School of Medicine

Quality Assurance Guide

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Disclaimer

All information in the EUC Student Handbook & Course Catalog are subject to revision, with changes in course offerings, academic rules and instruction plans. Information contained herein supersedes previously published descriptions and is subject to change.

Introduction

The Quality Assurance Guide (QAG) provides a regulatory framework that governs medical education processes at the School of Medicine of the European University Cyprus (EUC) by providing formal quality management procedures. The Guide was devised to promote consistent and systematic medical education, with continuous evaluation and monitoring of educational practices aimed at ensuring the highest quality of medical education at EUC.

The QAG ensures compliance with external regulatory and professional bodies, including the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (DI.P.A.E.); World Federation for Medical Education (WFME); and the European Association for Quality Assurance in Higher Education (ENQA). The QAG adheres to the standards outlined in the: Basic Medical Education WFME Global Standards for Quality Improvement (2015) and the ENQA Standards and Guidelines for Quality Assurance in the European Higher Education Area (the 2015 Revision). The policies and guidelines outlined in the QAG aim at ascertaining student learning outcomes by enhancing and monitoring the quality of medical teaching and services, improve professional practices of faculty and staff, ensure effective review processes of EUC education framework with appropriate dissemination of outcomes.

The QAG was prepared according to the nine headings outlined in the World Federation Medical Education (WFME) Standards. The EUC School of Medicine strives to measure beyond the Basic Standards outlined by the WFME to achieve the more demanding “Quality Standards”.

1. Mission and Outcomes

1.1 Mission – Vision - Values

The **Mission** of the School of Medicine is to educate medical students, graduate students, and postdoctoral fellows in accordance with the highest professional standards; to train competent and caring physicians to practice patient-centered medicine of the highest standard; and to identify and answer fundamental questions in the mechanisms, prevention and treatment of disease, in health care delivery and in the basic biomedical sciences.

The **Vision** of the undergraduate curriculum is to produce leaders in Medicine who will learn to apply the foundation of a broad medical education to improve health at a National and International level through patient care, research, and education.

The core **Values** of the EUC School of Medicine are

Excellence	in the conduct of education, research, patient care and community engagement
Integrity	Acting with honesty, accountability & social responsibility
Respect	Demonstrated by civility and communication worthy of the trust given to us as teachers, scholars and healers
Collaboration	Fostering creative partnerships with open communication
Community	Dedication to improve the quality of life of the community
Transparency	Promoting an atmosphere of openness to promote quality in medical education, research and clinical care

Educational Strategy

The six-year curriculum at European University Cyprus is fully integrated both horizontally (***systems-based***) and vertically (***spiral-design***) and is divided in three educational phases.

Phase I:	**Foundations of Medicine**	(years 1-2)
Phase II:	**Foundations of Clinical Practice**	(year 3)
Phase III:	**Clinical Medicine Core**	(years 4-6)

The curriculum at EUC engages multiple active and cooperative learning strategies. Innovative and web-based educational resources have been tightly intercalated in the program. The underlying educational aim underpinning the EUC Medical Curriculum is constructivism, which allows students to learn and create their own constructs of medical knowledge.

General Competencies

The EUC School of Medicine curriculum has been designed to facilitate the development of important ***competencies*** in our students. As a measure of his or her competence, every EUC Medical School graduate will:

- Apply biomedical scientific principles and knowledge to medical practice
- Understand health and disease through critical evaluation of biomedical research
- Apply medical knowledge to a sufficient level to perform medical practice.
- Critically appraise the results of the relevant scientific literature. Formulate simple research questions and design appropriate studies to address them. Apply findings from the literature to specific clinical problems.
- Interpret findings from the history and physical examination, considering the influence of clinical, psychological, spiritual, religious, social, financial and cultural factors in health, disease and medical care. Understand the principles of patient-centered care, including patient self-care.
- Apply psychological principles, methods and knowledge to medical practice, including normal human behavior and psychological concepts of health, illness and disease.
- Apply social science principles, method and knowledge to medical practice.
- Understand the principles, methods and knowledge of population health and the improvement of health and healthcare.
- Demonstrate effective and compassionate communication skills with patients, families and colleagues within the context of medical care.
- Access sources and use the gained information in relation to healthcare, health promotion, research, as well as providing advice, education and information to patients, families and colleagues
- Display compassion, honesty and integrity in relation to patients, families, and the medical community.
- Understand and adhere to the ethical issues involved in medical research and healthcare.
- Reflect on their medical knowledge and practice, and whenever necessary, accept constructive appraisal to/from patients and colleagues.
- Actively pursue, assess, acquire, and apply new knowledge and skills, aiming to improve their medical practice and/or contribute to science, while ensuring that patients receive the highest level of care.
- Demonstrate lifelong learning and continuing professional
- development, including establishing a professional development portfolio containing reflections, achievements and learning needs.
- Apply scientific methods and approaches to medical research
- Carry out practical procedures safely and effectively
- Understand the contribution of effective interdisciplinary teamwork to safe and quality care.

1.2 Institutional Autonomy and Academic freedom

The EUC School of Medicine is legally entitled to freedom of action in managing their affairs within the restraints of the EUC University Charter Annexes and Internal Regulations (February 2017). The academic freedom and institutional autonomy allows the School to undertake the educational activities, research and clinical training expected, to ensure that EUC Medical Graduates are of the highest possible standards.

The School of Medicine has autonomy in the selection of faculty and staff and their respective grade, selection or rejection of student applicants and determination of curricula and setting of standards. This is achieved through the Department of Medicine Council, Chaired by the Chair of the Medical School and the School Council chaired by the Dean of the Medical School. The councils formulate strategies regarding design of the curriculum (Self-Assessment Report- SAR) and use of the allocated resources by the University to implement the curriculum. The EUC School of Medicine ensures that faculty, staff and students are able to address the current curriculum and explore the new educational research results to illustrate specific subjects or modules of the existing curriculum. The existing curriculum is under constant review and assessment, and undergoes a periodic official Revision process (Self Assessment Report - SAR), where qualitative and quantitative data are collected to promote, when identified, revision in the curriculum. While this procedure is currently completed every 3 years, the process is continuous. Upon completion of the SAR, and identification / proposal of revisions, the School Council must approve the curricular changes and send them to the Senate for ratification.

While faculty and staff have academic freedom in their educational efforts, teaching is done within the constraints of the collectively agreed upon course content. Faculty, staff and students have the freedom to conduct research and publish the results. The privilege of academic freedom is counterweighed by accountability where the faculty members import the knowledge obtained responsibly.

1.3 Educational Outcomes

The educational outcomes have been defined in 2 phases *(adapted from: World Federation for Medical Education, Basic Medical Education WFME Global Standards for Quality Improvement, 2015; the Learning Outcomes for the Medical Undergraduate, Scottish Deans' Medical Education Group, 3rd Edition, 2008; Harden et al, 1999):*

A. Phase 1: Specification of learning outcomes

The outcomes are based on the following essential elements of a competent and reflective medical practitioner:

- Their knowledge, skills and attitudes
- Their foundations a scientist and critical thinker
- Their commitment to life-long learning
- Their role as a practitioner and professional in the health sector
- Their understanding of the needs of the health care delivery system, the health needs of the community and social accountability

These primary elements give rise to the following 12 domains:

- Basic and social sciences
- Clinical skills
- Practical procedures
- Patient investigation
- Patient management
- Health promotion
- Communication
- Patient records and data sources
- Ethical understanding and legal responsibilities
- Decision making and clinical reasoning
- The role of the doctor within the health system
- Personal development

Each of these 12 domains is subdivided into sets of learning outcomes, defined below:

B. Phase 2: Learning outcomes and assessment

Basic and Social Sciences	Explanation
Understanding the normal structure and function of the human organism	Anatomy, physiology, biochemistry, genetics
	Molecular, biochemical, cellular and immunological mechanisms that are important in maintaining homeostasis
The life cycle	The different life stages and how these affect normal structure and function
Behavioural sciences, psychology and sociology	Behaviour, beliefs, personal understandings and relationships between an individual and their surroundings, and responses to acute and chronic disease and medical care

Pathogenesis	The mechanisms of diseases how they affect the body
	The classification of the basic causes of disease
Pathology and pathophysiology	Changes and abnormalities in normal structure and function of the body and its systems, as a result of diseases and conditions
Pharmacological principles of treatment	Principles of drug development
	Pharmacokinetics and pharmacodynamics
	Mechanisms of action / drug interaction
	Side effects / adverse reactions of drugs
	Resistance to drug action
	Genetic aspects of pharmacology
	Evidence base for therapeutic measures
Public health	Knowledge and understanding of the basic principles and practice of public health
	Principles of healthcare planning, clinical services, and prevention and control of non-communicable and communicable disease
Health economics	Knowledge and understanding of basic economic concepts including the cost of patient management
Epidemiology	Understanding of basic epidemiologic terminology and concepts
	Knowledge and understanding of principles of demography, biological variability and clinical studies
Education	Applying basic theories of learning and teaching
	Demonstrating appropriate communication during teaching
	Basic organisation of medical education and training

Clinical Skills	Explanation
History taking	History taking in patients from all age groups and different cultural / ethnic backgrounds, following a patient-centred and structured approach and demonstrating appropriate communication skills
Physical examination	Complete physical examination of the patient, appropriate for age, gender, mental and physical health, following a structured and sensitive approach
Interpret findings of history taking, physical examination and investigations	Recognition and appropriate interpretation of abnormal findings
	Requesting appropriate investigations and tests
Diagnosis	Collection and interpretation of all available information
	Appropriate diagnostic approach
	Recognition of important and life-threatening conditions
Management plan	Formulation of a management plan taking into consideration personal, cultural and social factors of the patient and the healthcare system
Record findings	Recording appropriately and according to local standards all normal and abnormal findings of history taking, physical examination and investigations

Practical Procedures	Explanation
Measure and record	Peripheral pulses
	Blood pressure
	Body temperature
	Peak expiratory flow rate
	Blood glucose measurement using sticks
	Urinalysis using urine stick
	Faecal occult blood testing
	Pregnancy testing
	Performing and interpreting a 12 lead Electrocardiograph (ECG)
	Measuring height and weight of adults and children and interpreting growth charts
	Central venous pressure measurement
	Arterial blood gases interpretation
	Taking a blood culture
	Transcutaneous monitoring of oxygen saturation
Administer	First aid
	Basic resuscitation and basic life support for adults and children/infants
	Administration of oxygen therapy

	Establishing intravenous access and set up an infusion
	Wound care and basic wound dressing
	Preparing drugs for parenteral administration
	Administering intravenous, intramuscular and subcutaneous injections
	Dosage and administration of insulin and use of sliding scales
	Using intravenous infusion and volumetric pumps
	Requesting cross-matching of blood
	Urinary catheterization (male and female)
Perform	Venous puncture and placement of peripheral vein catheter
	Male and female urinary catheterisation
	Collecting a urine specimen
	Arterial puncture
	Hand hygiene, including surgical scrubbing and gowning for sterile procedures
	Skin suturing
	Taking nose, throat and skin swabs
	Using a nebuliser
	Taking a cervical smear
	Writing a medication administration record

Patient Investigation	**Explanation**
General principles of patient investigation	Demonstrating knowledge of the indications and contra-indications of the most common laboratory-based investigations and of the process required to obtain the necessary material for investigation

	Appropriate choice of investigation tests according to local protocols and guidelines
	Obtaining informed consent for investigations or interventions
	Ensuring and completing proper patient identification
	Providing all necessary demographic and clinical information on request forms
	Preparing patients for practical investigations providing adequate information
	Proposing investigations and communicating the results of investigations to patients / relatives
	Recognizing and interpreting results of investigations
Radiological investigations	Demonstrate knowledge of the range of radiological investigations available and their appropriate use and indication
Other investigations	Specific and less common investigations that the graduate is required to know

