UNIVERSITY OF BABYLON

Hammurabi College of Medicine

المنهاج التكاملي

Integrated Curriculum

2023 - 2024

2024 - 2025

المعتمد في

جامعة بابل / كلية طب حمورابي

Deposit number

1083/2024

وزارة التعليم العالي والبحث العلمي
جامعة بابل
كلية طب حمورابي

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Dean Speech:

Hammurabi College of Medicine was established in 2017 in response to the increase in the number of students, as well as in response to the tremendous development in the world of medical knowledge, medical education, and changes and modernization in medical curriculum.

The college adopted the integrative curriculum, which considers that education takes place only through the student, involving him in the educational process, making him the focus of this process, and changing the student's position from a passive recipient to a positive element in the curriculum through active participation in small group discussions and the development of mental and communication skills through materials (communication skills) and OSCE exams.

The teacher becomes a supervisor and facilitator of the student's learning process and assigns him scientific and practical activities such as (homework) and in cooperation with his colleagues and collectively. This method of learning develops the student's knowledge and mental abilities and makes him able to deduce and analyze medical information and apply it correctly and in an integrated manner with aspects and elements of basic and clinical knowledge and not retrieving information. Just as in the traditional system, so the Hammurabi College of Medicine, with the support of the Presidency of the University of Babylon and in cooperation with the College of Medicine, University of Kufa, and the Department of Medical Education at the College of Medicine / University of Leicester, adopted the integrative curriculum and held multiple workshops on medical education and consolidating the concepts of the integrative curriculum, and thus the study takes place in the college.

The educational program divided into two phases, and the study period is six years. The study takes place using the modular system, as the student does not study separate subjects such as anatomy, chemistry, biology, etc., but rather studies each of the body's systems in the form of a unit, and within this unit, the relevant materials are given in an integrated manner. The focus in the first stage is on basic sciences and the introduction of clinical sciences at a rate of 20%, while In the second stage, the percentage is the opposite, and each year the student has a "Work book," which contains the names of the unit's officials and the general and specific goals of the unit.

In the second phase, teaching of clinical medical sciences takes place in the form of blocks and according to the body's systems. The assessment system is integrated and includes all units in the first phase and all blocks in the second phase, using the system of the first paper for choice questions and the second paper for short essay questions based on clinical cases and the practical clinical exam.

Through the Medical Education Unit, the college adopts monitoring of the implementation of the curriculum and feedback from students, professors, and doctors participating in the training to update the curriculum on an ongoing basis.

Introduction

The College of Medicine adopts a six-year curriculum for obtaining a bachelor's degree in medicine and general surgery. It is divided into two phases. The first phase lays the foundations on which a full-time clinical work in the second phase will establish, and each phase takes 3 years. The curriculum is organized in a highly integrative way, both 'horizontally' so that medical specialties are learned together, and 'vertical' so that the close relevance of the clinical aspect is emphasized from the start.

The first phase extends over a period of 3 years and includes 6 semesters, where each academic year consists of two semesters, and at the end of the first phase a comprehensive examination is conducted (the final exam for the first phase). There after the student receives full-time clinical teaching.

1. Main basic semester units: Each semester unit deals with a topic or system of the body in an integrative multidisciplinary manner. The responsibility of each semester unit rests with its head, who coordinates the work of a small team of teaching staff drawn from various disciplines, including disciplines in ·all relevant clinical cases, to deliver the curriculum, which has been approved by the College Curriculum Committee, which is the responsibility of the College as a whole and it is not the responsibility of the branches of specializations or departments of the college individually.

Although the student will be taught by teachers specialized in their subject, the student will not learn for example "Anatomy", "Physiology", "Biochemistry", etc., as separate sciences, and will not be assessed separately, as the exam at the end of the semester will be decisive due to its ability to relate materials in a rational approach with clinical medicine.

2. Elective Modules: In each of these semester modules there will be a number of study topics provided, which the student can choose from, and include **scientific skills modules** that are organized by branches of specializations and departments, whether in basic or clinical medical *sciences* and where student has the opportunity to work closely with professionals in their chosen fields, and to advance his studies to a high level. It also provides a valuable opportunity to develop his skills as a medical scientist in the specialties he chooses, in addition to the **personal development modules** chosen by the student, from which he can choose - if he wishes - subject in *the* humanities.

3. Basic *Clinical* Skills Course: It extends with Semesters (2-6), consisting of a series of activities, some of which take place in the clinical skills lab, and some of them in hospitals.

4. "Diseases and Society" chapter: Learning and practicing medicine requires the student to acquire knowledge and skills together *from* several different sources, and is not necessarily organized into semester units. This part of the *curriculum* extends with the rest of the parts called "diseases and society" and it is a training course.

During the student's study throughout the first phase, the supervising teacher can help him plan his future personal and professional development, consider the job opportunities available to him in the future and realize the importance of monitoring progress at each stage and its impact on his practice of medicine.

Learning in the basic semester units is the basic subject that the student will work with for the rest of his life to support his continuous learning in clinical medicine, and to achieve the goals set for him by the College of Medicine. Of course, the student must meet the basic semester units to be allowed to continue with his studies.

Third: Organizing the semester units:

Semester One:

The first semester aims to cover 7 study subjects that constitute the university and college requirements (Foundations of medicine, computer science, medical physics, Arabic language, English language, Medical Ethics, democracy, and human rights)**,** which are taught as is the case in the rest of the curriculum through 5 successive study subjects.

• **Foundations of Medicine:** It consists of a group of lectures on medical ethics, medical terminology, the Arab-Islamic history of medicine, in addition to modern medical history.

• **Computer Science:** It consists of a set of lectures with practical lessons that equip the student with the necessary basics in computer science.

• **Medical Physics:** It includes lectures and teamwork method, in addition to hospital programs and laboratories.

• **Medical Ethics:** It includes lectures in Arabic that mainly deal with the relation between doctor and patient and society.

• **Democracy and Human Rights:** It includes lectures that clarify the general lines of these two topics.

• **Languages:** It consists of lectures on the basics of each of the two languages. In addition, the learning of Medical English will be done through Teamwork style.

Semesters 2-6

Each semester unit will extend at least 15 weeks starting in the first week of the semester and be defined by a detailed timetable presented to students at the beginning of the year. All core semester units are distributed into 14 lessons (school days), which will be held on the same school day for fourteen weeks. Teaching (Basic Clinical Skills Course) will be co-taught with the semester modules and will usually occupy one school day at a fixed date for each group of students.

Attendance in each of these scheduled classes is mandatory. Attendance will be monitored and will form part of student assessment. The remaining time is available to students for self-learning, and both learning resources and educational support will be provided to assist them.

• **The second semester** consists of the following semester units: Molecules, Genes And Diseases, Body Tissues, Metabolism, Health And Disease In The Population, Clinical Problem-Solving 1, Clinical Skill Foundation Course.

• **The third semester** consists of the following semester units:

The Musculoskeletal System, Disease Mechanisms, Membranes And Receptors, The Cardiovascular System, Clinical Problem Solving 2. , Clinical Skill Foundation Course.

• **The fourth semester** consists of the following semester units:

Urinary System, Gastrointestinal System, Respiratory System, Health Psychology and Diversity, Clinical Skill Foundation Course.

• **The fifth semester** consists of the following semester units:

Elective subiects: Forensic Medicine, Head and Neck, Reproductive System, Health, and Disease in Society. Infection and Immunity, Clinical Skill Foundation Course.

• **The sixth semester** consists of the following semester units:

Elective subiects: Clinical Pharmacology, Neurology, Medical Integration Unit, People and Disease in Society , Clinical Skill Foundation Course.

Fourth: The structure of phase 2

The second phase extends over 3 years and includes 14 semester units {block), where each academic year consists of 5 semester units, and at the end of each year an {IPE} test is conducted, and at the end of the second phase a comprehensive test {the final exam for the second phase {FPE). In addition to 3 elective modules.

1. The main clinical blocks: These blocks are divided on the basis of care {causes, diagnosis, treatment, prevention, etc.) of diseases of each organ of the body, as well as on the basis of care for the type of patients {children, women of childbearing age, the elderly, oncology patients, emergency patients, surgical operations). The students' working hours are clinical in hospital wards and hospital centers as well as in primary health care centers and under the supervision of specialist doctors, practitioners, and senior residents. The semester units include the following:

In the fourth stage:
Musculoskeletal care, Cardiorespiratory Care, Gastrointestinal Care, Endocrine and Renal Care, and Clinical Methods.

In the fifth stage:
Special Senses, Child Care, Reproductive Care and Perioperative Care**.**

In the sixth stage:
Cancer Care, Acute Care, Mental care , Chronic & Elderly Care and job Shadow.

2. Elective units: In each academic year, there will be an elective semester module that extends for two weeks in the fourth and fifth years and four weeks in the sixth year and includes several clinical topics, which are organized by branches of specializations and departments, and where the student has the opportunity to work closely with specialists in the fields of his choice, It also provides a valuable opportunity to develop his skills as a medical scientist in the specialties he chooses.

3. Job shadow: It includes students staying with periodic residents in the emergency department and other hospital wards for a period of two weeks, and

attendance is mandatory and under the supervision of the Medical Education Unit and in coordination with the hospital administration.

4. Organization of the semester units: Each semester unit will extend at least six weeks, the first week is called *(induction* week} and includes theoretical lectures related to the topics of the semester unit and is *specified* in a detailed timetable presented to students at the beginning of the year. In the remaining five weeks there will be full clinical training in the hospital wards and hospital centers or the specialized center and health centers for six hours a day. Attendance in each of these scheduled classes *is* mandatory. Attendance will be monitored and will form part of student assessment.

Aims & Outcomes.

In September 2009 the General Medical Council produced a radical new version of Tomorrow's Doctors', which defines the outcomes and standards for medical education from now on. Student will have to meet these outcomes, and we will have to meet the standards for the medical curriculum. Kufa Medical College has therefore adopted the new GMC outcomes immediately so that you understand what you have to do with our guidance. There are outcomes for the whole course, but we must understand where we have to end up, and should keep them in mind from day one.

Aim :The broad aim of Hammurabi College of medicine is that new graduates should have the clinical competence to work as Foundation Doctors combined with the potential to develop along the continuum of medical education into human and rational doctors. In accordance with the GMC document 'Good *Medical Practice',* graduates will make the care of patients their first concern, applying their knowledge and skills in a competent and ethical manner and using their ability to provide leadership and to analyze complex and uncertain situations.

Outcomes: The doctor as a scholar and a scientist

The graduate will be able to apply to medical practice biomedical scientific principles, method and knowledge relating to: anatomy, biochemistry, cell biology, genetics, immunology, microbiology, molecular biology, nutrition, pathology, pharmacology and physiology. The graduate will be able to:

a) Explain normal human structure and functions.

b) Explain the scientific bases for common disease presentations.

c) Justify the section of appropriate investigations for common clinical cases.

d) Explain the fundamental principles underlying such investigative techniques.

e) Select appropriate forms of management for common diseases, and ways of preventing common diseases, and explain their modes of action and their risks from first principles.

f) Demonstrate knowledge of drug actions: therapeutics and pharmacokinetics; drug side effects and interactions, including for multiple treatments, long-term conditions, and non-prescribed medication; and also including effects on the population, such as the spread of antibiotic resistance.

g) Make accurate observations of clinical phenomena and appropriate critical analysis of clinical data.

Apply psychological principles, method and knowledge to medical practice.

a) Explain normal human behavior at an individual level.

b) Discuss psychological concepts of health, illness and disease.

c) Apply theoretical frameworks of psychology to explain the varied responses of individuals, groups and societies to disease.

d) Explain psychological factors that contribute to illness, the course of the disease and the success of treatment.

e) Discuss psychological aspects of behavioral change and treatment compliance.

f) Discuss adaptation to major life changes, such as bereavement.

comparing and contrasting the abnormal adjustments that might occur in these situations.

g) Identify appropriate strategies for managing patients with dependence issues and other demonstrations of self-harm.

Apply social science principles, method, and knowledge to medical practice.

a) Explain normal human behavior at a societal level.
b) Discuss sociological concepts of health, illness and disease.
c) Apply theoretical frameworks of sociology to explain the varied responses of individuals, groups and societies to disease.

d) Explain sociological factors that contribute to illness, the course of the disease and the success of treatment - including issues relating to health inequalities, the links between occupation and health and the effects of poverty and affluence.
e) Discuss sociological aspects of behavioral change and treatment compliance.

Apply to medical practice the principles, method and knowledge of population health and the improvement of health and healthcare.

a) Discuss basic principles of health improvement, including the wider determinants of health, health inequalities, health risks and disease surveillance.

b) Assess how health behaviors and outcomes are affected by the diversity of the patient population.

c) Describe measurement methods relevant to the improvement of clinical effectiveness and care.

d) Discuss the principles underlying the development of health and health service policy, including issues relating to health economics and equity, and clinical guidelines.

e) Explain and apply the basic principles of communicable disease control in hospital and community settings.

f) Evaluate and apply epidemiological data in managing healthcare for the individual and the community.

g) Recognize the role of environmental and occupational hazards in ill- health and discuss ways to mitigate their effects.

h) Discuss the role of nutrition in health.

i) Discuss the principles and application of primary, secondary and tertiary prevention of disease.

j) Discuss from a global perspective the determinants of health and disease and variations in healthcare delivery and medical practice.

Apply scientific method and approaches to medical research.

a) Critically appraise the results of relevant diagnostic, prognostic and treatment trials and other qualitative and quantitative studies as reported in the medical and scientific literature.

b) Formulate simple relevant research questions in biomedical science, psychosocial science or population science, and design appropriate studies or experiments to address the questions.

c) Apply findings from the literature to answer questions raised by specific clinical problems.

d) Understand the ethical and governance issues involved in medical research.

The doctor as a practitioner

Graduate will be able to carry out a consultation with a patient:

a) Take and record a patient's medical history, including family and social history, talking to relatives or other carers where appropriate.

b) Elicit patients' questions, their understanding of their condition and treatment options, and their views, concerns, values and preferences.

c) Perform a full physical examination.

d) Perform a mental-state examination.

e) Assess a patient's capacity to make a particular decision in accordance with legal requirements and the CMC's guidance.

f) Determine the extent to which patients want to be involved in decision-making about their care and treatment.

g) Provide explanation, advice, reassurance, and support.

Diagnose and manage clinical presentations.

a) Interpret findings from the history, physical examination and mental-state examination, appreciating the importance of clinical, psychological, spiritual, religious, social and cultural factors.

b) Make an initial assessment of a patient's problems and a differential diagnosis. Understand the processes by which doctors make and test a differential diagnosis.

c) Formulate a plan of investigation in partnership with the patient, obtaining informed consent as an essential part of this process.

d) Interpret the results of investigations, including growth charts, x-rays and the results of the diagnostic procedures in Appendix 1.

e) Synthesize a full assessment of the patient's problems and define the likely diagnosis or diagnoses.

f) Make clinical judgements and decisions, based on the available evidence, in conjunction with colleagues and as appropriate for the graduate's level of training and experience. This may include situations of uncertainty.

g) Formulate a plan for treatment, management and discharge, according to established principles and best evidence, in partnership with the patient, their carers, and other health professionals as appropriate. Respond to patients' concerns and preferences, obtain informed consent, and respect the rights of patients to reach decisions with their doctor about their treatment and care and to refuse or limit treatment.

h) Support patients in caring for themselves.

i) Identify the signs that suggest children or other vulnerable people may be suffering from abuse or neglect and know what action to take to safeguard their welfare.

j) Contribute to the care of patients and their families at the end of life, including management of symptoms, practical issues of law and certification, and effective communication and team working.

Communicate effectively with patients and colleagues in a medical context.

a) Communicate clearly, sensitively, and effectively with patients, their relatives or other careers, and colleagues from the medical and other professions, by listening, sharing, and responding.

b) Communicate clearly, sensitively, and effectively with individuals and groups regardless of their age, social, cultural, or ethnic backgrounds or their disabilities, including when English is not the patient's first language.

c) Communicate by spoken, written and electronic methods (including medical records), and be aware of other methods of communication used by patients. The graduate should appreciate the significance of non- verbal communication in the medical consultation.

d) Communicate appropriately in difficult circumstances, such as when breaking bad news, and when discussing sensitive issues, such as alcohol consumption, smoking, or obesity.

e) Communicate appropriately with difficult or violent patients.

f) Communicate appropriately with people with mental illness.

g) Communicate appropriately with vulnerable patients, h) Communicate effectively in various roles, for example, as patient advocate, teacher, manager or improvement leader.

Provide immediate care in medical emergencies.

a) Assess and recognise the severity of a clinical presentation and a need for immediate emergency care.

b) Diagnose and manage acute medical emergencies.

c) Provide basic first aid.

d) Provide immediate life support.

e) Provide cardio-pulmonary resuscitation or direct other team members to carry out resuscitation.

Prescribe drugs safely, effectively, and economically.

a) Establish an accurate drug history, covering both prescribed and other medication.

b) Plan appropriate drug therapy for common indications, including pain and distress.

c) Provide a safe and legal prescription.

d) Calculate appropriate drug doses and record the outcome accurately.

e) Provide patients with appropriate information about their medicines.

f) Access reliable information about medicines.

g) Detect and report adverse drug reactions.

h) Demonstrate awareness that many patients use complementary and alternative therapies, and awareness of the existence and range of these therapies, why patients use them, and how this might affect other types of treatment that patients are receiving.

Carry out practical procedures safely and effectively.

a) Be able to perform a range of diagnostic procedures, as listed in Appendix 1 and measure and record the findings.

b) Be able to perform a range of therapeutic procedures, as listed in Appendix 1.

c) Be able to demonstrate correct practice in general aspects of practical procedures, as listed in Appendix 1.

Use information effectively in a medical context.

a) Keep accurate, legible and complete clinical records.

b) Make effective use of computers and other information systems, including storing and retrieving information.

c) Keep to the requirements of confidentiality and data protection legislation and codes of practice in all dealings with information.

d) Access information sources and use the information in relation to patient care, health promotion, giving advice and information to patients, and research and education.

e) Apply the principles, method and knowledge of health informatics to medical practice.

The doctor as a professional

The graduate will be able to behave according to ethical and legal principles. The graduate will be able to:

a) Know about and keep to the GMC's ethical guidance and standards including *Good Medical Practice,* the 'Duties of a doctor registered with the GMC' and supplementary ethical guidance which describe what is expected of all doctors registered with the GMC.

b) Demonstrate awareness of the clinical responsibilities and role of the doctor, making the care of the patient the first concern. Recognize the principles of patient-centered care, including self care, and deal with patients' healthcare needs in consultation with them and, where appropriate, their relatives or careers.

c) Be polite, considerate, trustworthy and honest, act with integrity, maintain confidentiality, respect patients' dignity and privacy, and understand the importance of appropriate consent.

d) Respect all patients, colleagues and others regardless of their age, colour, culture, disability, ethnic or national origin, gender, lifestyle, marital or parental status, race, religion or beliefs, sex, sexual orientation, or social or economic status. Graduates will respect patients' right to hold religious or other beliefs, and take these into account when relevant to treatment options.

e) Recognize the rights and the equal value of all people and how opportunities for some people may be restricted by others' perceptions.

f) Understand and accept the legal, moral and ethical responsibilities involved in protecting and promoting the health of individual patients, their dependants and the public - including vulnerable groups such as children, older people, people with learning disabilities and people with mental illnesses.

g) Demonstrate knowledge of laws, and systems of professional regulation through the GMC and others, relevant to medical practice, including the ability to complete relevant certificates and legal documents and liaise with the coroner or procurator fiscal where appropriate.

Reflect, learn, and teach others.

a) Acquire, assess, apply and integrate new knowledge, learn to adapt to changing circumstances and ensure that patients receive the highest level of professional care.

b) Establish the foundations for lifelong learning and continuing professional development, including a professional development portfolio containing reflections, achievements and learning needs.

c) Continually and systematically reflect on practice and, whenever necessary, translate that reflection into action, using improvement techniques and audit appropriately - for example, by critically appraising the prescribing of others.

d) Manage time and priorities tasks, and work autonomously when necessary and appropriate.

e) Recognize own personal and professional limits and seek help from colleagues and supervisors when necessary.

f) Function effectively as a mentor and teacher including contributing to the appraisal, assessment and review of colleagues, giving effective feedback, and taking advantage of opportunities to develop these skills.

Learn and work effectively within a multi-professional team.

a) Understand and respect the roles and expertise of health and social care professionals in the context of working and learning as a multi- professional team.

b) Understand the contribution that effective interdisciplinary team- working makes to the delivery of safe and high-quality care.

c) Work with colleagues in ways that best serve the interests of patients, passing on information and handing over care, demonstrating flexibility, adaptability and a problem-solving approach.

d) Demonstrate ability to build team capacity and positive working relationships and undertake various team roles including leadership and the ability to accept leadership by others.

Protect patients and improve care.

a) Place patients' needs and safety at the center of the care process.

b) Deal effectively with uncertainty and change.

c) Understand the framework in which medicine is practiced in the UK, including: the organization, management and regulation of healthcare provision; the structures, functions and priorities of the NHS; and the roles of, and relationships between, the agencies and services involved in protecting and promoting individual and population health.

d) Promote, monitor and maintain health and safety in the clinical setting, understanding how errors can happen in practice, applying the principles of quality assurance, clinical governance and risk management to medical practice, and

understanding responsibilities within the current systems for raising concerns about safety and quality.

e) Understand and have experience of the principles and methods of improvement, including audit, adverse incident reporting and quality improvement, and how to use the results of audit to improve practice.

f) Respond constructively to the outcomes of appraisals, performance reviews and assessments.

g) Demonstrate awareness of the role of doctors as managers, including seeking ways to continually improve the use and prioritization of resources,

h) Understand the importance of, and the need to keep to, measures to prevent the spread of infection, and apply the principles of infection prevention and control,

i) Recognize own personal health needs, consult and follow the advice of a suitably qualified professional, and protect patients from any risk posed by own health,

j) Recognize the duty to take action if a colleague's health, performance or conduct is putting patients at risk.

Practical procedures for graduates

Diagnostic procedures

1. *Measuring body temperature.* - Using an appropriate recording device

2. *Measuring pulse rate and blood pressure.* - Using ,manual techniques and automatic electronic devices

3. Trans-cutaneous monitoring of a oxygen saturation. - Applying and talking readings from an electronic device which measures the amount of oxygen in a patient's blood

4. Venipuncture. - Inserting a needle into a patient's vein to take a sample of blood for testing or to give an injection into the vein.

5. Managing blood samples correctly. - Making sure that blood samples are placed in the correct containers, and that these are labelled correctly and sent to the laboratory promptly and in the correct way. Taking measures to prevent spilling and contamination.

6. Taking blood cultures. - Taking samples of venous blood to test for the growth of infectious organisms in the blood. Requires special blood containers and laboratory procedures.

7. Measuring blood glucose. - Measuring the concentration of glucose in the patient's blood at the bedside, using appropriate equipment and interpreting the results.

8. *Managing an electrocardiograph (ECG) monitor.* - Setting up a continuous recording of the electrical activity of the heart. Ensuring the recorder is functioning correctly, and interpreting the tracing.

9. *Performing and interpreting a 12-lead electrocardiograph.* Recording a full, detailed tracing of the electrical activity of the heart, using an (ECG) machine recorder (electrocardiograph). Interpreting the recording for signs of heart disease.

10. *Basic respiratory function tests.* - Carrying out basic tests to see how well the patient's lungs are working (for example, how much air they can breathe out in one second).

11. *Urinalysis using Multistix.* - Testing a sample of urine for abnormal contents, such as blood or protein. The urine is applied to a plastic strip with chemicals which change colour in response to specific abnormalities.

12. *Advising patients on how to collect a mid-stream urine specimen.* - Obtaining a sample of urine from a patient, usually to check for the presence of infection, using a method which reduces the risk of contamination by skin bacteria.

13. *Taking nose, throat and skin swabs.* - Using the correct technique to apply sterile swabs to the nose, throat and skin.

14. *Nutritional assessment.* - Making an assessment of the patient's state of nutrition. This includes an evaluation of their diet; their general physical condition; and measurement of height, weight and body mass index.

15. *Pregnancy testing.* - Performing a test of the urine to detect hormones which indicate that the patient is pregnant.

Therapeutic procedures

16. *Administering oxygen.* - Allowing the patient to breathe a higher concentration of oxygen than normal, via a face mask or other equipment.

17. *Establishing peripheral intravenous access and setting up an infusion; use of infusion devices.* - Puncturing a patient's vein in order to insert an indwelling plastic tube (known as a 'cannula'), to allow fluids to be infused into the vein (a 'drip'). Connecting the tube to a source of fluid. Appropriate choice of fluids and their doses. Correct use of electronic devices which drive and regulate the rate of fluid administration.

18. *Making up drugs for parenteral administration.* - Preparing

medicines in a form suitable for injection into the patient's vein. May involve adding the drug to a volume of fluid to make up the correct concentration for injection.

19. *Dosage and administration of insulin and use of sliding scales.* - Calculating how many units of insulin a patient requires, what strength of insulin solution to use, and how it should be given (for example, into the skin, or into a vein). Use of a 'sliding scale' which links the number of units to the patient's blood glucose measurement at the time.

20. *Subcutaneous and intramuscular injections.* - Giving injections beneath the skin and into muscle.

21. *Blood transfusion.* - Following the correct procedures to give a transfusion of blood into the vein of a patient (including correct identification of the patient and checking blood groups). Observation for possible reactions to the transfusion, and actions if they occur.

22. *Male and female urinary catheterisation.* - Passing a tube into the urinary bladder to permit drainage of urine, in male and female patients.

23. *Instructing patients in the use of devices for inhaled medication.* - Providing instructions for patients about how to use inhalers correctly, for example, to treat asthma.

24. *Use of local anaesthetics.* - Using drugs which produce numbness and prevent pain, either applied directly to the skin or injected into skin or body tissues.

25. *Skin suturing.* - Repairing defects in the skin by inserting stitches (normally includes use of local anaesthetic).

26. *Wound care and basic wound dressing.* - Providing basic care of surgical or traumatic wounds and applying dressings appropriately.

27. *Correct techniques for 'moving and handling' including patients.* -Using, or directing other team members to use, approved methods for moving, lifting and

handling people or objects, in the context of clinical care, using methods that avoid injury to patients, colleagues, or oneself.

General aspects of practical procedures

28. *Giving information about the procedure, obtaining and recording consent, and ensuring appropriate aftercare.* - Making sure that the patient is fully informed, agrees to the procedure being performed, and is cared for and watched appropriately after the procedure.

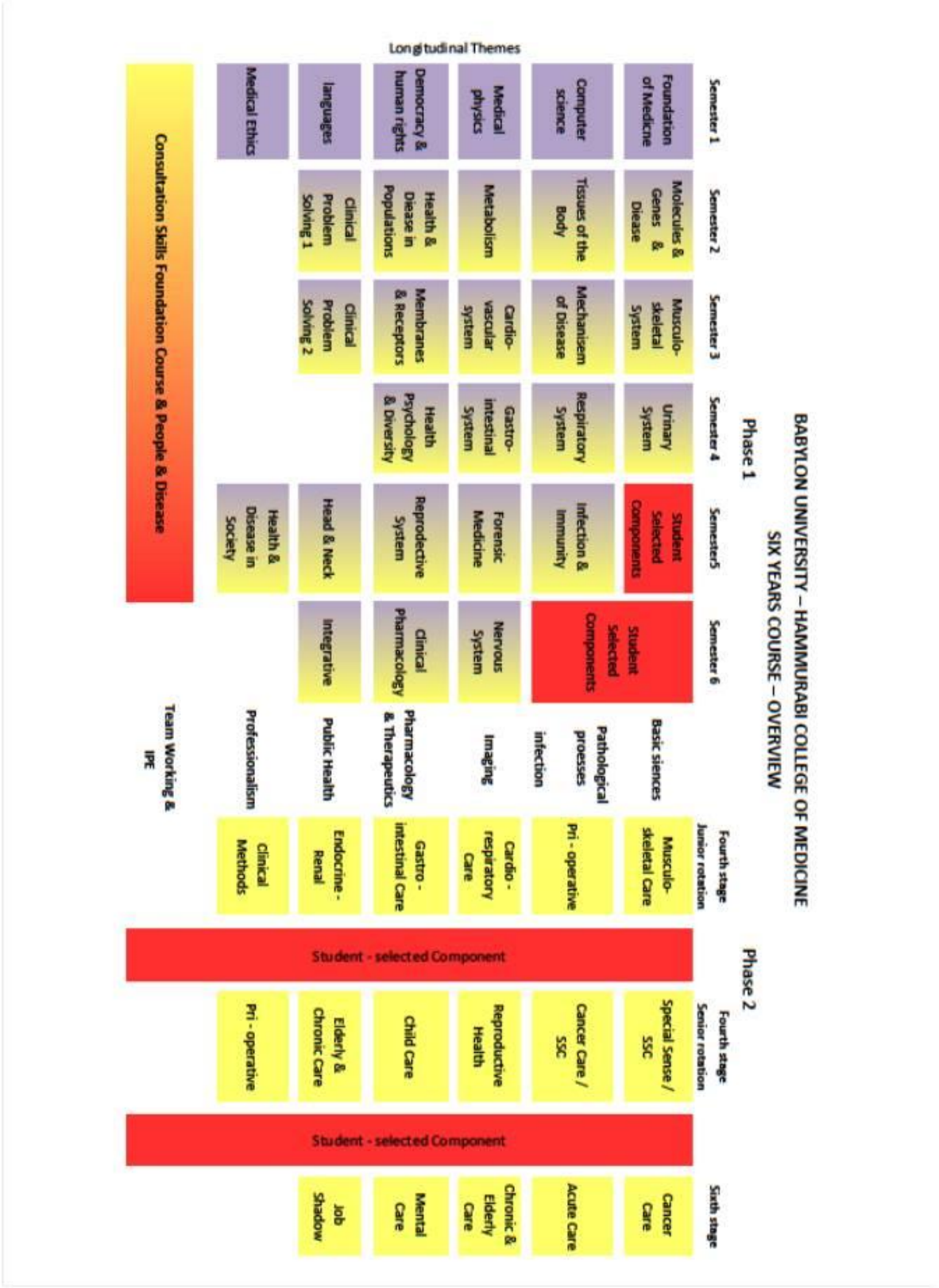
29. *Hand washing (including surgical 'scrubbing up').* - Following approved processes for cleaning hands before procedures or surgical operations.

