COLLEGE OF LIFE SCIENCES AND MEDICINE
TAUGHT POSTGRADUATE GUIDE

www.abdn.ac.uk/clsm/graduate
The College of Life Sciences and Medicine has long been known for expanding the frontiers of science teaching, learning and research. Building bridges between science and everyday life: the College’s work is making an impact in applying science to improving healthcare, addressing the fundamental biological consequences of environmental change and in realising the commercial potential of science ideas with outputs ranging from pharmacology to fish immunology.

Home to one of the first-established medical schools in Britain, and situated on the largest medical campus in Europe, the College’s medical science research ranges from bench to bedside in applying science to improving healthcare. Our biological science and psychology researchers are based a short distance away on the historic Old Aberdeen Campus, which houses the rest of the University.

More than 1200 staff and 3,000 undergraduate and postgraduate students from all over the world belong to the College of Life Sciences and Medicine, providing a dynamic and vibrant research-led centre with first class teaching. We offer an exciting range of postgraduate taught programmes at masters, diploma and certificate level across three Schools within the College: School of Biological Sciences, School of Medical Sciences and School of Medicine & Dentistry.

The College of Life Sciences and Medicine also has a Graduate School to which all postgraduate students belong. It offers an excellent environment for both taught and research qualifications, and provides students with a culture of excellence in teaching and research.
MSc/MRes Applied Marine & Fisheries Ecology
The Applied Marine & Fisheries Ecology programme aims to address the increasing need for highly numerate biologists or biologically literate mathematicians and statisticians to work in marine resource management. The programme includes training in data handling, statistics and other research and generic skills. There is also opportunity to conduct an individual research project in within the School of Biological Sciences which achieved a 5* rating in the last RAE (including the Scottish Fish Immunology Research Centre, Oceanlab and the Lighthouse field station at Cromarty), and the University's partner Marine Scotland Science (Marine Lab Aberdeen).

MSc/MRes Ecology & Environmental Sustainability
The Ecology & Environmental Sustainability programme, which was first established in 1965, aims to provide training in state of the art ecological techniques and concepts through a combination of field-based and lecture courses, culminating in an individual research project.

The programme has enabled graduates to develop successful careers in ecology and environmental sustainability within academia, non-governmental organisations and private companies. The taught courses build on the internationally renowned research strengths of the School of Biological Sciences, but also draw on expertise available in the many research institutes in Aberdeen. The three month research project will provide hands-on research in a diverse range of habitats abroad and in the UK, including the nearby stunning mountain and coastal ecosystems.

The MSc is available 24 months part-time or 12 months full-time, The MRes degree is available 24 months part-time or 12 months full-time both with a September entry.

MSc Environmental Microbiology
The MSc in Environmental Microbiology is unique in the United Kingdom and combines a diverse range of taught courses, practical work and a residential field trip through which the aim is to provide a wide-ranging training in environmental microbiology. The programme aims to provide students with theoretical knowledge, practical skills and an appreciation of the application of the subject matter covered, this includes environmental biotechnology, remediation technology and molecular biology.

Students are then provided with an opportunity to work on a 12 week individual research project on a specific topic of interest, recent research projects include “Do nematodes selectively graze on bacteria in soils?” and “Molecular analysis of ammonia-oxidising prokaryotes in a coastal successional gradient”. This MSc is available 24 months part-time or 12 months full-time with a September entry

MSc Environmental Science
The MSc degree in Environmental Science, which was established in 1980, capitalises on the strength of environmental research at the University of Aberdeen. The programme combines a diverse range of taught courses, practical work and a residential field trip as well as the opportunity to conduct an independent research project in a chosen discipline. These programmes include teaching on a wide range of topics including Environmental Pollution, Global Soil Geography, Climate Change and Remediation Technology. Flexible learning is adopted, students are provided with the opportunity to choose their timetable depending on their subject interests.

The MSc is available 24 months part-time or 12 months full-time, The MRes degree is available 24 months part-time or 12 months full-time both with a September entry.

MSc Forestry
The MSc in Forestry aims to provide an academic education in forestry preparing its graduates to respond to the increasing number of issues facing forest and nature management.