Patient Management	**Explanation**
General principles of patient management	Following a patient-centred approach using all information available from history, physical examination, and investigations and taking into consideration social, psychological and cultural factors
	Assessment of disease severity with appropriate management and investigation
	Patient support and symptom management
	Recognise the need for specialist help
	Patient referral as indicated

General principles of teamwork	Roles, relationships and importance of multidisciplinary team and approach
	Effective and constructive communication and collaboration
	Knowledge and demonstration of prescribing
Medication	Knowledge of indications and contraindications
	Knowledge of common adverse effects and their management
	Selecting the most appropriate method(s) of delivery
	Calculating appropriate dosing in adults and pediatric patients
	Consideration of PK/PD principles, interactions and adverse effects
	Knowledge of principles of antibiotic stewardship
Surgical intervention	Recognition of indications for surgical intervention and the available surgical interventions
	Knowledge of common surgical problems, their complications and management
	Understanding the principles of pre-, peri- and post-operative care
Psychosocial	Understanding the role of psychosocial factors in disease
	Consideration of patient's social factors when determining treatment options
	Understanding available interventions
	Identification of physical and sexual abuse of children and adults
Radiotherapy	Knowledge of appropriate use of radiotherapeutic methods
	Understanding the adverse effects
Nutrition	Understanding of nutrition, nutritional support and specialist dieticians

	Evaluating nutritional condition of patient and need for individualized nutritional support
	Appropriately refer and interact with nutrition services
	Understanding the role of nutrition as a major non-drug therapy in certain medical conditions
	Selecting appropriate method of ensuring adequate nutrition to meet individual patient's needs
	Promoting healthy nutrition as a means to improve and maintain health and prevent disease
Emergency medicine	Adequate assessment, risk stratification and provision of immediate management to life threatening adult emergencies
	Management of adult cardiac arrest using appropriate algorithms
	Performing basic life support
	Demonstrating systematic approach following local protocols/guidelines and working effectively as part of an emergency care team
Acute care	Management of medical, surgical and psychiatric conditions that are not immediately life-threatening, but require early management
Chronic care	Understanding nature and principles of management of chronic disease
Intensive care	Recognising the circumstances under which an individual patient requires referral / admission to high dependency units and communicating effectively
	Knowledge of the criteria and local guidelines/protocols for referral
	Appreciation of the range of facilities and services available
	Informing appropriately patient and/or family
Palliative care	Recognition of what and when palliative care can offer

	Appropriate and effective communication with patient, family and healthcare professionals
Pain control	Select and initiate appropriate analgesia using local protocols
	Specific knowledge of pharmacological, physical and psychological interventions
	Understanding the role of the pain management specialist
Rehabilitation	Understanding the role of rehabilitation in recovery, especially after major illness
	Appreciation of the role of other healthcare professionals in rehabilitation
Patient referral	Making appropriate referrals to the appropriate professionals
	Assessing criteria and indications for referral
	Providing appropriate information effectively
	Informing patient and family appropriately
Blood Transfusion	Understanding the nature blood transfusion
	Understanding how blood products are obtained including safety issues
	Understanding the diversity of blood products available and their use and indications
	Appropriate sample / patient / blood product identification
	Recognition and management of transfusion reactions
Management of Death	Appropriate communication: breaking bad news
	Death certification
	Burial/Cremation
	Principles of post-mortem examination – consent and social / cultural factors

Communication	Explanation
Apply general principles of good communication	Being able to listen and use other appropriate communication techniques including of non-verbal communication / body language
	Gathering and providing information with appropriate record keeping
	Dealing with complaints
	Making oral presentations and writing reports / papers
	Appropriate communication via the telephone and electronic media
	Communication taking into account the age, mental ability or other disability of the patient and surroundings
	Communication taking into account religious / spiritual / cultural beliefs
	Recognising a need for use of an alternative communication strategy
	Using an interpreter whenever appropriate
	Communicating with people with mental illness
Communicate with patients / relatives	Answering questions, explaining and providing instructions
	Use of alternative strategies to deal with "difficult" patients or relatives (eg. aggressive)
	Breaking bad news
	Admitting lack of knowledge or mistakes
	Obtaining informed consent
	Ensuring confidentiality at all times and as appropriate
	Educating patients

Communicate with colleagues	Sharing information orally, in writing and electronically
	Writing patient referrals, investigation requests and discharge notes
	Discussing cases with colleagues
Communicate with authorities	Knowledge of the circumstances under which there is a legal obligation to contact authorities
	Knowledge of the proper procedure when such communication is necessary and how to relay appropriate information without breaking confidentiality
	Providing evidence in court
Communicate with media	Understanding basic principles of communication with media, including who should give information and in what form, while maintaining confidentiality
Communicate as a teacher educator	Ensuring accuracy and validity of teaching content delivered to others
	Recognising the limits of one's knowledge and skills
	Demonstrate understanding, prompt responsiveness and appropriate communication to colleagues during the educational procedure
	Understanding of methods to evaluate the effectiveness and quality of teaching

Health promotion	**Explanation**
Recognise causes of disease and populations at risk	Understanding the definition of health, disease and disability
	Assessment of risk factors for disease in the population
	Risk identification and risk reduction policies for different
Recognise the impact of specific factors and implement risk reduction policies	Knowledge of the biological effects and disease processes associated with smoking, alcohol abuse, drug abuse, social and economic inequalities, population movements

	Knowledge of the prevalence of these factors
	Knowledge of and ability to implement interventions and risk reduction policies
	Helping patients to modify behaviour
Appreciate the values and principles of health promotion and disease prevention	Identifying the role of multidisciplinary approach to health promotion and disease prevention
	Consideration of political, economic, behavioural, social and organisational barriers
	Demonstration of the importance of audit and recording of health promotion, and of disease prevention activities
Screening	Application of established criteria for appropriate implementation of screening tests and programmes
General Principles of Infection Control	Knowledge of the major types of healthcare acquired infection and their common causes
	Knowledge of routes of spread of common pathogens
	Performing effective hand hygiene
	Knowledge and application of basic barrier precautions for infection prevention
	Knowledge of the principles of sterilisation and disinfection

Patient records and data sources	**Explanation**
Keep patient records	Keeping accurate patient records (written and/or electronic)
	Knowledge of the importance of medical record storage and retrieval
	Understanding the importance of confidentiality of medical records
	Knowledge of local legislation governing access to medical records and patient data

Data sources	Using different information sources for patient investigation and management
	Understanding the importance of access to data sources in everyday medical practice and biomedical research
	Using information in evidence-based practice
	Identifying and using professional guidelines and recommendations
Computing skills	Using appropriate tools such as email, word-processing and databases
	Using the above to deliver optimal healthcare

Ethical understanding and legal responsibilities	**Explanation**
Professional attitude	Establishing trust between doctor and patient and colleagues
	Adopting a patient-centred approach to healthcare
	Demonstrating appropriate approach and attitude to patients with problems related to substance abuse, physical abuse and other vulnerabilities
	Informing patients and involving them in decisions affecting them
	Ensuring that patients' rights are protected
Basic ethical principles and standards	Knowledge and understanding of contemporary medical ethics and the main ethical principles of autonomy, beneficence, non-maleficence and justice
	Applying ethical principles to daily practice and to other situations such as withholding or withdrawing life-prolonging treatment
	Understanding the duties and responsibilities of a doctor
	Understanding the importance of confidentiality

	Understanding circumstances under which breaking of confidentiality can occur
	Accepting, communicating and dealing effectively with complaints about own performance
Legal responsibilities	Awareness of legal reasoning and compliance with the law in relation to issues such as: • Death certification • Drug prescribing • Physical and sexual abuse of children and adults • Appropriate legislation (and amendments) • Reporting of adverse medical care / standards involving other practitioners • Codes of conduct • Human rights issues • Disclosure of patient information • Reporting of notifiable diseases.
Medicine in a multicultural society	Understanding and respecting differing cultures, views, beliefs and practices
Psychosocial issues	Knowledge of the social factors that affect relationships between doctors, patients, families and colleagues
Economic issues	Applying ethical and legal approaches to the appropriate and prudent use of healthcare resources
Research issues	Understanding research ethics and the role that doctors have
Patient consent	• Understanding and application of the principles of patient consent in medical practice and research
Disability	Understanding and application of principles relating to disability issues

Decision making clinical reasoning	Explanation
Clinical reasoning	Recognise and define the clinical problem, analyse and interpret available information, and find appropriate solutions
Evidence-based medicine	Find, analyse and interpret evidence
	Work with guidelines, recommendations and protocols.
Critical thinking	Adopt and apply an inquisitive attitude where appropriate and rational process
	Recognise the significance of value judgements and that these may be different between doctor and patient
Research and methodologies	Knowledge and appreciation of quantitative and qualitative methodologies, including their differences and usage
	Applying knowledge of scientific methodologies to critically evaluate research findings.
Statistical understanding	Understanding basic statistical principles
	Interpreting the results of basic statistical analyses
Creativity / resourcefulness	Innovative, sensible and effective use of knowledge, techniques, technologies and methodologies
Prioritising	Knowledge and understanding of the factors that influence priorities
	Prioritising one's own time as well as prioritising the care of patients, including management of tasks, events, time and stress
	Using protocols to aid prioritisation

The role of the Doctor within the health system

Trust and the patient-doctor relationship

The doctor-patient relationship involves establishing bilateral trust and acting in the patient's best interest. The doctor's obligations are contained in the codes of practice and codes of ethics of the medical profession. Patients trust their doctors and need to be able to value and trust their knowledge, skills and judgment

Diagnosis and decision-making

Diagnosis is a key feature of a doctor's medical practice. This is a core cognitive skill, based on both knowledge and clinical reasoning. It involves gathering and synthesizing all available information and taking responsibility for their clinical assessment. In addition, doctors are required to manage complex situations and manage conditions that might be of uncertain risk or where error can have serious consequences. The skills and up-to-date knowledge required in these conditions are reached with rigorous training and assessments. Doctors are responsibility to exercise good judgment in situations beyond the scope of protocols and guidelines, while are expected to apply protocols whenever necessary

Multidisciplinary approach and professionalism

Doctors are expected to apply their skills and knowledge, but also work within the context and capacity of a multidisciplinary, team-based approach to health care. They are expected to keep high ethical standards and work and communicate with respect to their patients and their peers. Professional standards are reinforced by accreditation and registration bodies.

Leadership and mentoring younger doctors

Medical practice is characterized by responsibility and trust. As a result, doctors are bound for leadership roles, including management and leadership of health and the organizations that they work in. In addition, the mentoring tradition of medical practice requires a continuous commitment in the education and training of themselves and others, while also having the responsibility to oversee the work of less experienced colleagues.

Personal Development: The EUC School of Medicine places significant importance on personal development as outlined below (BMJ 2015;351:h4603):

Doctors are intensely educated in basic sciences and clinical medicine to a great depth, in combination with training in behavioral and social sciences, practical skills, complex cognitive skills (such as problem-solving, clinical reasoning, critical assessment, diagnosis, risk-management, ethics, cultural values), communication skills, and professionalism. A key component of their training involves a lifelong learning process, thus assimilating a degree of confidence in basic and clinical sciences that is difficult to be compared by the level of training and experience of other health practitioners.

The EUC Medical School embraces the notion of a personal development plan (PDP), as it will guide all doctors in their career, whatever grade they are at and whether they work in an acute or community setting. PDPs help doctors become more self-aware, enabling them to understand how to improve performance and develop new skills. All doctors should engage in this process, as it is now a key component of appraisals and revalidation. A PDP helps plan and show the achievement of continuing professional development. The EUC Medical School advocates that continuing professional development activities should maintain and improve the quality of care doctors give patients and the public and the standards of the teams and the services in which they work. Doing a range of different continuing professional development activities to tackle a particular learning need is likely to be more effective than one-off events.