30. *Use of personal protective equipment (gloves, gowns, masks).* -Making correct use of equipment designed to prevent the spread of body fluids or cross-infection between the operator and the patient.

31. *Infection control in relation to procedures.* - Taking all steps necessary to prevent the spread of infection before, during or after a procedure.

32. *Safe disposal of clinical waste, needles and other 'sharps'.* Ensuring that these materials are handled carefully and placed in a suitable container for disposal.

The structure of the curriculum



Assessment

General principles of assessment:

• Since passing exams is the main concern of all students in all parts of the world, therefore, it was necessary for exams to be a major component of the modern curriculum, and its philosophy in modern curricula is to employ this obsession among students for the purpose of improving their skills and directing their performance in a way that achieves the final outcome. What is expected of the graduate, that is, exams should be a means to raise and develop learning capabilities, and not only aim for success or failure.

• Since this curriculum depends on integration between academic subjects, it was necessary for the exams to also be according to the principle of integration in learning (Integration System), as the desired change in updating the curriculum will not be achieved if the state of the exams remains as it is now.

• The student must remember that the test of what he learns during medical study does not revolve around passing the exam, but rather the extent to which he is able to deal with the clinical problems he faces as a doctor. His attempt to "cheat the teaching system" will do him little good for his patient or himself. Likewise, if the student plans to leave the classroom with minimal learning, he will then find it difficult to adapt to the clinical responsibilities of a rotating resident.

The tests at each stage do not aim to determine what should be learned, but the desired outcomes of the graduate have been set for this purpose.

• The tests are designed to check whether the student has the necessary competence to continue to the next stage of study or whether he should be asked to put in more effort

• Grades will not be awarded, and grades will not be divided in any way. Rather, only the result (pass or fail) will be given.

• There are formative assessment tests during each semester unit that are conducted to evaluate the student’s understanding of the scientific material during his studies. It is without grades and is an important means for the professor to evaluate the student’s scientific response and give instructions to correct any defect.

• A final summative assessment will also be conducted to evaluate the student in terms of linking subjects across semester units at the end of each semester, as at the

end of the semester there will be only one integrative exam (end semester exam ESA) and this exam combines all the subjects studied in that semester.

This exam consists of two papers at the end of each semester that includes all units in that semester.

• There is an annual examination for each module and block.

• By the end of the first phase the student:

• Will be able to communicate with patients, study and examine them clinically and will have a good understanding of the structure and function of parts of the human body and how this relates to health and disease.

• Can appreciate the psychological and social contexts of health and illness.

Examination Committee:

First: This committee consists of:

1- Responsible for the Examinations Committee (assessment leader) as Chairman

2- Vice Chairman of the Committee

3- The scientific official in the committee

4- The administrative officer in the committee

5- A member representing each semester, S1-S5

6- A member for each of the end-of-first-cycle exams and for each year in the second cycle.

7- Member responsible for clinical examinations administration

8- Member responsible for administering elective unit exams

The Chairman of the Examinations Committee, in agreement with the Director of the Medical Department, may add members to the committee as needed.

Second:

The Examinations Committee performs the following tasks:

1. Setting exam questions and correcting exam books is the responsibility of the Examinations Committee, in cooperation with the heads of the semester units, as it forms committees to write questions for each semester of the college's stages,

along with developing model answers for them and storing them in the question bank so that there is flexibility in choice.

2. Supervise the clinical examinations through the clinical examination officials.

Objective Structured Clinical Examination (OSCE) for the classes in which this exam is held, where you prepare for it in terms of preparing the place, the professors involved, and preparing the clinical cases and exam stations.

3. Monitoring clinical skills and communication abilities among students through professional follow-up officials.

4. Managing examination operations of all types, arranging and monitoring preparations for them (organizing halls, distributing halls, monitoring the final examination schedule, preparing signature sheets, photocopying examination questions) and receiving and delivering question and answer papers.

5. Follow up on exam results, announce them to students, and follow up on objections.

6. Carrying out the process of documenting, delivering, receiving, and archiving all tasks related to tests

7. Informing about exam instructions and following up on their implementation and adherence to them.

8. Completing the evaluation of the exams through statistics prepared for this purpose

Assessment mechanism:

First: Exams for the first semester of the first stage (S1):

It is similar to traditional exams, where each subject is tested separately with a theoretical test only, or a theoretical and practical test, depending on each module. In the same context, the forensic medicine exam is in the third stage (S5).

Second: Semester tests (S2-S6)

At the end of each semester, there will be an end-of-semester examination (End Semester Assessment), symbolized by the abbreviation (ESA), so there is from ESA2 to ESA5.

At the end of the first phase, the end-of-semester assessment (End Phase 1 Assessment) will be conducted, symbolized by (EPA) is scheduled for short at the end of the sixth semester of the phase I, and it determines the student's transition to the phase II.

Type of exam:

A: The written exam (paper or electronic): It is an integrative exam with two papers. The first paper is medical cases with short-answer questions, and the second paper is questions of the appropriate choice. This exam is conducted at the end of each semester and includes all the semester units in that semester.

B: Clinical and practical exam: There is a clinical and practical exam at the end of S3, S4, S5, S6, which includes the IUP exam. (integrated understanding practical exam) and the OSCE (Objective structured clinical examination), which is a system of exam stations, and the number of stations varies depending on the academic stage. For the first stage, there is an exam (OSCE + IUP) only at the end of S2 .

Third: Evaluating the components selected by the student

The components chosen by the student must be passed separately from the core semester units, and the evaluation in these semester units depends on the student obtaining a score of satisfactory completion of the optional component.

Fourth: Evaluation of the chapter "Living with Long-Term Conditions"

This lesson must also be passed separately from the basic semester units, as this lesson continues from the beginning of the third academic year to the end of the year, with an evaluation test in the form of an essay given in the third academic year.

Fifth: Second phase tests:

In the second phase, there is only one exam at the end of each year (IPE1, IPE2, FPE), similar to the written exam in the first phase, with a clinical exam (OSCE) and an objective structured long examination record (OSLER).

Phase one

First Stage of Study											
Semester One (S1)						Semester Two (S2)					
Course study		Theory	Practical	Discussion	Credits	Course study		Theory	Practical	Discussion	Credits
Name	Code					Name	Code				
Foundations of medicine	11101FM	30	-	30	4	Molecules, Genes and Disease	11207MGD	30	-	30	4
Computer	11102Co	30	30	-	3	Tissues of the body	11208TOB	30	30	30	5
Medical physics	11103MP	30	60	-	4	Metabolism	11209Met	30	-	30	4
Human Rights	11104HR	30	-	-	2	Health and disease in Population	11210HDP	30	-	30	4
English language	11105EL	30	-	15	3	Clinical Problem Solving 1	11211CPS	30	-	30	4
Medical Ethics	11106ME	30	-	-	2	Clinical skills foundation course	11212CSFC	-	-	30	2
Total credits					18	Total credits					23
Total number of study units (41)											

Second Stage of Study											
Semester Three (S3)						Semester Four (S4)					
Course study		Theory	Practical	Discussion	Credits	Course Name		Theory	Practical	Discussion	Credits
Name	Code					Name	Code				
Musculoskeletal system	12313MSK	30	30	30	5	Urinary system	12419Uri	30	30	30	5
Mechanisms of disease	12314MOD	30	30	30	5	Gastrointestinal system	12420GIT	30	30	30	5
Membranes and receptors	12315MR	30	-	30	4	Respiratory system	12421Res	30	30	30	5
Cardiovascular	12316CVS	30	30	30	5	Health psychology and diversity	12422HPD	30	-	30	4
Clinical problem solving 2	12317CPS	-	-	30	2						
Clinical skills foundation course	12318CSFC	-	-	30	2	Clinical skills foundation course	12423CSFC	-	-	30	2
Total credits					23	Total credits					21
Total number of study units (44)											

Third Stage of Study											
Semester Five (S5)						Semester Six (S6)					
Course study		Theory	Practical	Discussion	Credits	Course Name		Theory	Practical	Discussion	Credits
Name	Code					Name	Code				
Infection and immunity	13524II	30	-	30	4	Pharmacology	13631Pha	30	-	30	4
Reproduction	13525Rep	30	30	30	5	Nervous system	13632NS	30	30	30	5
Head and neck	13526HN	30	30	30	5	Integrative	13633Int	30	-	30	4
Health and disease in society	13527HDS	30	-	-	2	People and disease	13634PD	-	90	-	3
Forensic medicine	13528FM	15	-	-	1	Selected components	13635SC	15	-	-	1
Selected components	13529SSC	15	-	-	1	Clinical skills foundation course	13636CSFC	-	30	30	3
Clinical skills foundation course	13530CSFC	-	-	30	2						
Total credits					20	Total credits					20
Total number of study units (40)											

Phase two

Fourth Stage of Study					
Course study		Theory	Clinical	Discussion	Credits
Name	Code				
Musculoskeletal care	24037MSC	30	180	30	10
Cardio-Respiratory care	24038CRC	30	180	30	10
Gastrointestinal care	24039GIC	30	180	30	10
Endocrine-Renal care	24040ERC	30	180	30	10
Clinical methods	24041CM	-	60	-	2
Selected components	24042SC	-	60	-	2
Total number of study units (44)					44

Five Stage of Study					
Course study		Theory	Clinical	Discussion	Credits
Name	Code				
Special senses care	25043SpSC	30	180	30	10
Child care	25044ChC	30	180	30	10
Reproductive care	25045RC	30	180	30	10
Perioperative care	25046PC	30	180	30	10
Selected components	25047SC	-	60	-	2
Total number of study units (42)					42

Sixth Stage of Study					
Course study		Theory	Clinical	Discussion	Credits
Name	Code				
Cancer care	26048CC	30	150	30	9
Acute care	26049AC	30	150	30	9
Chronic and elderly care	26050CEC	30	150	30	9
Mental care	26051MC	30	150	30	9
Job shadow	26052JS	-	300	-	10
Total number of study units (46)					46

Sum units number of Phase one + Phase two	
Phase one	125
Phase two	132
Total	257

Academic weights for study stages from first to third (phase one) and from fourth to sixth (phase two)							
Phase One	%40	First stage	%9	Semester one	%2	Semester two	%7
		Second stage	%14	Semester three	%7	Semester four	%7
		Third stage	%17	Semester five	%7	Semester six	%10
Phase Two	%60	Fourth stage	%18				
		Fifth stage	%18				
		Sixth stage	%24				
Sum of Phases			100%				

Notes:

1. Every (15) hours in theoretical study or small groups are equivalent to one study unit.
2. Every (30) hours in practical labs or clinical training are equivalent to one study unit.

PHASE ONE

FIRST YEAR (S1 , S2)

TOTAL SEMESTERS

CREDITS 41

Semester One

Total Credits 18

Course study Name	theory	Practical	discussion	credits
Foundation of Medicine	30	-	30	4
Computer	30	30	-	3
Medical physics	30	60	-	4
Human Rights	30	-	-	2
English language	30	-	15	3
Medical Ethics	30	-		2

Foundation of Medicine

Credits 4

Theory hours 30

Practical hours 0

Tutorial hours 30

Most learners find the structure of the body and its diseases very interesting to learn. However, over the years, and many of the students struggle with the written material to be learned . In this module we aim to make it easy and enjoyable for every student to learn anatomy, physiology, medical terminology, and pathology.

The organization of this module is based on the body-system approach. In the starting sessions we outline the proper way to analyze terms, then presents basic body organization and introduces the common anatomical roots.

Then introduces suffixes and prefixes and explains how the body is organized. The remaining sessions are each devoted to one or more body system.

Each session begins with a very brief outlines in point form. This is followed by the learning objectives for the session , also in point form, and a brief introduction. In the body system sessions , an illustration of the body system to be studied immediately follows the introduction. The purpose is to provide a broad overview of the body system before details are presented.

Each session has diagrams illustrating body structure, function, and disease. The text associated with the diagrams is as simple as possible. Regular review is accomplished by the use of sidebars that contain brief summaries.

Vocabulary building is presented throughout each session . Near the end of each chapter is a list of common system-specific terms and their pronunciation.

Quizzes with answers included throughout each session allow learners to test themselves on the content presented before moving on to new content in the session.

Aims of the module:

This module is designed in a way to make it easy for the medical student to read , understand and communicate with others if he want to study a medical lecture, article, reading a discharge summary for a patient, at the medical college or in his daily life, even if he is just started his study in first year of the medical faculty and even if he did not studied that medical subject or that specialty, as the module is concerning with medical terminology other than digging in medical sciences and subspecialties.

Objectives of the module:

In the session one it will include:-

A- Basic word structure :

- Define a root, suffix, and prefix.
- Distinguish between roots, suffixes, and prefixes in a medical word.
- Learn the basic rules of medical word structure.
- Write the meaning of the roots, suffixes, and prefixes found in this chapter.
- Build medical words.
- Define medical words.

B- Basic body structure :

- Define anatomy and physiology.
- Describe how the body is organized.
- Define cells, tissues, organs, and systems.
- Name 12 body systems and the common organs found in each system.
- Define roots pertaining to the body systems.

Session two (common suffixes and prefixes)

A- common suffixes.

- Spell and define common suffixes.
- Identify suffixes used to convert medical nouns to adjectives.

B- common prefixes.

- State the meaning of prefixes found in this chapter.
- Identify prefixes that have the same meaning.
- Identify prefixes that have the opposite meaning.

Session three (Body organization and Integumantary system)

A- Body organization

- Name the cavities of the body and their related organs.
- Define the anatomical position.
- Define common terms used for directions.
- Name and locate the abdominopelvic regions.
- Name and locate the abdominopelvic quadrants

B- Integumantary System

- Identify the cells, tissues, and accessory structures of the system.
- Identify the layers of the skin and describe the structures found in these layers.
- List the functions of the skin.
- Describe common diseases of the system.

Session four (skeletal and muscular systems).

A- skeletal systems:

- Name and locate the major bones of the body.
- Describe the structure and functions of bones and joints.
- Pronounce, spell, and define the medical terms related to the skeletal system.
- Describe the common diseases related to the skeletal system.

B- muscular systems :

- muscle tissue and state the location of each.
- Name and define types of muscular movement.
- Name, locate, and state the function of common skeletal muscles.

- Pronounce, spell, define and write the medical terms related to the muscular system.
- Describe common diseases related to the muscular system.

Session five (Nervous system ,Eyes , Ears and -Digestive system)

A- Nervous system ,Eyes , Ears :

- Name and describe the divisions of the nervous system.
- State the function of nerve cells ,eye, and ear.
- Name, locate, and describe the structures and functions of the brain and spinal cord.
- Describe the peripheral nervous system.
- Pronounce, spell, define, and write the medical terms related to the nervous system, eye and ear.
- Describe common diseases related to the nervous system. eye and ear..

B- Digestive system

- Name and locate the organs of the digestive system.
- Describe the structures and functions of the organs of the digestive system.
- Pronounce, spell, define, and write the medical terms related to the digestive system.
- Describe common diseases related to the digestive system.

Session six (Blood ,Lymphatic's, Immune System and Cardiovascular System)

A- Blood ,Lymphatic's, Immune System:

- Name and describe the functions of the major components of blood.
- Pronounce, spell, define, and write the medical terms related to the blood. lymphatic and immune systems.
- Describe common diseases of the blood, lymphatic and immune systems.

- Locate and describe the organs of the lymphatic system.
- Define terms relating to the immune system.

B- Cardiovascular system:

- Name and locate the major organs of the cardiovascular system.
- Name, locate, and describe the structures of the heart and associated blood vessels.
- Describe the function of the heart and blood vessels.
- Name common blood vessels.
- Pronounce, spell, define, and write the medical terms related to the cardiovascular system.
- Describe common diseases related to the cardiovascular system.

Session seven (Respiratory system and Urinary System)

A- Respiratory system:

- Locate and describe the organs of the respiratory system.
- Describe the functions of the respiratory structures.
- Pronounce, spell, define, and write the medical terms related to the respiratory system.
- Describe common diseases of the respiratory system.

B- Urinary System:

- Name and locate the organs of the urinary system.
- Pronounce, spell, define, and write the medical terms related to the urinary system.
- Describe common diseases of the urinary system.

Session eight (Male , Female Reproductive System and Endocrine System)

A- Male , Female Reproductive System:

- Name and locate the organs of the male and female reproductive system.

-Describe the structures and functions of the male and female reproductive system.

- Describe common diseases of the male reproductive system.

- Define terms related to obstetrics.

- Describe common diseases of the male and female reproductive system

- Pronounce, spell, define, and write the medical terms related to the male and female reproductive system.

B- Endocrine System :

- Define endocrine glands and hormones.

-Name the endocrine glands and the hormones they secrete.

- Describe the structure and location of the endocrine glands.

- Pronounce, spell, define, and write the medical terms related to the endocrine system.

- Describe common diseases related to the endocrine system.

Module structures:

Pre –reading: the work book is already containing all the information needed for the student. Throughout the module, it includes the time tables , the venues, for the lectures and the tutorials, the lecture in a form of word fonts with all the diagram and needed tables, beside the Important exercises.

During the session: the session will be started with lecture as a power point presentation ,then student moves to the small group discussion room to participate in the related tutorials with his colleagues which runt under supervision of the Tutor Each session will include two lectures and two tutorials.

After the session.

The student may need to continue his learning by using the related web sites, finishing the home work assignments at the college website (formative exams) and some quizzes related to that session, or previous sessions. Beside the related textbooks of medical terminology or medical Atlas.

Module Assessment and Feedback Formative Assessments (for feedback purposes)
You will be able to check your own progress by:

- Completing self-study questions. Attending three viva voce.
- Completing related questions in the module book.

Textbooks Preferred:

Illustrated Guide to Medical Terminology. Second Eddition.Juanita.J.Davies

Computer Science

Credits 3

Theory hours 30

Practical hours 30

Tutorial hours 0

المقدمة:

دخل الحاسوب جميع المجالات العلمية، التطبيقية منها والاكاديمية، واصبح من الضروري على الجميع في شتى التخصصات ان يكون ملم ا بالقواعد الاساسية للتعامل مع الحاسوب وادارته ولو بالحد الادنى للوصول للهدف الذي يسعى المستخدم لتحقيقه باستخدام الحاسوب من حيث :انجاز المشاريع، وامور الطباعة، واعداد الاحصائيات والرسوم البيانية، وانشاء العروض التقديمية، وتصاميم المخططات الهندسية ... الخ.
من خلال تطور الحاسوب الرقمي، ظهر الانترنت كوسيلة تواصل غير مملوكة ومتاحة للجميع ، وذو دور مهم في العديد من المجالات ، منها التعليم والابحاث العلمية والتجارة والتسويق، عن طريق المراسلات الالكترونية وصفحات الويب والتحدث الالكتروني ...الخ.
لقد تم اعداد هذا المنهج الدراسي ليكون مدخلا الى اساسيات الحاسوب وتطبيقاته المكتبية ليوافق منهج طلبة الدراسات الاولية في الجامعات العراقية.

وصف المنهاج الدراسي(Course module description):

الهدف من هذا المنهاج الدراسي (Course module) هو تطوير فهم اساسيات ومعرفة مكونات وتشغيل منظومة الحاسوب بما في ذلك معرفة المكونات الاساسية للحاسوب واطوار واجيال صنع الحاسوب وتصنيف انواعه، ولاغراض متعددة بالاضافة الى تعلم كيفية التصفح بمواقع الانترنت وتعريف مفهوم امن الحاسوب وتراخيص البرمجيات ومدى اهميته بالوق الحاضر لكون العالم اصبح عالم تكنلوجيا المعلومات و ذكاء صناعي . ويهدف ايضا الى معرفة نظم تشغيل الحاسوب وبالخصوص نظام تشغيل Windows 7 وامكانياته لتقديم كافة المتطلبات والتسهيلات للمستخدم.

المخرجات المتوقعة من المساق:

في نهاية المنهاج يتوقع من الطلاب ان يكونوا قد تعلموا:
- مبادئ واساسيات الحاسوب وتطبيقاته
- مكونات الحاسوب المادية والبرمجيات
- امن الحاسوب وتراخيص البرمجيات
- الخصائص المهمة لانظمة تشغيل الكومبيوتر الحديثة واجهزة الاتصالات كالهواتف الذكية النقالة
- حزمة التطبيقات Microsoft Office 2010

ملخص المنهاج(الجدول الزمني):

يوضح الجدول الزمني ادناه الجلسات(المحاضرات) المتوقع تغطيتها اسبوعي ا .تبدا كل جلسة عادة بمحاضرة(حصة نظرية) لمدة ساعتين ثم محاضره عملية لمدة ساعتين ايضا.

1. مقدمة عامة عن الحاسوب
2. مبدا عمل الحاسوب وانواع الحاسوب
3. انظمة العد الرقمية في الحاسوب
4. النظام العشري والثنايي والتحويل بينهما
5. مكونات الحاسوب المادية والبرمجيات
6. وحدة المعالجة المركزية CPU واللوحة الام motherboard
7. نظام تشغيلWindows 7
8. مكونات سطح المكتب(الايقونات)
9. لوحة التحكم وشريط المهام
10. انشاء ملف ومجلد
11. الانترنت والاتصالات الحديثة
12. مراجعة ومناقشة نتائج الامتحان الاول

Medical Physics

Credits 4

Theory hours 30

Practical hours 60

Tutorial hours 0

Introduction:

The term medical physics refers to two major areas: the first area is the Applications of Physics to the function of the human body in health and disease; These could be called the physics of physiology. The second area is the Applications of physics in the practice of the medicine such as the physics of the stethoscope, the tapping of the chest(percussion),and the medical applications of lasers and ultrasound radiation .

Aims of the module :

The aims of this module can be summarized as following:

1- Knowledge and understanding of physical laws and their applications in medical physics.

2- Knowledge of medical imaging principles, techniques and applications using X-rays, radionuclides, ultrasound, and optical radiation.

3- Ability to identify relevant principles and laws when dealing with certain investigational tools in health and disease state.

4- Knowledge of the principles and applications of radiation as a therapeutic techniques.

5- Problem-solving skills; in the context of both problems with well-defined solutions and open-ended problems of applications of physics laws to health sciences.

6- Analytical skills; associated with the need to pay attention to detail, to construct logical arguments and to use technical language correctly.

Structure of the Module:

These modules will occupy (8) weeks including (16) lectures (2hr/week) , (8) medical physics lab, (8) hospital works and small group work (2hr/day)

Venues
Lectures will be held in the main lectures hall. Group work and tutorials will take place as follows:

Hospital work
Regulated visits are organized to the teaching hospital.

Group Work
During these sessions a variety of visual material will be presented and you will be expected to answer associated questions working together in your groups.

References:

Medical physics by Cameron.
Chrestens' physics of diagnostic radiology.
Physics in biology and medicine (Third Edition).

Assessment:

At the end of the first semester there will be a separate summative assessment and the next exam will be at the end of first year.

Sessions

Session1

Lecture 1:Forces on and in human body

Lecture Objectives:

1. The fundamental origins of forces.
2. Types of problems involving forces on body.
3. Effects of the acceleration.

Lecture 2: Physics of the Skeleton:

Lecture Objectives:

1. Understand the physics of skeleton, (the function of the bone).
2. Measurement of bone mineral.
3. Calcium homeostasis and the role of calcium in the bone formation and strength.

Session 2

Lecture 3: Physics of diagnostic X-Rays

Lecture Objectives:

Definition of X-Ray.

1. Processes of X-Ray and medical application.
2. Factors affecting X-Ray image.
3. Biological effects of radiation

Lecture 4: Pressure

Lecture Objectives:

Definition of pressure.

1. How can pressure affect our various body parts and organs
2. Measurement of pressure in the body.
3. Knowledge of the principles of pressure when dealing with certain investigational tools in disease state.

Session 3

Lecture 5: Heat and Cold in Medicine

Lecture Objectives:

1. Definition of Temperature
2. Types of thermometers
3. Heat Therapy Methods
4. How heat and cold can be used in Medicine
5. To get information about cryogenic method

Lecture 6: Energy, work, and power of human body

Lecture Objectives:

1. Knowledge of the principles of energy, work and power when dealing with certain investigational tools in disease state.
2. Definition of BMR and physical factors affecting it.
3. Methods of heat losing.
4. To get information about thermography applications.

Session4:

Lecture 7: Sound in medicine

Lecture Objectives:

1. To get information about general properties of sound.
2. Characteristics of human body.
3. Physics of stethoscope.
4. Applications of audible sound in medicine.
5. Doppler Effect in medicine.
6. Physiological effects of ultrasound in therapy.

Lecture 8: Physics of the ear and hearing

Lecture Objectives:

1. Mechanical principle of hearing process.
2. Physical aspect of ear and hearing.
3. Sensitivity of the ear.
4. Hearing loss (Deafness) and hearing aids.

Session5

Lecture 9: Physics of light and laser

Lecture Objectives:

1. Knowledge of the physical properties of light.
2. To get information about applications of light in medicine.
3. To get information about the principle of using laser in medicine.

Lecture 10: Physics of eyes and vision

Lecture Objectives:

1. Physical principle of vision.
2. The effect of diffraction of light in the process of vision.
3. How eyes focus on object?
4. Physics of different focusing diseases and their correction.

Session6

Lecture 11: Electricity within the body

Lecture Objectives:

1. Definition of electrical potential of nerves.
2. The application of electrical potential within various body parts like brain (EEG), heart (ECG) and (EMG) methods about the muscle.

3. Current research involves electricity in the body.

Lecture 12: Physics of the lung and breathing
Lecture Objectives:
1. To get information about anatomy of respiratory system.
2. To get information about removal of inhaled particles.
3. To get information about measurement of lung volumes.
4. To get information about physics of alveoli.
5. To get information about physics of common lung diseases

Session7:
Lecture 13:Physics of Cardiovascular System(CVS)
Lecture Objectives:
1. The principle laws that govern the heart structure and function.
2. Blood pressure and its measurement.
3. Types of blood flow (laminar and turbulent) and application in diseases.

Lecture14: Cardiovascular instrumentation
Lecture Objectives:
1. Physical principles of different parts of ECG machine.
2. Physics of defibrillator and pacemakers.

Session 8
Lecture 15: Physics of nuclear medicine
Lecture Objectives:
1. Physics of radioactive source.
2. Applications of nuclear in medicine (treatment& diagnosis).
3. The basic equation for describing radioactive decay
4. Basic instrumentation and its clinical applications.

Lecture 16: Physics of radiation therapy
Lecture Objectives:
1. To get information about ionizing radiation and medical applications.
2. Important factors of treatment.
3. Dose units used in radiotherapy.
4. Treatment of tumors with radiotherapy.

Human Rights

Credits 2

Theory hours 30

Practical hours 0

Tutorial hours 0

المقدمة :

يحظى موضوع حقوق الانسان باهمية بالغة في العصر الحاضر وهذا لا يعني عدم الاهتمام به في العصور الماضية الى ان درجة الاهمية تباينت من عصر الى اخر وذلك ما ينطبق على مفهوم تلك الحقوق ايضا اذ كان مفهوم الحقوق والحريات في القرون الماضية ضيق لا يتعدى المساواة المدنية وحق الحرية والملكية ولكن كل ما تطورت الحياة اصبح المفهوم واسعا يضم صورا من الحقوق والحريات المتعددة وهو في اتساع مستمر والقول بوجود حقوق وحريات متعددة للافراد لا يراد به مباشرتها من دون وجود قانون ينظمها ويبين مداها ،ان تعدد انواع الحقوق والحريات وتقدم الوعي السياسي والثقافي و انتشار المبادئ الديمقراطية لا يعني ان حقوق الانسان اصبحت في منأى من تدخل السلطة الذي قد يصل الى حد اهدارها ولذلك لابد من وسائل توفر الحماية اللازمة لها.

وصف المنهج الدراسي:

الهدف من هذا المنهج الدراسي هو التعريف بحقوق الانسان وتمييز معنى الديمقراطية للتمكين من ممارسة الحقوق بصورة فعالة من خلال التنمية الشاملة للشخصية والاحساس بكرامتها واحترام حقوق الاخرين بما يتفق وقيم المجتمع الديمقراطي.

ملخص منهج الجدول الزمني:

يوضح الجدول الزمني ادناه المحاضرات المتوقع تغطيتها اسبوعيا لمدة ساعة واحدة في الاسبوع :

1. مدخل لمفهوم حقوق الانسان.
2. التطور التاريخي لفكرة حقوق الانسان.
3. فكرة حقوق الانسان في الشرائع السماوية.
4. الاسهام الفكري في تطور فكرة حقوق الانسان.
5. انواع الحقوق والحريات العامة.
6. ضمانات حقوق الانسان على الصعيد الداخلي

7. التعريف بالديمقراطية ومبادئها الاساسية.
8. انواع الانظمة السياسية من حيث ممارسة السلطة.
9. صور الديمقراطية.
10. الديمقراطية شبة المباشرة.

الضوابط والانظمة :

1. يعتبر الطالب راسبا في مادة حقوق الانسان والديمقراطية اذا تجاوز الحدد المقرر لغيابه للساعات المقررة.
2. يمنح الطالب درجة صفر من اصل 80 % اذا تغيب دون عذر خلال الامتحان التحريري.
3. يقدم الطالب تقرير عن مفردات المادة وتقييمة من 5 درجات.
4. يحصل الطالب على درجة سعي من 15 درجة.

مصادر مادة حقوق الانسان والديمقراطية :

1. كتاب حقوق الانسان د. حميد حنون
2. محاضرات عن الديمقراطية تدرس في جامعة بابل.

المنهاج

المحاضرة الاولى :مقدمة لمفهوم حقوق الانسان نتناول فيها مفهوم الحق لغة واصطلاحا ومفهوم الانسان من خلال بيان خاصية السلوك الاجتماعي له ومن ثم بيان مميزات شخصيته.

المحاضرة الثانية: سنتناول التطور التاريخي لفكرة حقوق الانسان نبين فية حقوق الانسان في العصور القديمة في المجتمعات الشرقية في حضارة بلاد وادي الرافدين ووادي النيل وفي الحضارة الغربية الحضارة، اليونانية والحضارة الرومانية ثم (العصور الوسطى) و(مطلع العصر الحديث.)

المحاضرة الثالثة: فكرة حقوق الانسان في الشرائع السماوية في الديانة المسيحية والشريعة الاسلامية كالحق في الحياة ،الحق في العقيدة ،حرية الراي ،الحق في المساواة، الحق في التعليم ،الحق في الخصوصية ،الحق في الملكية ،الحق في الحرية والحق في العمل.