The programme aims to provide advanced training for a career in forestry, working nationally or internationally in management, conservation or research. The curriculum offers flexibility to cater for both professionals with a first degree in forestry wanting to update and upgrade their knowledge and graduates from other disciplines wanting to transfer into a forestry career. Students will be studying topics such as statistics, silviculture, biology of forest health, and global soil geography and then will move on to conducting an independent research project in the discipline.

This MSc is available 24 months part-time or 12 months full-time with a September entry
MSc Soil Science

The MSc degree in Soil Science, which was established in 1961, offers an opportunity for graduate students to receive training in a subject not widely available at undergraduate level. It provides a foundation for a career in research, advisory/consultancy services or overseas development work.

The programme aims to provide training in pure and applied aspects of modern soil science, and combines a traditional grounding in soil chemistry, biology and pedology with applications of theory and practices in new technologies, including analytical chemistry, land remediation and molecular biology.

Students receive teaching in the first two terms and then will proceed to an individual research project in the chosen subject area with research staff in the RAE 5* rated School of Biological Sciences.

The MSc is available 24 months part-time or 12 months full-time,
MSc Programmes in Medical Biosciences*

MSc Molecular Microbiology
The MSc in Molecular Microbiology capitalises on the strength of microbiological research at the University of Aberdeen, where the Wellcome Trust has recently established a Strategic Award on Medical Mycology and Fungal Immunology. Using innovative taught courses and an extended 14 week research project, the programme teaches students advanced molecular microbiology across a wide range of subject areas; these include medical microbiology, host-pathogen interactions during infection, the molecular biology of model microorganisms, and microbial physiology.

This Master's degree will equip students with the theory and state of the art methodologies used to study the genetics, physiology and biochemistry of bacterial and fungal species, both pathogens and non-pathogens. The programme provides the advanced training needed for a research career in molecular microbiology. This MSc is available part time over 24 months or full time over 12 months with a September entry.

MSc in Systems and Synthetic Biology
The MSc in Systems & Synthetic Biology will teach you how current understanding of cell and molecular biology is being used in new ways to design, model and construct synthetic biology gene circuits for the biotechnology and pharmaceutical industries. You will learn how, using engineering principles and computer models of living systems, synthetic biology with new function can be designed.

The programme is aimed at students with either a biology or physical sciences background. It will produce graduates who can work in the emerging field of synthetic biology, and can use modelling of biological systems as part of their everyday scientific approach to analysing and understanding biological systems. Successful graduates will be able to contribute to interdisciplinary research teams, which are the future of scientific research. This MSc is available part time over 24 months or full time over 12 months with a September entry.

MSc in Molecular Genetics
The MSc in Molecular Genetics aims to provide students with a thorough understanding of molecular genetics and its current applications to studies of human disease. Students studying on this programme will ultimately be able to understand different molecular and bioinformatic approaches to human genetics; have practical knowledge of procedures that are essential for understanding genetic causes of disease traits and the mechanisms by which these exert their effects; and have developed a keen understanding of human molecular genetics as it relates to disease occurrence and progression. Included in this MSc is a 16-week independent research project working with one of the University’s medicine or medical sciences research teams. This MSc is available part time over 24 months or full time over 12 months with a September entry.

MSc in Immunology
The MSc in Immunology aims to equip students with the knowledge, skills and abilities to take advantage of the wide range of career opportunities available to immunologists. Teaching is focused on the role of the immune system in maintaining health and determining disease development. Topics covered include Basic and Advanced Immunology, Immunogenetics, Host: Pathogen Interactions and Biotechnology and Entrepreneurship.

Students will be taught by members of staff within the RAE 5* rated Immunity and Disease Research Theme and also be given an opportunity to conduct an independent 16 week research project within the department. This MSc is available part time over 24 months or full time over 12 months with a September entry.

* programmes subject to approval
MSc Programmes in Biomedical Physics

The Medical Physics, Medical Imaging and Medical Physics Computing MSc programmes have all been accredited by the Institute of Physics and Engineering in Medicine (IPEM) as providing the knowledge base for training as a medical physicist or bio-engineer in the UK. IPEM is the professional body for Medical Physics and Bio-Engineering in the UK. This makes the programmes highly desirable for students who wish to continue with a career in healthcare academia or industry, in the UK or abroad. All programmes are available part time over 24 months or full time over 12 months with a September entry.