Potential ways of achieving goals include:

- Attending courses and seminars
- Attending regional/national/international conferences
- Completing e-learning modules
- Attending multidisciplinary meetings
- Shadowing others
- Completing assessments
- Discussions with seniors and colleagues
- Learning from peers
- Collaborating with colleagues

1.4 Participation in Formulation of Mission and Outcomes

The principal stakeholders of the EUC School of Medicine, including the Deans, Chair, Council, Curriculum Committee, Advisory Board, student and staff representatives, work in line with the guidelines set forth by the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (DI.P.A.E.), participate in formulating the mission and intended educational outcomes through programed meetings of the individual stakeholders, as well as programmed meetings amongst the leaders of the each stakeholder body. The Advisory Board includes representatives of professional bodies, governmental/regulatory bodies, public/private health administrators, and academic bodies.

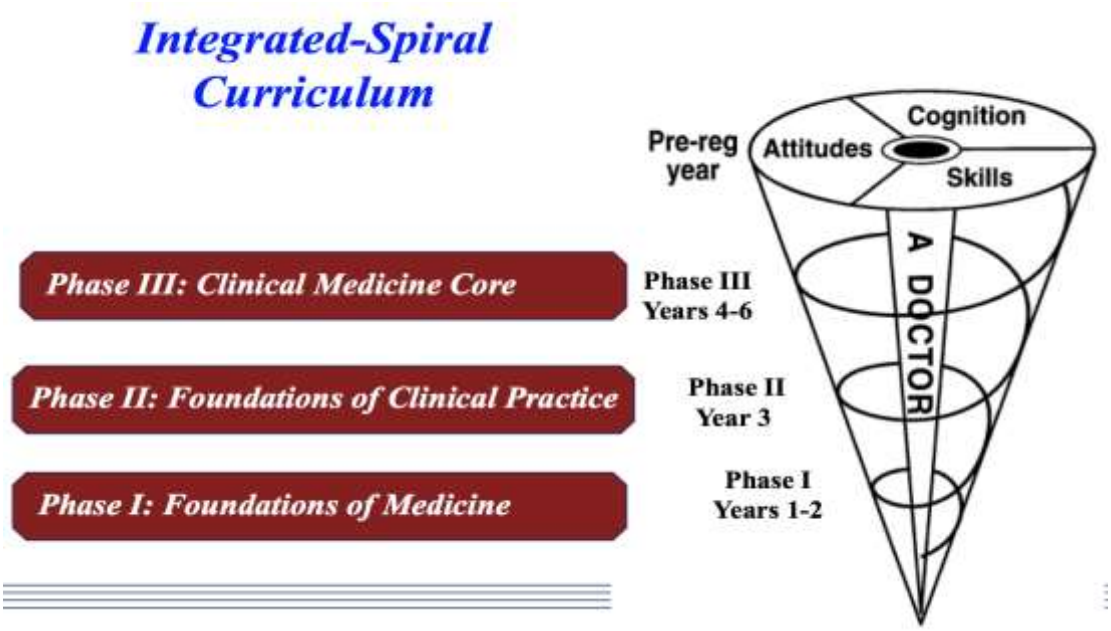
2. Educational Program

2.1 Framework of the program

The six-year curriculum at European University Cyprus is a **competency-based integrated curriculum**. Integration reflects courses that not only bring together the various basic disciplines, but also clinical, factual, experiential sources of information. The overall aim is to foster the understanding and performance of professional activities in medicine in our students at an early stage of their education. As such, integration of the curriculum can be viewed as a continuum, with discipline-based teaching at one end and full integration of disciplines at the other. Enhancing the cognitive activities of the students is a critical element required to achieve the high level of horizontal integration envisioned in this revised curriculum. To this end, we have focused on using active teaching modalities that enhance cognitive activities in our students. By this, the aim is to create a conceptual coherence between the various disciplines and allow our learners to build an understanding of basic sciences to relevant clinical problems.

The curriculum is fully integrated both horizontally (***systems-based***) and vertically (***spiral-design***) and is divided in three educational phases.

Phase I:	**Foundations of Medicine**	(years 1-2)
Phase II:	**Foundations of Clinical Practice**	(year 3)
Phase III:	**Clinical Medicine Core**	(years 4-6)



Foundations of Medicine is taught in two parts across to years. The first part is taught in modules that cover traditional synergies related to understanding the Structure and

Function of the human body from molecules to cells (e.g. cell biology, biochemistry, genetics), as well as medical information (epidemiology, biostatistics) in the first term and the basic structural components of the human body (anatomy, physiology, histology, embryology, biochemistry) in the second term. Students are given their first introduction to clinical practice in «Clinical Practicum». The second part of the Foundations is taught in modules that cover traditional synergies related to understanding the structure and function of the human body (anatomy, physiology, histology, embryology, biochemistry) that is organized in primary body systems (cardiovascular, pulmonary, renal reproductive and nervous). Instruction of basic clinical skills are promoted via the course and practicum in «Introduction to Clinical Skills», as well as by the use of simulated scenarios.

Foundations of Clinical Practice focuses on pathophysiology, formation of differential diagnoses, semiology, pathology and pharmacotherapy that is also organized in body systems over the course of the year. Basic clinical skills are further promoted via simulation. Students are also introduced to general surgery, immunology and microbiology.

Clinical Medicine Core forms the final turn of curriculum spiral, with the translation of knowledge and skills into practice, during clinical clerkships. The clinical training program and clerkships is outlined in the **EUC Clinical Training Manual (CTM).**

Themes such as medical ethics, family medicine, public health, etc. span all years and are threaded throughout the basic modules and clinical clerkships.

Horizontal integration brings together the various disciplines (e.g. Anatomy, Histology, Embryology, Physiology, Biochemistry) for each module, whereas vertical integration is aimed at bringing together basic and clinical sciences, in order to break the traditional divide between preclinical and clinical studies. As such, the knowledge presented in the basic sciences is placed in clinical context, as well as in context of professional practice. The overall aim is to enhance the acquisition of knowledge, skills, attitude, values and professionalism in our students throughout their medical training. The interdisciplinary units in the Foundations of Medicine phase of the curriculum use a multidisciplinary, systems-based, horizontally integrated approach to teach the normal structure and function of the body, along the continuum from molecules-to-cell to entire functional systems. During this process, students are also introduced to basic clinical skills, and abnormalities in structure and function, when appropriate. The disciplines (Cell & Molecular Biology, Biochemistry) and (Anatomy, Histology-Embryology, Physiology, Biochemistry) are integrated and organized into modules based on foundational concepts or on organ systems. The teaching of communication skills is also fully integrated alongside and introduction to the demands of professional practice and care.

Vertical integration is achieved by the early introduction to clinical skills and clinical thinking and reasoning. During the Foundations of Medicine phase, each module is closed with a session designed to reinforce the basic knowledge acquired and integrate that knowledge with its clinical significance. Clinicians present clinical association lectures and interactive sessions. Students are introduced to clinical thinking by applying their basic science knowledge to solve clinical problems and case-based sessions.

The curriculum at EUC engages multiple active and cooperative learning strategies. Innovated and web-based educational resources have been tightly intercalated in the program. ***Simulation***, as one of the most prominent innovations in medical education over the last decade, is a pivotal component of the curriculum practical training. The underlying educational aim underpinning the EUC Medical Curriculum is constructivism, which allows students to learn and create their own constructs of medical knowledge.

EUC is well aware that medical knowledge has been expanding exponentially over the last three decades, with about 1.8 zetabytes of new clinical data being created annually, and by some estimates, the body of medical knowledge doubles about every 18 months and is projected to double every 3 months by 2020. As a result, medical educators are challenged to reform the medical curriculum with innovative ways that accommodate this increasing burden of medical information to ensure that students have the required knowledge and skills base necessary to function as qualified new clinicians. This reinforces the notion that the practicing physician must forever be a student of medicine and a life-long learner. Conceptual knowledge includes the development of efficient methods for the acquisition, interpretation and recording of patient information and a systematic approach to patient care. This provides a framework on which to arrange rapidly changing and increasingly detailed medical information.

6-Year Curricular Map

Phase	Year	Fall	Spring
		Basic Science Years	
I	1	**Structure & Function: From Molecules to Cells**	**Structure & Function: Human Body In Health I**
Foundations of Medicine I		***Medical Information, Foundations of Structure & Function***	***Musculoskeletal, Integument, Hemopoetic-Lymphatic, Endocrine/Exocrine Systems***
		Cell & Molecular Biology Medical Biochemistry I Physics for Biomedical Sciences Introduction to Epidemiology Biostatistics	Anatomy I Histology-Embryology I Physiology I Medical Biochemistry II Introduction to Genetics Clinical Practicum I
I	2	**Structure & Function: Human Body In Health II**	**Structure & Function: Human Body In Health III**
Foundations of Medicine II		***Cardiovascular, Respiratory, Gastrointestinal, Urinary, Reproductive Systems***	***Neuroscience (Brain & Behavior), Immunology, Skills***
		Anatomy II Histology-Embryology II Physiology II Human Nutrition & Metabolism	Medical Neuroscience Medical Psychology Basic Immunology-Microbiology Introduction to Clinical Skills
		Family Medicine - Public Health	*Elective*
II	3	**Structure & Function: Human Body In Disease I**	**Structure & Function: Human Body In Disease II**
Foundations of Clinical Practice		**Hemopoetic-Lymphatic, Gastrointestinal, Immune Systems**	**Circulatory, Respiratory, Endocrine, Urogential Systems**
		Pathophysiology I Pathology I Pharmacology I Semiology I Basic Genral Surgery	Pathophysiogy II Pathology II Pharmacology II Semiology II Medical Microbiology

Clinical Science Years			
III	4	Clinical Training	Clinical Training
Clinical Medicine Core I		**Respiratory, Cardiovascular, Digestive, Hematology**	**Infections Diseases, Microbiology, Endocrine, Urology,**
		Clinical Training I (Respiratory and Cardiovascular System) **Clinical Training II** (Digestive System and Hematology)	Diagnosis By Imaging **Clinical Training III** (Infectious Diseases and Clinical Microbiology)
			Clinical Training IV (Endocrine System, Uro-Nephrological System and Male Genital Tract)
III	5	Clinical Training	Clinical Training
Clinical Medicine Core II		**Orthopaedics, Neurology, Neurosurgery, Psychiatry**	**Bioethics, Legal medicine, Pediatrics, Dermatology, Therapeutics**
		Clinical Training V (Musculoskeletal **Clinical Training VI** (Nervous System	Clinical Bioethics and Legal Medicine **Clinical Training VII** (Pediatrics) **Clinical Training VIII** (Dermatology) Medical Therapeutics
III	6	Clinical Training	Clinical Training
Clinical Medicine Core III		**Gynecology, Opthalmology, Primary care, Major Elective**	**ENT, Toxicology, Oncology, Palliative, Major Electives**
		Symptoms and Interpretation of Complementary Examination Procedures **Clinical Training IX** (Obstetrics and Gynecology) **Clinical Training X** (Ophthalmology) Primary Care Free Elective	**Clinical Training XI** (Otorhinolaryngology) **Clinical Training XII** (ER, Toxicology, Oncology and Palliative Care) *Major Elective** *Free Elective*
		* Major Electives	
		〈 Medical Humanities and History	
		〈 Genomics	
		〈 Systems Biology	
		〈 Healthcare Management	
		〈 Clinical Embryology	
		〈 Rehabilitation Medicine	
		〈 Research Meth & Scientific Writing	
		Interventional Radiology	
		THE FIRST 3 LISTED ELECTIVES TO BE OFFERED IN THE 2nd year with 5 ECTS	
		THE REST OF THE ELECTIVES TO BE OFFERED IN THE 6th year with 6 ECTS	

The full curriculum and course outlines are provided in Appendix I

Teaching Methodologies

The medical curriculum at EUC engages multiple ***active and cooperative learning strategies***. ***Innovated and web-based educational resources*** have been tightly intercalated in the program at all levels. With the exception of brief introductory lectures, all other teaching methods applied in the medical curriculum entail active learning,

including collaborative learning, cooperative learning, problem-based learning, and self-directed learning, among others.

