcomes for the modules that you have taken. The details of assessment for each module will be available in the individual module handbooks. It is usual for assignments to be relevant both to the module and to your own personal and professional development needs. Please see the table below for details of the grades awarded.

Percentage	Level
>80%	Distinction
70% - 79%	Distinction
60% - 69%	Merit
50% - 59%	Pass
40% - 49%	Fail/Refer
<40%	Fail

Award Criteria

Postgraduate taught qualifications are awarded as pass, merit or distinction and the criteria for each are listed below.

Pass criteria

Postgraduate Certificates: achievement of 60 credits

Postgraduate Diplomas: achievement of 120 credits

Master's Degrees: achievement of 180 credits

Merit criteria

Achievement of credits as listed above for pass criteria with a credit-weighted mean mark from all modules across the award of 60.00-69.99 and a mark of at least 60 in the dissertation element.

Distinction criteria

Achievement of credits as listed above for pass criteria with a credit-weighted mean mark from all modules across the award of at least 70 and a mark of at least 70 in the dissertation element.

For further details please refer to the award section in the BSMS Postgraduate Taught Examination and Assessment Regulations (PGTEAR).

Student Support

Full-time and International Students receive individual Tutorial support by email, phone, or 1:1 in relation to all assessments: part-time students are supported through the timetable of Tutorial

support which is delivered in relation to the timescale for module assessments; full-time students have a structured 1-year timetable of Tutorial support. Students have advance notice of all module and submission dates at the time.

Learning Support

Library and computer services

BSMS students have access to the University of Sussex Library as well as the University of Brighton Falmer Library, where key textbooks for the course will be held - here is the [BSMS Library Link](#). You will be registered to use the Universities' computing facilities and receive a library card. A username and password will provide you with access to online resources to the University of Brighton – [My Studies](#). To access Sussex Library online resources and certain reading list items follow instructions [here](#).

BSMS librarians offer training on finding and retrieving information, literature searching, online referencing, and can purchase books for your specific research area where possible. For further information please see the library [induction video](#). Please contact us via the email below if you have any issues with accessing online library resources. To make an appointment or for general enquiries, email BSMS Librarians at: bsmslibrary@bsms.ac.uk

See also Online Resources which link to databases and authoritative websites in the fields of medicine, pharmacy, nursing and other subject areas.

To find out how to develop a medical research question and conduct a literature search using BSMS databases see [Searching the Literature video](#)

My Studies is a key electronic source of learning materials from the course, including handouts, timetables and announcements. ***It is imperative that you learn how to access and use this vital system of communication.*** If you are unable to attend the My Studies training session on the **Induction Day** or feel that you would benefit from further instruction, then let your Course Leader know as soon as possible. My Studies **will be the main method of communication for any changes to course location or timetable. Please check the site on a regular basis. Examples of assignments that achieved a distinction will be available for you to read on My Studies.**

Study Support

Assistance with essay writing is available from Royal Literary Fund fellows. These writers offer one to one sessions on how to improve writing skills. Sessions can be booked via the link below:

www.sussex.ac.uk/library/guides/rlf

Alternatively, the Royal Literary Fund website offers useful information on essay writing.

<https://www.rlf.org.uk/resources/writing-essays/>

Academic skills for students at University of Sussex

For practical help on academic English language skills, reading, research and study techniques Sussex offers workshops, tutorials and events. For more information and to book a place, click link below:

<http://www.sussex.ac.uk/skillshub/>

Computers, IT support and free software

Find help and information on connecting to Eduroam university WiFi, recommended software and apps, printing, computer clinics, access to computers and free laptop hire:

<https://staff.brighton.ac.uk/is/computing/Pages/Home.aspx>

Personal Tutors

Your Course Leader or their nominee will be your Personal Tutor for the course duration. Individual Module Leaders will also support your progress through their specific modules.

The Course Leader and Course team will be available by arrangement for group (or personal) tutorials with you to support you in successfully completing your assignments.

Tutorials are normally held at structured times during the module and teaching programme and can also be arranged in response to a specific request for a tutorial session. Please do make use of the Course team, we aim to be supportive and helpful, both academically and personally.

Student Group and Peer Support

In the generic (“Professional”) modules you will be studying alongside students from a diversity of backgrounds. This will provide rich basis for academic discussion, broadening perspectives and the application in a wider arena. Experience of other courses run in Postgraduate Medicine has shown that professional culture barriers are broken down very rapidly with mutual respect for differing topic expertise and approaches to care.

Some course groups opt to share email addresses to have discussions and arrange social events. Of course, this becomes even easier if you use My Studies, which is the main system of electronic communication that this course uses. If you have websites for articles that you would wish to share with the rest of the group then these can be added to this system.

The flexibility of study that is afforded through the University means that not everyone on your professional modules will be taking the same course as you. Some may be on other M-level courses and others may wish to study a single module for continuing professional development only. The modular pre-requisites mean that all students have been selected for the ability to study at graduate level and will have the necessary clinical or scientific background to participate.

Occasionally, some of you may be familiar with some parts of the modules. It is important to bear in mind that the contact time for the module is about 30 hours but the total time you should be spending on developing your topic to M level is about 200 hours per module.

The breadth and depth of your assignment should reflect this total period of study. As with all postgraduate study, the taught sessions are guides to the topic area and should be built upon to achieve the learning outcomes. The emphasis at M level is on independent learning.

Fees

For fee enquiries please email fees@brighton.ac.uk or telephone: **01273 642449**.

Please note: if you receive a 'Fail' result for a module and are asked to re-take it with attendance you will be charged again for the module.

Teaching Staff

Academic staff from the Division of Medical Education as well as other staff from the Faculty of Health and Social Science and other Faculties in the University, are involved in the teaching. Specialist teaching may be provided by consultants, specialists and other clinical staff from Trusts and organisations in and around the region. The extensive contribution of expert practitioners to the teaching of the modules is a distinctive feature of courses within postgraduate medicine at the Division of Medical Education.

Teaching and Learning Methods

As with all Masters courses, there is a considerable degree of independent study. Teaching methods encompass lectures, whole group discussions, small group discussions, critical appraisal workshops and individual tutorials. Maintaining employment throughout the course ensures the transfer of knowledge and skills from the course into the workplace.

Assessment

Most modules require an in-depth evaluation of a topic chosen by the student and agreed with the module leader. It is normally a 3,000 word written assignment. The Dissertation is a 16,000 word project of the students' own choice.

How to Apply

Please apply online via the following link: <https://www.bsms.ac.uk/postgraduate/taught-degrees/medical-research.aspx>

And Finally.....

We look forward to welcoming you to the course and hope you have an enjoyable, successful and productive time at the University. Do not hesitate to contact your Course Leader or the Programme Administrator with any queries.

We look forward to working with you during your time with the University.