MSc Medical Imaging
The MSc in Medical Imaging provides students with knowledge in the physics and technology of underlying modern diagnostic imaging including X-rays, CT, Nuclear Medicine, PET, MRI and Ultrasound. Students are taught by members of staff with expertise in these areas and are offered the opportunity to conduct an independent research project in their chosen field. Recent projects have included “Pharmacokinetic modelling of MR contrast update in breast cancer” and “Fast T1 mapping in field-cycling MRI”.

MSc Medical Physics
The MSc in Medical Physics which was established in 1968, covers the application of physics, electronics and computing to problems in medicine, especially the diagnosis and treatment of disease. Students are offered excellent teaching facilities, combined with on-site training in a leading teaching hospital. Students also have access to the latest facilities, including state-of-the-art Positron Emission Tomography and Magnetic Resonance Imaging scanners.

MSc Medical Physics Computing
The MSc in Medical Physics Computing is designed to provide a grounding in the computing which underpins modern medical physics. The programme content provides a broad coverage of medical physics, with emphasis in areas including: the application of computing in medical image processing and analysis; the management of computers and networks; cluster and Web computing; Internet information systems; and computer security.
Within the College of Life Science and Medicine we offer 4 Masters degrees within the broad area of Clinical Pharmacology and Drug Discovery. The degree programmes are related but have key differences in terms of the specialism offered. All the degrees offer an element of student choice which in the case of Clinical Pharmacology is restricted to a choice of 1 or 2 elective courses to the MSc in Bio-Business and Medical Science where the only core topics are the Bio-Business courses with the remainder being the choice of the individual student.

All our MSc Programmes are available as full time (12 months), part time (24 months) with a September intake. The MRes Drug Discovery is available full time (12 months) only as this contains 2 research projects.

**MSc Clinical Pharmacology**

MSc Clinical Pharmacology aims to equip students for careers developing and expanding current knowledge of drugs via a multidisciplinary approach in subjects ranging from Molecular Pharmacology and Therapeutics, to Pharmacovigilence and Evidence based Medicine. You will also be given the opportunity to conduct an independent research project. As one of the longest established MSc programmes in the College of Life Sciences & Medicine, Clinical Pharmacology continues to be popular with graduates from many different backgrounds, both in the UK and worldwide. Our graduates are much sought after and employment rates within 2 months of completion of the course are >98%.

**MSc Drug Discovery and Development**

This degree aims to provide insight into the discovery and use of medicines. The degree also offers Bio-Business skills which are key to understanding the pharmaceutical and biotechnology industries. The programme will train new scientists in the biological research that underpins the discovery and development of modern medicine. Drug discovery remains a vital part of the UK economy and therefore offers excellent opportunities for employment of our graduates. Students will be about all aspects of drug discovery and development including the regulation of these processes by governments.

**MSc Bio-Business & Medical Sciences**

Science is now a strongly competitive business with large numbers of graduates looking for employment in the sector. There is therefore a need for scientists with the appropriate business skills alongside their high quality science. The College of Life Sciences & Medicine recognises this and offers a unique opportunity to combine your scientific excellence with Bio-Business acumen. This MSc is designed to improve your skills for the job market and allows you to style your own curriculum from various disciplines whilst learning key skills in Bio-Business.

**MRes Drug Discovery**

The MRes programme provides training for a career in research. It differs from the MSc programmes offered in that students are given the opportunity to undertake two 15 week research projects in addition to 13 weeks of taught material. This degree is run in collaboration with the Kosterlitz Centre for Therapeutics and many of the research projects will be within the Centre. Students will also be given the opportunity to visit the core research facilities within the Institute of Medical Sciences, a leading research centre in the UK.
**MSc Programmes in Applied Health Sciences**

You will study in a stimulating inter-professional and international learning environment, characterised by academic and research excellence. Vibrant face to face learning is promoted through seminar style engagement, and supported by a comprehensive Virtual Learning Environment (MyAberdeen). These MSc programmes are available part-time over 24 months or full time over 12 months with a September entry.

**Economics of Health**
The MSc in Economics of Health is aimed at students who wish to pursue a career as a professional health economist or who wish to undertake a PhD. Health economics is a relatively young sub-discipline but has grown rapidly. There are numerous graduate job and career opportunities in health economics nationally and internationally, in both private and public sectors. Examples include academia, government and NHS, pharmaceutical companies and international organisations such as WHO.

Health economics is typically applied in multidisciplinary settings. This is reflected within the programme providing you with health economics skills alongside generic economic and health service research skills. The programme builds our internationally recognised areas of expertise including preference elicitation (contingent valuation and discrete choice experiments) and economics of the health workforce.

**MSc in Global Health & Management**
The MSc in Global Health & Management is designed for health professionals who wish to conduct research in an international context, get involved in health policy or planning and work in the health management sector. The MSc in Global Health & Management aims to equip students with the knowledge and understanding required to conduct and apply public health research in the international context. The programme comprises of two taught semesters followed by a research project. Taught courses students will study include Global Health, Research Skills, Statistics, Health Services Research, Health Systems & Policy and Managing people at work. Students can also elect to complete a NGO work-based placement. All courses are taught by members of staff within the institute of Applied Health Sciences and the Business School. Students will complete a research project and dissertation with a team of academic supervisors within their chosen subject area. Recent research projects have included “The coincidence of direct & indirect causes of maternal mortality in developing countries”, “Systematic review of studies examining biomass fuel smoke in sub-Sahara Africa” and “The burden of chronic kidney disease and renal replacement therapy in low to middle income countries”.

**MSc Nursing / MSc Midwifery**
Our well-established taught postgraduate programmes are modern, dynamic and responsive to current practice, policy and research agendas. They are relevant for nurses and midwives at all stages of their careers. You will enjoy strong integration of learning and practice, as teaching and research supervision is undertaken by experienced lecturers, researchers and clinical specialists (many of whom hold Honorary titles at the University of Aberdeen).

You will commence your programme with core courses which focus on research, using evidence in practice and advancing professional practice. You will then have the opportunity to focus your studies on your individual needs and interests, selecting elective courses from an interesting range within the College of Life Sciences of Medicine and the wider University. In the final stage of your MSc you will undertake supervised study on your thesis course, enabling you to engage deeply in an area of specialist interest. For nurses and midwives, an additional route through the MSc programmes enables specialisation in international health.

*Programmes subject to approval*
**MSc in Public Health Research**

The MSc in Public Health Research aims to equip students with the knowledge and skills in health care research and its application in a Public Health context.

The initial taught component will provide a certificate in Health Services Research by undertaking courses in Quantitative (Health Services Research, Applied Statistics and Epidemiology), Qualitative and Systematic Review methods. These core transferable research skills obtained in the taught components will be applied in conducting an extensive 6 month individual research project in a Public Health context. While undertaking the research project, students will attend a seminar series in Public Health to substantiate and guide the application of research in a Public Health context. These projects will be conducted under the supervision of internationally renowned academic research teams throughout the Division of Applied Health Sciences, including HSRU and HERU and other academic units in the University. Individual courses are available to obtain skills in specific research methodology.

**MSc in Human Nutrition**

Our nutrition masters programmes are research orientated degrees which aim to provide training in human nutrition for graduates in Biological Sciences which will help them for future careers in nutrition in private and academic institutions, hospitals, industry, or national and international agencies. We have 3 areas of specialisation within ie. Human Nutrition and Metabolism; Molecular Nutrition and Public Health Nutrition. Students complete taught courses in Human Nutrition and Applied Statistics before following an elective specialisation course and an independent research project with members of the research teams at the Rowett Institute for Health and Nutrition, one of the world's leading nutrition research centres and experienced members from the Division of Applied Health Sciences.

Human Nutrition and Metabolism specialisation provides the scientific principles of human nutrition and metabolism and explores current theories of the relationships between nutrition and health and disease. The programme is accredited by the Association for Nutrition who recognise the high standard of training provided. Students who complete the MSc programme are entitled to enter the UK Voluntary Register of Nutritionists as Associate Nutritionists and be awarded the letters ANutr. The Public Health Nutrition specialisation focuses on health promotion and disease prevention through nutrition in the population. The Molecular Nutrition specialisation focuses on the relationship between diet, health and disease at the molecular and cellular level, with particular emphasis on practical exercises.
Postgraduate Qualifications for Health Care Professionals

MSc Paediatric Dentistry
The brand new Certificate/Diploma/Master of Science Degree in Paediatric Dentistry is the first within Scotland which has been designed specifically for dentists working within the Primary Care setting. The courses are planned with the busy practitioner in mind and are organised by the new University of Aberdeen Dental School & Hospital which offers state-of-the-art teaching facilities. All programmes are part-time and are taught by a small group of internationally-renowned, experienced and practicing healthcare professionals and researchers. Centred around a number of core modules, the programmes will allow dentists the opportunity to develop the practical skills needed to treat the child and adolescent patient effectively and importantly, will also allow plenty of time for informal case presentation and discussion of the participants’ own patients. The MSc programme is available 24 months part-time with a January intake.