Team Based Learning (TBL) serves to move the courses away from one-way lecture style, to a more interactive and engaging instruction. The aim of TBL is transform students from passive information receivers, to active collaborators working with each other to learn how to use concepts and course material in practical situations. TBL is a ***"Learn by doing",*** *rather than a* ***"learn by listening approach".*** This teaching tool helps students form self-supported, collaborative & cohesive learning groups. The approach is based on the premise that interactive group collaboration improves the quality and resonance of students' shared learning experiences. Students do not just hear about core concepts, but rather learn how to use these concepts. By collaborating in teams, students develop analytical and empathetic behavioral skillsets, as well as understand the importance of accountability, responsibility and professionalism. All of these skills and attitudes provide practical and valuable advantages for the student later in their career. The effectiveness of TBL is based on long-term learning, learner accountability, incentivized collaboration and frequent learning application feedback. TBL is used at EUC to allow us to shift towards conceptual understanding to applied use of knowledge in:

- Practical laboratory exercises
- Simulation scenarios
- Clinical Problem/Case Solving & Discussions
- Clinical Problem Presentations

Problem Based Learning (PBL) – Clinical Problems/Cases is one of the fundamental integrating methods, both for integration of structure & function knowledge, as well as integrating basic knowledge with clinical relevance. Various techniques are applied in PBL at EUC, including clinical cases based on computed tomography, real patient clinical cases, or documented case presentations. Using group dynamics, PBL promotes communication, professionalism and teamwork. Students learn to research and represent evidence-based articles and use SNAPPS as a technique for clinical case presentations. PBL classes are incorporated into all modules and are facilitated by a faculty member.

Computer-Assisted Learning (CAL): augments, enhances and improves instruction of all structure and function modules. It promotes independent learning, problem solving, and allows schedule flexibility. The increased collaboration between disciplines has led to advances in anatomical informatics, three-dimensional modeling and virtual reality methodology, which in turn, have made computer-based structural visualization a new and practical tool for structure and function education. The value of CAL is that it allows individual students to learn at their own personal pace. 3D engagement tools provide interactive models of the human body for students using the web browsers provided in the computer lab or mobile apps. To enhance our educational program at EUC, computer-based instruction and other interactive computer-related activities have been effectively integrated into the total instructional process.

Simulation has been one of the most prominent innovations in medical education the last decade. The use of simulators is a basic objective in the Structure & Function curriculum and is a fundamental teaching model for preclinical medical skills. Simulation offers the students knowledge and skills that requires understanding of basic structure and function concepts, as well as supports skills and professional competency acquisition. The power of simulation as a teaching tool is that the various choices allowed for in the simulated scenarios, allow students to explore the consequences of their choices and behaviors.

Clinical Association Lectures are presented in multi-thematic short seminars that are delivered by invited clinicians and experts in their field.

Peer Teaching (PT): Peer teaching or near-peer teaching assistants are medical students who have already passed a portion of the program and are still in medical school. They are present during lab exercises and self-directed learning modules to help their younger peers (students). Peer teaching enhances the quality of education and has been associated with improved grades, study habits, better attitudes, improved communication skills and independent study in tutees. By acting as young mentors, peer teachers promote accountability and professionalism, both for themselves and tutees. The peer teachers also have advantages. While serving as role models, peer teachers solidify their knowledge of anatomy and develop teaching skills.

Tutorials / Small Group Discussions Interactive tutorial sessions are aimed to promote independent and team-based learning and to help students imbed multisystem / integrative concepts. These will be prepared for students to work independently on Moodle/blackboard, with timed and supervised access. Ultimate Learning Outcome is to be able to integrate basic facts with clinical data, and to develop problem-solving skills based on this knowledge to evaluate both normal and pathologic structure and function.

Skills / Task Training: as a methodological teaching approach is nowadays part of the training programs of almost all medical faculties. Skills-labs offer a protected, "mistake-forgiving" training environment that allows students to practice procedures on mannequins, with standardized patients or with each other prior to performing procedural skills on real patients. Skills-lab training has been shown to improve procedural skills both in novices and experts. This applies to complex surgical skills as well as basic clinical skills performed by medical students. Furthermore, there seems to be evidence that simulation-based medical education (SBME) positively influences the outcome in the clinical setting. Specific ingredients have been shown to contribute to a successful learning experience in skills-labs, such as pre-defined learning goals and curriculum integration, validity of the simulated scenarios, sustained deliberate practice and feedback. The EUC Medical School has adopted "Peyton's Four-Step Approach" which – since the year 2000 – has also represented the standard instruction within training courses of the European Society of Cardiology and the European Resuscitation Council.

Peyton's Four-Step Approach consists of four clearly defined instructional steps:

1. The teacher demonstrates the skill at his normal pace without any comments ("Demonstration")
2. The teacher repeats the procedure, this time describing all necessary sub-steps ("Deconstruction")
3. The student has to explain each sub-step while the teacher follows the student's instructions ("Comprehension")
4. The student performs the complete skill himself on his own ("Performance").

This model is used throughout the skill teaching in all of the courses, which include skills. Several studies have shown that students become unconsciously competent and they are able to transfer this competence into the clinical setting and thus obtain conscious competence.

Additional teaching methodologies include: wet lab experiments, virtual histology, virtual anatomy, digital learning for digital laboratory session in cell biology, genetics and

biochemistry,), bed-side teaching/clinical instructor shadowing, clinical demonstrations among others.

Equality in EUC Medical Education Opportunities

With an international faculty and student body, the Medical School is vigilant regarding protection of equal treatment of all students and faculty, irrespective of any personal characteristic. Students with special needs are provided with necessary support to facilitate their learning. Descriptions of common special needs with possible provisions (but not limited to) are outlined the EUC Charter according to Regulations, Part VII articles 55 and 56 for support in learning and Part VIII 61-68 for examination allowances.

2.2 Scientific Method

The EUC School of Medicine curriculum is designed to focus attention away from content and emphasizes cognitive events, in other words teaching our students to “think”. The curriculum is designed to develop our student’s skills at the higher levels of Bloom’s taxonomy that require demonstration of deeper cognitive processing. While the learning objectives outlined in our modules represent all levels of the taxonomy, emphasis is given to the higher levels of critical and creative thinking. ***Explicit intended learning outcomes*** that are indicated for each module.

One of the aims of the EUC Medical Curriculum is to engage cooperative learning strategies, which ultimately engage social intelligence and enhance social cohesion. Cooperative learning is applied as a means of integrating the social skills with the academic knowledge and includes the five core elements of cooperative learning: positive interdependence, face-to-face interaction, individual and group accountability, social skills, and group processing

Underlying concepts addressed throughout the educational program include:

- Principles of scientific method, including analytical and critical thinking. This is a basic pillar that crosses through the curriculum vertically, through both the preclinical and clinical years.

- Medical research methods are introduced broadly throughout the medical curriculum. Students participate in *in vivo, in vitro and in situ* experiments in basic science courses, such as biochemistry and biology, and are asked throughout their studies to analytically and critically evaluate research papers. The students’ performances in these critical evaluations are included in the students’ assessment.

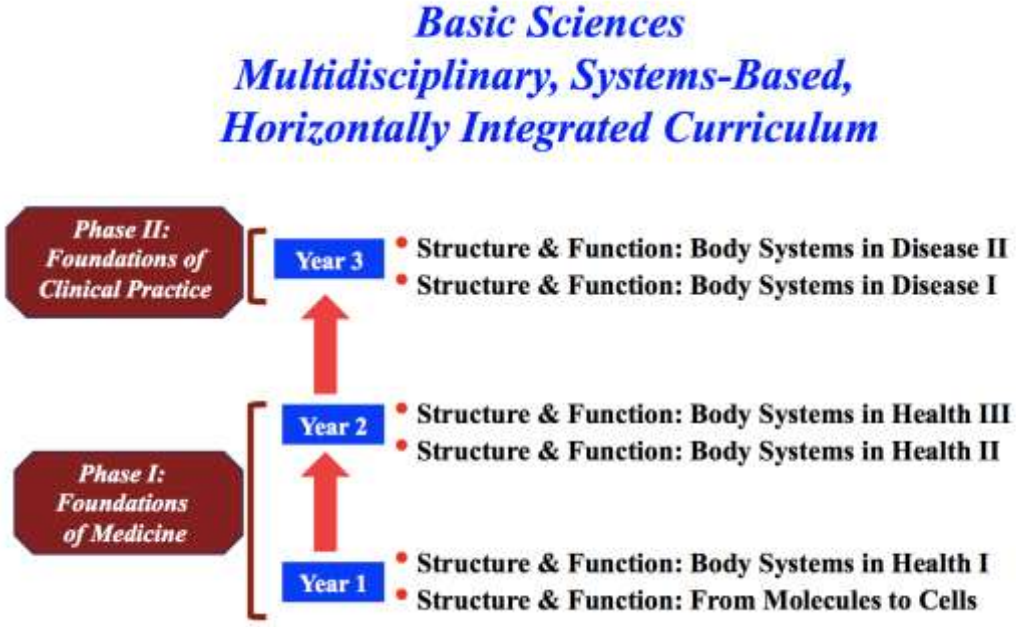
- Evidence-based medicine. The University Quality Control Committee and the curriculum committee of the School of Medicine oversees and certifies that the students are taught evidence-based medicine. This is done not only by the Professional Guidelines, which are published regularly, but also by the fact that innovative research is being introduced to the students’ studies.

- Students are imbued with the notion that they are never experts, but rather life-long learners.

The curriculum committee, along with the quality assurance committee of the University, ensures that the pillars of Scientific Method are adequately addressed.

2.3 Basic Biomedical Sciences

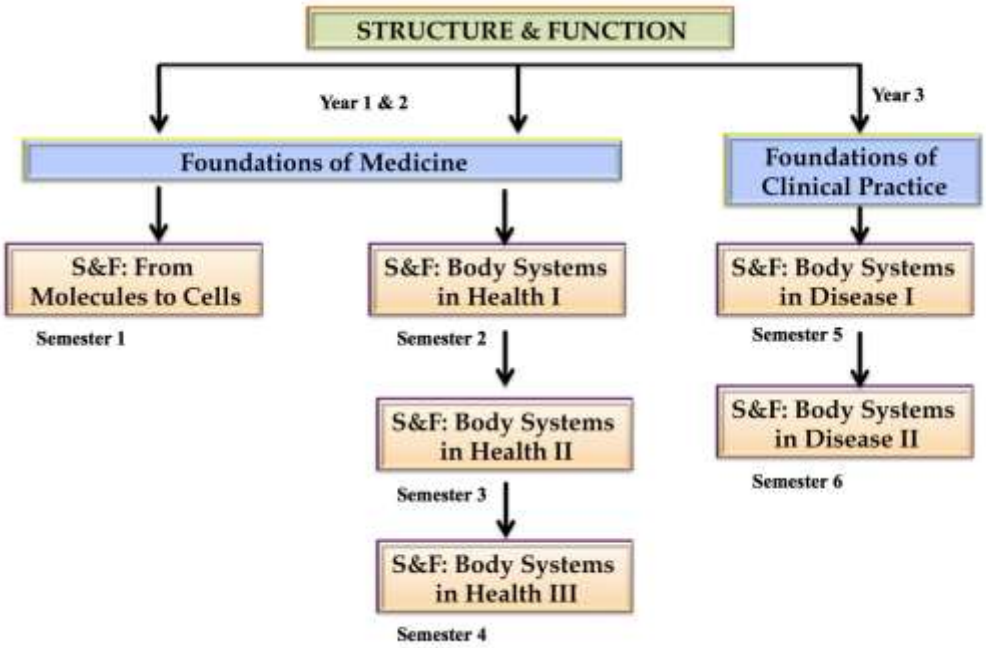
The basic sciences in the six-year curriculum at the European University of Cyprus spans the first three academic years and is integrated both horizontally (***systems-based***) and vertically (***spiral-design***) in two educational phases. Each semester of the first three years has been identified as a Structure and Function unit covering current biomedical knowledge spanning systems in health to systems in disease.