المحاضرة الرابعة : الاسهام الفكري في تطور فكرة حقوق الانسان في العصور القديمة عند الاغريق والرومان والعصور الوسطى وعصر النهضة.

المحاضرة الخامسة: انواع الحقوق والحريات العامة(حقوق حريات عامة تقليدية) وهي حقوق وحريات شخصية ومنها الحق في الحياة ،الحق في الكرامة ، الحرية والسلامة الشخصية ،الحق في الخصوصية ،حرية التنقل والاقامة ،حق الجنسية ،حقوق وحريات فكرية وهي حرية العقيدة والدين ،حرية الراي ،حرية التعبير ،حق التجمع الاجتماعي ،حرية الصحافة وحرية الاذاعة والتلفزيون والسينما والمسرح ،حرية التعليم ،حق تكوين الجمعيات والاحزاب السياسية وحق المشاركة في ادارة الشؤون العامة نتناول فيها الحقوق السياسية وحق التوظيف وحق مخاطبة السلطات العامة وحق المساواة وحريات اقتصادية وحقوق اجتماعية.

المحاضرة السادسة: ضمانات حقوق الانسان على الصعيد الداخلي وهي ضمانات دستورية حيث تدرج حقوق الانسان وحرياته في صلب نصوص الدستور اضافة الى ضمانات دستورية اخرى وهي مبدا سيادة القانون ومبداالفصل بين السلطات.

المحاضرة السابعة : التعريف بالديمقراطية ومبادئها الاساسية.

المحاضرة الثامنة :انواع الانظمة السياسية من حيث ممارسة السلطة تقسم الى انواع رئيسية ثلاثة نظام الحكم الفردي ،نظام حكم الاقلية والنظام الديمقراطي.

المحاضرة التاسعة : صور الديمقراطية ونتناول فيها الديمقراطية المباشرة والغير مباشرة(النيابية او التمثيلية.)

المحاضرة العاشرة: الديمقراطية شبه المباشرة(نصف المباشرة) من مظاهر الديمقراطية شبه المباشرة الاستفتاء الشعبي و الاعتراض الشعبي و الاقتراح الشعبي واقالة الناخبين لنائبهم والحل الشعبي وعزل رئيس الجمهورية.

Medical English

Credits 3

Theory hours 30

Practical hours 0

Tutorial hours 15

Section One: Concepts Of Health And Wellness
Reading Section 1: Perspectives On Health Care In The New Millennium
Reading Section 2: Health Is A State Of Optimal Well-Being
Grammatical Spot: Section One
Participles

Section Two: Professional Caring
Reading Section 1: Professional Caring
Reading Section 2: Holistic Care
Reading Section 3: Health-Care Professionals: Members Of The Health-Care Team
Reading Section 4: Professional Caring: History Taking and The Illness Experience
Grammatical Spot: Section Two
Verbs: Past Tense ~ Regular Verbs
Verbs: Mixed Tenses

Section Three: The Drugstore
Reading Section 1: Drugstores and Pharmacists 3
Reading Section 2: Filling a Prescription
Grammatical Spot: Section Three
Root Words, Prefixes, and Suffixes in Medical Terminology
Opposites

Section Four: Callingthe Doctor's Office
Reading Section 1: Phone Call To A Doctor's Office
Grammatical Spot: Section Four
Word Formation: Nouns
Word Formation: Verbs
Odd One Out

Section Five: Anatomy and Physiology
Reading Section 1: Organization Of The Body
Reading Section 2 : The Musculoskeletal System
Grammatical Spot: Section Five
Nouns
Adjectives 4

Section Six: Treatments, Interventions and Assistance
Reading Section 1: Use Of Emergency Rooms
Reading Section 2: A Visit To The Walk-In Clinic
Grammatical Spot: Section Six
Prepositions
Good Advice

Section Seven : Wounds
Reading Section 1: Type Of Wounds
Grammatical Spot: Section Seven
Verbs: Active/Passive
Opposites : Prefixes

Medical Ethics

Credits 2

Theory hours 30

Practical hours 0

Tutorial hours 0

الاهداف العامة :

كيفيه تعامل طالب الطب والطبيب مع المرضى وزملائه ودراسة الاخلاقيات المتعلقة بالأدوية وشبكة المعلومات والبحوث الطبية.

الاهداف الفرعية:

1. كيفية معاملة المريض من الجانب الانساني والمهني
2. كيفية التعامل مع بقية الزملاء
3. معرفة وسائل الاتصال مع المريض
4. معرفة اسس اخلاقيات البحوث
5. كيفية التعامل مع الادوية والمستلزمات الطبية
6. كيفية التعامل مع شبكة المعلومات وتوظيفها لخدمة المريض

المنهاج

المحاضرة الاولى : علم الاخلاق الطبية العام , لمحة تاريخية:

الاهداف العامة: معرفة معنى الاخلاق وماهي نظريات الاخلاق واهميتها عبر التاريخ.

الاهداف الفرعية: معرفة الطالب عن علم الاخلاق عبر العصور وعن اهمية اتباع مبادى الاخلاق من نظرة تاريخية وان مبادئ الاخلاق عملية ديناميكية تتطور مع تطور العلوم الطبية والحاجة لاتباعها تبقى من ضروريات التزام الطبيب.

المحاضرة الثانية :مبادئ علم الاخلاق الطبية:

الاهداف العامة: إلمام ومعرفة طالب الطب بالمبادئ الاساسية التي يجب ان يتمسك بها كل من يعمل في مهنة الطب وشفاء المرضى وما يترتب عليه من امور في حالة الاخلال وعدم الالتزام بهذه المبادئ.

الاهداف الفرعية:

1. معرفة المبادي الاربع الواجب ان يعرفها طالب الطب.
2. شرح الابعاد الايجابية لاتباع تلك المبادئ والاثار السلبية المترتبة على
3. الطبيب في حالة اخلاله بهذه المبادي.
4. مناقشة بعض المحددات العامة لهذه المبادئ.
5. معرفة فيما لو يكون اي تداخل بين تلك المبادئ.

مخارج التعليم:
ان اتباع والتمسك بهذه المبادئ دليل على جودة الخدمات الصحية والطبية وهي من اهم المبادئ الواجب اتباعها في التعامل مع المرضى وعلى الطالب ان يعرف مدى فائدة معرفة هذه المبادئ وانعكاسها على العلاقة بين الطبيب والمريض وعلى عملية تقديم الخدمات الطبية الصحيحة.

المحاضرة الثالثة : المسؤولية الطبية(Physician Liability)

الاهداف العامة :معرفة المسؤولية الطبية وحدودها.
الاهداف الفرعية:

1. الالمام بتعريف المسؤولية الطبية.
2. التعرف على انواع المسؤولية الطبية.
3. ماهي حدود المسؤولية الطبية.

مخارج التعليم :في نهاية المحاضرة يتمكن الطالب من ادراك دور الطبيب في المسؤولية الطبية وطبيعتها.

المحاضرة الرابعة :اخلاقيات ومهارات الاتصال والعلاقة بين الطبيب والمريض وواجبات الطبيب تجاه مجتمعه.

الاهداف العامه : على طالب الطب والطبيب الالمام بعملية ومهارة الاتصال وبناء العلاقة الصحيحة والجيدة والناجحة مع المريض لتقديم الخدمات الطبية الجيدة

المحاضرة الخامسة :العلاقة بين الطبيب وزملائه:

الهدف العام :ان يتعلم طالب الطب كيفية بناء علاقه طيبه مع زملائه الاطباء والعاملين معه في المجال الصحي من غير الاطباء وماهي الاسس التي تبنى عليها هذه العلاقة.

المحاضرة السادسة : اخلاقيات التعامل مع الادوية والمستلزمات الطبية والتعامل مع المخدرات:

الهدف العام: ان يتعلم طالب الطب ان العقاقير والمستلزمات الطبية والمخدرات هي مواد خطرة على صحة الانسان اذا سيء استخدامها مما يضعه امام مسؤوليه اخلاقية وقانونية عند التعامل معها.

المحاضرة السابعة : اخلاقيات التعامل مع شبكة المعلومات:

الاهداف العامة: على الطالب معرفة النظام والقوانين الاخلاقية التي تحكم التعامل مع الانترنيت.

المحاضرة الثامنة : اخلاقيات البحوث الطبية:

الاهداف العامة :اطلاع طالب الطب والطبيب على الاسس الواجب اتباعها في اجراء البحوث الطبية على المريض.

Semester Two

Total Credits 23

Course Study Name	Theory	Practical	Discussion	Credits
Molecules, Genes and Disease	30	-	30	4
Tissues of the body	30	30	30	5
Metabolism	30	-	30	4
Health and disease in Population	30	-	30	4
Clinical Problem Solving 1	30	-	30	4
Clinical skills foundation course	-	-	30	2
Total credits				23

Molecules, Genes and Disease

Credits 4

Theory hours 30

Practical hours 0

Tutorial hours 30

Aim of The Module :

The aim of this module is that students should understand the general relationship between the processes involved in chromosome behaviour, gene expression and the activity of cells. Students should gain an understanding of the fundamental processes of inheritance and mutation and how these may affect patients. Students should appreciate the variety of protein structures necessary to carry out the range of cellular processes and be able to relate genes to nucleic acids and proteins in the overall process of gene expression, including protein synthesis and secretion. Students should gain an understanding of the use of molecular analyses in a clinical situation, and be aware of the ethical issues associated with it.

Pre-requisites:

At the beginning of this module the students should be able to:

• explain basic biological terminology and outline the fundamental principles of chemistry.

Summary of Intended Learning Outcomes:

By the end of the module students should be able to:

• Understand how basic cell structure relates to functional processes in the cell.

• Understand the chemistry of amino acids and how this relates to protein structure.

• Describe the action of enzymes and the major mechanisms for their regulation.

• Understand the link between the molecular structure and the physiological function of oxygen-transporting proteins.

• Recognise the structural components of nucleic acids and distinguish between RNA and DNA.

• Explain the relationship between DNA, chromosome and genes.

• Outline the general features of DNA replication and compare and contrast mitosis and meiosis.

• Outline the chromosomal basis of inheritance and understand the principles underlying pedigree analysis.

• Explain the principles of the genetic code and describe in general terms the processes of transcription, translation and post-translational modifications.

• Describe the different types of DNA mutation at the nucleotide and chromosomal levels.

• Understand the molecular methods used to analyse genes and proteins and appreciate the ways in which these methods are used in clinical situations and the ethical issues that may arise.

• Outline the molecular bases of a number of common inherited diseases.

Structure and Teaching Methods:

The module will be taught in 11 morning sessions containing a mix of activities that include lectures and supervised work sessions with students working in small groups. Additional reading and questions will be provided at the end of each session for self-directed learning. Blackboard will be used to support this self-study.

Sessions

Session 1: Introduction to the cell and biological molecules
Lecture: Introduction to the module
Lecture: Introduction to the cell Lecture: Amino acids and proteins
Work Session: Amino acids and proteins

Session 2: Protein structure and function
Lecture: Protein folding and action.
Lecture: Haemoglobin and myoglobin
Work Session: Protein structure and function

Session 3: Enzymes and enzyme regulation
Lecture: Enzyme activity.
Lecture: Regulatory strategies
Work Session: Enzymes and enzyme regulation

Session 4: DNA structure and chromosome organisation
Lecture: Nucleotides, DNA structure and chromosomes
Lecture: DNA replication and the cell cycle
Work Session: DNA structure

Session 5: Inheritance of genes
Lecture: Mitosis and meiosis, genotypes and phenotypes
Lecture: Genetic linkage and pedigree analysis
Work Session: Inheritance of genes

Session 6: Transcription and translation
Lecture: What is a gene and transcription
Lecture: The genetic code and translation
Work Session: transcription and translation

Session 7: Protein processing and targeting
Lecture: Protein processing in cells; the secretory pathway
Lecture: Proteolytic processing within the secretory pathway; collagen
Work Session: Control of cell growth

Session 8: Molecular diagnosis
Lecture: Molecular diagnosis 1
Lecture: Molecular diagnosis 2
Work Session and Lab demonstrations

Session 9: Mutations
Lecture: Mutagenesis and its effects
Lecture: Detecting mutations
Work Session: Mutations and their consequences

Session 10: Chromosomal abnormalities
Lecture: Chromosomal abnormalities 1
Lecture: Chromosomal abnormalities 2
Work Session: Chromosomal abnormalities

Session 11: Case studies
Work Session: Case studies Work
Session: Case studies

Session 12: Revision
Informal revision session

Assessments and Assessment Methods

Formative:
There will be a mid-module web-based formative assessment containing short answer questions that students will be able to complete in their own time.

Summative:
This module will be assessed on the basis of satisfactory attendance and also by performance in End of Semester Assessments (ESAs) and Objective Structured Clinical Exams (OSCEs) throughout Phase 1, including the Phase 1 Assessment and OSCE.

Tissues of the Body

Credits 5

Theory hours 30

Practical hours 30

Tutorial hours 30

Aim of the module:

The module aims to enable you to understand the human body as a cellular system, classify its tissues as epithelial, connective, muscular or nervous, identify several examples of each, explain their embryological derivation, apply a knowledge of histological and anatomical structure to predict function, and state examples of the cellular basis of disease.

Pre-requisites

At the beginning of this module students should be able to:
• Use simple biological terminology appropriately.
• Outline the concept of the cell as the basic unit of all living organisms.
• Use the measurement terminology of the System Internationale (SI) scale to describe relative size.

Summary of Intended Learning Outcomes

On completion of this module, students should be able to:

• Describe early embryonic development including the origin of germ layers and tissues.

• Interpret electron micrographs of the main organelles of the eukaryotic cell, and light micrographs of epithelial, connective, muscle and nervous tissues, explaining structure function relationships in each case.

• Recognize and classify the main types of simple and compound epithelia, explaining their function and the role of cell surface specialisations.

• Classify simple and compound glands on a structural and functional basis, outlining their epithelial derivation and differentiating between exocrine and endocrine glands.

• Classify connective tissue types and summaries the function of their cellular and extracellular components.

• Describe the structural and functional relationships between epithelial, connective, muscle and nervous tissues which permit more complicated arrangements at body surfaces, particularly in the skin, but also in the gastrointestinal wall.

• Outline how some diseases affect skin

• Recognize and explain the function of different types of cartilage and bone, describing the process of ossification and how some diseases affect bone.

• Recognize the different cells of the blood in micrographs, outlining their origin, and comparing their functions.

• Recognize and explain the structure and function of skeletal, cardiac and smooth muscle, and describe the defects occurring in the muscle disorders (e.g. myasthenia gravis, muscle atrophy and muscular dystrophy).

• Describe the structure and function of neurons and their respective supporting cells.

• Define the autonomic nervous system and explain its subdivision into sympathetic and parasympathetic systems in structural and functional terms.

Structure and Teaching Methods:

Formal teaching will occupy 11 morning sessions of 3-4 hours, each of which will normally involve lectures, a tutor-facilitated practical class in the Dissection Room (examining cadavers, prosections and diagrams) and either (i) a period in the Histology Lab or Computing Room using a microscope or PC to observe tissues, answer questions, and receive feedback, or (ii) a tutor-facilitated group work period centred on micrograph interpretation.

Sessions

Session 1: Methods in Light Microscopy & Epithelial Tissues

Lecture: Methods in light microscopy (Introductory lecture)
Practical Classes: Use of the light microscope. How to study a slide (Histology Room). Simple & Compound Epithelia (Dissecting Room - DR).
Lecture: Epithelial tissues
Directed Learning: Virtual microscope questions based upon epithelia.

Session 2: Glandular Tissues & Internal Surfaces of the Body

Lecture: Glandular tissues and how cells secrete
Practical Classes: Use of the light microscope. How to study a slide (Histology Room). Glands (DR).
Lecture: Internal surfaces of the body
Directed Learning: Virtual microscope questions based upon glands and internal surfaces of the body.

Session 3: Cell Ultrastructure & Introduction to Microbiology

Lecture: Cell Ultrastructure
Small Group Work: Tutor-facilitated interpretation of light and electron micrographs of epithelia, glands and internal surfaces of the body.
Lecture: Bugs in the System: (cross-modular support for microbiology teaching in Semester 1: includes information on Gram Staining, one of the most important staining techniques in microbiology)

Session 4: Early Embryonic Development 1 & Viruses in Human Tissues

Lecture: 'Viruses - molecular pirates hijacking cells on the tissue high seas' (cross-modular support for microbiology teaching in Semester 1)
Practical Class: General Review - Epithelia and glandular tissues (Histology Room); Surfaces of the body (DR).
Lecture: Early embryonic development 1 (Origin of Tissues)
Directed Learning: Blackboard questions centred on early embryonic development.

Session 5: Connective Tissue & Early Embryonic Development 2

Lecture: Connective tissue
Practical Classes: General Review - Connective Tissue (Histology Room).
Connective tissue (DR) Lecture: Early embryonic development 2 (Development of germ layers)
Directed Learning: Virtual microscope questions centred on connective tissue types.
Formative assessment placed on Blackboard for completion within two weeks.

Session 6: Cartilage and Bone & Skin

Lecture: Cartilage and bone
Small Group Work: Tutor-facilitated interpretation of connective tissue micrographs.
Lecture: Skin, its accessory structures and disorders
Directed Learning: Virtual microscope questions based upon connective tissues and skin.

Session 7: Ossification & Bone Disease & Formative Assessment Review

Lecture: Ossification and bone disease
Practical Classes: General Review - Skin (Histology Room). Cartilage and Bone (DR).
Lecture Theatres: Formative Assessment Review
Directed Learning: Virtual microscope questions based upon cartilage and bone micrographs.

Session 8: Muscle & Disorders of Muscle

Lecture: Muscle
Practical Class: General Review - Muscle (Histology Room). Muscle (DR).
Lecture: Disorders of Muscle
Directed Learning: Virtual microscope questions based upon muscle micrographs.

Session 9: Nervous Tissue & Early Embryonic Development 3

Lecture: Neurons, nerve fibres and peripheral nerves
Practical Classes: General Review - Peripheral nerves and spinal cord (Histology Room). CNS & PNS (DR).

Lecture: Early embryonic development 3 (Early development of the musculoskeletal system) Directed Learning: Virtual microscope questions based upon peripheral nerve & spinal cord.

Session 10: The Autonomic Nervous System (ANS) & Blood Cells

Lecture: Organisation of the autonomic nervous system
Practical Classes: General Review - Blood cells (Histology Room)
The ANS and revision (DR) Lecture: Blood cells and haemopoiesis
Directed Learning: Virtual microscope questions based upon blood smear micrographs.

Session 11: Innate and Adaptive Immunity

Lecture: Innate and adaptive Immunity (how the body's cells protect it from pathogens –crossmodular support for microbiology teaching in Semester 1)
Small Group Work: Tutor-facilitated interpretation of muscle, nerve and blood micrographs.

Session 12: Revision Week

Assessments and Assessment Methods:

Formative:

A formative assessment will be made available on Blackboard, at the end of week 5, for completion in students' self-study periods; this will be reviewed in a lecture theatre setting in session 7. The assessment comprises a short-answer question paper (some questions will be based upon the interpretation of micrographs) but its format is not the same as that of the integrated End of Semester Assessments (ESAs).

Summative:

This module will be assessed on the basis of satisfactory attendance and also by performance in End of Semester Assessments (ESAs) and Objective Structured Clinical Exams (OSCEs) throughout Phase 1, including the Phase 1 Assessment and OSCE.

Metabolism

Credits 4

Theory hours 30

Practical hours 0

Tutorial hours 30

Aim of the module:

The aim of this module is that students should have an understanding of tissue metabolism and its control by the endocrine system, sufficient for them to understand the metabolic basis of clinical conditions such as diabetes and obesity.

Pre-requisites:

At the beginning of this module the students should be able to describe the basic principles of organic chemistry including atomic structure, chemical bonding, chemical structure, chemical equilibrium, the laws of thermodynamics and the reactivity of functional groups.

Summary of Intended Learning Outcomes:

On completion of this module students should be able to:

• list the essential components of the diet and explain why they are essential.

• calculate their own Body Mass Index and describe the factors involved in the long-term regulation of body weight.

• define homeostasis and discuss control systems in the body

• explain how the energy required for cellular activity is derived from the food eaten.

• describe the general features and any clinical relevance of the metabolic pathways by which carbohydrates, lipids, amino acids and alcohol are degraded and are synthesized from appropriate precursors.

• outline the pathways involved in drug metabolism

• describe the metabolic problems of anaerobic conditions and their clinical consequences.

• describe in outline how glucose and lipids are transported and stored in the body and explain the clinical consequences of defects in these pathways.

• describe how ketone bodies are produced and explain their clinical importance.

• describe how ammonia is produced, why it is toxic and how it is detoxified.

• analyze simple clinical case histories involving disturbances to metabolism such as marasmus, kwashiorkor, obesity, galactosaemia, lactose intolerance, glucose 6-phosphate dehydrogenase deficiency, hypercholesterolaemia, phenylketonuria, and hypoglycaemia.

• describe in outline the structures, functions, modes of action and the control of secretion of the major hormones involved in the control of metabolism.

describe in outline the metabolic changes that occur during feeding, fasting, starvation, pregnancy and exercise and explain how they are controlled.

• explain why the blood glucose concentration is normally held relatively constant and explain the metabolic and clinical consequences of untreated type 1 and type 2 diabetes mellitus.

• analyze simple clinical case histories involving disorders of the thyroid, pituitary and adrenal glands.

Structure and Teaching Methods:

The module will run over twelve morning sessions of 3 hours, each involving a mixture of lectures, problem-solving group work, reviews and clinical presentations. For each session students will be set tasks in the Workbook to complete in their own time before the next session.

Sessions

Session 1: Nutrition, body weight, homeostasis

Lecture: Nutrition and body weight
Group work: BMI, obesity, malnutrition
Lecture: Homeostasis, circadian rhythm

Session 2: Cell metabolism, energy balance, carbohydrate metabolism

Lecture: Cell metabolism, bioenergetics, energy balance
Group work: Gastroenteritis, pyrexia
Lecture: Carbohydrate metabolism 1

Session 3 Carbohydrate metabolism, TCA cycle, gluconeogenesis

Lecture: Carbohydrate metabolism 2
Group work: Galactosaemia
Lecture: TCA cycle and gluconeogenesis

Session 4: Oxidative phosphorylation, fuel storage and lipid metabolism

Lecture: Oxidative phosphorylation, oxidative stress
Group work: Glucose 6-phosphate dehydrogenase deficiency
Lecture: Fuel storage and lipid metabolism

Session 5: Lipid metabolism and transport, protein metabolism

Lecture: Lipid metabolism and transport
Group work: Hyperlipidaemia, hypercholesterolaemia
Lecture: Protein and nitrogen metabolism

Session 6: Control of energy metabolism, drug metabolism

Lecture: Control of energy metabolism
Group work: PKU, amino acid metabolism
Lecture: Drug metabolism

Session 7: Endocrine pancreas

Lecture: Introduction to endocrinology
Group work: Glycogen storage diseases, hypoglycaemia
Lecture: Endocrine pancreas

Session 8: Diabetes

Clinical presentation: Diabetes mellitus
Group work: Type 1 & type 2 diabetes
Lecture: Control of appetite, metabolic syndrome

Session 9: The thyroid gland

Lecture: Thyroid gland
Group work: Hyperthyroidism & hypothyroidism
Clinical presentation Disturbances to thyroid function

Session 10: Calcium metabolism, pituitary

Lecture: Calcium metabolism
Group work: Calcium metabolism
Lecture: Pituitary & adrenal glands

Session 11: Adrenal glands

Clinical presentation: Disorders of the adrenal cortex
Group work: Cushing's & Addison's disease
Lecture: adaptations of metabolism

Session 12: Review

Assessments and Assessment Methods:

Formative:

A formative assessment consisting of short-answer questions will be posted on Blackboard after Session 6 and self-assessment questions are included in the Workbook at the end of each Session.
Answers to the self-assessment questions will be posted on Blackboard.

Summative:

This module will be assessed on the basis of satisfactory attendance and also by performance in End of Semester Assessments (ESAs) and Objective Structured Clinical Exams (OSCEs) throughout Phase 1, including the Phase 1 Assessment and OSCE.

Health and Disease in Populations

Credits 4

Theory hours 30

Practical hours 0

Tutorial hours 30

Aim of the module:

This module will demonstrate how to interpret population-based studies of disease frequencies, risk factor associations and treatment effectiveness, to enable the practice of evidence-based medicine for the benefit of the health of patients and the population.

In this module, we aim to:

- give students an introduction to the scientific basis of epidemiology.
- enable students to understand the implications of epidemiological and health service data for their future practice.
- facilitate students in the development of their practice of medicine, not only in terms of benefit for individual patients but for the population as a whole.
- equip students with the skills to critically appraise the evidence for and against potential risk

factors causing a disease or clinical interventions they may consider using.

Pre-Requisites:

At the beginning of this module, students should be able to use and understand basic mathematical and arithmetical functions, including logarithmic and exponential functions, up to the level required for a GCSE Grade 'C'. A-level mathematics or statistical proficiency is NOT required.

Summary of Intended Learning Outcomes:

On completion of this module, students should be able to:

• recognise the importance of the population (epidemiological) perspective in assessing disease frequency, in establishing the cause of disease and in assessing the benefits of treatment

• describe how to set about doing a study using sound methodological design in which the extent of a health problem is to be measured

• describe, evaluate and interpret routine and non-routine information relating to health, ill-health and healthcare in populations

• calculate and interpret a Standardized Mortality Ratio (SMR) and demonstrate why crude rate ratios can be misleading

• calculate confidence intervals using the error factor and interpret a 95% confidence interval appropriately

• perform and interpret tests of a null hypothesis

• describe the purpose, strengths and weaknesses of prevalence surveys, cohort studies, case control studies and randomized controlled trials

• define bias, confounding and chance, and explain how and why we allow for them

• explain what is meant by a cause-effect relationship in an epidemiological context and the criteria for its evaluation

• read and critically appraise systematic reviews.

Structure and Teaching Methods:

This module will run over twelve morning sessions, each lasting about three hours. Each morning will start with a small group session followed by one or two lectures after a half hour break. The small group sessions will be facilitated by a tutor using the worksheets in the module handbook.

Students will be required to prepare for each of the small group sessions in their own time beforehand.

Sessions

Session 1: Lecture - Introduction to Health and Disease in Populations Module Small Group
Session - Introduction to Epidemiology

Session 2: Small Group Session - Prevalence Survey Lecture -

Births, Deaths and Populations Lecture - Uses of
Health Information

Session 3: Small Group Session - Health Information Lecture -

Measuring Disease

Session 4: Small Group Session - Comparing Populations and Mortality Rates Lecture : Sources of Variation

Session 5: Small Group Session - Sources of Variation Lecture - Cohort Studies

Session 6: Small Group Session - Cohort Studies Lecture - Guest Lecture

Session 7: Small Group Session - Mid-Module Assessment Feedback Session Lecture : Case- Control Studies

Session 8: Small Group Session - Case-Control Studies Lecture - Causality

Session 9: Small Group Session - Causality: Cause or Merely Association Lecture - Randomised Controlled Trials 1 Lecture - Randomised Controlled Trials 2

Session 10: Small Group Session - Randomised Controlled Trials Lecture - Reviewing the Evidence

Session 11: Small Group Session - Reviewing the Evidence Lecture - From Research to Practice

Session 12: Small Group Session - Revision Lecture - Revision

Cross-Modular Themes:

Themes addressed in other core modules, e.g. inequalities, compliance (other 'Social and Behavioural Medicine' Core Modules), or topics like heart disease, cancer, diabetes mellitus (Basic Medical Sciences Core Modules, and People and Disease Special Study Module) will be used extensively to illustrate principles taught in this module.

Assessments and Assessment Methods:

Formative:

There will be several opportunities during the module to judge your progress through formative assessment.

Summative:

This module will be assessed on the basis of satisfactory attendance and also by

performance in End of Semester Assessments (ESAs) and Objective Structured Clinical Exams (OSCEs) throughout Phase 1, including the Phase 1 Assessment and OSCE.

Clinical Problem Solving

Credits 4

Theory hours 30

Practical hours 0

Tutorial hours 30

Introduction:

You are here to become a doctor, which is a very long task involving the assimilation of a huge amount of material. Most people find the process challenging as it requires a change of approach from previous study. In the early years in particular the challenge is mainly the enormous breadth of material which has to be covered, and seeing the relevance to the ultimate task of working with patients. If you can see early how you are going to use material, however, it becomes very much easier to cope with, because you can place your learning in context. The issue, however is that there is no single context in which any given piece of information is used. Medicine is all about transferring ideas between contexts, so that the same basic understanding will permit a wide range of different activities. We have introduced this module to help you with these challenges. We will also use the opportunity to help you audit you more general skills such as literacy and numeracy, to identify any issues you will need to address in order to prosper on the medical course.

Aim of the Module:

The purpose of this module is to help you begin to think like a doctor, to develop the skills to retain a large amount of information, and to focus that information upon the solution of patients' problems.

Learning Outcomes:

By the end of the module you should be able to:

- explain how clinical problem solving is learned during medical education
- construct 'concept maps' related to clinical presentations or conditions, which enable you to link information and ideas into multiple contexts
- identify for yourself the important questions which may be asked about any clinical presentation or condition
- establish an intellectual process that enables you to identify and catalogue as the medical course progresses information relevant to individual clinical presentations or conditions
- build mental structures which allow you to collect information systematically from patients by taking a history from them, conducting a focussed examination and initiating appropriate investigations
- audit effectively your skills in literacy, numeracy, and information handling, to identify and remedy any deficiencies

Structure of the Module:

The module does not focus on factual content. Its purpose is to enable you to move from ways of thinking which have served you well at A level or a first degree, but which are no longer appropriate for learning medicine. The module therefore focuses on processes and skills. It may take time, but you will eventually realise how important these processes are and how they will both help you to do well in assessments in the course and become a good, thoughtful doctor.

The module runs on a series of two-week cycles, unlike the others in semester one. Each cycle is focussed on a single clinical condition, which we have chosen carefully because of its relationship with the material you will be learning in the concurrent core modules. This provides some, but not all, of the raw material you need to engage in the module. You will also need to seek out some information for yourself, and identify other information, which you know you will study later in the course, but it is clearly relevant to the topic in hand.