Postgraduate Diploma in Physician Assistant Studies
The University of Aberdeen is the first university in Scotland to offer the Postgraduate Diploma in Physician Assistant Studies. A physician assistant is an independent healthcare professional who has been trained to practice medicine under the supervision of a doctor.

PAs obtain medical histories, conduct comprehensive physical exams, request and interpret tests, diagnose and treat illnesses and injuries, and counsel on preventive health care in a way supporting a doctor. PAs are involved in acute medicine as well as chronic disease management.

This programme is offered in partnership with NHS Grampian and it is anticipated that there will continue to be increasing job opportunities on a UK-wide basis to support doctors in their duties. The programme provides the necessary experience to meet the Department of Health competency framework for Physician Assistants.

This is a 2 year full time programme requiring 90 weeks of study and combines the theoretical and scientific basis of medicine with clinical experience. It involves intensive training alongside medical students and other healthcare professionals. This PgDip in Physician Assistant Studies has a September entry.

Entry Requirements

> 2.1 degree in a Medical Science or health related subject
> Higher (A level) grade C or above in chemistry
> Standard (O level) grades B or above in English and Mathematics

(Experience in health care may contribute and compensate if the above requirements have not been fully met).

Medical Education (Postgraduate Certificate)
This programme is offered as a direct support for the professional development requirements of teaching staff in medicine and allied fields. The programme is based around the concept of situated learning. It has elements relating to; learning theory and learning styles, aspects of reflective practice, planning and methods for learning and teaching; approaches to teaching and evaluating your teaching; on-line tutoring; assessment and feedback; effective learner teacher relationships in medical education; research in medical education; assessment, appraisal and evaluation in medical education, and the political area of medical education.

This Postgraduate Certificate is available part-time over 12 months

Postgraduate Certificate in Medical Research Skills
This PgCert Medical Research Skills programme is designed for qualified medical doctors and will provide training in generic research skills within a clinical context. The rationale is to equip doctors with fundamental research skills that will enable them to pursue a clinical academic career.

Clinical academia is a strongly competitive environment. Thus the need for doctors to have a keen and active interest along with the appropriate research training and portfolio has never been greater.

Programme is available 12 months full-time or 24 months part-time with a September entry.
What Do I Need?

The requirement for Masters programmes is normally a good undergraduate Honours degree in a relevant discipline is required (a second class Honours degree (at least 60% or GPA 2.4/4).

Further details on entry requirements for the programmes are available at www.abdn.ac.uk/clsm/graduate/prospective-students/masters/tmp

How to Apply

To apply please visit www.abdn.ac.uk/postgraduate/apply

Complete Application forms must consist of:

- A completed Postgraduate Application Form
- Academic transcripts and/or degree certificate(s) to date
- For international applicants, proof of proficiency in English (English Language Requirements)
- Academic References. For Taught Programmes (MBA, MSc, MLitt etc) graduates from a UK institution are not required to supply references. Applicants with a first degree from outwith the UK are required to submit one reference only.

If you have any questions about the application process, please contact:
Postgraduate Admissions Office
University Office,
University of Aberdeen,
King’s College,
Aberdeen, AB24 3FX
Tel: +44 (0)1224-273506 Fax: +44 (0)1224-272041
Email: pgadmissions@abdn.ac.uk

Finance and Funding

- Tuition fees will depend on your domiciled status. For up-to-date information on fees visit www.abdn.ac.uk/registry/tuitionfees
- Our Funding Database is the quickest and easiest way to search for any funding sources that may apply to you.
- Graduates of the University of Aberdeen can take advantage of our Alumni Discount Scheme
- Scholarships and bursaries are available from the College of Life Sciences and Medicine Graduate School. For full details visit www.abdn.ac.uk/clsm/graduate

For full information on funding opportunities available at the University visit www.abdn.ac.uk/postgraduate/funding
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For more information:
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