The modules across the three years in the basic sciences are designed to underscore the integration ladder throughout the basic science years of study to the clinical training in the last three years. While horizontal integration brings together the various disciplines (e.g. Anatomy, Histology, Embryology, Physiology, Biochemistry) for each module, ***vertical integration is aimed at bringing together basic and clinical sciences***, in order to break the traditional divide between preclinical and clinical studies. As such, the knowledge presented in the basic sciences is placed in clinical context and in context of the student's future professional practice. The overall aim is to enhance the acquisition of knowledge, skills, attitude, values and professionalism in our students. Acquisition of concepts is further enhanced by incorporation of multiple teaching modalities, including lectures, case-based learning, team-based learning, problem oriented patient sessions (POPS), laboratories, patient skill laboratories, simulation, computer-assisted learning (CAL), among others. Regular formative assessments, similar to those used at the end of the unit summative assessments, will help students track their progress.

Foundations of Medicine (Phase I) are provided across the first two years of medical education. During this time, students develop the foundational understanding and skills necessary to understand disease processes that will be taught in ***Phase II (Foundations of Clinical Practice***) and begin to care for patients during their medical clerkships (***Phase III: Clinical Medicine Core***). Students begin to form their professional identity from day one, as they learn clinical skills, foundational medical knowledge, and the skills needed to develop into life long learners.

The interdisciplinary units in the Foundations of Medicine phase of the curriculum use a ***multidisciplinary, systems-based, horizontally integrated approach*** to teach the normal structure and function of the body, along the continuum from molecules-to-cell to entire functional systems. During this process, students are also introduced students to basic clinical skills, and abnormalities in structure and function, when appropriate. The disciplines (Cell & Molecular Biology, Biochemistry) and (Anatomy, Histology-Embryology, Physiology, Biochemistry) are integrated and organized into modules based on foundational concepts or on organ systems. The teaching of communication skills is also fully integrated alongside and introduction to the demands of professional practice and care.



Phase I: Foundations of Medicine

Structure & Function: From Molecules to Cells
Year 1, Semester 1

Courses:

1. Cellular & Molecular Biology
2. Medical Biochemistry I
3. Physics for Biomedical Sciences
4. Introduction to Epidemiology
5. Biostatistics

The first semester presents the basic principles of human biochemistry, cellular & molecular biology and will provide the foundation knowledge to understand the biochemical, molecular, cellular and genetic basis for disease. The courses of this unit proved a wide-range of scientific knowledge that underlies medical practice drawn from biochemistry, genetics, cell biology, molecular biology, etc. This semester includes active-learning components such as simulation lab exercises, small-group instruction and TBL. Also included in this unit is physics for biomedical science, biostatics and an introduction to epidemiology. The later help students' master medical information.

Structure & Function: Body System in Health I
Year 1, Semester 2
(Musculoskeletal, Integumentary, Hemopoietic, Lymphatic, Endocrine, Exocrine Systems)

Courses:

1. Anatomy I
2. Histology-Embryology I
3. Physiology I
4. Medical Biochemistry II
5. Introduction to Genetics
6. Clinical Practicum I

The second semester will begin with an overview of major body systems, and early development. Integration of disciplines (anatomy, histology, embryology, physiology and biochemistry) will address the introductory principles, the musculoskeletal system, integumentary system, hemopoietic-lymphatic systems, and endocrine/exocrine systems. Throughout the term, students will apply practical (clinical) skills and incorporate new information related to examination of the patient including Adams bending test for spinal deformities, palpation of bony landmarks, muscle function examination, among others.

Structure & Function: Body System in Health II
Year 2, Semester 1
(Organ Systems)

Courses:

1. Anatomy II
2. Histology-Embryology II
3. Physiology II
4. Human Nutrition & Metabolism
5. Family Medicine – Public Health

The second part of the Structure & Function Body Systems in Health integrates disciplines (anatomy, histology, embryology, physiology and biochemistry) to address primary organ system structure and function (e.g. cardiovascular, respiratory, digestive, urinary and reproductive systems). Among the topics covered are energy generation by metabolism of basic foodstuffs, and the role of nutrition in health and disease, as well as homeostasis. The overview of major organ systems will allow students to begin learning and practicing basic clinical skills, such as listening to heart and lung sounds, palpation of major organs and measuring pulse and respiration rates. Learning will be supplemented by the use of medical imaging, such as radiographs, CTs, MRIs and ultrasound. Students will explore the structure of the organ systems and the physiology underlying their normal function, and relate the development and anatomy of the organs to their microscopic structure and the mechanisms underlying functionality. Students will learn how their functions are integrated and what happens when this normal state is disrupted. Throughout the Unit students will apply practical (clinical) skills and incorporate new information related to examination of the patient including ECG data interpretation, listening to heart sounds and imaging techniques.

Structure & Function: Body System in Health III
Year 2, Semester 2
(Mind, Brain & Behavior)

Courses:

1. Neuroscience
2. Medical Psychology
3. Basic Immunology-Microbiology
4. Introduction to Clinical Skills
5. Major Elective

This is the third unit of the structure & Function of Body Systems in Health, which is devoted to understanding the central nervous system. Medical Neuroscience is an integrated course, which integrates neuroanatomy, histology, embryology, physiology and biochemistry to understand the structure and function of the central nervous system. Students will examine the gross and microscopic structures of the various regions of the human brain, using models, imaging and virtual microscopy. Students will learn to apply concepts of central neural pathways to the neurological aspect of the physical examination, and will explore how the brain determines aspects of human behavior and consciousness and the consequences of defects that lead to abnormal function.

This unit also introduces students to the basic defense systems of the human body. Appropriate, since the immune system has been considered the “floating brain”. Students will learn basic immunological principles and their clinical relevance. They will be introduced students to infectious diseases, the biology of the causative agents and the defense systems that protect against them.

This term students will be introduced to clinical skills, such as taking a medical history, performing a physical exam and practicing simple procedural skills, such as arterial blood gases withdrawal, management of the airway, urinary catheter insertion, etc. These skills and procedures are done with the use of simulation and standardized checklists that have been adopted by the faculty of medicine.

Phase II: Foundations of Clinical Practice

The study of the normal structure and function of systems from Years 1 and 2 (in Phase I) of the curriculum is expanded to an understanding of the basic disease processes. A horizontally integrated systems approach is also applied for structure and function in human disease (pathophysiology, pathology, semiology, pharmacology, basic surgery, medical microbiology)

Structure & Function: Body System in Disease I
Year 3, Semester 1
(Gastrointestinal, Endocrine, Reproductive, Infection, Nervous)

Courses:

1. Pathophysiology I
2. Pathology I
3. Pharmacology I
4. Semiology I
5. Basic General Surgery

Fundamental knowledge acquired in Phase I will be applied to disorders and diseases that affect the gastrointestinal, endocrine and reproductive systems. In an integrated manner students will become familiar with diseases and disorders that affect these systems. Since these organs act to regulate normal conditions within the body, students will learn how their functions are integrated and what happens when this normal state is disrupted. Throughout the modules students will apply their clinical skills and incorporate new information related to examination of the patient using simulated scenarios.

This unit also includes an introduction to basic general surgery and relevant skills, such as wound closure, infected wounds, etc.

Structure & Function: Body System in Disease II
Year 3, Semester 2
(Cardiovascular, Urinary, Respiratory)

Courses:

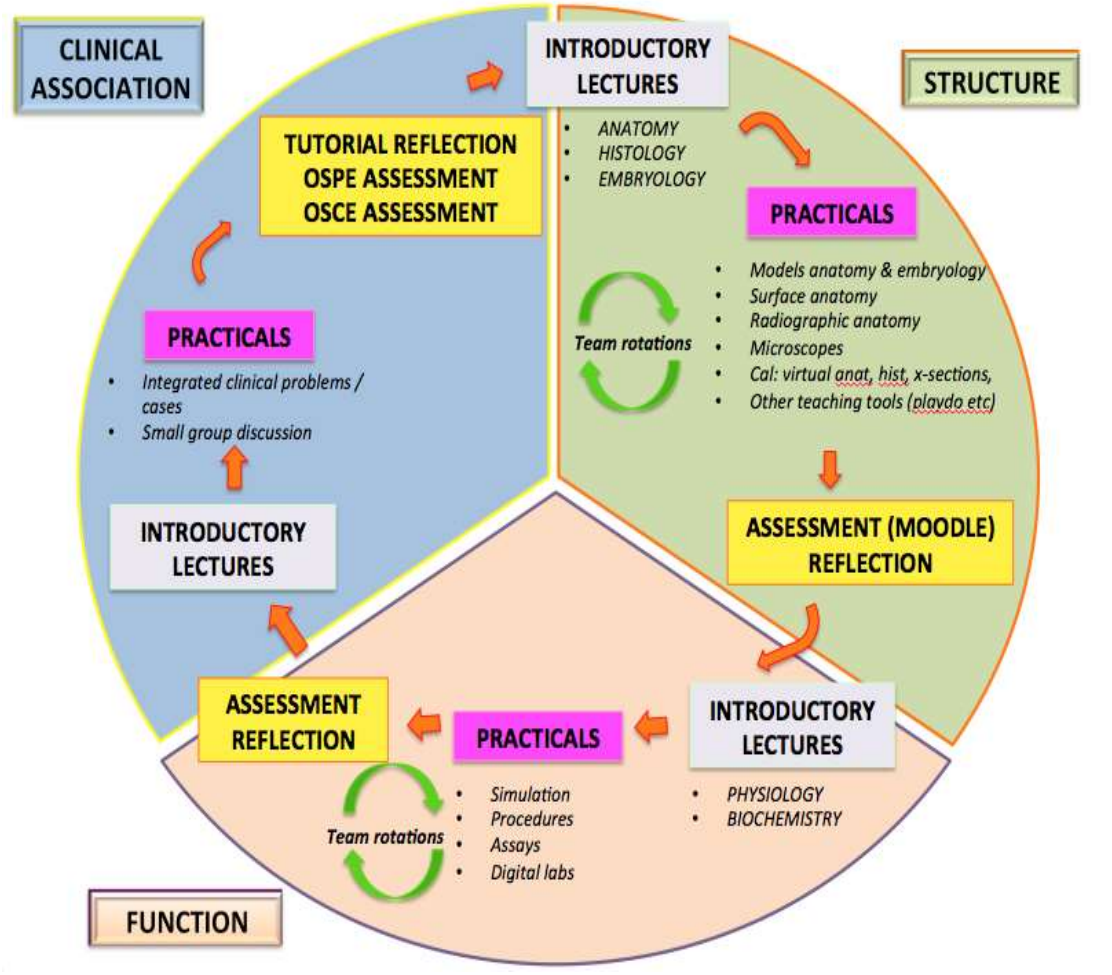
1. Pathophysiology II
2. Pathology II
3. Pharmacology II
4. Semiology II
5. Medical Microbiology

Students will learn about the structure and function of the cardiovascular, urinary and respiratory systems and the effect of various diseases affecting it. The first four course are fully horizontally integrated to address the modules of the semester. Students will also be introduced to Medical Microbiology, covering basic principles of virology, bacterial physiology and genetics, presenting information relevant to pathogenesis of human infections.

Integration of Basic Science to Clinical Practice

To assist our students to meet the learning objectives, we designed a highly collaborative learning experience that is based on discovery, inquiry, deep understanding and skills competencies. By using a team-based approach, the learning experience also emphasizes mutual responsibility, as team members collaborate for each laboratory practical session or case-based problem-solving workshop.

The temporal coordination of foundational material of structure & function is organized in such a manner, so that for each module the students are first exposed to the gross and microscopic structure, and development of the organ system. Understanding of the structure provides the foundation for discussing the function of the organ systems as addressed by physiology and biochemistry. Both foundations in structure and function are applied to explore clinical correlations. As such, for each module the students rotate from structure –to- function –to- clinical correlations. As students rotate through this integration, they are exposed first to a short introduction of the topic (introductory lectures). This is followed by team rotations through a complex series of practical sessions, which includes work with models, surface / radiographic anatomy, microscopes, CAL, virtual programs, simulation, procedures, assays, digital labs, among others). At the end of each complex structure & function practical session rotation, there is time devoted for assessment, as well as individual and group reflection.



2.4 Behavioral and Social Sciences, Medical Ethics and Jurisprudence

The EUC School of Medicine identifies and incorporates the contributions of behavioral sciences, social sciences, medical ethics and medical jurisprudence, as outlines in the

learning outcomes of the EUC School of Medicine. Mind, Brain and Behavior are covered in detail during the second semester of the second year of studies in the courses Neuroscience and Medical Psychology. Themes such as medical ethics, public health, medical humanities span all years and are threaded throughout the basic modules and clinical clerkships. Courses that address the issue behavioral and social sciences include Biostatistics, Clinical Practicum, Epidemiology, Psychology and Public health. Medical ethics is introduced as part at the preclinical training with simulation, it is expanded as part of all clinical training and the course is taught independently as part of Legal Medicine. Medical Jurisprudence is not taught independently, but rather it is a vertical pylon of the curriculum, which crosses all years of the studies.

The curriculum committee, which includes the Dean, oversees that Behavioral and social sciences, medical ethics and jurisprudence are up-to-date along with the quality assurance committee of the University.

2.5 Clinical Sciences and Skills

Years four to six, the **Clinical Medicine Core**, forms the final turn of curriculum spiral, with the translation of knowledge and skills into practice, during clinical clerkships. During the clinical years, the EUC Medical Student becomes a clinical clerk.

An essential feature of the clinical training consists of in-depth contact with patients. Students take histories, examine the patient, propose diagnostic and therapeutic plans, record their findings, present cases, perform minor procedures under supervision, attend all scheduled lectures and conferences, participate in rounds with their peers and teachers, maintain a patient log and study extensively about their patients' diseases. In surgical departments, attendance in the operating room is required. In special departments (eg. prenatal and postpartum clinics, endoscopy units, etc), attendance is mandatory; patients they are assigned to, must be followed through their different procedures.

A physician, nurse or other health care provider must be present in the room while students examine patients. This is especially true for examinations of intimate body areas. Student orders in the chart or electronic medical records must be authorized and countersigned by a physician. Minor procedures may be performed on patients after adequate instruction has been given and certification documented in the Student Logbook as permitted by hospital policy and governmental regulations. Students working in hospitals are protected by liability insurance, which is carried by EUC. Students must become familiar with the electronic medical record or patients' charts and know where to locate its individual components. Students are responsible for patient workups and might also write daily progress notes as stipulated by the EUC clerkship curriculum and hospital policy.

Students are expected to be on duty throughout the hospital workday, Monday through Friday. Evening, weekend, and holiday on-call schedules may be the same or less than those for the resident team to which the student is assigned, depending on the requirements of the EUC curriculum. Student duty hours must take into account the effects of fatigue and sleep deprivation on students' education. Medical students are not required to work longer hours in patient care than residents. Allowing for some modifications at different hospitals and for different cores, the average workday or week should consist of approximately 50% patient care activities, 20% conferences, lectures and/or preceptor sessions and about 30% academic time. (Academic time is used for students to prepare for case presentations, reports, etc.).

Students are given protected academic time for self-study and exam preparation before final exams. While all clerkship directors must comply with this policy, they do have the option of allowing additional time off for study.

The EUC Medical Curriculum is designed to also facilitate the development of primary ***competencies*** in our students, as defined by the Accreditation Council for Graduate Medical Education (ACGME). The clinical years of the EUC curriculum aim to transform students who have learned basic sciences into students who can deal with patients and their problems in a hospital or outpatient milieu. To do this, numerous new clinical skills,

professional behaviors and considerable medical knowledge must be added to that which the student has previously acquired, which is based on the learning objectives of their clinical courses and the clinical competencies roadmap of the School of Medicine. EUC is firmly committed to their competency-based curriculum. These competencies have been detailed in the EUC Clinical Training Manual (CTM). The **Accreditation Council for Graduate Medical Education (ACGME)** Core Competencies are:

1. Patient Care
2. Medical Knowledge
3. Practice Based Learning and Improvement
4. Systems Based Practice
5. Professionalism
6. Interpersonal Skills and Communication

EUC Core Clerkships

EUC has a formal administrative and academic structure for facilitating the clinical training of its medical students at its affiliated hospitals. The Dean, in collaboration with the Deputy Dean and Chair, oversees and is responsible for the Clinical Training (Clerkship) programs at EUC, School of Medicine. As such, they are not members of any clinical training committee. The School council appoints a seven-member **Clinical Training Committee (CTC),** who are all full-time faculty and Chairs of the Clinical Divisions (see below) and the committee elects by majority a **Chairman.** The medical program at EUC is comprised of 7 primary Divisions (5 of which are Clinical Divisions), to which the courses and subjects are distributed. The **Chairs of the Clinical Divisions** (Internal Medicine, Surgery, Child & Maternal Health, Social Medicine/Public health/Primary Care, and Neuroscience/Mental Health/Sensory Systems) are full-time senior faculty (Associate Professor or Professor) and are responsible for the overall academic content and coordination of the courses taught in that Division. They oversee clinical program and rotations at each affiliated hospital and ensure equality of training for EUC students across all clinical training sites.

Clinical Training I Respiratory & Cardiovascular

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The clinical manifestations, diagnosis, medical and surgical management and prevention of the diseases of
  - The immune, cardiovascular and respiratory system

Course Content

- Most frequently encountered pathologies of the immune system
- Inflammatory reactions, hypersensitivity reactions, autoimmune diseases and other pathologies relevant to the immune system..
- Most frequently encountered pathologies of the respiratory system.

- Respiratory insufficiency, obstructive and restrictive syndromes, lung tumors, pleural pathology, mediastinal pathology and other pathologies that are relevant to the respiratory system
- Most frequently encountered pathologies of the cardiovascular system
- Cardiac arrhythmias, thoracic pain, acute coronary syndrome, cardiac insufficiency, syncope, shock, valvulopathies, ischemic syndromes, venous alterations and arterial hypertension, edematous syndromes, pericardial pathologies and other relevant cardiovascular pathologies.
- Methods of diagnosis (history, physical examination and laboratory tests) of the above diseases and conditions
- Medical and surgical treatment and prevention of the above diseases and conditions

Guidelines

- ***Length:*** 280 contact hours; 4 weeks
- ***Site:*** cardiology department, respiratory department, outpatient clinic, bronchoscopy unit, spirometry, interventional cardiology unit, echo unit, ambulatory care unit, emergency department, cardiology/cardiosurgery ICU, medical ICU, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision-making and adherence to bioethical principals.

Educational Objectives

Upon successful completion of this course students should be able to:

- Identify the most frequent pathologies of the immune system
- Diagnose the most frequent pathologies of the immune system: obtaining a clinical history and carrying out a physical examination focused on the pathology of the immune system, indications and interpretation of the principal complementary diagnostic tests (basic analytical immunology, cutaneous tests, histocompatibility studies, imaging and anatomopathological tests, etc).
- Manage the clinical treatment of most frequently encountered pathologies of the immune system.
- Identify the most frequently encountered pathologies of the respiratory system.
- Diagnose the most frequently encountered diseases of the respiratory system by obtaining a past clinical history with focus on the respiratory pathology, physical respiratory examination (respiratory auscultation, percussion, inspection, palpation, etc), indications for and interpretation of the principal complementary tests for diagnosis (spirometry, gasometry, arterial blood gasses) clinical laboratory tests, imaging, anatomopathological tests, etc.
- Manage the medical-surgical treatment of the most frequent diseases of the respiratory system.

- Identify the most frequent cardiocirculatory pathologies
- Diagnose the most frequent cardiocirculatory pathologies by obtaining a past clinical history with focus on cardiovascular pathology, physical cardiovascular examination (cardiac auscultation, taking pulses and arterial pressure, assessment of edemas, etc), indications and interpretation of the principal complementary tests for diagnosis (electrocardiograms, stress tests, clinical laboratory tests, imaging, anatomopathological tests, etc).
- Manage the medical-surgical treatment of the most frequently encountered diseases of the cardiovascular system.

Medical Knowledge

Demonstrate knowledge of the principal syndromes and illnesses, their underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients.

Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g.; CBC, chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.

Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations, which arise in our health care system.

Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

- Clinical examination, including recognition of common signs of cardiovascular diseases: skin and mucosa, murmurs, lung auscultation, assessment of volume status and peripheral vasculature
- Common cardiovascular disorders (see Part D): recognition, evaluation, diagnosis, management
- Differentiation between respiratory and heart disorders
- ECG performance and interpretation
- History taking and focus on pulmonary risk factors, family history, social and occupational history

- History taking and focus on cardiovascular risk factors, family history, and social history
- Arterial blood gases and acid-base balance: obtaining and evaluation
- Clinical examination, including recognition of common signs of respiratory diseases: skin and mucosa, lung auscultation findings, lymphadenopathy
- Common respiratory disorders (see Part D): recognition, evaluation, diagnosis, management
- Differentiation between respiratory and heart disorders
- Spirometry evaluation
- Arterial blood gases
- Blood culture
- Blood glucose examination using finger stick
- Blood transfusion
- Hand washing (including surgical scrubbing)
- Intramuscular injection
- Intravenous injection
- Nasogastric tube placement
- Oxygen supplementation
- Peripheral venous catheter placement
- Rectal examination
- Respiratory secretions culture
- Setting up syringe driver
- Skin suturing
- Skin swabs for culture
- Subcutaneous injections
- Suction of respiratory secretions
- Swabs from nose, throat and skin
- Urinary catheter insertion, female
- Urinary catheter insertion, male
- Urinary catheter removal
- Urinalysis using urine stick
- Vein puncture and blood drawing
- Wound care and basic wound dressing

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds

- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on “Training Problems “published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign, abnormal laboratory value or known medical condition

1. Acute coronary syndrome
2. Acute pulmonary edema
3. Angina - Chest pain
4. Arrhythmia (eg. atrial fibrillation)
5. Heart Failure
6. Heart murmur
7. Hepatojugular sign
8. Hypertension
9. Orthopnoea
10. Pericardial effusion
11. Pericarditis/Myocarditis/Endocarditis
12. Peripheral edema
13. Valve disorders
14. Bronchial Asthma
15. COPD
16. COPD exacerbation
17. Hemoptysis
18. Interstitial Lung Disease
19. Pleural effusion
20. Pleural effusion
21. Pneumonia (CAP, HAP, immune compromise)
22. Pulmonary embolism
23. Rales
24. Stridor
25. Wheezing

Clinical Training II - Digestive System & Hematology

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The clinical manifestations, diagnosis, medical and surgical management and prevention of the diseases of
- The digestive system and the blood and blood forming organs

Course Content

- Most frequently encountered pathologies of the digestive system.
- Functional abnormalities, gastrointestinal bleeding, ulcerative syndromes, acute abdomen, pathologies of the biliary pathway, jaundice, liver failure, portal hypertension, ascites, pathology of the pancreas, gastrointestinal cancer, malabsorption syndromes, diarrhoea, constipation and other relevant pathologies of the digestive system.
- Most frequently encountered pathologies of the hematopoietic system.
- Hyperglobulinemia, anemia syndromes, leucocyte abnormalities, bleeding and thrombotic diathesis, pathology of the lymphatic system, hemotalogical neoplasias and other relevant hematological pathologies
- Methods of diagnosis (history, physical examination and laboratory tests) of above diseases and conditions
- Medical and surgical treatment and prevention of above diseases and conditions

Educational Objectives

Upon successful completion of this course students should be able to:

- Identify the most frequently encountered pathologies of the digestive system:
- Diagnose the most frequently encountered pathologies of the digestive system by obtaining a past clinical history and carrying out physical examination with focus on digestive pathologies, indications and interpretation of the principal complementary tests for diagnosis (clinical laboratory and imaging tests, anatomopathological studies, etc).
- Carry out the medical-surgical management of the most frequently encountered pathologies of the digestive system.
- Identify the most frequently encountered pathologies of the hematopoietic system.
- Diagnose the most frequently encountered pathologies of the hematopoietic system by obtaining a past clinical history and carrying out a physical examination with focus on the hematopoietic system, indications and interpretation of the principal complementary tests for diagnosis (hemogram, peripheral blood smear, proteinogram, hemostasis tests, iron metabolism values, other laboratory, imaging and anatomopathological tests, etc).
- Manage the medical-surgical treatment of the most frequent diseases of the hematopoietic system.

Guidelines

- ***Length:*** 280 contact hours; 4 weeks
- ***Site:*** gastroenterology department, hematology department, outpatient clinics, endoscopy unit, chemotherapy unit, ambulatory care unit, emergency department, medical ICU, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision making and adherence to bioethical principals.

Medical Knowledge

Demonstrate knowledge of the principal syndromes and illnesses, their underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients.

Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g.; CBC, chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.

Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations, which arise in our health care system.

Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to

develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

- Clinical examination, including recognition of common signs of gastrointestinal diseases: abdominal examination and findings, skin and mucosa, liver and spleen evaluation, volume status assessment
- Common gastrointestinal disorders (see Part D): recognition, evaluation, diagnosis, management
- Evaluation of endoscopy findings
- History taking and focus on risk factors for digestive diseases, family history, social and occupational history
- Clinical examination, including recognition of common signs of hematological diseases: skin and mucosa, lymph nodes, liver and spleen evaluation, immune status
- Common hematological disorders (see Part D): recognition, evaluation, diagnosis, management
- History taking and focus on risk factors for hematological diseases, family history, social and occupational history
- Peripheral blood findings and smear evaluation
- Arterial blood gases
- Blood culture
- Blood glucose examination using finger stick
- Blood transfusion
- Hand washing (including surgical scrubbing)
- Intramuscular injection
- Intravenous injection
- Nasogastric tube placement
- Oxygen supplementation
- Peripheral venous catheter placement
- Rectal examination
- Respiratory secretions culture
- Setting up syringe driver
- Skin suturing
- Skin swabs for culture
- Subcutaneous injections
- Suction of respiratory secretions
- Swabs from nose, throat and skin
- Urinary catheter insertion, female
- Urinary catheter insertion, male
- Urinary catheter removal
- Urinalysis using urine stick
- Vein puncture and blood drawing
- Wound care and basic wound dressing

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups

Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on "Training Problems "published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign, abnormal laboratory value or known medical condition

1. Acute abdominal pain
2. Ascites
3. Colostomy
4. Diarrhea
5. Functional disorder (irritable bowel syndrome, constipation, diarrhea)
6. Gastroesophageal reflux disease (GERD)
7. Hematemesis
8. Hematochezia
9. Hepatitis - Elevated liver enzymes (acute liver damage)
10. Inflammatory bowel disease (Crohn's disease, Ulcerative colitis)
11. Liver cirrhosis
12. Pancreatitis
13. Peptic ulcer disease
14. Upper gastrointestinal bleeding
15. Vomiting
16. Anemia
17. "B" symptomatology
18. Bone marrow biopsy
19. Idiopathic thrombopenic purpura / Thrombotic thrombopenic purpura
20. Leukemia (AML, ALL, CML, CLL)
21. Lymphadenopathy
22. Multiple myeloma
23. Myelodysplastic syndromes (MDS)
24. Splenomegaly
25. Thalassemia syndromes
26. Abdominal pain
27. Anemia

28. Dyspepsia
29. GI bleeding
30. Irritable bowel
31. Jaundice
32. Weight loss

Clinical Training III - Infectious Diseases and Clinical Microbiology

Mission & Introduction
Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The clinical manifestations, diagnosis, medical and surgical management and prevention of the infectious diseases

Course Content

- Infectious Pathologies of the Various Organs and Systems
- Bacterial, viral and fungal diseases
- Parasitic diseases and zoonoses
- Diseases due to intestinal bacteria (Enterobacteriaceae, vibrios, Campylobacter, Helicobacter).
- Prevention of infectious diseases and immunizations
- Methods of diagnosis (history, physical examination and laboratory tests) of above diseases and conditions
- Medical and surgical treatment and prevention of above diseases and conditions

Educational Objectives
Upon successful completion of this course students should be able to:

- Identify the most frequently encountered infectious pathologies in the various organs and systems.
- Diagnose the most frequently encountered infectious pathologies in the various organs and systems by obtaining a past clinical history and carrying out physical examination with focus on infectious pathologies, indications and interpretation of the principal complementary studies of infectious pathologies, obtaining and processing the various biological samples in the clinical microbiology laboratory.
- Manage the medical-surgical treatment of the most frequently encountered infectious diseases in the various organs and systems.

Guidelines

- ***Length:*** 140 contact hours; 2 weeks
- ***Site:*** internal medicine department, outpatient clinics, ambulatory care unit, specialized units (eg. HIV), emergency department, medical or ID ICU, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision-making and adherence to bioethical principals.

Medical Knowledge

Demonstrate knowledge of the principal syndromes and illnesses, their underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients.

Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g.; CBC, chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.

Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations, which arise in our health care system.

Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

- Arterial blood gases
- Blood culture
- Blood glucose examination using finger stick
- Blood transfusion
- Hand washing (including surgical scrubbing)
- Intramuscular injection
- Intravenous injection
- Nasogastric tube placement
- Oxygen supplementation
- Peripheral venous catheter placement
- Rectal examination
- Respiratory secretions culture
- Setting up syringe driver
- Skin suturing
- Skin swabs for culture
- Subcutaneous injections
- Suction of respiratory secretions
- Swabs from nose, throat and skin
- Urinary catheter insertion, female

- Urinary catheter insertion, male
- Urinary catheter removal
- Urinalysis using urine stick
- Vein puncture and blood drawing
- Wound care and basic wound dressing

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan
Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on “Training Problems “published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign, abnormal laboratory value or known medical condition.

1. Antibiogram interpretation
2. Antimicrobial stewardship principles
3. Bloodstream infection
4. Community-acquired infections
5. Cultures follow-up and their correlation to the patient’s condition
6. Diagnostic tests: Sampling, transfer & preparation of specimens, culture, Gram-stain, microscopy
7. Immunosuppression and infection

8. Infection prevention & control measures
9. Methods to detect resistance
10. Nosocomial infection definitions
11. Pneumonia
12. Skin & soft tissue infection
13. Surgical site infection

Clinical Training IV - Endocrine system, Uro-Nephrological System & Male Genital Tract

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The clinical manifestations, diagnosis, medical and surgical management and prevention of the diseases of
- The endocrine and uro-nephrological system and the male genital tract

Course Content

- Most frequently encountered pathologies of the endocrine system and the metabolism.
- Diabetes mellitus, dislipidemias, endocrine syndromes due to glandular hyperfunction and hypofunction (pituitary, thyroid, parathyroids, adrenals), growth disorders, nutritional and eating disorders, storage diseases and other relevant endocrine and metabolic pathologies
- Most frequently encountered pathologies of the uretero-nephroglogical systems and the male genital tract.
- Hydroelectrolytic changes, acute and chronic renal insufficiency, nephrotic and nephritic syndrome, neoplasias, obstructive uropathy, pathology of the prostate, erectile dysfunction and other relevant uro-nephrological pathologies and pathologies of the male genital tract.
- Methods of diagnosis (history, physical examination and laboratory tests) of the above described diseases and conditions
- Medical and surgical treatment and prevention of the above described diseases and conditions

Educational Objectives

Upon successful completion of this course students should be able to:

- Identify the most frequently encountered pathologies of the endocrine system and the metabolism.
- Diagnose the most frequently encountered pathologies of the endocrine system by obtaining a past clinical history and carrying out a physical examination with focus on the endocrine system, indications and interpretation of the principal complementary diagnostic tests (laboratory, imaging, anatomopathological tests, etc).
- Manage the medical-surgical treatment of the most frequently encountered diseases of the endocrine system and the metabolism.
- Identify the most frequently encountered uro-nephrological pathologies
- Diagnose the most frequently encountered uro-nephrological pathologies by obtaining a past clinical history and physicalexamination with focus on uro-nephrological pathologies and on pathologies of the male genital tract, indications and interpretation of the basic blood serum and urine analysis related to the renal function and the electrolyte balance including acid/base abnormalities, other clinical laboratory tests, imaging, and anatomopathological tests, etc.
- Manage the medical-surgical treatment of the most frequently encountered diseases of the uro-nephrological system.

Guidelines

- ***Length:*** 266 contact hours; 6 weeks

- ***Site:*** endocrinology department, diabetes clinic, obesity clinic, nephrology/renal department, hemodialysis, peritoneal dialysis, outpatient clinics, urology department, andrology clinic, lithotropsy unit, urological operation room, ambulatory care units, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions, and surgeries.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision-making and adherence to bioethical principals.

Medical Knowledge

Demonstrate knowledge of the principal syndromes and illnesses, their underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients.

Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g.; CBC, chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.
Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations, which arise in our health care system.

Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

- Arterial blood gases
- Blood culture

- Blood glucose examination using finger stick
- Blood transfusion
- Hand washing (including surgical scrubbing)
- Intramuscular injection
- Intravenous injection
- Nasogastric tube placement
- Oxygen supplementation
- Peripheral venous catheter placement
- Rectal examination
- Respiratory secretions culture
- Setting up syringe driver
- Skin suturing
- Skin swabs for culture
- Subcutaneous injections
- Suction of respiratory secretions
- Swabs from nose, throat and skin
- Urinary catheter insertion, female
- Urinary catheter insertion, male
- Urinary catheter removal
- Urinalysis using urine stick
- Vein puncture and blood drawing
- Wound care and basic wound dressing

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on “Training Problems “published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign, abnormal laboratory value or known medical condition

1. Blood sugar obtaining and interpretation
2. Bone densitometry test (eg. DEXA) interpretation
3. Diabetes mellitus
4. Dyslipidemia interpretation
5. Hyperthyroidism
6. Hypothyroidism
7. Lipid disorders
8. Oral glucose tolerance test interpretation
9. Osteoporosis / Metabolic bone disease
10. Surgical treatment of thyroid disease
11. Thyroid tests interpretation
12. Kidney stone disease
13. Lithotripsy
14. Male subfertility
15. Obstructive uropathy
16. Prostate biopsy
17. Prostate cancer
18. Prostate examination
19. Prostate hypertrophy
20. Urethral catheterization (male)
21. Urethral catheterization (female)
22. Urinary colic
23. Urine retention
24. Acute renal failure
25. Creatinine clearance calculation and interpretation
26. Glomerulonephritis (any)
27. Hemodialysis
28. Kidney biopsy
29. Kidney transplantation
30. Kidney vasculitis (any)
31. Patient with fistula
32. Urine sediment microscopy

Clinical Training V - Musculoskeletal System

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The clinical manifestations, diagnosis, medical and surgical management and prevention of the diseases of the Musculoskeletal System

Course Content

- Most frequently encountered pathologies of the musculoskeletal system
- Principal pain syndromes of the musculoskeletal system, inflammatory and degenerative processes, autoimmune diseases affecting the musculoskeletal system, traumas and fractures, tumors and other pathologies relevant to the musculoskeletal system.
- Methods of diagnosis (history, physical examination and laboratory tests) of above diseases and conditions
- Medical and surgical treatment and prevention of above diseases and conditions

Educational Objectives

Upon successful completion of this course students should be able to:

- Identify the most frequently encountered pathologies of the musculoskeletal system.
- Diagnose the most frequently encountered pathologies of the musculoskeletal system by obtaining a past clinical history and physical examination with focus on the pathology of the musculoskeletal system, indications and interpretation of the principal complementary analytical tests, imaging, anatomopathological studies, etc.
- Manage the medical-surgical treatment of the most frequently encountered pathologies of the musculoskeletal system.

Guidelines

- ***Length:*** 280 contact hours; 4 weeks
- ***Site:*** orthopedics department, paraplegics department, rheumatology department, outpatient clinics, orthopedics/trauma operation room, acute trauma unit, ambulatory care unit, emergency department, surgical ICU, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions, and operations.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision-making and adherence to bioethical principals.

Medical Knowledge

Demonstrate knowledge of the principal syndromes and illnesses, there underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients.

Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g.; CBC, chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.

Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations, which arise in our health care system.

Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

- Arterial blood gases
- Blood culture
- Blood glucose examination using finger stick
- Blood transfusion
- Hand washing (including surgical scrubbing)
- Intramuscular injection
- Intravenous injection
- Nasogastric tube placement
- Oxygen supplementation
- Peripheral venous catheter placement
- Rectal examination
- Respiratory secretions culture
- Setting up syringe driver
- Skin suturing
- Skin swabs for culture
- Subcutaneous injections
- Suction of respiratory secretions
- Swabs from nose, throat and skin
- Urinary catheter insertion, female
- Urinary catheter insertion, male

- Urinary catheter removal
- Urinalysis using urine stick
- Vein puncture and blood drawing
- Wound care and basic wound dressing

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on “Training Problems “published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign, abnormal laboratory value, or known medical condition

1. Back pain
2. Chronic pain
3. Osteoporosis
4. Falls, gait and balance problems
5. Arthritis examination
6. Arthritis differential diagnosis
7. Gait assessment
8. GALS examination
9. Knee aspiration
10. Muscle strength
11. Plaster placement
12. Plaster removal

13. Acute trauma
14. Arthritis, inflammatory
15. Arthritis, non-inflammatory
16. Arthroplasty
17. Osteoporosis
18. Rheumatoid arthritis
19. Sacroiliitis

Clinical Training VI - Nervous System & Psychiatry

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The clinical manifestations, diagnosis, medical and surgical management and prevention of the diseases of
- The nervous system and of psychiatric disorders

Course Content

Most frequently encountered pathologies of the central and peripheral nervous system.

- Intracranial hypertension syndrome, cephalalgeas, vertiginous syndromes, cerebellar syndromes, meningeal syndromes, convulsive syndromes, encephalopathies, cranioencephalic trauma, peripheral neuropathies and neuropathies of the autonomous nervous system, myopathies and other pathologies relevant to the central and peripheral nervous system.

Psychiatric disorders.

- Anxiety disorders, related food intake disorders, syndromes associated with the use of drugs, delirium, psychosis, dementia, affective disorders, phobias, obsessive-compulsive disorders, post-traumatic stress, psychopathological reactions in situations of illness and death, somatization disorders, dissociative disorders, sleep disorders, impulse control disorders and personality disorders

Methods of diagnosis (history, physical examination and laboratory tests) of above diseases and conditions

Medical and surgical treatment and prevention of the above described diseases and conditions

Educational Objectives

Upon successful completion of this course students should be able to:

- Identify the most frequently encountered pathologies of the central and peripheral nervous system
- Diagnose the most prevalent diseases of the central and peripheral nervous system by obtaining a past clinical history and physical examination with focus on the pathologies of the central and peripheral nervous system, indications and interpretation of the principal complementary studies in neurology, laboratory, imaging, anatomopathological tests, etc.
- Manage the medical-surgical treatment of the most frequently encountered pathologies of the central and peripheral nervous system.
- Identify the principal psychiatric disorders.
- Diagnose psychiatric disorders by obtaining a past clinical history and physical examination with focus on psychiatric pathologies, indications and interpretation of the principal complementary studies in psychiatry.
- Manage the treatment of the principal psychiatric disorders (anxiety, depression, delirium, agitation, insomnia, etc).

Guidelines

- ***Length:*** 280 contact hours; 4 weeks
- ***Site:*** neurology department, stroke unit, dementia clinic, psychiatry department, outpatient clinics, substance abuse unit, neurological/neurosurgery ICU, ambulatory care unit, emergency department, private office practice, additional sites, as available.

- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision making and adherence to bioethical principals.

Medical Knowledge

Demonstrate knowledge of the principal syndromes and illnesses, their underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients.

Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g.; CBC, chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.

Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations which arise in our health care system.

Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

Clinical examination, including recognition of common signs of neurological diseases: cognitive status assessment, muscle tone and power, reflexes, sensation, motor function and coordination, localizing neurology

Common neurological and psychiatric disorders (see Part D): recognition, evaluation, diagnosis, and management

History taking and focus on neurological and psychiatric diseases: risk factors, family history, social history

History taking and patient evaluation in psychiatry, including use of screening tools

- Evaluation and management of substance and alcohol use and abuse
- Arterial blood gases
- Blood culture
- Blood glucose examination using finger stick
- Blood transfusion
- Hand washing (including surgical scrubbing)
- Intramuscular injection
- Intravenous injection
- Nasogastric tube placement
- Oxygen supplementation
- Peripheral venous catheter placement
- Rectal examination
- Respiratory secretions culture
- Setting up syringe driver
- Skin suturing
- Skin swabs for culture
- Subcutaneous injections
- Suction of respiratory secretions
- Swabs from nose, throat and skin
- Urinary catheter insertion, female
- Urinary catheter insertion, male
- Urinary catheter removal
- Urinalysis using urine stick
- Vein puncture and blood drawing
- Wound care and basic wound dressing

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.

- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on "Training Problems "published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign, abnormal laboratory value or known medical condition

1. Cranial nerve examination
2. Cerebellar tests
3. Cerebrovascular event (stroke)
4. Huntington's disease
5. Intracranial hemorrhage
6. Lower motor neuron disease
7. Lumbar puncture
8. Motor system examination
9. Multiple sclerosis
10. Neurological examination
11. Parkinson's disease
12. Peripheral neuropathy
13. Sensory system examination
14. Tendon reflexes
15. Upper motor neuron disease
16. Alcohol misuse screening
17. Alcohol misuse / withdrawal
18. Anxiety disorder
19. Cognitive status assessment
20. Dementia
21. Depression
22. Psychiatric history
23. Psychosis
24. Substance abuse
25. Altered mental status
26. Geriatric Issues
27. Cognitive Impairment
28. Falls, gait and balance problems
29. Sensory impairments
30. Sleep disorders

Clinical Training VII - Pediatrics

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The process of normal growth of children from birth to adolescence and of growth abnormalities
- The development of the cognitive and mental functions of children
- The clinical manifestations, management and counselling of genetic disorders
- The clinical manifestations, diagnosis, medical and surgical management and prevention of the diseases of children

Course Content

- Normal growth and development of the newly-born, infant, child and adolescent.
- Cognitive, emotional and psychosocial development in childhood and adolescence
- Fundamentals of child nutrition.
- Premature newly-born and its comprehensive care and neonatal care.
- Childhood immunizations, prevention of disease and health promotion
- Most frequently encountered paediatric pathologies.
  - Immune system and infections
  - Disorders of the metabolic, respiratory, circulatory, hematological, digestive, nephro-urological, endocrine, nervous, dermatological & musculoskeletal systems and of the eye and ear;
  - Hematological and solid malignancies;
- Methods of diagnosis (history, physical examination and laboratory tests) of the above described diseases and conditions
- Medical and surgical treatment and prevention of the above described diseases and conditions

Educational Objectives

Upon successful completion of this course students should be able to:

- Recall the morphological and functional characteristics of the newly-born, the child and the adolescent.
- Describe the normal process of growth of the child and the adolescent.
- Explain the cognitive, emotional and psychosocial development in childhood and adolescence.
- Discuss the fundamentals of nutrition in the child.
- Demonstrate that they know the characteristics of the premature new-born and their comprehensive care.
- Discuss the fundamentals of diagnosis and genetic counselling.
- Identify the most frequently encountered pediatric pathologies.
- Diagnose the most frequently encountered pediatric pathologies by obtaining a past clinical history of the child, physical examination of the newly-born, infant, child and adolescent, indications and interpretation of the principal complementary studies used in pediatrics.
- Manage the medical-surgical treatment of the most frequently encountered pediatric pathologies.

Guidelines

- ***Length:*** 224 contact hours; 6 weeks

- ***Site:*** general pediatric unit, ambulatory care unit, pediatric emergency department, nursery, NICU, PICU, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision making and adherence to bioethical principals.

Medical Knowledge

- Gain knowledge in the core topics of the curriculum.
- Gain supplementary information and data from journals, texts, research, the internet and other resources.
- Demonstrate knowledge regarding the major illnesses and conditions that affect newborns.
- Demonstrate knowledge of health maintenance and preventive pediatrics, including: immunization schedules, newborn screening, lead testing, TB testing, vision and hearing screening.
- Demonstrate knowledge of growth and development with special emphasis on puberty. (Tanner Stages)
- Compare and contrast the feeding and nutritional requirements of each age and stage of childhood.
- Demonstrate knowledge of fluid and electrolyte balance.
- Learn the principles of bioethics and understand how they apply to clinical practice.
- Clinical Skills
- Demonstrate the ability to approach the patient and family in an empathic and focused manner to form a positive and informative relationship.
- Demonstrate the ability to perform an accurate and organized diagnostic interview and record the information precisely and concisely.
- Perform both comprehensive and focused histories and physical examinations on newborns, infants, toddlers, children and adolescents.
- Participate in the selection of relevant laboratory and radiological tests.
- Interpret results to support or rule out diagnoses and arrive at a working diagnosis.
- Actively participate in formulating a management plan and participate in carrying out that patient care plan.
- Communicate orally and/or in writing the information necessary to inform and educate all persons involved in the care of the patient: the patient, family/guardians, nurses and all members of the multidisciplinary health care team. Communication should avoid jargon and vagueness.
- Participate in making decisions regarding management, discharge and follow-up plans.
- Interpret laboratory values according to age-related norms.
- Accompany and observe senior staff in the delivery room for high risk births.

- Communicate with families regarding education and anticipatory guidance during outpatient visits.
- Evaluate common infections and acute illness of children of all ages in the urgent care or emergency setting.
- Evaluate children with serious illness in the inpatient setting.
- Evaluate children with chronic and rare illnesses in the outpatient and sub-specialty centers.
- Prepare management plans that consider the patient's identity, culture and ability to adhere to the recommendations.
- Demonstrate your ability to research topics and apply clinical research to your understanding of patient issues.
- Participate in clinical research when possible, either by participating in an ongoing project or initiating a new line of inquiry.
- Learn to self-assess your own unique learning needs.
- Learn how to devise and enact a plan to remediate your deficiencies relevant to learning gaps.
- Learn to assess the credibility of information sources.
- Professional Behavior
- Establish rapport with patients and families that demonstrates respect and compassion.
- Appreciate and acknowledge their identity and culture.
- Demonstrate honesty, integrity and respect in dealing with patients, families and colleagues.
- Adhere to the principals of confidentiality, privacy and informed consent.
- Demonstrate that you are a responsible team member and carry out all of your assigned duties in a timely manner.
- Offer assistance when and where it is needed.
- Demonstrate that you are an effective member of the team by fully participating in discussions and contributing to learning endeavors.
- Demonstrate sensitivity to issues related to culture, race, age, gender, religion, sexual orientation and disabilities.
- React appropriately to conflicts and ethical dilemmas by working toward solutions.
- Demonstrate a commitment to professionalism and adherence to the principals of Bioethics.
- Demonstrate responsibility in completing assignments.
- Share insights and information with your peers.
- Learn to recognize your personal biases and how they lead to diagnostic error.
- Learn to recognize when there is a need for consultation.
- Prepare for and commit to life-long learning.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on “Training Problems “published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign, abnormal laboratory value or known medical condition

1. Communication skills with children, adolescence and parents.
2. Vaccines
3. Developmental milestones in children
4. Infant and child nutrition
5. Breast feeding
6. