

University of St Andrews - School of Medicine Handbook

PLEASE NOTE: The BSc (Hons) Medicine Programme, like all medical courses, is having to adjust to the challenging and ever-changing situation resulting from the coronavirus pandemic. For academic year 20-21 planning is therefore somewhat unpredictable and the information available even at the time of revising this and the related year guides we know they will be subject to some changes. The academic team is seeking to maintain a programme as close as possible to that intended but obviously we are required to maintain safety for all and align placements with changes to NHS services. Any changes are minimised as far as possible and approved through due process within both schools' and where relevant universities' quality assurance systems. Please be tolerant and work with us to provide you with the best opportunities we can by following guidance and behaving professionally. We are supported by an extensive network of NHS staff but their first responsibility must always be patient care. We will do our best to communicate any changes with you clearly and effectively.

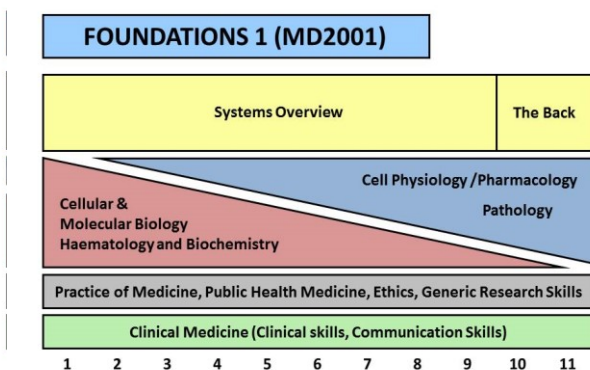
MD2000

The academic year begins in Orientation Week with a number of events, both academic and social, where students will have the opportunity to meet colleagues and medical staff within the Medical School. The orientation programme ensures that students possess the skills required to access the online resources that are essential as they begin their medical studies. Students are encouraged to make the most of these sessions and take time to practise the skills so that they can 'hit the ground running'.

The Foundation of Medicine Modules (MD2001 and MD2002) introduce the fundamentals of medical science and professional skills that are essential preparation for the Honours modules. The Honours modules in years two and three (MD3001, MD3002 and MD4001) take an integrated approach to the body systems, examining their normal structure and function, how disease processes affect the individual, the treatment of disease and how the health of individuals affects families and the community in which they live. Therefore, our aim in the first turn of the curriculum spiral is to establish a link between existing knowledge, skills and attitudes, and help students to become independent lifelong learners, able to meet the professional challenges of doctors in training (see figure 2).

The first semester module, Foundations of Medicine 1 (MD2001), is a broad overview of the structure, function and behaviour of living cells and how they interact to form tissues, organs and systems within the human body. The second semester module, Foundations of Medicine 2 (MD2002) uses the musculoskeletal system to provide the integrated theme.

The modules also include introductory overviews of clinical disciplines such as Pathology, Microbiology, Health Psychology and Public Health Medicine as well as early training in a number of professional skills (e.g. clinical and scientific skills). The content of the Foundation Modules cannot be fully integrated, but you should be aware that the interconnections and links within the curriculum will become apparent in later turns of the spiral.



Strands within the Foundations of Medicine

Patient Scenarios

A major component of the clinical context in the curriculum is provided by a customised series of patient scenarios running through MD2001 and MD2002 which provide the focus for clinical skills training and to the application of clinical reasoning. Student-led small group discussions and presentations, focusing on the patient scenarios, encourage the application of prior knowledge and provide a context for skills training.

The patient scenarios are integrated with curriculum content to illustrate the clinical application of the basic sciences. In order to introduce key clinical skills, the patient scenarios in MD2001 focus on patient safety, standard infection control procedures and altered levels of consciousness. Subsequent scenarios in MD2002 are linked more directly to the curriculum content and illustrate the effects of disease, trauma and tumours on the musculoskeletal system.

People and Medicine

Communications Skills, Practice of Medicine, Health Psychology and Public Health Medicine are important themes which are introduced in the first year and run throughout the curriculum.

A major component of Communication Skills teaching is provided in both foundation modules and covers the basic interaction skills in preparation for subsequent (year 2+) GP and hospital attachments.

The Practice of Medicine provides a framework which aims to demonstrate how both science and the humanities contribute to clinical judgment. These lectures introduce the theories of moral philosophy, principles of medical ethics and discussion of the duties of a doctor using clinical examples to highlight moral and ethical dilemmas.

The aim of the Health Psychology component is to introduce students to the issues that assist our understanding of patients, their disclosure of symptoms and how these relate to beliefs about illness and health.

Public Health Medicine includes an overview of the general principles of screening and epidemiology, culminating in a conference day which highlights the specific Public Health issues that impact on the local Fife community. These issues will be directly relevant to the GP and hospital attachments taken in the second and third years.

Structure

Before studying the general arrangement of all the major systems in the human body, students examine primary tissues and their component cells. Subsequently, students embark upon a more detailed study of human structure which extends throughout first year and the Honours modules. Great emphasis is placed relationship between structure and function and how these may be affected by trauma and disease. After an initial brief introduction at the beginning of the first semester, the theme of the musculoskeletal system is developed further at the end of the semester by ~~dissection~~ a three dimensional study of the back and continues as the major theme of second semester which includes detailed analysis of both the upper and lower limbs.

Function

The Function strand introduces the concept of homeostasis at both a cellular and body system level before focusing on the important molecular and cellular mechanisms responsible for regulating the electrical excitability of nerve and muscle cells. In the second semester, the musculoskeletal theme is developed through descriptions of the functional organisation of the central, peripheral and autonomic nervous systems, including an analysis of drug-receptor interactions, pharmacokinetics, the mechanisms of action of the major neurotransmitters, muscle control and reflex control of movement and sensation.

Mechanisms of Disease

The mechanisms of disease strand aims to introduce the ways in which body structure and function are affected by disease processes. This is addressed by examining the processes that cause and accompany disease, wherever it occurs in the body: examples include microbiology, immunology, inflammation and the development of cancer.

Cell and Molecular Medicine

Recent advances in molecular medicine and genetics have established their importance to our understanding of the causes and treatments of many diseases. The control of gene expression and the early events in the development of the embryo are important factors that are essential for an understanding of structure and function. The characteristics and biological activity of carbohydrates, nucleic acids, proteins and lipids are studied as a foundation to the understanding of cell and molecular medicine.

Scientific Research Skills

In order to prepare students for the Honours modules and clinical training a Scientific Research skills programme has been developed which extends through all three years of the curriculum. It focuses on a number of key areas including the role of evidence based medicine in medical practise, medical informatics, critical analysis and data interpretation. Students also maintain their own portfolio in which they are encouraged to plan, record and reflect on key events in their medical career development.