In the first week you will be introduced to the topic for the fortnight, and taken through some of the processes you will need to engage with. You will then work in your groups to build a concept map relating to the chosen condition, to identify topics which are relevant, and design a plan of work to address a set of questions provided to you in the workbook. Between the first week and the session of the following week you will complete those tasks and bring them to a second session where you will be asked to present your findings. Later in the module, you will then

be asked to use the work you have done to set questions in the format of the assessments which you will take at the end of each semester in phase 1, and in major summative assessments in phase 2. Each two week cycle also addresses one of a set of key generic skills, with exercises which allow you to audit those skills and prompts to develop them further.

The idea is that you come to see how a huge variety of questions may be linked to a simple clinical presentation, understand how assessments operate at Leicester and practise setting, answering and marking those questions, and ensure that you gave the generic skills to prosper on the course. In this way you will change the way in which you think, and no doubt, in the course of the exercise think up for yourselves many of the questions which we may ask you in one form or another in the assessments, so they will be easy to pass.

Assessment:

No module in phase 1 is separately assessed. The assessment of all material is by Integrated End of Semester Assessments (ESA's) each of which covers all material to date in the course. If you persist in thinking as you have done before you will regard this module as irrelevant to those assessments as it has limited content. You may still pass the first semester, but all experience shows that you will eventually collapse under the strain of the cumulative content of the course and fail later. If you recognise the relevance of the module to assessment, you will handle that accumulating material and you will pass, and pass well. The choice is yours.

Resources:

Much of the content linked to the module is presented in either concurrent or later modules in the course, and the workbooks and reading prescribed for those modules is your major resource. You will need to search out some topics, in order first to learn the skills of doing so and second to learn how to filter information from multiple sources. The library will provide you with guidance as to how this should be done.

Sessions

Session One : Introduction

The aim of this session is to introduce you to how clinical medicine is learned and to plot a course that you may follow to begin to think like a doctor.

Session Two: Chest Pain and Literacy Skills

The aim of this session is to follow up on the work in session one about how clinical medicine is learned and to allow you to audit your skills in literacy

Session Three: Cystic Fibrosis (1)

The aim of this session is that you should use the example of cystic fibrosis to explore how to build conceptual structures which will help you to diagnose and manage that and related conditions.

Session Four: Cystic Fibrosis (2) and Numeracy Skills

The aim of this session is that you should use the example of cystic fibrosis to explore how to build conceptual structures which will help you to diagnose and manage that and related conditions, and audit your numeracy skills relevant to medical practice.

Session five: Sickle Cell Disease (1)

The aim of this session is that you should use the example of sickle cell disease to explore how to build conceptual structures which will help you to diagnose and manage that and related conditions.

Session six: Sickle Cell Disease (2) and Module Skills Assessment

The aim of this session is that you should use the example of sickle cell disease to explore how to build conceptual structures which will help you to diagnose and manage that and related conditions, and that you should appreciate the challenge of the End of Semester Assessments (ESAs).

Session seven: Falls (1)

The aim of this session is that you should use the example of falls to explore how to build conceptual structures which will help you to diagnose and manage complex multi-factorial conditions.

Session eight: Falls (2) and Internet Research

The aim of this session is that you should use the example of falls to explore how to build conceptual structures which will help you to diagnose and manage complex multi-factorial conditions.

Session nine: Tuberculosis (1)

The aim of this session is that you should use the example of tuberculosis to explore how to build conceptual structure which will help you to diagnose and manage that and related conditions. Structure of the session

Session ten: Tuberculosis (2) and Literacy skills

The aim of this session is that you should use the example of tuberculosis to explore how to build conceptual structures which will help you to diagnose and manage that and related conditions, and audit your literacy skills relevant to medical practice.

Session Eleven :Tired all the Time (1)

The aim of this session is that you should use the example of a patient presenting to report that they are “tired all the time” to explore how to build conceptual structures which will help you to diagnose and manage complex multi-factorial conditions.

Session Twelve: Tired all the Time (2)

The aim of this session is that you should use the example of a patient presenting to report that they are “tired all the time” to explore how to build conceptual structures which will help you to diagnose and manage complex multi-factorial conditions.

Session Thirteen: Preparing for Assessments (1)

The aim of this session is that you should understand precisely the way in which you will be assessed in end of Semester Assessments (ESAs), to develop skills to read and understand questions, to identify the nature of answers required, and to express those answers concisely.

Session fourteen: Preparing for Assessments (2)

The aim of this session is that you should understand precisely the way in which you will be assessed in end of Semester Assessments (ESAs), to develop skills to read and understand questions, to identify the nature of answers required, and to express those answers concisely.

Consultation Skills

Foundation Course

Credits 2

Theory hours 0

Practical hours 0

Tutorial hours 30

Aim of the Module:

The aims of the Consultation Skills Foundation Course (CSFC) are:

1. To enable students to carry out a patient-centred consultation and interpret the findings to generate appropriate working diagnoses.

2. To enable students to take and record a history from a patient, perform a physical examination of the main systems of the body and understand the importance of the patient perspective in diagnosing and managing patient problems.

Learning Outcomes:

Knowledge

The student should be able to:

- Explain the importance of effective communication skills and the need for a patient- centred approach in the diagnosis and management of patients problems
- Describe how the use of effective communication skills can enhance the doctor-patient relationship and improve patient care
- Apply their understanding of normal anatomy, physiological and psychological functioning to the symptoms experienced by patients and signs found by examination.
- Describe the integral role of information retrieval skills in the study and practice of medicine Describe the ethical principles and values that underpin good medical practice.

Skills

The student should be able to:

- Use a patient-centred approach to explore common symptoms and elicit key information about a patient's medical, family and psycho-social histories
- Recognize and respond appropriately to a patient's emotions
- Give information to a patient about an illness or disease process appropriate to their level of understanding
- Make an assessment of a patient's mental state
- Perform a general examination of a patient, including general examination of the skin and superficial tissues.
- Demonstrate the communication skills needed to prepare a person for and to facilitate the performance of a clinical examination
- Demonstrate a competent physical examination of each of the body systems and detect common clinical signs
- Correctly interpret and apply information obtained from the patient history and examination to generate appropriate working diagnoses.
- Demonstrate an awareness of safe practice in the clinical environment, for example, hand hygiene and moving and handling issues
- Demonstrate an awareness of the ethical and legal concepts of competency, informed consent, autonomy and confidentiality as applied to a healthcare context.

Attitudes

The student should demonstrate :

- Appropriate professional behaviour in a clinical setting
- An unconditional positive regard for patients and their carers, and for Colleagues
- A willingness to work with and learn from patients with diverse backgrounds and personal lifestyles
- A desire to support peers in learning and personal development Course The CSFC runs through all five Semesters of your Phase I training .

There are six components included in the module :

- Communication Skills
- History taking and Physical Examination
- Clinical Practice Component (CPC)
- Health and Safety
- Information Retrieval Skills
- Introductory Course in Medical Ethics and Law .

Sessions

Session 1:

One-hour lecture: Introduction to communication skills
One-hour seminar : communication skills (seminar one: A):common phrases used to break ice and establish rapport with patients, and what to avoid.

Session 2:

Two-hour seminar :communication skills (seminar one: B): Case-study to deal with: (A) a patient in pain (e.g. chest pain), and (B) an angry patient because he didn't have anyone to see him in the casualty unit for more than one hour,

Session 3:

Two-hour seminar : communication skills (seminar one: C): Case-study to deal with: (A) a woman with headache whose husband died last week (grieving wife), and (B) a terrified patient with skin lesion, who had his brother diagnosed with skin cancer one year earlier (anxious patient).

Session 4:

One-hour lecture: Introduction to history taking
One-hour seminar: communication skills (seminar two :A):Main components of history taking and history of present illness.
Half-an-hour case study: A patient with abdominal pain (Important points when one encounters with pain).

Session 5:

Two-hour seminar: communication (seminar two : B): Review of systems : with case study

Session 6:

One-hour seminar : Seminar Three A (Past-medical and past-surgical histories)
One-hour skill lab : Distal pulses assessment in a simulator actor (upper and lower limbs).

Session 7 :

One-hour seminar : Seminar Three B (family, social, and drug histories) with case study: Important points in social history in patient with heavy smoking and chronic alcoholism.
One-hour skill lab: Superficial veins of the upper and lower limbs +Blood aspiration and injection.

Session 8:

One-hour lecture: Introduction to general examination 1
One-hour tutorial: Anemia and jaundice (types)
Half-an-hour skill lab: Two cases of anemia and jaundice (how to examine)

Session 9:

One hour lecture: Vital signs
Half-an-hour case study: vitals in a patient with severe dehydration.
One-hour skill lab: How to assess vital

Session 10:

One-hour lecture: Introduction to general examination 2
One-hour tutorial: Cyanosis and plethora
Half-hour small group discussion : Types of cyanosis

Session 11:

One-hour tutorial : Hand examination
One-hour small group discussion: Causes of clubbing
Half-an-hour case study: A patient with ankle edema (common causes)

Session 12:

One-hour tutorial: examination of lymph node groups (cervical, axillary, and inguinal)
One-hour small group discussion: Common causes of LAP

Session 13:

Semester two revision

Session 14:

OSCE

Learning Resources:

There is a wide variety of materials available to support your learning on this course and some of these are detailed below.

Clinical Examination Textbook

Every student will require a personal copy of a textbook that describes how to conduct a clinical examination. The following 2 books are good to have and are of great help to you to start .

Macleod's Clinical Examination, 12th Edition

Editors: Graham Douglas, Fiona Nichol, Colin Robertson

Davidson's Principles and Practice of Medicine.

PHASE ONE

SECOND YEAR (S3 , S4)

TOTAL SEMESTERS

CREDITS 44

Semester Three (S3)

Total Credits 23

Course study Name	theory	Practical	discussion	credits
Musculoskeletal system	30	30	30	5
Mechanisms of disease	30	30	30	5
Membranes and receptor	30	-	30	4
Cardiovascular	30	30	30	5
Clinical problem solving	-	-	30	2
Clinical skills foundation course	-	-		2

Musculoskeletal system module

Credits 5

Theory hours 30

Practical hours 30

Tutorial hours 30

Musculoskeletal disorders account for around 20% of GP visits alone. An understanding of the structure and function of muscles, bone and joints, along with regional anatomical knowledge of the nerve and blood vessels that supply these structures, will undoubtedly equip the physician with the knowledge for successful diagnosis and treatment. This module will look at the fundamental sciences of histology, physiology and anatomy within this system and, of course, apply this in the exploration of common clinical disorders.

Aims of the Module

Through study of the structure and function of the upper limb, the lower limb and the vertebral column you should acquire a working knowledge and clinical understanding of the principles and concepts applicable to the musculoskeletal system, in general. This will be achieved in class and through private study by:

lecture and clinical presentation
dissection and prosection study
surface and living anatomy
clinical examination skills.

Pre-Requisites:

The module is divided into three areas:

The science of the musculoskeletal system
Clinically applied topographical anatomy
Clinical presentations and review of the musculoskeletal system

Module Structure

Each session will typically consist of: Before the session:

Pre-Reading: To familiarize yourself with new terminology and topics to be covered in the session, read the notes for each session or use a text book.

During the session:

Lectures: Lectures on general aspects of the musculoskeletal system are for the purpose of conveying deeper understanding of the general concepts and principles (exemplified by the upper and lower limbs) underlying normal and abnormal structure and function. It is important to bear in mind that these lectures will not necessarily be directly related to the work in the DR.

Introduction to Regional Anatomy: In small groups session you will be able to ask questions on regional anatomy before dissection commences.

Dissection and Pro-section Study: Dissection of the human cadaver will provide you with a unique opportunity to explore the structure of the body, observe and study important relationships between structures and, thereby, develop, acquire the spatial skills that will be of immense value during your education and training as a doctor and in subsequent medical practice. Each student group will be allocated a cadaver to dissect.

Clinical Presentations and Review: Clinical presentations will highlight a range of common clinical conditions and disorders affecting the upper limb, the lower limb and the vertebral column.

After the session:

Further self-directed DR work: This may consist of pro-section and dissection study, looking at bones, X-rays, reading poster presentations.

Consolidation of notes, guides to learning: A guide (not a prescriptive list) to learning is provided for each session to help you produce resources to use to easily re-fresh your memory, such that important information is not forgotten.

Exploring surface anatomy and practicing clinical skills: It is only by familiarization of the normal and practicing clinical skills that you will gain the confidence to be able recognize and diagnose the abnormal.

Test your learning with ESA and other questions: These should be attempted after completing the above and hence, will form a weekly test of your understanding.

Module Assessment and Feedback

Formative Assessments (for feedback purposes)
You will be able to check your own progress by:

Completing self-study questions.
Attending three viva voce.
Completing eleven ESA-style questions in the module book.
Two online extended matching (EMQ) assessments (upper and lower limb).
A written ESA style formative (session 10).

The **viva voce** will enable you to acquire the skills to communicate your understanding and knowledge in a clear, concise and confident manner. This will prepare you for the year 1 OSCE. Each viva will be conducted as a table group.

Feedback: You will receive individual and group feedback during all the above formative assessments. Additionally, during dissection, staff will test your understanding of new topics and as such enable you to evaluate your individual progress.

End Semester Assessment (ESA 2)

The module leader will report to the Phase 1 Board of Examiners any student who does not have satisfactory attendance for this module.

Concepts of basic musculoskeletal science, topographical anatomy and application in common clinical cases may be examined in the End of Semester Assessments (ESAs). Students will be expected to show links between the musculoskeletal system and other modules taught to date.

Students will also be assessed on their knowledge of the musculoskeletal system in the OSCE (Objective Structured Clinical Examination). Students will be expected to for example to examine volunteer patients (e.g. a joint), interpret and describe orthopedic X rays and explain clinical and topographical anatomical knowledge in relation to prosections and anatomical models.

References

Ellis, H., Clinical Anatomy, A revision and applied anatomy for clinical

students,11th Edition , Blackwell Science Ltd. 2006.

S. Jacob, Anatomy - A Dissection Manual and Atlas, Churchill Livingstone.

Weir, J and Abrahams, P.H. An Imaging Atlas of Human Anatomy, Wolfe.

Agur, A.A.M.R. Grant's Atlas of Anatomy, Williams and Wilkins.

Sessions

Session One :

Theory hours:

1. module introduction.

2. The Skeletal System: Bones & Joints .

3. Clinical Overview and Examination of the Musculoskeletal System

Practical hours :

1. Anatomico- Medical Terminology.

2. Introduction to Dissection & Pectoral Region.

Session Two:

Theory hours

Skeletal muscle: Structure, Morphology & Mechanics

Practical

The Axilla

Small group :

Osteology & Radiology of Upper Limb

DR Briefing: Brachial Plexus

Session Three

Theory :

1. Development of the Limbs

2. Functional & Applied Anatomy of Shoulder joint

Practical Back of Trunk

Small group: Back of Trunk

Session Four

Theory

1. Dermatomes, Myotomes& Segmental Innervation of UL & LL

2. The Musculoskeletal System

Practical :

Front & Back of Arm

Small group Front & Back of Arm

Session Five

Theory
1. Elbow Joint & Joints of the Forearm
2. case study

Practical
Front & Back of Forearm

Small group : Front & Back of Forearm

Session Six

Theory
1. Pathology of Joints
2. Injuries of Joints: Dislocations, Fractures & Sprains

Practical:
The Hand

Small group:
The Hand

Session Seven

Theory
Vertebral Column & Common Injuries

Practical
Front & Medial Thigh

Small group:
1. Osteology & Radiology of Lower Limbs
2. Front & Medial Thigh

Session Eight

Theory
1. Hip Joint

Practical
Gluteal Region

Small group:
1. Buttock & Gluteal Region
2. Tutorial: Investigating Nerve Injuries in the Upper Limb

Session Nine

Theory
1. Knee Joint
2. Joint Examination & Imaging of the MS System

Practical
Back of Thigh & Popliteal fossa

Small group
Hamstring muscles & Popliteal fossa

Session Ten

Theory
Common Fractures of the UL & LL; Causes , Repair & Delayed Healing .

Practical
Back of Thigh & Popliteal foss

Small group
Hamstring muscles & Popliteal fossa

Session Eleven

Theory
1. Effects of age & Dysfunction of MS System
2. Major arteries & veins of the lower limb

Practical
Dissection of the back of Leg

Small groups
Introduction to the Calf

Session Twelve

Theory
1. The Ankle joint & joints of the Foot
2. Nerve injuries in the lower limb & Gait Abnormalities
3. Module Feedback .

Small group Tutorial: Muscles of the lower limb in walking

Mechanisms of disease module

Credits 5

Theory hours 30

Practical hours 30

Tutorial hours 30

Aim of the module:

The aim of the module is to introduce you to basic pathological processes in order to prepare you for the other core modules in Phase 1 of the course which are devoted to the various body systems.

The purpose of the module is to introduce to you the fundamental disease processes that affect the human body. Once you are familiar with these basic pathological concepts you will be able to apply them to any organ or organ system.

Structure of the Module

The Mechanisms of Disease module will occupy 12 morning sessions. The dates and subject matter for each session are shown below. The purpose of the module is to introduce to you the fundamental disease processes that affect the human body. Once you are familiar with these basic pathological concepts you will be able to apply them to any organ or organ system.

Assessment

Mechanisms of Disease will be assessed in the Semester 3 ESA. There will be module-specific questions. There will also be the cross-modular semester 3 questions and cross-semester questions that may include material from this module. In addition, material from this module will feature in cross-semester questions in future ESAs.

There will be a formative assessment part way through the module after the 6 and 12 morning session and with review and feed back after it immediately This is to help you in your learning and understanding and you are strongly encouraged to participate. The lecture that precedes the assessment will not be included. There will be a feedback session immediately after.

References

Robbins basic pathology kumar , abbas fausto and mitchell

Muir's Textbook of Pathology. MacSween and Whaley

General and Systemic Pathology Underwood

Sessions

Theory

Session One …. Cell injury

Session Two … Cellular adaptations

Session Three…… Acute inflammation

Session Four……. Acute inflammation

Session Five …….. Chronic inflammation

Session Six…… Healing & repair

Session Seven……. Hemostasis & thrombosis

Session Eight ……. Atheroma

Session Nine …….. Neoplasia I

Session Ten …… Neoplasia II

Session Eleven ……. Neoplasia III

Session Twelve …… Neoplasia IV

Practical hours

Twelve sessions of small group work.

Discussion

Discussion of different topics in general pathology distributed over 12 sessions.

Membranes and receptor module

Credits 4

Theory hours 30

Tutorial hours 30

Aims Of The Module

The aims of this module are the students should:

- understand membrane structure and function and be able to relate this to cell behavior.
- understand how the movement of ions and molecules across membranes may contribute to pH and cell volume regulation and electrical excitability and nerve impulse conduction.
- appreciate how chemical messengers, such as hormones and neurotransmitters, influence the activity of cells and organs by interacting with receptors;
- understand in principle how drugs might modify the action of such chemical messengers.

Pre-Requisites

At the beginning of this module the students should be able to describe basic cell structure and function, including the pathway for protein secretion outline the non-covalent forces governing the structure and interactions of biomolecules discuss protein structure and function, including the properties of enzymes discuss factors influencing the association and dissociation of protein-ligand complexes

Structure of the module:

Sections of the module handbook will be distributed before the module started. The handbook will consist of a synopsis of each lecture together with exercises for use in tutorials and study sessions.

Study Groups For all activities (tutorials, study sessions, presentation sessions) you will work in your normal study groups of students.

Lectures

All lectures will be held in the Hammurabi College of Medicine. Between some lectures and/or work sessions there may not be a timetabled break – please get from one to the other as quickly as possible.

Study Sessions

In these sessions the student will work in his normal study groups using study sheet materials provided.

Please you should come to these sessions with answers to as many of the questions on the study sheet as he can. It is recommended that he bring personal copies of relevant texts to study sessions, particularly in the earlier sessions. The tutors will be available to help him in these sessions.

It is module policy that where work in study sessions is consolidated either by a tutor-led discussion or by a subsequent tutorial session, it is the students' responsibility to ensure that they have obtained from the discussion the answers they need against questions set in the study sheets.

Tutorial Sessions

These, tutor led, sessions are to provide an opportunity to consolidate material worked on previously, either in study sessions or during private study. The students are requested to come to these sessions with completed study sheet exercises and prepared to contribute to the discussion. Answer sheets will not be provided after tutorial sessions, so the student must make sure that he has sufficient notes against each study sheet question to aid future reference and revision.

Assignment Presentation Sessions

There are 2 assignment presentation sessions in the module in Sessions 6 &7.

Groups of students should prepare the presentations together and one or more group members may make the presentation required. In the second session, different students should make the presentation. Study Groups should decide amongst themselves who should make the presentations. Presentations should be approximately 8 minutes in length. The following 7- 8 minutes will be available for students to ask questions of the presenting group and to be used by the tutor to

develop discussion of the topic from the presentation. Assignment handbook material to guide this preparation will be provided. All students should make notes during presentations against the guideline questions in the accompanying handbook materials, particularly for the topics not covered during preparation. In this way, each student should leave the session with a complete set of answers to the questions on the assignment worksheet. Answer sheets will not be provided for these sessions. Most aspects will be covered again at other points in the module. It is very important that study groups work together in researching and preparing the material for each assignment presentation. In addition, it is important that each oral presentation is practiced within the group. It should be noted that it is the responsibility of the whole group, not just the presenter(s), to answer questions about the presentation asked by either other students or the tutor.

Formative Assessment

It will be held in Session 9. The session will consist of a paper sat under examination conditions but followed by a debriefing session with the module leader. Students will be able to bring study materials and textbooks for consultation to maximize the usefulness of this session. The formats of sub-questions in the formative assessment and the time available to answer will be similar to those to be used in the End of Semester Assessments (ESAs).

References:

1. Page, C.P., Hofmann, B., Curtis, M., & Walker, M.. Integrated Pharmacology, With Student

Consult Online Access, 3rd Edition, Mosby, 2006, ISBN 0323040802.

2. Rang, H.P., Dale, M.M., Ritter, J.M., and Flower, R. Rang & Dale's Pharmacology: With Student Consult Online Access, 6th Edition, Churchill Livingstone, 2007, ISBN 0443069115.

3. Guyton, A.C., Human Physiology and Mechanisms of Disease, 6th Edition, W.B. Saunders, 1997, ISBN 0721632998

4. Waller, D.G. Medical Pharmacology and Therapeutics, 2nd Edition. Elsevier Sanders, 2005, ISBN 0702027545

5. Schmidt, R.F. & Thews, G., Human Physiology, 2nd Edition, Springer-Verlag, 1989, ISBN 3540194320

Sessions

Session One : **1.** The membrane bilayer

2. Proteins of cell membrane

Session Two : **1.** Role of membranes as permeability barrier

2. ATP-dependent ion pumps and ion exchangers

Session Three: **1.** The resting membrane potential

2. Changing membrane potential

Session Four: **1.** Action potential and its properties

2. Conduction of the nerve impulse

Session Five : **1.** Electrical excitability

2. Control of intracellular calcium concentration

Session Six: **1.** Receptors in cell signaling

2. Principles of receptor mediated endocytosis

Session Seven: **1.** Receptors effector signallig via G proteins

2. effector mechanisms in intracellular signaling.

Session Eight : **1** Drugs and receptors/pharmacokinetics

2. Drugs And Receptors

Session Nine: Formative assessment and data handling

Session Ten & Eleven : Autonomic nervous system pharmacokinetics

Discussion

Eleven sessions of small group work & Discussion of different topics .

Cardiovascular system module

Credits 5

Theory hours 30

Practical hours 30

Tutorial hours 30

Aim of the module:

The broad aim of this module is that, by its end, you should understand the structure and function of the human cardiovascular system, how its condition is assessed and how cardiovascular function is altered in common diseases. You should also begin to understand the broad principles of management of cardiovascular disorders.

Structure of the module:

The module will begin with a lecture at 8.30 am. In some early sessions this will be followed by time in the dissecting room, where you will learn about the anatomy of the cardiovascular system. In other sessions you will complete group work material with the help of a tutor. The final few sessions of the module are strongly clinical, consisting of case-based discussions. In this way we hope that you will see the links between the basic sciences and their clinical application, and lay a secure foundation for your subsequent clinical work. You will also be expected to work in your own time either in the dissecting room, by continuing study of workbooks, or in preparation for the next session.

It is important to take an integrated approach to your learning and to study the content of this module in relation to a number of other modules.

Dissecting Room

In the dissecting room you will work in the same groups as in the Musculoskeletal module. The organization of dissecting room work will be explained to you, as will the appropriate codes of behavior and safety precautions necessary in the dissecting room. Please take care to follow these rules.

Group work

Workbook material will be provided for all sessions. You should work together in your groups to complete these. It is important that you bring along appropriate text books. You will have a tutor who will quiz you on your understanding and help out when you are stuck. Answers to group work will be posted on MOODLE the following week.

Self-Study

There are a number of self-study exercises in the module handbook which you should work through. To encourage active learning the answers to self-study questions will not be provided. If you have any problems with these you can seek help via the discussion board on Moodle. You may work on CVS or musculoskeletal anatomy when the dissecting room is open and not required for teaching.

Assessment

This module will be assessed on the basis of satisfactory attendance and also in the End of Semester Assessments (ESAs) from Semester 3 onwards.
In addition, material from the module will be included as part of the Integrated Medical Sciences Assessment at the end of Phase 1.

References

Essential Clinical Anatomy 3rd Edition, LW&W

Clinically Orientated Anatomy 5th Edition, LW&W

Basic Histology 11th Edition, Mosby

Longman's Medical Embryology 11th Edition, LW&W

Rang & Dale's Pharmacology 6th Edition, Churchill Livingstone

Clinical Medicine 7th Edition, Saunders

Sessions

Session One:

Theory 1. Introduction to the CVS
2.. Histology-blood vessels & heart tissue

Practical Pericardium & Coronary Circulation

Discussion Introduction To Anatomy

Session Two:

Theory 1. The heart as a pump
2. Development of the heart1

Group work: Pressure/flows during cardiac cycle / Heart sounds

Session Three:

Theory : 1. Development of the heart
2. Congenital heart defects

Discussion Surface& radiological anatomy of the heart

Practical : Chambers of the heart

Session Four:

Theory : The autonomic nervous system

Group work: The autonomic nervous system

Session Five:

Theory : 1. Factors affecting flow through tubes
2. Pressure and flow in the systemic circulation

Group work: Pressure/flows and resistance

Session Six:

Theory : 1. Control of cardiac output
2. Response of the whole system

Group work: Problems of the behavior of the CVS under different circumstances.

Session Seven:

Theory: 1. Cellular events in the heart
2. Action of drugs on the heart

Group work : Control of the heart beat

Session Eight:

Theory: 1. The electrical activity of the heart and ECG
2. Plenary lectures on ECG

Group work: Analysis and interpretation of the ECG

Session Nine:

Theory : The Special circulations

Group work: Special circulations

Session Ten:

Theory : 1. Causes of chest pain +investigation and management of angina and MI
2. Clinical skills

Group work: Case studies on patients with chest pain

Discussion : ECG practical and demo

Session Eleven:

Theory : 1. Heart failure
2. ECG practical and demo

Group work : Case studies on heart failure

Tutorial : Review of cases

Session Twelve:

Theory : 1. Review of CVS module
2. Shock.

Group work : Shock &example summative style questions

Clinical Problem Solving II Module

Credits 2

Tutorial Hours 30

Aim of the module

The aim of this module, as an extension to the Clinical Problem Solving module in semester one, is to help you to continue to develop the skills that will allow you to think like a doctor. You will work on your developing skills in retaining a large amount of information that lasts, and to focus that information upon the solution of patients‟ problems.

Learning Outcomes

By the end of the module you should be able to:
1-Explain how clinical problem solving is learned during medical education

2-Construct „concept maps‟ related to clinical presentations or conditions, which enable you to link information and ideas into multiple contexts

3-Identify for yourself the important questions which may be asked about any clinical presentation or condition

4-Establish an intellectual process that enables you to identify and catalogue as the medical course progresses information relevant to individual clinical presentations or conditions.

5-Build mental structures which allow you to collect information systematically from patients by taking a history from them, conducting a focused examination and initiating appropriate investigations

6-Audit effectively your skills in literacy, numeracy, and information handling, to identify and remedy any deficiencies.

Structure of the Module:

As in semester one, the module does not focus on factual content. Its purpose is to further enable you to move away from ways of thinking which have served you well in the past, but which are no longer appropriate for learning medicine. In recognition of the time often needed to adapt to a new style of learning, Clinical Problem Solving in semester 2 will continue to focus on processes and skills in order to support the change in your approach to learning. In Semester 2 you will revisit the clinical presentations you considered in Semester 1, but in the light of new information presented to you in the concurrent Modules of Semester 2. The approach will be the same, developing the skills and approach to learning you activated in Semester 1. The module runs on a two week cycle, unlike the others in semester two. Each cycle is focused on a single clinical presentation, those conditions you considered in semester one and chosen again because of the relationship with the material you will be learning in the concurrent core modules. This new material provides some, but not all of the content you need to engage in the module. You will also need to seek out some information for yourself, and identify other information, which you know you will study later in the course, but it is clearly relevant to the topic in hand. Each cycle will involve you working in your groups to design a plan of work to address a task provided to you in the workbook. You will have lectures where appropriate. Between the beginning and the end of the cycle you will complete those tasks and bring them to a second session where you will be asked to present your findings. The tasks are of a number of types, such as answering questions, which we will have written for you, setting the questions and presentation of information in verbal and written formats to assist in the development of your communication skills. Overall, this will help you to hone your skills of linking the knowledge you have to a wider context and of identifying what information you will need to solve clinical problems. Your confidence in your own judgment and ability to make decisions should therefore increase.

Assessment:

No module in phase 1 is separately assessed. The assessment of all material is by Integrated End of Semester Assessments (ESA‟s) each of which covers all material to date in the course. If you persist in thinking as you have done before you will regard this module as irrelevant to those assessments as it has limited content. You may still manage to pass the first year of the course, but all experience shows that you will eventually collapse under the strain of the cumulative content of the course and fail later. If you recognize the relevance of the module to assessment, you will handle that accumulating material and you will pass, and pass well. The choice is yours.

Resources

Much of the content linked to the module is presented in previous, concurrent or later modules in the course, and the workbooks and reading prescribed for those modules is your major resource. You will need to search out some topics, in order first to learn the skills of doing so and second to learn how to filter information from multiple sources. The library will provide you with guidance as to how this should be done.

Sessions

Session One: Tired all the time.

Theory: **1.** Module Introduction
2. Iron metabolism

Group work: Concept map and case study

Session Two : Tired all the time

Group work: identify a map in the logical way the topics relevant to the understanding, diagnosis and management of tired all the time .

Session Three: Falls

Group work: Constructing a concept map and preliminary questions

Session Four: Falls

Group work: Extending the concept map and problem solving questions .

Session Five: Fainting

Theory : 1. Brief lecture

2. lecture; focus on case-related concepts

Session Six: Fainting

Theory : case summery and answers .

Group work : Group work activities including open discussion

Session Seven: Review 1

The purpose of this cycle is to allow to develop further your self-assessment skill. This skills are essential skill for lifelong learning necessary for career in medicine.

Theory: briefing lecture

Group work. **1.** question critique
2. writing good questions

Session Eight: Knowledge seeking

Group work:

You should have selected five that you think will be the most useful to research your topic and theme.Topics such as sickle cell anemia, T.B. fall.

The themes including:

1- Patient information
2- Clinical guidelines
3- Drug information
4- Evidence based summaries for clinicians.

Session Nine: Knowledge seeking

Group work:

By the end of this session you will be able to: To search Medline competently using both the PubMed basic search and the OVID advanced search. Use MeSH (Medical Subject Headings) to search Medline.

Understand and apply the principles of bibliographic database searching including Boolean operators (AND /OR), subject headings, free text, synonyms, and limits. Demonstrate an understanding of the differences between Ovid Medline and PubMed.

Clinical skills foundation course module

credits 2

tutorial hours 30

Aim of the module:

The musculoskeletal system

History:

You need to know common causes of, and be able to fully explore the following symptoms:

- Joint pain
- Back pain
- Stiffness
- Swelling
- Deformity
- Loss of function

Physical Examination

The extent of the physical examination will obviously be dependent upon the patients presenting complaint, history and localization of the problem. The Musculoskeletal examination follows a different routine from the other systems examinations however the same routine can be followed for whichever structure you are examining. After taking the patients history and performing a general examination, the key stages of physical examination of the joints are: Look , Feel , Move .

Assess Function

Checklists are provided for each joint and contain any additional information that is specific to examining that particular joint.

Preparation

- Introduce yourself to the patient if you have not already done so and check the identity of the patient
- Wash your hands
- Ask the patients permission to carry out the examination .
- Give a brief explanation to the patient before you start, Further-explanation/instructions.
- can be given as you proceed.
- Patient position .
- See individual joint examinations .
- The area to be examined should be exposed

General Examination

You should be able to recognize and understand the significance of skin and nail changes associated with common musculoskeletal conditions. For example, rheumatoid nodules, psoriasis, onycholysis, rashes.

The Cardiovascular System

History:

You need to know common causes of, and be able to fully explore common symptoms of cardiovascular disease. The most common symptoms of cardiovascular disease are:

- Chest pain
- Shortness of Breath (Dyspnoea)
- Cough
- Palpitations
- Syncope
- Edema
- Cyanosis
- Intermittent Claudication and rest pain)

Physical Examination

The cardiovascular examination should include the following:

- General inspection from the end of the bed.
- General examination of:

- Hands / pulse
- Arms (pulses, BP)
- Face
- Neck

- Examination of the chest

Inspection
Palpation
Auscultation

- Auscultation of the lung bases
- Examination for sacral oedema
- Examination of the feet/legs

Sessions

Session One **:** The Musculo-Skeletal System

History Taking

Session Two : The Musculo -Skeletal System

Preparatory Worksheet

Session Three: The Musculo -Skeletal System

Physical Examination

Session Four: The Musculo -Skeletal System

Physical Examination

Session Five: Musculoskeletal System

Case Studies

Session Six: The Cardiovascular System

Session Seven**:** The Cardiovascular System

Preparatory Worksheet

Session Eight**:** The Cardiovascular System

Physical Examination

Session Nine**:** The Cardiovascular System

Physical Examination

Session Ten: The Cardiovascular System

The Cardiovascular Case Studies.

Semester Four (S4)

Total Credits 21

Course study Name	theory	Practical	discussion	credits
Urinary system	30	30	30	5
Gastrointestinal system	30	30	30	5
Respiratory system	30	30	30	5
Health psychology & diversity	30	-	30	4
Clinical skills foundation course 30	-	-	30	2

Urinary system module

Credits 5

Theory hours 30

Practical hours 30

Tutorial hours 30

Aims of The Module:

The Broad aim of this module is that through a study of the structure and function of the Urinary System, you should be able to acquire a working knowledge and clinical understanding of the system from filtration of the plasma through to the production of urine. You should appreciate the role of the urinary system in homeostasis. In addition, you should understand common clinical problems and disorders and be able to assess the urinary system using a variety of techniques.

This module runs in Semester four on Sunday mornings. The goal of the module is to provide a clear, clinically orientated, exposition of the essentials of urinary anatomy and physiology.

The material in the e-workbook is in the context of a system to emphasise that the functions we associate with the Urinary System depend upon more than just the kidney. This approach is essential for a complete understanding of the clinical problems that affect the elimination of toxic substances from the body and the fine-tuning, not only of our water status, but our blood pressure as well.

Summary Of Urinary Unit Learning Objectives

Anatomy

1. Describe the structure and relationships of the kidneys, ureters, bladder and urethra in both the male and female

Development

2. Describe the development of the urinary system and understand how congenital abnormalities of position and renal vessels occur

Homeostasis

3. Describe the fluid compartments of the body, to include their electrolyte composition and the normal composition of the major electrolytes in extra- cellular fluid (ECF) blood and urine.

4. Describe the mechanisms to control sodium and potassium ion concentrations in ECF.

5. Describe renal responses to ECF volume depletion

6. Describe how the kidney is able to produce urine that is more or less concentrated than plasma

7. Describe the kidneys role in acid base balance.

Histopathology

8. Describe the histological structure of the kidney and the nephron

9. Describe the structure of the glomerulus and relate this to the process of filtration.

10. Describe common pathological changes in the urinary tract to include tumours of the urinary bladder and prostate Infection.

11. Describe defence mechanisms of the urinary tract

12. Describe and explain the neuronal control of the bladder.

Pharmacology

13. Outline diuretics and their use

Micturition

14. Describe the changes in micturition associated with urinary incontinence to include consequences and management.

Clinical features, consequences & management

15. Describe features, consequences and management of acute kidney injury chronic renal failure

Assessment:

Formative assessments

Summary of Urinary System Unit formatives
Week 3: Anatomy of the Urinary System
Week 6: Physiology of the Urinary System
Week 11: Urinary System End of Unit Formative

End of Semester Assessment (ESA's)

Any student who does not have a satisfactory attendance or who has failed to complete the compulsory formative assessments (Formative No1 and 2) will be reported to the board of examiners. Material from the Unit will form a part of the ESA's from Semester 3 onwards. Material from the Unit will form part of the Primary Professional Examination (PPE) at the end of Phase2.

Recommended Books

Renal Physiology A Clinical Approach Danziger J et al
Publisher: Lippincott Williams and Wilkins: First Edition: ISBN:9780781795241
Fluids and Electrolytes Made Incredibly Easy Scott W N.
Review of Medical Physiology , WF Publisher: McGraw Hill: Twenty-third ISBN:9780071605670
Clinically Orientated Anatomy , Agur AMR
Langman's Medical Embryology Sadler TW , Publisher: Lippincott Williams and Wilkins.

Sessions

Session One:

Gross Anatomy Of The Urinary System .
L1. Lecture Anatomy of the urinary system.
L2. Clinical Lecture: Imaging of the urinary tract .

Tutorial. anatomy of the urinary system

Self-study. Gross anatomy of the urinary system

Session Two:

Development Of The Urinary System.
L1 Development of the urinary system
L2 Structure and function of the urinary system

Group-work Development of the urinary system

Self-study Structure and function

Session Three:

Filtration By The Glomerulus.
L1 How does the glomerulus work as a filter?
L2. urinary structure review

Group- work problems on filtration.

Self-study Glycosuria and Aminoaciduria

Session Four:

Changes In Plasma Volume.
L 1. Control of plasma volume
L2. Control of Blood Pressure

Group -work Changes in plasma volume

Self-study. Renal control of blood pressure

Session Five:

Changes In Plasma Osmolarity.
L1. Control of plasma osmolarity
L2. Control of plasma calcium concentration and stones

Group- work Changing plasma osmolarity

Self-study Control of serum calcium and stone formation

Session Six:

Renal Control Of Acid & Base
L1. Control of acid base balance
L2. Control of potassium concentration
Group -work Acid base problems

Formative exam.

Self-study Changes in plasma potassium concentrations

Session Seven:

Urinary Tract Infection
L1 Urinary Tract infections
L2. Diuretics
Group-work Problems with Urinary tract infractions

Self-study Diuretics

Session Eight:

Physiology Of Micturition
L1 Neuronal control of micturition.
L2 Continence

Group-work. Micturition

Self-study. Urodynamics

Session Nine:

Acute Kidney Injury (AKI).
L1: Acute Kidney Injury
L2 Clinical presentations of Kidney disease.
Group-work AKI problems.
Self-study Glomerular disease.

Session Ten:

Pathology of the Urinary System
L1 Glomerular pathology
L2. Malignancy of the Urinary tract

Anatomy Dissection of the urinary tract

Self-study Malignancy of the urinary tract

Gastrointestinal System Module

Credits 5

Theory Hours 30

Practical Hours 30

Tutorial Hours 30

Introduction

Disease of the Gastrointestinal (GI) System is a major cause of ill health. Most of you will deal with some aspects of gastrointestinal disorders on a daily basis in your future clinical careers.
This module has been completely redesigned this year, to make it more focused on the clinical application of basic medical sciences, and to lay a sound base for the further study of the material in the Gastro-intestinal & Metabolism block in Phase 2. The two components of the course have been designed as a whole, and we hope that you will see from the outset how you will be able to diagnose and manage patient problems in the future.

Aims of the Module

The aims of this module are that the students should:
-Understand the structure, function and development of the human Gastro-Intestinal System
-Understand how the condition of the Gastrointestinal System is assessed
-Understand how gastrointestinal function is altered in common diseases
-Understand the basic principle of management of gastrointestinal illness

Intended Learning Outcomes

On completion of this module you should be able to:

- Describe the gastro-intestinal tract in terms of its gross and histological structure (including its blood and lymphatic supply and innervations and its radiological and endoscopic appearance).

- Describe the structure and function of the salivary glands, liver, gall bladder and pancreas, the mechanism and control of their secretion and their role in digestion.

- Describe the structures and processes involved in mastication and swallowing food and outline the causes of dysphasia and of common oesophageal disorders such as achalasia and gastro-oesophageal reflux.

- Describe the functions of the stomach, and the mechanisms of and control of gastric secretion.

- Describe the movements of the stomach and regulation of the pyloric sphincter in the passage of the contents of the stomach to the duodenum.

- Describe the main effects of peptic and gastric ulcer disease on the structure and function of the stomach, duodenum and associated structures.

- Describe the structure and function of the liver, biliary tree and pancreas .

-Describe common liver and gall bladder disorders (e.g. ascites and portal hypertension, jaundice, cirrhosis, gallstones, bile & pancreatic duct blockage and pancreatitis) and their consequences.

-Describe the functional and structural adaptations of the intestines in relation to absorption of water, electrolytes, carbohydrates, proteins, lipids and vitamins and explain the principal methods and mechanisms relating to processes of absorption and in elimination of undigested and unabsorbed materials.

-Explain, in general terms, the basis of disorders such as malabsorption, diarrhoea, steatorrhoea, constipation & inflammatory bowel disease and their consequences.

-Explain the neurological basis of abdominal visceral and somatic pain.

-Describe the embryology of the gastrointestinal tract in the adult and explain common congenital disorders (hiatus hernia, Meckel's diverticulum, diverticulosis and common sites of atresia and fistulae of the gastro-intestinal tube).

-Describe the structure of the abdominal wall, inguinal canal and the structural basis of the common congenital defects (e.g. inguinal, umbilical and other hernias).

-Describe the causes and effects of common infections of the gastrointestinal system.

-Describe the presentation, investigation and management of inflammatory bowel disease.

-Describe the natural history of the common benign and malignant tumours of the gastro- intestinal tract and its associated structures.

Assessment

The outcomes of this module will be assessed in the End of Semester Assessments (ESAs) for the remainder of phase 1, and in Phase 2. A web-based Formative Assessment, in the style of the ESA is planned in the second half of the module. You will be given feedback.

It is expected that you will take full advantage of the opportunities the module provides. In order to satisfy the module requirements, you must attend all lectures, practical sessions and small group sessions and should use the follow-up questions in the workbook to extend your understanding by private study. Attendance will be monitored in the usual ways.

References

1. Porth, CM. **Essentials of Pathophysiology**. 3rd Edition, Lippincott Williams & Wilkins [2011] Chew,R& Long, MS. **Gastrointestinal system – crash course**. 3rd Edition, Mosby [2008]

ISBN9780723434207

2. Snell R.S**. Clinical Anatomy by regions,** 9th Edition, Lippincott Williams & Wilkins, [2012]

Moore, K.L. &Dalley, A.f. ***Clinically Oriented Anatomy,*** 6th Edition, Lippincott Williams & Wilkins [2010]

3. Drake, R.L., Vogl,W& Mitchell, A.W.M. ***Gray's Anatomy for Students***,Elsevier Churchill Livingstone [2005]

4. ***Clinical Medicine*** (Kumar & Clark)
Ellis, H. ***Clinical Anatomy,*** Blackwell
5. Sadler, T. W. ***Langman's Medical Embryology***

Sessions

Session One:

Overview of GIT function-anatomy
L1 Basic strictures and process
L2 Endoscopic tour of GIT
Small group work Principle of GIT pathophysiology

Session Two:

Swallowing and Embryology
L1. Salivation and swallowing
L2. Development of foregut/midgut/hindgut
Small-group work Salivation and swallowing question

Session Three:

Surgical anatomy / Hernia
L1 Surgical anatomy of abdomen
L2 Introduction to anatomy
L3 Abdominal wall and hernias
Dissection room Abdominal wall and peritoneal cavity

Session Four:

Stomach 1
L1 Abdominal wall and peritoneal cavity.
L2 Embryology 2
Small-group work Stomach/Hernia .

Session Five :

Stomach 2
L1. Presentation and pathophysiology of gastric disease
L2 Introduction to anatomy
Dissection room Functional relationship of stomach, duodenum, pancreas
Small-group work: Case study of gastric disease.

Session Six:

Liver ,Gal bladder, Pancreas 1.
L1 Chyme , Pancreas, liver
L2 Introduction to anatomy
Dissection room Liver and biliary tree
Small group work Chyme , Pancreas ,liver

Session Seven:

Liver , Gall bladder, Pancreas 2.
L1. Dealing with toxin
L2. Diagnosis of liver and pancreatic disease.
Small-group work Liver disease, jaundice.

Session Eight:

Intestine 1
L1: Absorption and motility of S/L intestine.
L2: Introduction to anatomy
Dissection room: Intestine / Mesentery
L3: Clinical presentation of inflammatory bowel disease

Session Nine:

Intestine 2
L1 Microbiology of GIT

Small-group work : Traveller's diarrhea
Formative exam.

Session Ten:

Malignancies and investigation of GIT
L1: GI Malignancies
L2: Investigation the GI system

Small-group work : Case study

Session Eleven:

Sign and symptoms/ examination
L1: Sign and symptoms of GI disease/ intro to abdominal wall
Small-group work: Examination of abdomen

Session Twelve:

L1: Revision Topics.

The Respiratory Module

Credits 5

Theory hours 30

Practical hours 30

Tutorial hours 30

Aim of the Module:

You should understand the normal structure and function of the respiratory system, how that is altered by disease, how respiratory function is assessed, and how, in principle, respiratory disorders are managed.

Your study of respiratory conditions will continue into Phase 2 of the course in the 'Cardio- Respiratory' Block, and in the 'Acute Care' block and, as respiratory disease is common you will also meet patients with respiratory problems in virtually all clinical situations. It is essential therefore that you develop a good understanding of the system at this stage.

Overall intended learning outcomes for the Unit
By the end of the unit you should be able to:

-Describe the structure and the respiratory function of the nose, the paranasal sinuses, pharynx and larynx and describe the connections between the nose, paranasal sinuses, pharynx, auditory tube & middle ear.

-Describe the structure of the pleural cavity and lines of pleural reflection, the lobes of the lung and their surface marking, structure and arrangement of airways and blood vessels in the lungs, and the histology of the lung airways.

-Describe the structure of a typical thoracic vertebra and rib, the relations and arrangement of muscles in the thoracic wall and diaphragm, and the function and distribution of the intercostal nerves, arteries and veins.

-Describe the mechanism of inspiration and expiration, the measurement of lung volume and capacities, and common tests of lung function.

-Describe the carriage of oxygen in the blood, explain the role of carbon dioxide in blood and its role in acid base balance, and describe the neural and chemical control of breathing, with particular reference to different types of respiratory failure.

-Describe the conditions of asthma, and chronic obstructive pulmonary disease; its presentation, diagnosis, cell biology, epidemiology and treatment with bronchodilators and other drugs.

-Describe the defenses of the lung against infection, the immunology of the lung, and the microbiology of common lung infections.

-Describe the classification, microbiology and principles of diagnosis and treatment of pneumonias, and tuberculosis.

-Describe the definition and classification of interstitial lung disease, its relationship to occupational lung disease, its pathology and the principles of diagnosis and treatment.

-Describe the pathology of lung cancers, their classification, and the principles of their diagnosis and management.

-Describe common diseases of the pleura and chest wall.

-Describe the changes in various types of respiratory failure and explain their physiological consequences.

-Describe and be able to recognize the key features of a plain film radiograph of the chest, describe the features of and recognize uncomplicated lobar collapse, pneumothorax, consolidation, space occupying lesions in the lung and pleural effusion and estimate the cardiac index.

Assessment:

There will be formative assessments .
Week 6 – respiratory anatomy, histology & physiology formative
End of module - an ESA type formative
The summative assessment of the material from this unit occurs in the End of Semester Assessments (ESAs) from semester 4 onwards and in the PPE.

References:

1. Clinically oriented Anatomy by Moore, KL & Dalley, AF OR

2. Gray's Anatomy for students by Drake, Vogl and Mitchell

3. Colour Atlas of Histology by Leslie P. Gartner & James L. Hiatt

4. Lippincott's Illustrated reviews: Physiology by Robin Preston & Thad E Wilson, published by Walters Kluwer/Lippincott, Williams & Wilkins.

5. Gannon's Review of Medical Physiology by Barrett, Brooks, Boitano & Barman.

6. Clinical Medicine by Kumar P & Clarke M.

7. History Taking & Clinical Examination of the Respiratory system: Macleod's Clinical Examination by Douglas G, Nicol F & Robertson C Clinical Skills by Cox N, Roper TA

Sessions

Session One:

Introduction to the Respiratory System

Lecture: Introduction to the respiratory system

Group work, Tutorial : surface marking of the pleural cavity and lung .

Demonstration: The upper respiratory tract

Lecture: Histology of the respiratory tract

Session Two:

Ventilation of The Lungs.

Lecture Anatomy of the Respiratory System.

Dissecting room Thoracic cavity and intercostal spaces

Lecture Ventilation of the lungs

Session Three:

Mechanics Of Breathing

Lecture :Mechanics of breathing

Group work: Lung mechanics

Lecture Lung: function testing

Session Four:

Blood Gas Carriage

Lecture Oxygen in blood

Group work Oxygen in blood

Lecture Carbon Dioxide in blood

Session Five:

Control of Breathing, Hypoxia, Respiratory Failure, Asthma

Lecture: Chemical control of breathing

Group work: Control of breathing

Lecture: Hypoxia, Respiratory Failure

Lecture: Asthma

Session Six:

COPD, Lower Respiratory Tract Infections & Pneumonia

Lecture: COPD.

Group work: Case studies in Asthma & COPD

Lecture: Pneumonia

Session Seven:

Tuberculosis, Lung Cancer

Lecture Tuberculosis .

Group work Case studies – Pneumonia & TB

Lecture Lung Cancer

Session Eight:

Radiology of the Chest, Pleural and Chest Wall disease & Interstitial Lung.

Lecture Radiology of the Chest

Group work Lung Cancer case studies

Lecture Interstitial lung disease

Session Nine:

History Taking & Examination of Respiratory System

Group work: imaging of the chest

Lecture: History taking and Examination of the Respiratory system.

Session Ten:

Consultation skills :History Taking, Spirometry Practical

Group Work: Instructions for the history taking & examination group work

Instructions for Spirometry Practical

Session Eleven

Respiratory Failure and Overview of the Respiratory System Consultation skills 2 examination Spirometry Practical

Lecture Respiratory Failure & overview.

Examination Spirometry practical.

Health Psychology & Human Diversity Module.

Credits 4

Theory Hours 30

Tutorial Hours 30

Aims of the Module:

This unit aims to meet relevant GMC requirements for Tomorrow‘s Doctors. The unit will introduce you to major psychological factors involved with health, illness and medical care. After an introduction to stereotypical thinking and prejudice, you will be challenged to reflect upon your responses to various aspects of human diversity in the context of your role as doctor and how you need to manage these responses in order to fulfill your professional obligations. You will be introduced to psychological theories of health related behavior and reflect on implications for practice. You will have the opportunity to develop an understanding of how people might respond and adapt to diagnosis, treatment, and living with chronic illness, and to dying and bereavement. You will also be introduced to models of good practice in communicating with patients in difficult circumstances, such as breaking bad news.

Summary of intended learning outcomes

On completion of the unit, students should be able to apply psychological principles, method and knowledge to medical practice. They should be able to:

-Discuss psychological and social factors that contribute to health, illness and disease, health related behaviour, and adherence to treatment.

-Assess the impact of issues relating to equality and diversity on health behaviours and outcomes.

-Recognize some of the issues implicated in communicating well with individuals and groups regardless of their age, social, cultural or ethnic backgrounds, sexuality or -mental or physical disabilities; reflect upon and challenge personal stereotypes.

-Discuss psychological aspects of behavioural change and adherence to treatment and identify appropriate strategies for managing patients with substance misuse and other dependence issues.

-Discuss adaptation to and coping with chronic conditions, disabilities, and major life change (such as terminal illness and bereavement).

-Describe psychological models that inform good practice when communicating in difficult circumstances, such as breaking bad news.

-Demonstrate basic ability to use reflection to evaluate experience, and develop a format for planning to translate that reflection into action.

Assessment

This unit will be assessed on the basis of satisfactory attendance, and upon performance in the End of Semester 4 Assessment (ESA 4). The intended learning outcomes provided in this handbook for the unit as a whole, and for individual sessions, will be the basis for assessment. This unit may also be assessed in ESA 4, OSCE exams, and the Phase 1 Assessment written papers.

There will be opportunities for formative assessment throughout the unit. There will be a formative exam during week 7 of the unit. Sample questions and answers will be made available during the unit, and will be posted on Blackboard. You will also be required to submit a short piece of reflective writing.

Reflective writing

You will be required to complete a short piece of reflective writing on one topic covered in the unit, for inclusion in your e-portfolio. This could be based on a lecture or DVD, one of the small group sessions, or independent study. This is a requirement of this unit, to demonstrate you have engaged with and reflected on the material, but will not be formally assessed. A template will be available for this on the e-portfolio site on Blackboard, under Reflective Practice .

Sessions

Session One:

Introduction, stereotypes and Aging

Lecture: Introduction, stereotypes.

Session Two:

Disability & health related behavior.

Lecture: health related behavior.

Group work: disability.

Session Three:

Health behavior adherence

Lecture: Adherence

Group work: health related behavior

Session Four:

Stress & Coping

Lecture: Stress

Small group work coping.

Session Five:

Communication culture diversity

Lecture: culture diversity

Small group work: communication.

Session Six:

Child Development & Communications.

Lecture1: Child Psychosocial Development.

Lecture 2: Communication With Child.

Session Seven:

Psychological intervention

Lecture: Psychological intervention

Group work: formative exam.

Session Eight:

Death, Bereavement And Sexual Dysfunction.

Lecture 1: death, bereavement.

Lecture 2: sexual dysfunction.

Session Nine:

personality

Lecture: personality.

Group work: defence mechanism.

Session Ten:

Debates, Breaking Bad News

Lecture: breaking bad news

Group work: Debate.

Clinical Skills Foundation Course

Module

Credits 2

Tutorial Hours 30

Sessions

Session One:

The Respiratory System

History

Session Two:

The Respiratory System.

Physical Examination - Respiratory Preparatory Worksheet

Session Three:

Physical Examination

Session Four:

Case Studies

Session Five:

The Gastrointestinal System

History

Session Six:

The Gastrointestinal System.

Physical Examination - Gastrointestinal Preparatory Worksheet.

Session Seven:

The Gastrointestinal System.

Physical Examination

Session Eight:

The Urinary System

History

Session Nine:

The Urinary System

Examination Of The Urine (Urinalysis)

Session Ten:

The Gastrointestinal And Urinary Systems Case Studies

Assessment:

Practical Exam: OSCE

PHASE ONE

THIRD YEAR (S5 , S6)

TOTAL SEMESTERS
CREDITS 40

Semester Five (S5)

Total Credits 20

Course study Name	theory	Practical	discussion	credits
Reproductive System	30	30	30	5
Infection And Immunity	30	-	30	4
Head And Neck	30	30	30	5
Health And Disease In Society	30	-	-	2
Forensic Medicine	15	-	-	1
Selected Components	15	-	-	1
Clinical Skills Foundation Course	-	-	30	2

Reproductive System Module

Credits 5

Theory Hours 30

Practical Hours 30

Tutorial Hours 30

Aims of the Module:

This module workbook aims to provide a structure for learning during the module. First, it provides lecture synopses for the lectures. Lectures will describe the principles of each topic, and provide the basis for further study. Questions to test student understanding of the lectures are included. Second, there are questions and case studies for student work in groups. This module will be demanding, but it has been organized to provide as coherent a structure as possible, and to focus on those topics that are most clinically relevant.

The broad aim of the module is that you should come to understand the processes of human reproduction from the production of gametes to the establishment of independent life in the neonate. You should understand common problems and disorders of the male and female reproductive systems, mechanisms of contraception and the sexual transmission of diseases.

Modular Learning Objectives

By the end of this module you should be able to:

-Simply describe the embryological and fetal development of the reproductive tract in the female and male.

-Describe the sequence of anatomical and physiological changes at puberty and the mechanisms of these changes.

-Describe the anatomy of the male reproductive system, the histology of the testis and accessory organs, and the formation of the male gamete.

-Describe the anatomy of the female reproductive tract and the histology of the ovaries, uterus, cervix, vagina and breast.

-Describe the ovarian and uterine cycle.

-Describe and explain the endocrine control of the menstrual cycle and describe in outline common abnormalities of menstruation

-Describe the changes at the menopause and their mechanisms.

- Describe the processes involved in coitus

-Describe the mechanism of action of common forms of contraception List the reasons for male and female infertility

-Describe the processes of fertilization and implantation.

-Describe the roles of the placenta in the maintenance of pregnancy Describe maternal and fetal adaptations to pregnancy

-Describe the normal pattern of fetal development and the principles of detection of fetal abnormalities

-Describe the processes involved in normal labour and delivery and some common problems of labour.

-Describe mechanisms of lactation

-Describe disorders of the breast, in particular breast cancer and its treatment.

- Describe common sexually transmitted diseases, their detection and treatment.

- Describe common tumors of the reproductive tract in the female and male.

Assessment

This module will be assessed on the basis of satisfactory attendance and also in the End of Semester Assessments (ESAs) from Semester 5 onwards. In addition, material from the module will be included as part of the Integrated Medical Sciences Assessment at the end of Phase 1. Remember that if you donot attend then you will be graded as unsatisfactory irrespective of performance in the assessment.

A module-specific formative assessment will be made available, with feedback provided in week 14. This is intended to give you an indication of your level of knowledge and understanding in this topic area. A short, ESA-style Formative Assessment will be held under exam conditions in week 14 of the module.

References:

- Essential Reproduction (6th edition 2007), Johnson, M H & Everitt, BlackwellScience.

-The Reproductive System at a Glance, (3rdedition 2010), Heffner, L J,BlackwellScience.

-Obstetrics and Gynaecology at a Glance, (4th edition, 2013), Schorge, J.O & Norwitz, E., Blackwell Science.

-Hacker and Moore's essentials of obstetrics and gynecology, (5th edition 2010), Neville F. Hacker, Joseph C. Gambone,Calvin J. Hobel, 5th ed. Saunders Elsevier.

-Essential Obstetrics & Gynaecology (4th edition 2003), Symonds & Symonds, Churchill Livingstone.

-Obstetrics by Ten Teachers, (19th edition, 2011), Kenny, L.C & Baker P.N., Hodder Arnold.

-Gynaecology by Ten Teachers, (19th edition, 2011),Kenny, L.C & Baker P.N., Hodder Arnold.

Self- Directed Learning

Suggested timetable, Compulsory

After session 1 Males Reproductive Histology

After session 2 Females Reproductive Histology including the Breast

Sessions

Session One:

Origin of the Sexes

Module Introduction

Lecture: Development of the Reproductive Systems

Lecture: Origin of the Gametes

Group Work: Sexual Differentiation

Session Two:

Control Of Reproductive Processes

Lecture: The HPG axis

Lecture: The Menstrual cycle

Group work: Hormonal control of reproduction

Session Three:

Puberty & Abnormalities of Menstruation

Lecture: Puberty & Menopause

Clinical Lecture: Menstrual dysfunction

Group work: Puberty & disorders of puberty

Session Four:

Female reproductive system

Lecture: Clinical Anatomy of Female Reproductive System

Clinical Lecture: The Pelvic Floor

DR: Anatomy of Female Reproductive System & Pelvic Osteology

Session Five:

Male reproductive system

Lecture: Histology Review

Lecture: Clinical Anatomy of Male Reproductive System

DR: Anatomy of Male Reproductive System

Session Six:

Infections of the genital tract

Lecture: Sexually transmitted infections

Clinical Lecture: Pelvic Inflammatory Disease

GW: Sexually transmitted infections

Session Seven:

Conception & Contraception

Lecture: Coitus & Fertilization

Lecture: Contraception

GW: Fertility & Infertility

Session Eight:

Pregnancy

Lecture: Placental function & dysfunction

Lecture: Maternal physiology of pregnancy

GW: Maternal problems in pregnancy

Session Nine:

Fetal Growth & Development

Lecture: Fetal physiology
Lecture: Fetal growth & development

GW: Assessment of fetal growth & well-being.

Session Ten:

Labour & Birth

Lecture: Parturition

Lecture: Labour & its problems

GW: Chilbirth video

Session Eleven:

Lactation & the Breast

Lecture: Lactation

Lecture: Breast disease

GW: Pathology of breast disease

Session Twelve:

Tumours of the RT

Lecture: Tumours of the male reproductive tract

Lecture: Tumours of the female reproductive tract

GW: Case studies

Infection and Immunity Module

Credits 4

Theory Hours 30

Tutorial Hours 30

Aims of the Module:

The term "Infection" covers a large topic that is of central importance to the practice of medicine in all specialties. It crosses many boundaries, both in terms of understanding the relevant basic science and in the clinical application of this knowledge. It is not possible to cover all of this material in a single unit; and there is no intention of doing so. As a consequence of the above paragraph the aim of this unit is to provide a structure for a student to consider a patient who presents with a possible infection. Material will be presented in a clinical context and will seek to identify patterns of disease and presentation. We have chosen a limited number of clinical problems and for each identified selected microorganisms. Each is chosen to highlight principles of microbial physiology with links to a common 'infection model'. The 'infection model' will be used in different contexts so that your knowledge of how to apply this model will grow as the semester progresses. Understanding the patient-pathogen interaction is an important first step in the infection model. This will also allow for a progressive accumulation of knowledge of how the body responds to infection and the role of the immune system.

Summary of Intended Learning Outcomes

On completion of this unit students should be able to:
• Describe the principles of the infection model
• Describe the 'microbial world' and key features of bacteria, viruses and fungi. By the end of the Unit you should be able to identify important and/or common examples of microbes and the diseases they cause. You should link the principles of infection outlined within this Unit to the infections described in the systems-based Units.

• Describe a clinical approach to gathering information to evaluate a patient with a possible infection and to use the principles of pathogen/patient/person/place to consider a diagnosis of infection.

• Describe the patient - pathogen interaction for a range of clinically important infections.

• Describe the use of laboratory investigations to aid in the diagnosis of infection, and to interpret common and important results for a patient with a possible infection

• Describe the principles of managing a patient with infection, both with reference to general measure of support and specific anti - microbial treatment. Describe the principles of antimicrobial stewardship.

Describe important issues linked with hospital - acquired infections; including how these are investigated and managed.

• Describe the role of the doctor and allied health professionals in the prevention of infections. To further describe additional specific measures to prevent infections.

• Outline the principles of the epidemiology of infective diseases and contrast infections acquired in different settings, including travel - acquired infections.

• Describe the response of the body to infection utilising the innate and acquired (adaptive) immune system in a range of clinical infections. To further describe the infective consequences of an immune system that functions appropriately, including patients who are immunocompromised.

Assessments and Assessment Methods

Formative:

There is one formative assessment which will be conducted in session 8.

Summative:

This unit will be assessed on the basis of satisfactory attendance and also in End of Semester Assessments (ESAs) from semester 3 onwards through the remainder of the course, including the Primary Professional Examination, the Intermediate Professional Examination and the Final Professional Examination.

Reading

The recommended textbook is: Lippincott's Illustrated Reviews: Microbiology. (Third Edition 2013), Harvey, RA, Cornelissen, CN, Fisher, BD.

This is an excellent textbook and will be of value throughout your course. Each chapter is relatively short with a clear layout and useful pictures and diagrams. We especially like the first seven chapters which covers all you need to know about microbial physiology and the principles of diagnosis of an infection. There are sections at the back of the book that cover a systems-based approach to infection: e.g. Urinary Tract Infection, etc. There are separate chapters for individual microorganisms and you can look at these selectively.

Sessions

Session One:

Lecture : An Introduction to Infection

Small group work.

Session Two:

An Infection Model
Lecture1 : An Infection Model
Lecture 2: Anti - Microbial and Resistance .

Small Group Work.

Session Three:

Acute Sepsis In The Emergency Department
Lecture 1: Acute Sepsis In The Emergency Department.
Lecture 2: Innate Immunity.

Small group work.

Session Four:

Hospital Acquired Infection.
Lecture 1: Hospital Acquired Infection
Lecture 2: Interactive Case Study.

Small Group Work.

Session Five:

Travel Related Infections.
Lecture 1: Travel Related Infections.
Lecture Two: Adaptive Immunity.

Small Group Work.

Session Six:

Blood Born Viruses.
Lecture 1: Blood Born Viruses.
Lecture 2: Review & Preparation For Week 11.

Small Group Work.

Session Seven:

Infections On Surfaces.
Lecture1: Infections On Surfaces.
Lecture 2: Allergy.

Small Group Work.

Session Eight:

Infection Prevention.
Lecture 1: Infection Prevention.
Lecture 2: Antimicrobial Stewardship.

Small Group Work.

Session Nine:

Chronic Health & Infection.
Lecture 1: Chronic Infection.
Lecture 2: Chronic Infection.

Small Group Work.

Session Ten:

The Immunocompromised Host.

Lecture 1: The Immunocompromised Host.
Lecture 2: Clinical Examples Of Infections In Immunocompromised Host.
Small Group Work.

Session Eleven: Revision.

Head and neck module

Credits 5

Theory hours 30

Practical hours 30

Tutorial hours 30

Introduction

The Head and Neck comprise a highly specialized region of the body. The structures contained within this region are closely inter-related because they are compacted into a small complex area. Other regions of the body, where structural inter-relationships are relatively less complex, lend themselves to a systemic approach. Head and Neck region does not fit neatly into a systemic approach. Nevertheless, knowledge of this region is critical to understanding the basis of clinical methods and procedures undertaken to determine the integrity of structures such as the eye, ear, throat, cranial nerves, vessel pulses, etc during physical examination and assessment in the later year of medical education and clinical practice. The subject material included in this module will serve as the framework around which an understanding of function can be integrated, particularly with other future modules and clinical domains, particularly with ENT, Ophthalmology and Neurology. The learning of Head and Neck structures will be driven by exploration, demonstration or illustration of its usefulness to you in your clinical years.

Aims of the module

The aims of this module are (i) to study the structures of the head and neck within functional and clinical contexts; (ii) to apply this knowledge to understand the basis of common clinical head and neck disorders and the procedures used to investigate them and (iii) to integrate the 2 module with the Nervous System Module and as the explicator of patho-physiology and disease in clinical domains (particularly ENT and Ophthalmology).

Pre-Requisites

At the beginning of this module you should be able to:

- Outline general properties of bones & joints, major vessels & nerves and lymphatics studied in the Musculoskeletal System and Cardiovascular Modules (Semester 2)
- Describe the general anatomy of the oral, nasal and pharyngeal spaces studied in the Respiration and Gastrointestinal System Modules (Semester 3)
- Outline the role of the pituitary, thyroid and parathyroid glands studied in Metabolism and Tissues of the Body modules (Semester 1).

Summary of Intended Learning Outcomes

On completion of this module you should be able to:

- Describe and demonstrate clinically relevant features of the skull and its radiological images. These features will include the orbit and the context of the eyeballs, paranasal sinuses, air cells, auditory passages and temporomandibular joint.
- Describe the clinical sequelae of fractures of the skull, face and cervical spine. Describe the clinical outcomes from common head and neck bone pathologies and cervical spine arthritis.
- Outline the muscle groups involved in gaze and facial movements, mastication, swallowing and head movements.
- Describe the clinical assessment of and explain patterns of sensory loss plus weakness of these muscle groups in terms of damage to head and neck innervation.
- Outline the anatomy and transducer function of special sense organs and the basis of their clinical testing and investigating.
- Discuss the basis of common disorders associated with olfaction, paranasal sinuses, epistaxis, airways obstruction, tonsillar, salivary and other neck swellings; ear pain, deafness and disequilibrium.
- Demonstrate the position of the major nerves and vessels, discussing the clinical relevance of their surface anatomy in relation to clinical procedures.
- Outline the disposition of cervical lymph nodes and explain their role in draining local territories and their involvement in more widespread disorders.
- Outline the anatomical context of the thyroid (& parathyroids) and the consequences of enlargement related to cervical triangles and their role in localizing neck lumps generally.
- Outline the embryonic development of major structures (e.g. eye, nose, palate, face, thyroid gland, etc.) of the neck and their common anomalies.
- Outline the anatomical basis of interpreting endoscopic views of the nose, pharynx and larynx; the anatomical context of the front of the trachea related to laryngeal obstruction.

- Identify anatomical structures on plain radiographs and other radiological images of the head and neck.

Assessment & Assessment Methods:

The end of semester assessment will comprise module-specific and cross-modular questions testing knowledge, understanding and application of the subject material covered during the module and its relevance and significance within a clinical context. In addition, material from the module will be included as part of the Phase 1 Integrated Medical Sciences Assessment and OSCEs at the end of Semester 5.

List of Appropriate Textbooks:

1- Moore, K.L. & Agur, A.M.R. Essential Clinical Anatomy, 5th Edition (2014)

2- Moore, K.L. & Dalley, A.F. Clinically Oriented Anatomy, 8th Edition (2017)

Lippincott Williams & Wilkins

3- Drake, R.L., Vogl, W. & Mitchell, A.W.M. Gray's Anatomy for Students 4th edition (2019) Elsevier Churchill Livingstone

4- Richard Snell. Clinical anatomy by regions 10th edition (2018)

Self-Study & Follow-Up Work

You are strongly recommended to spend self-study time to fully meet the intended learning outcomes of the module by working through the follow-up work included in the module workbook. The aim is to enable you to apply your knowledge and understanding of the subject material learnt in this module in a clinical and functional context. Additional resources, such as prosections, potted specimens, anatomical models, charts, audio-visual aids and CAL packages, illustrating structural, functional and clinical interrelationships will be available and accessible by arrangements.

Sessions

Session One:

General Organisation of the Head and Neck

Session Two:

The Orbit & the Eyeball

Session Three:

The Ear

Session Four:

The Nose, Paranasal Sinuses

Session Five:

Development of the Nose and Face & the Temporal Region

Session Six:

Head & Neck Embryology II & Viscera of the Neck

Session Seven:

The Pharynx and the Larynx

Session Eight:

Lymphatic Drainage & Inspection and Palpation of Lymph Nodes of the Head & Neck & Student presentations

Session Nine:

Cranial Nerves & Assessment of Function

Session Eight:

Student Presentations & Small Group Work

Session Eleven:

Student Presentations & Small Group Work

Session Twelve:

Cranial Nerves Overview

Clinical Skills Foundation

Course Module

Credits 2

Tutorial Hours 30

Sessions

Session One:

The reproductive System

History

Session Two:

The reproductive System.

Physical Examination – reproductive Preparatory Worksheet

Session Three:

Physical Examination

Session Four:

Case Studies

Session Five:

Pediatric

History

Session Six:

Pediatric

Physical Examination – pediatric Preparatory Worksheet

Session Seven:

The endocrine System.

History

Session Eight:

The Endocrine System

Physical Examination

Session Nine:

The Endocrine System

The Endocrine case studies.

Session Ten:

The respiratory & reproductive Case Studies

Assessment:

Practical Exam: OSCE

موديول الطب العدلي

Credits 1

Theory Hours 15

اهداف الموديول:

تدريب الطلبة على كيفية استقبال الاصابات المشتبه بها من الناحية الطبية العدلية مثل اصابات الاطلاقات النارية او الجروح وانواعها وتنظيم التقارير العدلية وتحرير شهادة الوفاة بالاضافة الى تدريب الطلبة على مهارة فتح الجثة وتوصيف الافات المرضية العينية المسببة للموت وكيفية كتابة تقارير الطب العدلي.

المنهاج

المحاضرة الاولى: مقدمة عن الطب العدلي

المحاضرة الثانية: الفحوصات المختبرية

المحاضرة الثالثة: الموت وعلاماته

المحاضرة الرابعة: السموم 1

المحاضرة الخامسة: السموم 2

المحاضرة السادسة: الجروح

المحاضرة السابعة: الجروح الرضية

المحاضرة الثامنة: الاختناق

المحاضرة التاسعة: الاضرار الناتجة عن حوادث وسائط النقل

المحاضرة العاشرة: اصابات الاسلحة النارية

Health and Disease in Society |Module

Credits 2

Theory hours 30

Aims of the module:

This module aims to support you to meet the requirements for the standards that medical students must reach in order to become registered as doctors, as specified in Tomorrow‘s Doctors. It does by giving a thorough grounding in sociological theory and research on the social origins and consequences of health and illness; relationships between patients and health professionals; evidence and theory on prevention of illness, including screening; theory and practice of evidence-based healthcare; quality and safety in healthcare; outcomes of healthcare; organization, financing and management of healthcare; and a public health perspective on health. Much of the knowledge and skills that you will acquire in this module will provide the foundation for life-long learning, which will be a requirement no matter what area of medicine you eventually specialize.

Summary of intended learning outcomes :

On completion of this module students should be able to:

- Apply social principles, method and knowledge to medical practice (TD 10);

- Discuss sociological concepts of health, illness and disease (TD 10b);

- Apply theoretical frameworks in sociology to explain the varied responses of individuals groups and societies to health and illness (TD 10c);

- Explain the social factors that contribute to illness, the course of disease and the success of treatment, including issues relating to health inequalities and the effects of poverty and affluence.

- Discuss social aspects of behavioral change and compliance with treatment and health promotion advice; discuss basic principles of health improvement including the wider determinants of health, the health risks associated with disability, race, sex, sexuality and age, and disease surveillance

- Describe methods for measuring to improve clinical effectiveness and demonstrate improvements in care ; discuss the principles underlying the development of health and health service policy including issues related to health economics and equity and clinical guidelines

- Discuss the principles and application of primary, secondary, and tertiary prevention of disease.

- Apply social scientific method and approaches to health and healthcare research

- Critically appraise social science studies reported in the medical literature, and recognise the ethical issues in conducting health research .

-Apply findings from the literature to answer questions raised by specific clinical problems.

-Formulate relevant research questions in social science and design appropriate studies to address these .

-Demonstrate knowledge of the laws and systems of professional regulation through the Ministry of Health (MOH) relevant to medical practice .

- Explain the framework within which medicine is practiced in the Iraq, including the MOH , management and regulation of healthcare provision and the structures and functions of the Iraqi health system .

-Recognise the need to promote, monitor; and maintain patient safety, including an understanding of how errors can happen, and apply principles of quality assurance, and risk management; explain principles and methods of improvement including assurance, adverse event reporting and quality improvement .

-Demonstrate understanding of the role of doctors as managers .We have to establish audit and clinical governance system in Iraqi health institutions.

References:

Scambler, G (ed) (2008) Sociology as Applied to Medicine (6th edition) London: WB Saunders.

Evans I, Thornton H, Chalmers I (2006) Testing Treatments: better research for better healthcare. London: The British Library. Please note:

Gabe J, Bury M and Elston MA (2004) Key Concepts in Medical Sociology London: Sage Publications.

Assessment:

The summative assessment takes the form of end of semester assessments (ESAs) where the learning objectives from the module will be assessed. There will be opportunities for formative assessment throughout the module. Sample questions and answers will be made available on Moodle and during the module. You will also get an opportunity to practice exam questions during one of the small group sessions.

Sessions

Session One: Introduction to Module; Quality and Safety in Healthcare

Session Two: Methods and Evidence

Session Three: Inequalities in Health

Session Four: Lay Beliefs; Health Promotion

Session Five: Chronic Illness; Quality of Life

Session Six: Screening

Session Seven: Iraqi Health services ; Structure and Management

Session Eight: Resource Allocation

Session Nine: Professions and Professionalization

Session Ten: Patient-professional Relations; Patients' Evaluations of Healthcare

Session Eleven: Complementary Therapies; Patients' Perspectives

Session Twelve: Review and Revision

Phase I

Semester 6

Total credits 20

Course Study Name	Theory	Practical	Discussion	Credits
Pharmacology	30	-	30	4
Nervous system	30	30	30	5
Integrative	30		30	4
People and disease	-	-	90	3
Clinical skills foundation course	-	30	30	3
Selected components	15	-	-	1

Clinical Pharmacology and Therapeutics Module

Credits 4

Theory Hours 30

Tutorial Hours 30

Aims of the Module:

This introduction aims to provide a broader context in which to place the material for the Clinical Pharmacology and Therapeutics lectures and workgroups sessions. This includes an overview of the general topic areas covered and the longitudinal conceptual themes within the module. A brief overview of the genuine multidisciplinary and integrated nature of Pharmacology and the necessity of weighing therapeutic balance against toxic risk is also given. This leads to a consideration of one of the primary professional responsibilities of the doctor; namely, safe prescribing and reducing the incidence of serious prescription error. Some of the major recognised causes of prescription error are considered. It also reiterates your responsibility for the continuing development of directed study skills in this final semester. This is particularly important in helping you successfully bridge the transition from Phase I to Phase II of the degree.

Review of relevant background and concepts

Before coming to the relevant lectures and workgroups in a session, you should always aim to refresh your knowledge of the relevant areas in the appropriate modules. Prior to the CPT lectures you should:

- Understand the basic principles of pharmacology first introduced in the Membranes and Receptors Module.

- Understand normal, healthy physiological function in the relevant body system.

- Understand the way in which normal function in the relevant body systems is modified by disease.

Learning Objectives:

It should be evident to you that an objective of self-directed learning is to be able identify what the main objectives are for yourself. At this stage of your degree, you should be able to gauge from the lectures and workbooks what the objectives are. The weight anyone of you give them will vary, but this is no bad thing. This forms a useful exercise in developing your own critical judgment.

General learning objectives are still given within this Course book for the beginning of every lecture, but you should not simply direct your learning in dull box-ticking style, to fulfill these alone. What is more important is that you can relate the concepts and ideas presented in the lectures to the major themes already described.

What not to learn? There is a large amount of material to learn for this module and a limited amount of time to learn it. In order to use your learning and revision time most effectively You should not

- Learn long lists of drug names or trade names.

-Learn explicit dosing regimes for every drug referred to in the module

- Attempt to learn all the interactions and side effects as listed in the BNF.

References:

-Golan et al: Principles of Pharmacology: The Pathophysiologic Basis of Drug Therapy. Third Edition. Lippincott Williams and Wilkins

-Rang, Dale, Ritter and Moore: Pharmacology 7th Edition. Churchill Livingstone

-Clark et al: Pharmacology:Lippincott‟s Illustrated Reviews. Fifth Edition: Lippincott Williams and Wilkins

-Batchelder et al Rapid Clinical Pharmacology: A Student Formulary First Edition

Sessions

Session One: Module Introduction, Safe Prescribing

Session Two : Pharmacology – General Principles

Session Three: Clinical Endocrine Pharmacology

Session Four: Diabetic Pharmacology

Session five: Drugs treating Infection

Session Six: Drugs treating Arthritis, Respiratory Clinical Pharmacology

Session Seven: Pharmacology of Pain Management

Session Eight: Blood Pharmacology, Introduction to Anaesthetics

Session nine: Drugs and the Kidney, Drugs affecting Haemostasis

Session Ten: Drugs treating Cardiac Arrhythmias, Cancer Chemotherapy

Session Eleven: Neuropharmacology

Nervous System Module

Credits 5
Theory hours 30
Practical hours 30
Tutorial hours 30

Aims of the Module:

The aim of this module is to allow the student to develop a 3D concept of the system. Such a concept is basic to the understanding and elucidation of clinical problems. You can accomplish this task mainly by a study of the structure and function of the nervous system.

Self- Study:

Because of the shortage of material and limited teaching time not all necessary topics are covered in these teaching courses. Therefore, you must seek such topics and some are covered by self-directed sessions. Four Self Study Sessions are described in the workbook. These require you to look at demonstration and other material designed to broaden your general knowledge. So, the workbook sessions should be reinforced by private study.

Structure of the Module:

The module covers the physiology, applied anatomy of the nervous system, neurology and related pathology and radiology. The work is divided broadly into five sections covering:

a) the peripheral nervous system

b) the central nervous system

c) the cranial nerves and special senses

d) the environment of the brain and

e) Clinical Examination skills The clinical aspects of these divisions are summarized by clinical presentation and the analysis of case studies.

Related Modules:

All the previous modules you had already received are so vital for comprehensive understanding of this module, so please consult such modules as needed.

References:

Generally, below are the references and books that you may find particularly useful. Additionally, you could consult relevant chapters in your textbooks or ask senior lecturers.

Author	Title	Publication Office
Carpenter R and Reddi B	*Neurophysiology*	Hodder Arnold
Fitzgerald, Gruener & Mtui	*Clinical neuroanatomy & neuroscience*	Elsevier
Siegel & Sapru	*Essential Neuroscience*	Lippincott,W & W
Crossman & Neary	*Neuroanatomy*	Churchill Livingstone
Krebs, Weinberg & Akesson	*Illustrated Revies \ Neuroscience*	Lippincott W & W
Young, Young & Tolbert	*Basic Clinical Neuroscience.*	Lippincott,W & W
Renton	*Medical Imaging*	Churchill Livingstone
General Physiology:		
Vander, Sherman & Luciano	*Human Physiology*	McGraw Hill
Guyton & Hall	*Medical Physiology*	Sauders
Berne & Levy	*Principles of Physiology*	Mosby
General Anatomy:		
Thieme Atlas of Head and Neck		
Moore & Agur	*Essential Clinical Anatomy*	Lippincott W & W
Ellis	*Clinical Anatomy*	Blackwell
Snell	*Clinical Neuroanatomy*	Lippincott W & W
Anne Agur & Arthur Dalley	*Grant's atlas of anatomy*	Lippincott
Clinical Textbooks:		
Kumar & Clarke	*Clinical Medicine*	Bailliere Tindall
Aminof clinical neurology	*Clinical neurology*	lipincotte
Davidson's	*text book of medicine*	
Axford	*Medicine*	Blackwell
Clinical Examination		
Douglas, Nicol & Robertson	*Macleod's Clinical Examination*	Elservier, Churchill
Radiology		
Armstong P & Martin W & Anderea R	*Armstrong's Diagnotci Imaging*	Willey-B.
Other useful books:		
Goldberg	*Clinical Neuroanatomy Made Ridiculously Easy*	MedMaster, US
Pritchard & Alloway	*Medical Neuroscience*	Fence Creek
Bear, Connors & Paradiso	*Neuroscience*	Lippincott W & W
Diamond, Schiebel, Elson	*The Human Brain Colouring Book*	Harper Collins
Dissection guides and other neuroanatomical texts:		
Chumbley & Hutchins	*A Colour Atlas of Human Dissection*	Wolfe
Jacobs	*Anatomy: A Dissection Manual & Atlas*	C. Livingstone
England & Wakely	*A Colour Atlas of the Brain & Spinal Cord*	Mosby
Internet, e books and other useful references and sites		
http://www.doctorslongue.com		
http://www.youtube.com/watch?v=vZBpNsFPJVQ		
http://www.youtube.com/watch?v=jdaq-Ecz7Co		
http://www.aclandanatomy.com		

Sessions

Session One: Introduction To Structure And Development Of Nervous System.

Self-Study One: The Internal Structure Of The Brain And Spinal Cord.

Session Two: The Environment Of The CNS.

Session Three: Somatic Sensation & The Sensory Pathways.

Session Four: The Motor System

Self- Study Two: The Skull And Cranial Nerves.

Session Five: Motor Disorders & Review Of Patterns Of Sensory Deficits.

Session Six: Pain.

Self -Study Three: Imaging & Neurophysiologic Testing Of Nervous System.

Session Seven: Neurotransmission & Its Clinical Correlates

Session Eight: Special Sense Organs – The Eye And The Ear.

Session Nine: Strokes, Head Trauma & CNS Imaging.

Self- Study Four: Special Senses And Higher Centres Of The Brain.

Session Ten: Formative Assessment And Neuroradiology

Session Eleven: Consciousness And Its Disturbances

Session Twelve: Higher Functions Of The Brain

Session Thirteen: Integration & Pathology

Session Fourteen: Formative Assessment

Integrative Module
Credits 4
Theory Hours 30
Tutorial Hours 30

Summary of Intended Learning Outcomes:

By the end of this unit you should be able to:

• Effectively link together topics (e.g. by the use of concept maps) in the context of their application to common and important clinical problems

• Identify the appropriate level of detailed knowledge and understanding to apply to a particular clinical problem

• Be able to relate the relevant basic medical sciences, social and behavioural sciences, clinical sciences and broader issues to any particular patient problem.

Purpose and Delivery of the Unit:

You will notice that the learning outcomes for this unit are broad and are not explicitly knowledge based. Patients do not present with problems in neat, 'unit-specific' packages, and virtually every patient you encounter will require you to draw upon material from across the full breadth of the medical curriculum. This capacity to integrate and to focus the totality of your learning on every problem you face in an organised, context specific manner is a critical skill of being a doctor; this takes time to develop.

The Assessment Programme of the MBChB course is designed to drive such an integrated approach to learning and practice, and the forthcoming Primary Professional Examination (PPE) is the culmination of that process for Phase 1. This unit aims to help you develop further the skills of pulling together knowledge and understanding and applying this to address clinical problems, by considering examples drawn from across the curriculum. The unit intentionally contains limited new material, but will be revisiting topics in new ways much more focussed on clinical application. As such, it will help you to prepare for the PPE, though is not solely a 'primer' for the assessment. Indeed, in order to be able to integrate and apply knowledge effectively you must know the facts to apply.

The unit also serves as a bridge between Phases 1 and 2 and a greater proportion of the unit is delivered by clinicians integrating with Phase 1 tutors. You will find that more attention is paid to the analysis of a clinical problem and how that problem may be solved then the individual answers; the importance of a sound understanding of the basic sciences will be high-lighted. Each session in the unit is built around a theme which has been chosen to draw from a range of topics across Phase 1. All sessions begin with a lecture, and most proceed to group work based on problems. The group work will be supervised by Clinical Educators in the normal way, and the format is very similar to that you are already familiar with from other units. Do remember that in most respects the 'answers' to the group work questions are not the issue, what matters is the process of thinking about and discussing the questions, as that is what you will learn from.

Sessions

Session One: Putting It All Together -Hypoxia

Session Two: Fluid Balance And Its Application To Intravenous Fluid Therapy

Session Three: Acid Base Balance

Session Four: Professionalism In Clinical Practice

Session Five: Cardiac Failure

Session Six: Hypersensitivity Reactions

Session Seven: Defensive Failure And The Bone Marrow

Session Eight: Neurology And Stroke

Session Nine: Anemia

Session Ten: Blood And Bleeding Dysfunction

Session Eleven: The Liver In Health And Disease

Session Twelve: Clinicopathological Correlation - The Patient With Renal Disease

Clinical skills foundation course

Module

Credits 3

Practical hours 30

Tutorial hours 30

The Neurological System / History

You need to know common neurological causes of, and be able to fully explore the following symptoms:

- Headache
- Fits, faints, funny turns and falls (e.g. loss of consciousness, seizure)
- Dizziness and vertigo
- Visual Symptoms
- Altered motor function (e.g. weakness)
- Altered sensation (e.g. tingling, loss of sensation)

The Nervous System
Examination of the cranial nerves
Overview

The cranial nerves are examined in order:

- I Olfactory

- II Optic

- III, IV &VI Oculomotor, Trochlear & Abducens

- V Trigeminal

- VII Facial

- VIII Vestibulocochlear

- IX & X Glossopharyngeal & Vague

-XI Accessory

- XII Hypoglossal.

PHASE TWO

FOURTH YEAR

TOTAL SEMESTERS
CREDITS 44

Fourth Stage

Total Credits 44

Course Study Name	Theory	Practical	Discussion	Credits
Musculoskeletal care	30	180	30	10
Cardio-Respiratory Care	30	180	30	10
Gastrointestinal Care	30	180	30	10
Endocrine-Renal Care	30	180	30	10
Clinical Methods	-	60	-	2
Selected Components	-	60	-	2

Clinical Methods Block

Block type: Core

Block duration: Seven weeks

Aims of the Block:

This Block aims to enable students to develop further the consultation competencies underpinning clinical learning and practice across the curriculum, and provide a sound foundation for clinical practice in all settings.

Learning Outcomes For The Block:

As this block embodies the approach to consultation across the curriculum, its outcomes are a staged version of those of the course as a whole. By the end of the block students should be able to:

Carry out a consultation with a patient:

• Take and record a patient's medical history, including family and social history, talking to relatives or other carers where appropriate.

• Elicit patients' questions, their understanding of their condition and treatment options and their views, concerns, values and preferences.

• Perform a full physical examination.

• Perform a mental-state examination.

• Assess a patient's capacity to make a particular decision in accordance with legal requirements and the GMC's guidance.

• Determine the extent to which patients want to be involved in decision-making about their care and treatment.

• Provide explanation, advice, reassurance and support.

Diagnose and manage clinical presentations:

• Interpret findings from the history, physical examination and mental-state examination appreciating the importance of clinical, psychological, spiritual, religious, social and cultural factors.

• Make an initial assessment of a patient's problems and a differential diagnosis. Understand the processes by which doctors make and test a differential diagnosis.

• Formulate a plan of investigation in partnership with the patient, obtaining informed consent as an essential part of this process.

• Interpret the results of investigations, including growth charts, x-rays and the results of the diagnostic procedures.

• Synthesize a full assessment of the patient's problems and define the likely diagnosis or diagnoses.

• Make clinical judgments and decisions, based on the available evidence, in conjunction with colleagues and as appropriate for the graduate's level of training and experience. This may include situations of uncertainty.

• Formulate a plan for treatment and management, according to established principles and best evidence, in partnership with the patient, their carers and other health professionals as appropriate. Respond to patients' concerns and preferences, obtain informed consent, and respect the rights of patients to reach decisions with their doctor about their treatment and care and to refuse or limit treatment.

• Support patients in caring for themselves.

• Identify the signs that suggest children or other vulnerable people may be suffering from abuse or neglect and know what action to take to safeguard their welfare.

• Contribute to the care of patients and their families at the end of life, including management of symptoms, practical issues of law and certification, and effective communication and team-working.

Communicate effectively with patients and colleagues in a medical context:

• Communicate clearly, sensitively and effectively with patients, their relatives or other carers, and colleagues from the medical and other professions, by listening, sharing and responding.

• Communicate clearly, sensitively and effectively with individuals and groups regardless of their age, social, cultural or ethnic backgrounds or their disabilities.

• Communicate by spoken, written and electronic methods (including medical records), and be aware of other methods of communication used by patients. The graduate should appreciate the significance of non-verbal communication in the medical consultation.

• Communicate appropriately in difficult circumstances, such as when breaking bad news, and when discussing sensitive issues, such as alcohol consumption, smoking or obesity.

• Communicate appropriately with difficult or violent patients.

• Communicate appropriately with people with mental illness.

• Communicate appropriately with vulnerable patients.

• Communicate effectively in various roles, for example, as patient advocate, teacher, manager or improvement leader.

Provide immediate care in medical emergencies:

• Assess and recognize the severity of a clinical presentation and a need for immediate emergency care.

Prescribe drugs safely, effectively and economically:

• Establish an accurate drug history, covering both prescribed and other medication.

• Plan appropriate drug therapy for common indications, including pain and distress.

• Provide a safe and legal prescription.

• Calculate appropriate drug doses and record the outcome accurately.

• Provide patients with appropriate information about their medicines.

• Access reliable information about medicines.

• Detect adverse drug reactions.

•Demonstrate awareness that many patients use complementary and alternative therapies, and awareness of the existence and range of these therapies, why patients use them, and how this might affect other types of treatment that patients are receiving.

Carry out practical procedures safely and effectively:

• Be able to perform a range of diagnostic procedures and measure and record the findings.

• Be able to perform a range of therapeutic procedures.

• Be able to demonstrate correct practice in general aspects of practical procedures.

Use information effectively in a medical context:

• Keep accurate, legible and complete clinical records.

• Make effective use of computers and other information systems, including storing and retrieving information.

• Keep to the requirements of confidentiality and data protection legislation and codes of practice in all dealings with information.

• Access information sources and use the information in relation to patient care, health promotion, giving advice and information to patients, and research and education.

• Apply the principles, method and knowledge of health informatics to medical practice.

The block also has specific sessions on evidence-based medicine, dermatology, the clinical assessment of children and imaging, whose outcomes are:

• Understand how patients learn about disease and its treatment from the media and demonstrate an ability to explain research findings in relation to newspaper stories that patients have read.

• Be able to identify and describe the clinical symptoms and signs of common skin disease, discuss with patients the psychological, social and occupational impact of skin disease and describe the most appropriate management plans for these.

• Practice the content and process of consultations with families and children of all ages and learn how the developmental stages of children affect the process

• Explain the indications for requesting particular imaging investigations in order to address specific diagnostic questions and interpret the results in the light of the patient's presentation.

Structure of the block

At the end of the Phase 1 it is expected that all students will "be able to take a basic clinical history and perform a basic physical examination of the major body systems". This course will build on and extend the competences you acquired in Phase 1 and in the other clinical blocks undertaken by you prior to the Clinical Methods Course.

The Clinical Methods Course has the overall intention to help all students to become better doctors, irrespective of their current career preference or eventual career choice. More specifically, it seeks to assist students "to recognise, adopt and develop those clinical skills and values that are fundamental to the practice of rational and humane clinical medicine, whatever the clinical setting". Our intention is to concentrate on the principles of, and the concepts underlying, sound clinical method in its broadest sense, and provide guidance on how its many components need to be integrated and then applied in clinical practice for the benefit of patients.

Sunday Monday, Tuesday

You will receive teaching in the setting of general practice, generally from a GP clinical teacher directly observing your consultations with patients and providing you with feedback on your performance. This will be supplemented by a small number of sessions during which you will observe the work of other primary care professionals. You will also be provided with teaching in small groups of students, drawn from neighboring teaching practices in localities, in which the main means of instruction will be analysis of video recorded consultations in group discussion facilitated by a GP clinical teacher.

Wednesday, Thursday

You will take part in a variety of teaching sessions including lecture presentations, small group discussion and student presentations. This teaching will focus on:

• Clinical Problem Solving

• Patient-centred consultations

• The Clinical Assessment of Children

• Interpreting and explaining topical health issues to patients in relations to the published scientific literature

• The recognition and treatment of skin disease

• Clinical pharmacology of drugs commonly used in primary care

• Choice of diagnostic imaging

Links to overarching themes

This block will link with several of the overarching themes.

• Basic sciences and pathological processes underpin the hypothesis generation that is a key feature of taking a focussed history and performing an appropriate physical examination.

• The diagnosis and management of infections in primary care is a major feature of the block

• There are specific sessions in the block relating to the ordering of investigations such as imaging, and the use of drugs in Primary Care, including a 'Desert Island drugs' session.

• Public health issues pervade practice in primary care, and students will have several opportunities to explore them.

Assessment of the Block

At the end of the block a report will be made to the Medical School as to whether each student has:

• Attended all clinical placement sessions in their allocated practice

• Contributed to locality teaching sessions in a satisfactory manner.

• Attended all teaching sessions on Thursday and Friday of each week.

• Completed satisfactorily two case studies in a standard format and written a reflective essay on the ethical issues of confidentiality.

• Performed to a satisfactory level in five observed consultations judged according to the competencies defined for consultation across the curriculum, and specified in the Code of Practice for assessment in Phase 2.

• Behaved in a professional manner throughout the block

• Achieved competence in the examination of the fundus of the eye using an ophthalmoscope

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Musculo-Skeletal Care

Block Type: Core

Block Duration: 7 Weeks

Aims of the block:

The aim of this block is to equip medical students with the necessary knowledge, skills and attitudes for the diagnosis and treatment of musculoskeletal disorders and to enable them to enter the foundation year training and subsequent postgraduate training programmes with the necessary skills for the basic management of patients with musculoskeletal conditions.

Learning Outcomes:

By the end of the block students should be able to:

• Identify the important causes of the following symptoms :

- Pain arising in multiple small joints

- Pain arising in a solitary large joint

- Pain and/or paraesthesiae arising in the spine

- Pain arising in soft tissues

- Widespread pain associated with arthralgia and/or myalgia by taking a history considering physical psychological and social aspects formulate appropriate diagnostic hypotheses based on sound, scientific understanding of normal and abnormal structure and function in the causation of musculoskeletal disease

• Elicit selectively, normal and abnormal physical signs in the musculoskeletal system to test diagnostic hypotheses .

• Use investigations selectively and demonstrate an understanding of the use of haematology, biochemistry, immunology, radiology and other relevant investigations with regard to musculoskeletal disease

• Use information sources and appraise evidence as appropriate for musculoskeletal disease

• Formulate and implement management plans with regard to prescribing mild, intermediate and strong analgesics as appropriate and using combinations of anti-inflammatory agents and analgesics appropriately

• Offer advice for patients whose pain is not satisfactorily controlled by pharmacological agents

• Communicate effectively and sensitively in dealing with patients with chronic musculoskeletal disease; and negotiate, where appropriate, alterations in lifestyle that would be in the patient's best interest.

• Formulate and implement a management plan for patients with inflammatory joint disease, based on an understanding of disease modifying anti rheumatic drugs (DMARDs) .

• Appreciate the role of other health care professionals and be aware of the wider strategies for the management of acute and chronic musculoskeletal disorders including rehabilitation, pain management, physiotherapy, occupational therapy, the role of allied healthcare professionals and social services

With regard to Trauma, the student should be able to:

• Identify the extent and severity of injury following trauma by taking an appropriate history, and by the selective use of physical signs and investigations

• Perform basic first aid and resuscitative care in a patient with musculo-skeletal trauma

• Use effective communication skills to outline to patients with orthopaedic trauma the consequences of that trauma and the impact both in the short and long term to lifestyle

• Identify and discuss with the patient potential risk factors for further injury and the way they may be reduced

• All of the above tasks should be based on a sound basic knowledge of applied anatomy, physiology and pharmacology.

Competency Contexts the student should be able to express the above competencies in the context of:

• Musculoskeletal emergencies.

• Chronic inflammatory polyarthropathy.

• Autoimmune disease

• Tumours affecting bones

• Metabolic bone disease

• Low back pain, sciatica and radicular pain

• Degenerative joint disease

• Childhood musculoskeletal problems

Structure of the Block

The block structure will be based on the following principles:

• Students should learn in the workplace and learn to work as members of medical staff.

• All medical team members have something to contribute with respect to student learning.

• Other disciplines can contribute significantly to learning.

• Priority is given to learning the core skills of musculo-skeletal medicine e.g. history taking, physical examination, development of investigation plans, medical management and deciding when surgery is appropriate.

• Exposure to the most common conditions is important.

• A broad experience is desirable

Each week there will be a plenary session on the Monday. This will cover the following core topics:

i) Introduction; and history taking

ii) Anatomy of lower and upper limbs

iii) Physical examination.

iv) Rehabilitation and investigations

v) Back pain

vi) Rheumatoid arthritis, ankylosing spondylitis and sero-negative inflammatory arthritis

vii) Auto-immune diseases.

viii) Osteoporosis, metabolic bone disease, muscle disease.

ix) Resuscitation .

x) Student presentations, Quiz and feedback.

The remainder of the week will contain a mix of:

i) Clinical attachments

ii) Special learning experiences

Clinical Procedural Skills

i) Backslab

Links to overarching themes

During this block students will learn about the following aspects of the overarching themes: Basic sciences:

• Anatomy of musculoskeletal system

Pathology

• Inflammatory processes in joints

Pharmacology & therapeutics

• Pharmacology of pain relief

Infection

• Post operative infections

Imaging

• Radiology of fractures

Ethics and Law

• Consent

Procedural skills

• Venepuncture

• Backslab

Assessment of the block:

At the end of the block a report will be made to the Medical School as to whether each student has:

• Attended all compulsory timetabled sessions; and other clinical sessions as appropriate

• Completed the required tasks defined in the block workbook

• Satisfactorily completed in-block formative assessments (as appropriate for the block),

including consultation skills and knowledge-based assessments.

• Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Cardio-Respiratory Care

Block Type: Core

Block Duration: 7 Weeks

Aims of the Block :

The aim of this block is that students should be able to recognize common conditions affecting the cardiovascular and respiratory systems, and be able to describe their investigation, treatment and prevention.

Learning outcomes for the block

By the end of this block students should be able to:

• demonstrate their ability to identify the important cardiovascular and respiratory causes for:

• Chest Pain

• Breathlessness

• Syncope

• Palpitation

• Cough

• Sputum Production

• Wheeze

• Haemoptysis

• Leg Pain

• Oedema

by taking a history considering physical, psychological and social aspects, using clinical reasoning to reach an appropriate provisional diagnosis.

• Elicit selectively, normal and abnormal physical signs in the cardiovascular and respiratory systems to test diagnostic hypotheses.

• Use investigations selectively to confirm diagnostic hypotheses including.

• Interpretation of chest X rays and other relevant imaging.

• Performing and interpreting an ECG.

• perform and interpret basic pulmonary functions tests, including use of a peak flow meter .

• Interpret arterial blood gas analyses

• Recognize cardiac and peri-arrest arrhythmias and their initial management

• Formulate a management plan (including the use of medication), if necessary using information sources, appraise evidence and apply the conclusions, for the care of patients with common cardiovascular and respiratory diseases.

• Use effective communication skills to give advice about cardiovascular risk factors.

• Give advice about lifestyle changes including occupational factors to a patient who has recently suffered a myocardial infarction

• Explain the procedures of spirometry, bronchoscopy, coronary angiography, exercise testing and echocardiography

• Negotiate with a patient the pros and cons of taking anti-hypertensive medication.

• Inform sensitively a patient that he/she has incurable lung disease

• Negotiate a smoking cessation plan with a patient

• Describe how primary and secondary preventative strategies may reduce the burden of cardiovascular and respiratory disease on society.

• Recognise the possibility of environmental and occupational factors in the causation of lung disease .

Competency contexts: You should exhibit the above competencies in the following contexts:

- Angina Pectoris
- Acute Myocardial Infarction
- Hypertension
- Heart failure
- Valvular heart disease
- Arrhythmias
- Thrombo-embolic disease (including prevention)
- Peripheral vascular disease
- Airflow limitation
- Respiratory infections
- Respiratory failure
- Pleural disease
- Tuberculosis
- Lung cancer
- Restrictive Lung disease

Procedural skills

- Performing and reading ECGs
- Managing an ECG monitor
- Performing peak flow
- Administering a nebuliser

Structure of the Block

Each block comprises of a 7-week attachment to a cardiology and a respiratory team with programmed time spent on the coronary care unit and clinical decisions /acute admissions unit including time spent on call.

There are a variety of teaching opportunities:

• Seminar teaching at the GGH and local DGH

• Out-patient clinic experience

• Ward based learning

• Senior-led ward rounds

• Acute emergency experience (including on-call)

• Cardio-respiratory simulation in the Clinical Skills Lab at the LRI

• Cardiovascular and respiratory system clinical examination teaching

• Multi-professional learning

• Observing specialty-specific procedures

• Private study time

• Ad hoc optional extras

The workbook provides direction for learning during this block and is divided into several key sections:

• Record of Cases: to allow reflective understanding

•Specified Clinical Cases: this section represents common cardio-respiratory presentations that students will be expected to take a history and examine a patient presenting with each of these conditions and reflect upon fundamental basic science, pathology, clinical pharmacology etc related to each case.

• Allied Medical Staff Activities: working with many different professionals including nursing staff, lab technicians, cardiac and respiratory technicians and physiotherapists to name a few. It is important to learn how these professional work together (e.g. in a multi-disciplinary team meeting) or undertaking investigations (e.g. echocardiography).

• Invasive Procedures: although not a key aim, this block will give you the opportunity of observing invasive procedures including coronary angiography and bronchoscopy.

• Tasks: performing and interpreting ECGs and peak flows, managing an ECG monitor,

administering a nebulizer, interpreting blood tests and chest X-rays are fundamental to this attachment.

• Taking responsibility: observing the day-to-day management of patients in dedicated ward bay

• Additional tasks include understanding the clinical pharmacology and therapeutics related to drugs treating cardio-respiratory conditions and the writing of management plans.

• Professionalism.

• Intermediate Clinical Examination Mock. Whether this block is the 1st, 3rd or 6th, exam ,practice can often highlight areas for improvement before the real thing!

Seminars will be held at the GGH and locally at the DGHs for students based there. For GGH-based students, we are expecting that you will be able to attend all or almost all of the seminars. Other students are invited to attend the Cardio-Respiratory Seminar programme if available

Examples of cardio-respiratory seminar topics:

• Palliative care in heart failure
• Respiratory Pharmacy
• Hypertension and Heart Failure
• Pleural Disease
• Blood gases
• Recognising the critically ill patient
• Respiratory emergencies
• Haematology
• Allergies
• Bronchiectasis
• Basic Science

Links To Overarching Themes:

All overarching themes will be linked into the block. Most often this will be as part of the ward or clinic based teaching and is reflected in the workbook. The seminar programme at the GGH will allow a number of these key themes to be developed further (i.e. palliative care, pharmacology, basic sciences, imaging and infection).

Basic Sciences

• Anatomy and physiology

Pathological sciences

• Microbiology

• Including pneumonia, infective endocarditis, infective exacerbations of COPD / asthma

Imaging

• Chest X-ray, Cardiac MR imaging, CT imaging of the thorax.

Clinical Pharmacology

• Cardiovascular and respiratory medicine are very therapeutic-dependent.

Assessment

At the end of the block a report will be made to the Medical School as to whether each student has:

• Attended all compulsory timetabled sessions; and other clinical sessions as appropriate

• Completed the required tasks defined in the block workbook.

• Satisfactorily completed in-block formative assessments (as appropriate for the block), including consultation skills and knowledge-based assessments.

• Demonstrated professional attitudes and behavior.

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Gastrointestinal Care

Block type: Core

Block duration: 7 Weeks

Aims of the Block:

The aims of this block are that, students should continue to improve their skills in history taking and clinical examination, presentation, communication and clinical reasoning. Students should be able to recognize common conditions affecting the gastro-intestinal systems, and be able to describe their investigation, treatment and prevention. Students should learn about patient safety issues and clinical governance through involvement with the ward teams.

Learning Outcomes For The Block

By the end of phase 2 students should be able to:

• Identify the important alimentary causes of the following symptoms:

• Acute and recurrent abdominal pain

• Vomiting

• Hematemesis

• Dysphagia

• Constipation

• Diarrhoea

• Rectal bleeding

• Jaundice

by taking a history considering physical, psychological and social aspects, using clinical reasoning to reach an appropriate provisional diagnosis.

• Elicit selectively normal and abnormal physical signs in the alimentary system and liver to test diagnostic hypotheses.

Use investigations selectively to confirm diagnostic hypotheses and relate the results to the underlying pathophysiology including

• Recognise radiological features of intra-peritoneal air, obstructed bowel and correct placement of nasogastric tubes

• request appropriately abdominal ultrasound and radiographs.

• interpret liver function tests.

• formulate a management plan, if necessary using information sources, appraise evidence and apply the conclusions, for the care of patients with common alimentary and liver conditions.

Use effective communications skills to:

• Communicate to a patient that he/she is drinking alcohol to excess and to outline the potential consequences.

• Outline to a patient the management options available for oesophageal, gastric and large bowel cancer.

Competency contexts:

The above competencies should be expressed in the following contexts:

• Benign & malignant oesophageal stricture

• Oesophageal varices

• Peptic ulcer disease

• Gastro-Oesophageal reflux disease

• Pre-hepatic, hepatic and post hepatic causes of jaundice

• Gall bladder disease

• Pancreatitis

• Bowel obstruction

• Malabsorption

• Inflammatory Bowel disease

• Bowel cancer

• Irritable bowel syndrome

• Hernia

Gastrointestinal disease

There are a variety of teaching opportunities:

• Seminar teaching

• Out-patient clinic experience

• Ward based learning

• Senior-led ward rounds

• Acute emergency experience (including on-call)

• Multi-professional learning

• Observing specialty-specific procedures

• Private study time

• Ad hoc optional extras

The workbook provides direction for learning during this block and is divided into several key sections:

• Record of Cases: to allow reflective understanding

• Specified Clinical Cases: this section represents common gastrointestinal presentations that students will be expected to take a history and examine a patient presenting with each of these conditions and reflect upon fundamental basic science, pathology, clinical pharmacology etc related to each case.

•Allied Medical Staff Activities: working with many different professionals including nursing staff, lab technicians, endoscopy staff and physiotherapists to name a few. It is important to learn how these professional work together (e.g. in a multi-disciplinary team meeting) or undertaking investigations (e.g. endoscopy, imaging).

• Invasive Procedures: although not a key aim, this block will give you the opportunity of observing invasive procedures.

• Common surgical procedures. You should have seen, and be able to describe to a patient the common surgical procedures in upper and lower GI and hepato-biliary surgery .

• Tasks: taking part in investigations and clinics.

• Professionalism.

Seminars will be held at UHL and locally at the DGHs for students based there. For UHL-based students, we are expecting that you will be able to attend all or almost all of the seminars.

Assessment of the block

At the end of the block a report will be made to the Medical School as to whether each student has:

• Attended all mandatory timetabled sessions; and other clinical sessions as appropriate.

• Completed the required tasks defined in the block workbook.

• Satisfactorily completed in-block formative assessments (as appropriate for the block), including consultation skills and knowledge-based assessments.

• Demonstrated professional attitudes and behavior.

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Metabolic Care

Block type: Core

Block duration: 7 Weeks

Aims of the Block:

The aims of this block are that, students should continue to improve their skills in history taking and clinical examination, presentation, communication and clinical reasoning. Students should be able to recognize common conditions affecting the endocrine and renal systems, and be able to describe their investigation, treatment and prevention. Students should learn about patient safety issues and clinical governance through involvement with the ward teams.

Learning Outcomes For The Block :

By the end of phase 2 students should be able to:

• Identify patients likely to have a diagnosis of diabetes on the basis of the clinical history

• Confirm diabetes on laboratory investigation

• Detect sub-clinical diabetes

• Formulate a management plan, if necessary using information sources, appraise evidence and apply conclusions, for the care of patients with diabetes

• Use effective communication skills to

• Give advice about lifestyle changes to a patient who has recently been diagnosed as suffering from diabetes and offer an explanation of why various treatments are required over and above simple dietary intervention

• Explain to patients the importance of good metabolic control, blood pressure control and reduction of serum lipids in reducing morbidity and mortality

• Give advice to patients on exercise, driving and occupation.

• Give patients information about self-help organisations

• Describe and be able to recognise long term complications of diabetes, including

• Macrovascular disease

• Eye disease

• Renal disease & hypertension

• Neuropathy & foot disease

• Lipid disease

• Recognise and manage the particular differences in diabetes in those of Asian ethnic origin

• Explain the role of chiropodists, dieticians, psychologists and specialist nurses in the care of diabetes

• Identify patients likely to have a diagnosis of thyroid disease on the basis of clinical history, examination and appropriate investigations.

• Identify patients likely to have a diagnosis of adrenal disease on the basis of clinical history, examination and appropriate investigations .

• Identify patients likely to have a diagnosis of pituitary disease on the basis of clinical history, examination and appropriate investigations

• Explain the principles of fluid and electrolyte balance, including

• Causes, investigations and management of hypo- and hyper-natraemia

• Causes, investigations and management of hypo- and hyper-kalaemia

• Use and safe prescribing of intravenous fluids

• Explain the principles of acid base balance

• Identify and manage metabolic acidosis and alkalosis

• Identify the causes of abnormal unrinary sediment, approporaite investigations and treatment

Acute kidney injury:

• Causes

• Prevention

• Early recognition

• Management

• complications

Chronic kidney disease:

• Prevention

• Recognition

• Management

• Complication

• Awareness of framework for management of chronic diseases

• Communication skills

• Principles of breaking bad news

• Counseling patients about chronic illnesses (end stage renal failure)

• Principles of end-of-life care in the context of renal disease

• Patient safety (through inpatient care)

• Hospital acquired infection

•Venous thromboembolism prophylaxis

•Documentation

•Safe prescribing for the patient with renal disease.

Structure of the Block:

During the block students will be divided into groups and allocated predominantly to a team of either diabetes, endocrine or renal medicine. The expectation is that wherever a student is placed they will be able to achieve the key learning outcomes. During the block students will have the opportunity to attend specialist clinics in areas other than their main attachment to gain exposure to a broad range of the learning outcomes. In a similar way there will be local seminars arranged on key topics that all of the students in that locality will be able to attend. It is emphasized that you can achieve all your learning objectives while being pan effective member of your ward team and contributing to the care of patients on a daily basis.

1. Diabetes and Metabolism

Stuctured Presentations

- Diagnosis and general management of diabetes mellitus
- Diabetic emergencies
- Complications of diabetes mellitus
- Pituitary disorders
- Thyroid disorders
- Adrenal disorders
- Calcium disorders
- Disorders of gonads
- Structured clinical experience
- Attendance at endocrine clinics
- General endocrine clinics
- Specialised endocrine clinics
- Attendance at diabetic clinics
- General diabetes clinics
- Specialised diabetes clinics (depending on local services)
- Foot
- Nephrology
- Erectile dysfunction
- Antenatal
- Attendance on the wards
- Patients presenting with endocrine and diabetes problems
- Patients who have these problems as issues additional to their presenting complaint.

The learning opportunities in this block include:

1. The structured teaching events.

2. Clinic attendance. Many of these clinics are multidisciplinary and you will be encouraged to learn from the various members of the teams.

3. The diabetes and endocrinology wards

4. Additional educational meetings held locally.

Experience:

• General diabetes clinics x 3

• General endocrine clinics x 3

• Nurse led clinic or ward consultation with DSN x 1

• Joint obstetric clinic x 1

• Diabetes foot clinic x 1

Minimum evidence of competence

• Type 1 diabetes consultation

• Type 2 diabetes consultation

• Diabetes during intercurrent illness

• Diabetic foot consultation

• Thyroid disorder consultation

2. Renal Disease

Patients with renal disease present often to specialties other than nephrology. You will find patients at risk of renal disease and patients affected by renal disease on your base wards. Learning about prevention of renal disease is as important as learning about treating established renal disease. Renal experiences for students not attached to nephrology include:

• Seminars on Blackboard

• Seminars during the block

• Nephrology clinics

• SpR ward teaching

Links To Overarching Themes:

During this block students will learn about the following aspects of the overarching themes: Basic sciences:

• Glucose homeostasis

• Control of the hypothalamo-pituitary axis

• Thyroid hormone homeostasis

• Anatomy and physiology of the GI and urinary systems

• Role of the kidney in maintenance of electrolyte and fluid balance

• Role of kidney in acid base balance

• Hormonal functions of the kidney

Pathology:

• Micro-vascular disease

• Macro-vascular disease

• Auto-immunity

• Basic renal pathology related to disease presentations

Pharmacology & therapeutics

• Oral hypoglycaemics

• Insulins and their delivery devices

• Endocrine replacement

• The effect of renal function on drug metabolism

• Nephrotoxicity of drugs

Infection

• Diabetic foot

• Thyroiditis

• Urinary tract infections

Imaging

• Endocrine imaging

• Vascular imaging

• Plain radiology of diabetic foot

Ethics and Law

• Diabetes and driving

• Diabetes and employment

• Ethical issue related to dialysis and transplantation

• Ethical issues related to organ donation

• Importance of good documentation

Assessment of the block:

At the end of the block a report will be made to the Medical School as to whether each student has:

• Attended all mandatory timetabled sessions; and other clinical sessions as appropriate

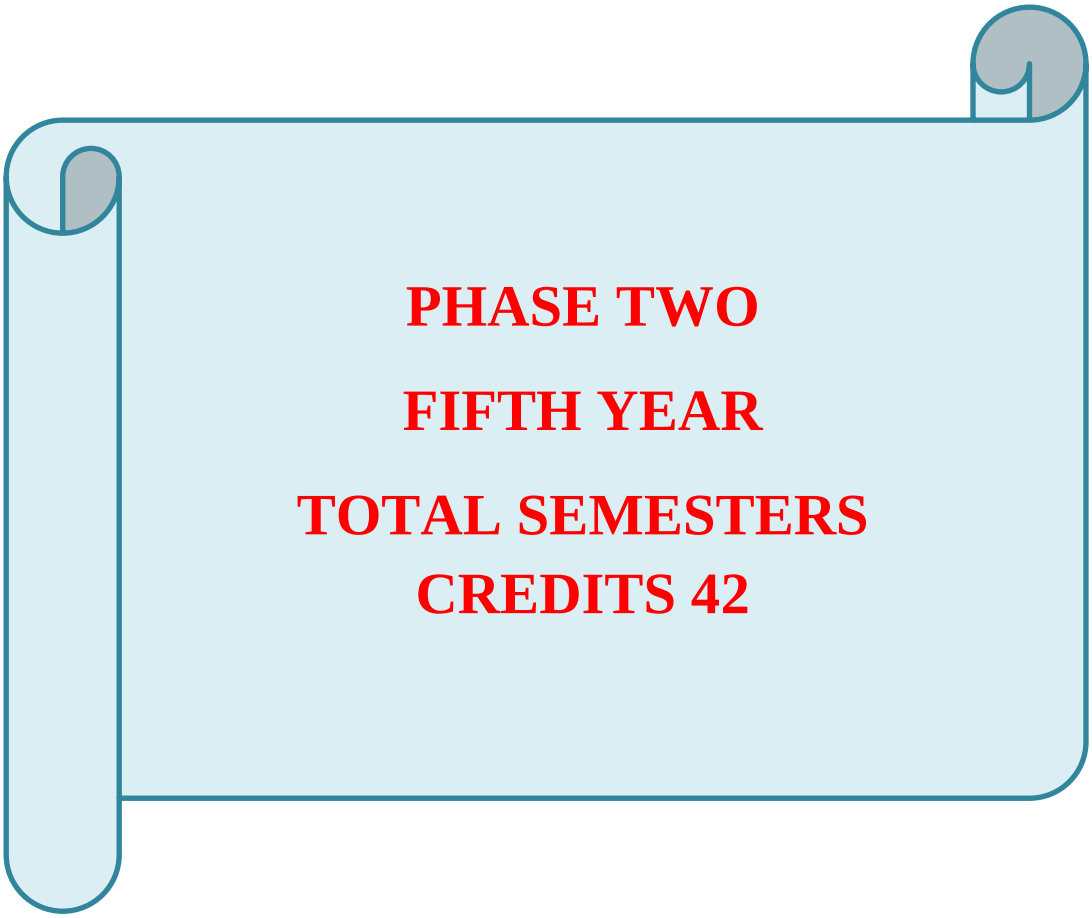
• Completed the required tasks defined in the block workbook

• Satisfactorily completed in-block formative assessments (as appropriate for the block),

including consultation skills and knowledge-based assessments.

• Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.



PHASE TWO

FIFTH YEAR

TOTAL SEMESTERS

CREDITS 42

Fifth Stage

Total Credits 42

Course Study Name	Theory	Practical	Discussion	Credits
Special Senses Care	30	180	30	10
Child Care	30	180	30	10
Reproductive Care	30	180	30	10
Perioperative	30	180	30	10
Selected Components	-	60	-	2

Special Senses Care

Block type: Core

Block duration: 8 Weeks

Aims of the block

This block aims to equip students to:

1. take a history and carry out an appropriate examination in a patient with an ENT or ophthalmic problem
2. understand the impact of dysfunction or loss of a special sense for a patient and their carer, and the resources required to manage the disability
3. understand acute, common, and important ophthalmic and ENT disorders, especially those that have systematic features or appear in other parts of the MBBS course.

Learning outcomes for the block

By the end of the block the student should be able to:

• Demonstrate their ability to identify the important causes for the symptoms of:

• Ocular discomfort

• Visual disturbance

• A red eye

• Ocular discharge

•An abnormal pupil

• by taking an appropriate history to reach a provisional diagnosis

• elicit selectively, normal and common abnormal signs in the eyes to test diagnostic hypotheses, in particular:

• test and record visual acuity in adults and children.

•assess a patient for the presence of squint by means of the corneal reflexes and cover testing

• examine the anterior segment and external eye with a pen torch, perform the swinging lamp test for a reflective afferent papillary defect

• examine the fundus with a direct ophthalmoloscope.

• use safely mydriatic and fluorescein diagnostic drops

• examine visual fields by confrontation

• examine the ocular media of both adults and children by means of the red reflex

• distinguish between ophthalmic complaints requiring immediate referral, those which require referral but are not urgent and those with can be managed by the newly qualified practitioner

• discuss the extent and causes of preventable blindness world-wide

• Demonstrate their ability to identify the important causes of:

• nasal blockage

• rhinitis

• epistaxis

• deafness

• pain in the ear

• pain in the throat

• difficulty swallowing

• swelling of the neck

• facial pain

• headache

• hoarseness

• by taking an appropriate history to reach a provisional diagnosis

• elicit selectively normal and common abnormal signs in the ears, nose and throat including the use of an otoscope and a tuning fork to test diagnostic hypotheses

• use investigations selectively to confirm diagnostic hypotheses.

• formulate a simple management plan including an assessment of the need for referral Competency contexts:

The above competencies should be expressed in the following contexts:

• Chronic visual loss

• Cataract

• Diabetic retinopathy

• Eye trauma

• Conjunctivits, corneal abrasion, corneal foreign body, corneal abscess, keratitis, orbital cellulitis

• Deafness: conductive and sensorineural

• Infections of the ear

• Rhinosinusitis and sinsusitis

• Throat infections

Procedural skills

• Use of ophthalmoscope

• Use of otoscope

The block will cover the following topics:

• Examination of the special senses

• DVD – Examination of the ENT

• Introduction to ophthalmology examination.

• Clinical Skills laboratory

• Anatomy review.

• Clinical opportunities

• Eye casualty

• Eye clinic

• ENT clinic

• ENT emergency clinic

• An understanding of the impact of a dysfunction or loss of a special sense on an individual patient and the resources required to manage the disability

• Introductory session run by Community team.

• Planned visits to key hospital areas

• Audiology

• Balance

• Eye clinic

• Common and acute problems affecting the special senses

• Structured teaching.

• Seminars. Ophthalmology seminars

• Clinical opportunities

• Clinics

• Eye casualty

• Special interest clinics

• WEB-based learning sessions

Links to overarching themes

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

• Anatomy of the special senses by spending a session in the Dissecting Room Pharmacology & therapeutics

• Review of sympathetic and parasympathetic nervous system

• Pharmacology of nasal decongestants.

• Treatment of acute eye infections

• Treatment of acute ear infections

Infection:

• Acute otitis media

• Sinusitits

• Conjunctivitis

• Corneal abscess

Imaging

• Radiology of sinuses

Block structures:

Induction phase for 2 week (40 hours)

Induction titles :

Dermatology

- Introduction to dermatology :Anatomy and functions of skin.
- Skin infection : Bacterial, viral, fungal and parasitic.
- Dermatitis (Eczema)
- Hair disorders
- Papulosquamous disorders
- Diseases of sebaceous glands
- Pigmentary skin disease
- Urticaria and angiooedema
- Connective tissue dieases
- Bullous diseases
- Genodesmotases

ENT

- External ear diseases.

- Acute middle ear infection & OME
- Chronic middle ear infections
- Complications of middle ear suppuration
- Inner ear diseases
- Conditions of external nose, midfacial trauma and Epistaxis
- Rhinitis (allergic and nonallergic)
- Rhiunosinusitis (acute and chronic)
- Complication of sinonasal infections
- Sinonasal tumours
- Pharyngeal infections
- Deep neck space infections
- Pharyngeal tumours
- Laryngeal infections
- Laryngeal tumours
- Hoarseness, stridor & tracheostomy

Ophthalmology

- Glaucoma
- Squint
- Eye complications in Systemic diseases
- Ocular Trauma
- Cornea & refractory errors
- Ocular Tumours
- Approach to red eye
- Approach to diplopia
- Approach to dry & watery eye.

- Approach to white pupil
- Laser in ophthalmology
- Imaging technique in ophthalmology

Week 3-7 : 5 weeks of Clinical training include :

- consultation clinic: attachment with the seniors

- ward round : to communicate with patients to have information gathering , clinical examination & case presentation

- field visit

- seminars

Week 8 : assessment : which consists of :

- actively & Satisfactorily complete the time table with log book filling & seminar presentation & active participation

- 2 papers written exam. Of MCQ & clinical cases

- OSCE

Child Care

Block type: Core

Block duration:8 Weeks

Aims of the block

This block aims to ensure that students have a sound understanding of child health, including normal and delayed development; routine health screening and surveillance; knowledge of common acute and chronic paediatric illnesses; and the role of the family in child health.

Learning outcomes for the block

Students should be able to demonstrate that they are able to:

• take an appropriate history using appropriate communication skills, including dealing with language difficulties, from a carer about a newborn, infant, toddler and older child, and take a history from an adolescent

• undertake a physical examination of a child

• undertake a developmental assessment of a child, recognise if a child is developmentally delayed and be aware of common behavioural problems

• describe simple feeding problems

• describe common neonatal problems and routine newborn baby examination

• use investigations appropriately

• formulate management plans for common paediatric problems

• adopt a team approach and recognise the importance of multi-disciplinary team working

• recognise common paediatric illnesses for example:

• common respiratory disease, such as asthma, stridor, pneumonia, cystic fibrosis

• cardiovascular, such as common congenital heart disease

• gastrointestinal conditions, such as vomiting, diarrhoea, constipation, abdominal pain, gastroenteritis, and common surgical problems

• urinary system disease, such as UTI, bed wetting and nephrotic syndrome

• central nervous system, such as febrile fits, epilepsy and meningitis

• Other – haematology, diabetes, common skin and joint disease.

• Explain the principles and processes of child protection

• exhibit appropriate personal and professional attitudes and show multicultural awareness, recognising the need not be prejudiced by culture, belief, race, colour or disability.

Procedural skills

• Attachments to the medical wards

• Attending Ward Rounds (recommend 2 per week per student)

• Individually Clerking Patients (clerk at least an average of 1 per day)

• Teaching – weekly ward teaching 2-4 sessions per week

• Neonatal Seminars

• Specialist Teaching - Intensive care, surgery, neurology, cardiology – 1 session each

• Clinic Attendance – 1 or 2 per week

• 1 neonatal day

• 1 community day

• 1 CAU day

• Evening presentations

• Make use of interactive learning items available on Blackboard During the 5 week attachment at a district teaching hospital:

• Ward rounds, Clinics and Teaching as per individual hospital

Links to Overarching Themes

During this block students will learn about the following aspects of the overarching themes:

Basic Sciences:

• Relevant anatomy, for example upper airway in stridor and obstruction

• Relevant physiology, such as the mechanism of epilepsy and its management

• Relevant biochemistry, such as diabetes Pathological processes

• Pathological processes in common diseases such as pneumonia, bronchiolitis and cystic fibrosis, pathology of common congenital heart disease

Pharmacology & therapeutics

• Use of insulin in diabetes

• Use of anticonvulsants in epilepsy

• Use of antipyretics and pain relief

Infection

• Use of antibiotics in severe infection, such as meningitis, septicaemia and septic arthritis

• Management of UTI and otitis media

Block Structures:

Induction phase for 2 week (40 hours)

Induction titles :

- Growth and Development

- Anemia and hyperbilirubinemia

- Hypoxic-ischemic encephalopathy, intracranial hemorrhage, and seizures

- Congenital infections

- Sepsis and meningitis

- Respiratory diseases of the newborn

- Maternal diseases affecting the newborn

- Infectious diseases:

- immunization

- Infections characterized by fever and rash

- Fever without a focus

- Meningoencephalitis

- Respiratory tract infections (pertussis, croup, epiglottitis, bronchiolitis, pneumonia) & Asthma

- Gastroenteritis

- Urinary tract infection

- Infective endocarditis

- Infectious diseases: Kala Azar, Enteric fever and Brucellosis

- Nutrition

- Poisoning

- Acyanotic congenital heart disease

- Cyanotic congenital heart disease

- Heart failure

- Rheumatic fever

- Dysrhythmias

- Anemia

- Hemostatic disorders

- Oncology

- Nephrotic syndrome and proteinuria

- Glomerulonephritis and hematuria

- Acute and chronic renal failure

- Vesicoureteral reflux

- Endocrinology :

- Diabetes mellitus

- Thyroid disease

- Adrenal gland dysfunction

- Neurology :

- Seizures (paroxysmal disorders)

- Weakness and hypotonia

- Cerebral palsy and mental retardation

- Neurocutaneous disorders

Week 3-7 : 5 weeks of Clinical training include :

- consultation clinic: attachment with the seniors in the ER & RCU

- ward round : to communicate with patients to have information gathering , clinical examination & case presentation

- field visit

- seminars

week 8 : assessment : which consists of :

- actively & Satisfactorily complete the time table with log book filling & seminar presentation & active participation

- 2 papers written exam of MCQ & clinical cases

- OSCE

Reproductive Care

Block type: Core

Block duration: 8 Weeks

Aims of the Block

To enable students to acquire an understanding of women's reproductive health issues, including normal and complicated pregnancy, common gynaecological disorders, sexual health and family planning

Learning outcomes for the Block

By the end of the block the student should be able to:

- Take a full obstetric, gynaecological and sexual history considering physical, psychological and social aspects of women's health
- Perform competently a physical examination of the reproductive system and related systems where appropriate
- Diagnose and date pregnancy
- Counsel patients about routine antenatal care and antenatal screening and diagnosis
- Recognise and suggest management strategies for common problems in pregnancy
- Identify and participate in the management of life-threatening problems of pregnancy
- Manage normal labour, delivery and puerperium under supervision
- Identify and participate in the management of abnormal labour and puerperium
- Explain the benefits of breast feeding
- Identify important causes of irregular, absent, painful or excessive menstruation, and suggest appropriate investigations and management strategies.

• Identify common causes of acute and chronic pain (including pelvic pain and dyspareunia), vaginal discharge and genital ulceration and suggest appropriate investigations and management strategies

• Counsel patients regarding common methods of family planning and advise on prevention and diagnosis of sexually transmitted disease

• Identify common causes of male and female infertility and suggest appropriate investigations and management strategies

• Identify common causes of genital prolapse and urinary incontinence and suggest appropriate investigations and management strategies

• Recognise risk factors for gynaecological cancer and counsel patients regarding appropriate screening programmes

• Describe concepts of screening and related public health issues

• Recognise and discuss ethical dilemmas in Obstetrics and Gynaecology

Procedural skills

In some units in Teaching Hospital the students will be attached to a Consultant team and follow their clinical timetable. The students will be expected to actively participate in the work of the teams, i.e. during ward rounds, antenatal clinics, gynecology outpatients and operating lists. They will be expected to present case histories and keep up to date with changes in the clinical course of patients.

It is in the student interest to maintain frequent contact with consultant throughout the course, so they can follow the students' progress and provide a meaningful formative assessment at the end of the block.

The clinical attachment will be in the following units

Labour room

Postnatal wards

Operative Theater

Admission ward

Consultation Clinic

Fertility out- patient clinic

Family Planning clinic

Antenatal care center

Emergency Department

Links to overarching themes

Basic sciences

Anatomy and embryology of the female reproductive tract

• Reproductive and pregnancy physiology

Pathological processes:

• Gynaecological cancers

Pharmacology & therapeutics:

• Drug treatment in Obstetrics and Gynaecology

• Pre-operative assessment and Peri-operative care

Infections:

• Community and hospital acquired infections

• infection control

• sexually transmitted infections

Public health:

• Screening and prevention

Medical ethics:

• Termination of pregnancy

• Prenatal diagnosis

Structure of the block:

induction phase for 2 week (40 hours)

Introductory lectures and sessions: To provide an overview of common clinical problems in Obstetrics and Gynaecology and Genito-Urinary Medicine. You must recognize that the lecture course cannot be comprehensive and supplement this knowledge with your own reading.

Induction titles

- Introduction ,Obstetrics and gynecological History taking and examination .

Obstetrics:

- Antenatal care
- Drugs in pregnancy
- Maternal medicine:
- D.M.in pregnancy
- Thyroid disorder in pregnancy
- Hypertensive disorder in pregnancy
- Kidney disease and UTI in pregnancy
- Heart and Respiratory diseases during pregnancy
- GIT problem in pregnancy
- Bleeding disorder in pregnancy
- Coagulation disorder in pregnancy
- Anemia in pregnancy
- Rh isoimmunization
- Congenital and chromosomal abnormalities, Antenatal screening and diagnosis
- Intrauterine infection
- Intrauterine growth retardation
- Intrauterine death

- Normal Labor
- Abnormal labor
- Partogram & intrapartum fetal assessment ,Fetal heart monitoring.
- Antepartum Hemorrhage
- Post- Partum Hemorrhage
- Malpresentation ,and malposition
- Breech
- Multiple pregnancy
- Preterm labour & Preterm premature rupture of the membranes
- Caesarean section
- Prolonged pregnancy, Induction of labour
- Obstetric shock, Fluid and blood in obstetric emergency
- Perinatal and maternal mortality
- Postnatal care: Puerperium and lactation

Gynecology :

- Approach to normal & abnormal development of the genital tract
- Intersex
- Primary and secondary amenorrhea , Polycystic Ovary Syndrome
- Ectopic pregnancy
- Miscarriage
- Gestational trophoblast disease
- Abnormal uterine bleeding
- Endometriosis and adenomyosis
- Contraception
- Urinary incontinence

- Pelvic organ prolapse

- Menopause & post- menopausal bleeding & HRT

-Benign condition of genital tract :

-Fibroid

- Sexual transmitted infections and Pelvic inflammatory diseases

- Vulval ,vaginal and cervical benign condition

- Precancerous cervical lesions

- Benign ovarian lesions

- Endometrial polyp and endometrial hyperplasia

- Malignant condition of genital tract :

- Ovarian malignancy

- Uterine malignancy

- Cervical malignancy

- Infertility

- Laparoscopic surgery in gynecology and obstetrics

-Effects of obesity and smocking on care of patients in gynecology and obstetrics

Week 3-7 : 5 weeks of Clinical training include :

- consultation clinic: attachment with the seniors in Antenatal care clinic, fertility clinic, and family Planning clinic

-Emergency Department ,labour room

- ward round : to communicate with patients to have information gathering , clinical examination & case presentation

- field visit

- seminars

Week 8 : Assessment : which consists of :

- actively & Satisfactorily complete the time table with log book filling & seminar presentation & active participation

- 2 papers written exam. Of MCQ & clinical cases

-OSCE .

Perioperative Care

Block type : Core

Block duration: 8 Weeks

Aims of the block

This block aims to:

1. Ensure that students have a sound understanding of the patient journey through an elective surgical procedure, including the principles of acute care in the perioperative period.
2. Eexpose students to patients with the common acute surgical problems, learn the management principles of these problems, specifically gastrointestinal perforation, haemorrhage, obstruction, peritonitis; complications of abdominal aortic aneurysms and limb ischaemia.
3. Enable students to recognise and deal with “the acute abdomen”.
4. Provide an introduction to airway management and other practical skills, patient monitoring and equipment.

Learning outcomes for the block

By the end of the block the student should be able to:

• Explain the principles of pre-operative assessment of patients

• Identify the high risk surgical patients

• Participate in the preoperative preparation and planning of high risk patients

• Describe the preoperative management of the diabetic patient

• Describe the general principles of anaesthesia, and the use of common anaesthetic agents

• Identify in broad terms the level of care that a patient will require postoperatively

• List the common postoperative problems with the nature of presentation and treatment.

• Write prescriptions for strong, intermediate and minor analgesics in the postoperative period having regard to the operation and to appropriate doses, routes of administration, side effects and contra- indications.

• Manage a patient receiving patient controlled analgesia or epidural analgesia

• Assess a Critically ill patient using a standard approach and initiate basic resuscitation including patients with acute renal, acute respiratory failure and acute confusional state.

• Calculate the daily fluid requirements for children and adults allowing for the effect of disease, surgery and trauma

• Organise a safe and appropriate blood transfusion

• Recognise the need for invasive central and arterial monitoring and the associated complications

• Use and interpret pulse oximetry

• Recognise and manage airway obstruction

• Perform basic airway skills.

• Identify and management the patient with “an acute abdomen”

• describe the common benign and malignant conditions of the gastrointestinal tract

• Describe the principles of vascular surgery, including bypass surgery and aortic aneurysm surgery

Procedural skills

• Venepuncture

• Basic airway manoeuvres

• Advanced airway management: airway adjuncts and laryngeal mask airway

• Arterial blood gas sampling

• Intravenous, intramuscular and subcutaneous injection

• Setting up IV fluids

• Sharps disposal

• Nasogastric tube placement

• Placement of urinary catheter

Clinical experience

• Attendance at clinic and theatre

• Attendance on Surgical Admissions Unit, clerking of emergency patients and •bservation of emergency operations

• Observation of the following operative procedures:

• Emergency laparotomy ,Elective laparotomy

• Laparoscopy

• Fibreoptic Endoscopy (upper or lower)

• Structured clinical skills

• Structured patient studies

• Working with recovery nurses

Links to overarching themes

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

• Physiology of pain

• Cardiovascular physiology

• Respiratory physiology

• Renal physiology

• Physiology of nausea and vomiting Pathology.

•Pharmacology & therapeutics

• Pharmacology of pain relief

• Pharmacology of cardiac drugs

• Pharmacology of drugs used in respiratory disease Infection

• Post operative infections Imaging

• Radiology

• Ethics and Law

• Consent

• The dying patient

Structure of the block:

Induction phase for 2 week (40 hours)

Induction titles

Preoperative Assessment

Neurosurgery:

-Head injury

-Brain tumor

-Spinal dysraphism

- Spinal diseases

- Hydrocephalus

- Vascular malformation

General surgery

- Adrenal gland tumors

- Antibiotics in surgery

- Blood transfusion
- Benign breast diseases
- Breast cancer
- Metabolic response to trauma
- Approach to neck lumps
- Enteral and parenteral nutrition
- Shock
- Sterilization and Disinfection
- Surgical site infection

Anesthesia:

- Routine preoperative anesthetic evaluation.
- General anesthesia
- Local or regional anesthesia
- Postanesthesia care

Plastic surgery:

- FLAPS
- Burn injury
- Congenital anomaly
- Malignant and premalignant skin lesion

Cardiothoracic surgery

- Pulmonary Echinococcosis (Hydatid Cyst)
- Carcinoma of the lung
- Hiatal Hernia.
- Diseases of the pleura
- Chest Trauma
- Arterial diseases

- Venous disorders

- Disorders of the lymphatic system

- Vascular trauma

Urosurgery

- Congenital Anomalies of the urinary system

- Bladder Cancer

- Erectile Dysfunction

- Prostate gland

- Renal tumors

- Urolithiasis

- Urological emergencies

- UTI

Week 3-7 : 5 weeks of Clinical training include :

- consultation clinic: attachment with the seniors in the ER & RCU

- ward round : to communicate with patients to have information gathering , clinical examination & case presentation

- field visit

- seminars

Week 8 : assessment : which consists of :

- Actively & Satisfactorily complete the time table with log book filling & seminar presentation & active participation

- 2 papers written exam. Of MCQ & clinical cases

-OSCE

Selected Components

Block type: SSC

Block duration: 2 Weeks

Aims of the Blocks

These blocks aim to enable students to study subjects of their choice in order to follow interests, including investigation of possible future careers, and to develop generic skills of self-directed study, scholarship and research and self-confidence.

Learning outcomes for the blocks

These are generic to all blocks, by the end of which students should be able to

• Use research skills

• Direct their own learning effectively

• Describe the key features of selected topics outside of the core curriculum

• Demonstrate confidence in their own skills and abilities

• Present the results of their work verbally and in writing

• Evaluate possible future career choices

Structure of the blocks

There are Two opportunities for Student Selected Study in fifth stage Phase 2

-The students select one of the following components

-Selective cardiac surgery

-Selective infertility

Each of the two SSC blocks is two weeks in duration(60 hours).

The students choose between a wide range of clinical attachments. These are ideal opportunities to explore potential career options by spending more time attached to

a specialty, and extending their knowledge and skills in that area beyond the core curriculum.

As they choose where they go, every clinical block has elective tasks within it, where they choose what to study, so that they may complete the outcomes of the course in ways which suit their interests and aspirations. They should expect to spend about 10% of their time on such embedded SSC activity.

Assessment of Student Selected Components

The students must complete all selected components satisfactorily to graduate. To complete an SSC block satisfactorily they must have

• Attended all sessions

• Completed an SSC report describing in a reflective way what they have learned from the block

• If appropriate, completed prescribed work, such as a reflective essay or research report during the SSC

PHASE TWO

SIXTH YEAR

TOTAL SEMESTERS
CREDITS 46

Sixth Stage

Total Credits 46

Course Study Name	Theory	Practical	Discussion	Credits
Cancer Care	30	150	30	9
Acute Care	30	150	30	9
Chronic and Elerly Care	30	150	30	9
Mental Care	30	150	30	9
Job Shadow	-	300	-	10

Mental Health Care

Block type: Core

Block duration: 8 Weeks

Aims of the block:

1- knowledge : to know the presentation and management of common and serious mental disorders and of the structure and function of modern mental health services.
2- Skills : interviewing, obtaining detailed histories, examining mental states, assessing risk, and formulating cases using learning model
3- Attitude : Multidisciplinary team working, often in community settings, the students will have many opportunities to observe and participate in clinical activity in a variety of settings and with a range of health and social care professionals.

Learning outcomes for the block:

By the end of this block students should be able to:
• Use emphatic and effective communication skills to elicit relevant information from patients to formulate a differential diagnosis and management plan in a variety of clinical settings.
• Undertake a history and perform a clinical examination.
• Coherently present the history and examination.
• Describe the prevalence , presentations and have a basic understanding of the treatment and management of the common mental health disorders.

Procedural skills:

• Patient interviewing
• Clinical physical Examination
• Clinical communication & management planning
• Case presentation

Links to overarching themes:

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

- Genes and Disease
- Tissues of the body – nervous tissue
- Membranes and receptors - drugs and receptors.
- Urinary System- toxicity syndromes
- The nervous system
- Pathological processes
- Metabolism- the thyroid gland
- Mechanisms of Disease- cell injury and death
- Infection
- Imaging: Knowledge of the use of CT and MRI in psychiatry
- Pharmacology: Clinical pharmacology- clinical psychopharmacology
- Cardiovascular system- drugs and the CVS
- Professionalism
- Health and disease in society
- Communication skills
- Team working and IPE
- Health in the community

Structure of the Block

The block consists of 8 weeks

- Week 1-2 : induction of the theory lectures about 40 hours in the following topics:

- Introduction to neurology
- CVA
- Epilepsy
- Cranial nerve disorders

- Movement disorders & Parkinson dis.
- Myopathies & NMJ disorders
- Headache & facial pain
- MS
- CNS infection
- Peripheral neuropathies
- Myelopathies
- MND
- Clinical neurology
- Psychiatric history , Psychiatric sign and symptom
- Psychopathology
- Acute psychosis
- Chronic psychosis
- Bipolar disorder
- Psychopharmacology
- Chronic mixed anxiety and depression
- Paraphrenia
- phopia + panic
- Substance misuse
- Organic disorder
- Eating disorders
- OCD
- Childhood psychiatric
- Sleep disorders
- Conversation disorders and gref reaction

➢ Week 3-7 : 5 weeks of Clinical training include :
  - consultation clinic: attachment with the seniors
  - ward round : to communicate with patients to have information gathering , clinical examination & case presentation
  - field visit
  - seminars

➢ week 8 : assessment : which consists of :
  - actively & Satisfactorily complete the time table with log book filling & seminar presentation & active participation
  - 2 papers written exam. Of MCQ & clinical cases
  - OSCE : of long , short & oral examination

Acute care block

Block type: Core

Block duration: 8 Weeks

Aims of the block:

1- knowledge : to know the presentation and management of common and serious emergency cases

2- Skills : interviewing, obtaining detailed histories, examining critical states, assessing risk, and formulating cases using learning model

3- Attitude : Multidisciplinary team working, often in community settings, is students will have many opportunities to observe and participate in clinical activity in a variety of settings and with a range of health and social care professionals.

Learning outcomes for the block:

By the end of this block students should be able to:

• Use emphatic and effective communication skills to elicit relevant information from patients to formulate a differential diagnosis and management plan in a variety of clinical settings.

• Undertake a history and perform a clinical examination.

• Coherently present the history and examination.

• Describe the prevalence , presentations and have a basic understanding of the treatment and management of the common critical disorders.

Procedural skills:

- patient interviewing
- clinical physical Examination
- clinical communication & management planning
- case presentation

Links to overarching themes:

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

- Genes and Disease
- Tissues of the body – nervous tissue
- Membranes and receptors - drugs and receptors.
- Urinary System- toxicity syndromes
- The nervous system
- Pathological processes
- Metabolism- the thyroid gland
- Mechanisms of Disease- cell injury and death
- Infection
- Imaging: Knowledge of the use of CT and MRI in psychiatry
- Pharmacology: Clinical pharmacology- clinical psychopharmacology
- Cardiovascular system- drugs and the CVS
- Professionalism
- Health and disease in society
- Communication skills
- Team working and IPE
- Health in the community

Structure of the Block:

The block consists of 8 weeks

- Week 1-2 : induction of the theory lectures about 40 hours in the following topics:
  - Respiratory emergency & O2 treatment

- Surgical respiratory emergency
- Airway management
- BLS & ALS
- Shock & sepsis
- Vascular injury & bleeding control
- Poisoning
- Environmental medicine
- Surgical emergency
- Surgical emergency

➢ Week 3-7 : 5 weeks of Clinical training include :

- consultation clinic: attachment with the seniors in the ER & RCU
- ward round : to communicate with patients to have information gathering , clinical examination & case presentation
- field visit
- seminars

➢ week 8 : assessment : which consists of :

- actively & Satisfactorily complete the time table with log book filling & seminar presentation & active participation
- 2 papers written exam. Of MCQ & clinical cases
- OSCE : of long , short & oral examination

Chronic Care

Block Type: Core

Block Duration: 8 Weeks

Aims of the block:

1- knowledge : to know the presentation and management of common and serious elderly & infectious cases

2- Skills : interviewing, obtaining detailed histories, examining critical states, assessing risk, and formulating cases using learning model

3- Attitude : Multidisciplinary team working, often in community settings, is students will have many opportunities to observe and participate in clinical activity in a variety of settings and with a range of health and social care professionals.

Learning Outcomes for The Block:

By the end of this block students should be able to:

• Use emphatic and effective communication skills to elicit relevant information from patients to formulate a differential diagnosis and management plan in a variety of clinical settings.

• Undertake a history and perform a clinical examination.

• Coherently present the history and examination.

• Describe the prevalence , presentations and have a basic understanding of the treatment and management of the common geriatric disorders.

Procedural skills

- patient interviewing
- clinical physical Examination
- clinical communication & management planning
- case presentation

Links to overarching themes:

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

- Genes and Disease
- Tissues of the body – nervous tissue
- Membranes and receptors - drugs and receptors.
- Urinary System- toxicity syndromes
- The nervous system
- Pathological processes
- Metabolism- the thyroid gland
- Mechanisms of Disease- cell injury and death
- Infection
- Imaging: Knowledge of the use of CT and MRI in psychiatry
- Pharmacology: Clinical pharmacology- clinical psychopharmacology
- Cardiovascular system- drugs and the CVS
- Professionalism
- Health and disease in society
- Communication skills
- Team working and IPE
- Health in the community

Structure of the Block:

The block consists of 8 weeks

- Week 1-2 : induction of the theory lectures about 40 hours in the following topics:

  - Geriatric medicine
  - Surgery in elderly patient

- polypharmacy
- typhoid fever
- brucellosis
- HIV
- Viral infection
- Helminthic infestation
- Liver dis
- Immune liver dis
- Inherited liver dis.
- Hepatitis
- Vasculitis

- Week 3-7 : 5 weeks of Clinical training include :

  - Consultation clinic: attachment with the seniors in the outpatient
  - Ward round : to communicate with patients to have information gathering , clinical examination & case presentation
  - Field visit
  - Seminars

- week 8 : assessment : which consists of :

  - Actively & Satisfactorily complete the time table with log book filling & seminar presentation & active participation
  - 2 papers written exam. Of MCQ & clinical cases
  - OSCE : of long , short & oral examination

Hemato-Oncology Block

Block Type: Core

Block Duration: 8 Weeks

Aims of the block:

1- knowledge : to know the presentation and management of common and serious hematology & cancer cases

2- Skills : interviewing, obtaining detailed histories, examining critical states, assessing risk, and formulating cases using learning model

3- Attitude : Multidisciplinary team working, often in community settings, is students will have many opportunities to observe and participate in clinical activity in a variety of settings and with a range of health and social care professionals.

Learning outcomes for the block:

By the end of this block students should be able to:

• Use emphatic and effective communication skills to elicit relevant information from patients to formulate a differential diagnosis and management plan in a variety of clinical settings.

• Undertake a history and perform a clinical examination.

• Coherently present the history and examination.

• Describe the prevalence , presentations and have a basic understanding of the treatment and management of the common cancer disorders.

Procedural skills

- patient interviewing
- clinical physical Examination
- clinical communication & management planning
- case presentation

Links to overarching themes:

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

- Genes and Disease
- Tissues of the body – nervous tissue
- Membranes and receptors - drugs and receptors.
- Urinary System- toxicity syndromes
- The nervous system
- Pathological processes
- Metabolism- the thyroid gland
- Mechanisms of Disease- cell injury and death
- Infection
- Imaging: Knowledge of the use of CT and MRI in psychiatry
- Pharmacology: Clinical pharmacology- clinical psychopharmacology
- Cardiovascular system- drugs and the CVS
- Professionalism
- Health and disease in society
- Communication skills
- Team working and IPE
- Health in the community

Structure of the Block

The block consists of 8 weeks

- Week 1-2 : induction of the theory lectures about 40 hours in the following topics:
  - Introduction, Hematopoiesis Anemia
  - Investigations in hematology ,blood transfusion

- Granulopoiesis, Leukemia, MPN, MDS
- Lymphoma
- Multiple myeloma & BM transplant
- Hemostasis , bleeding disorders and thrombosis
- Cancer Carcinogenesis , screening and prevention Breast cancer
- Palliative care , Radiotherapy
- Hematological Emergencies , Oncological Emergencies
- Hematology and pregnancy and systemic disease Drugs in Hematology

➢ Week 3-7 : 5 weeks of Clinical training include :

- consultation clinic: attachment with the seniors in the ER & RCU
- ward round : to communicate with patients to have information gathering , clinical examination & case presentation
- field visit
- seminars

➢ week 8 : assessment : which consists of :

- actively & Satisfactorily complete the time table with log book filling & seminar presentation & active participation
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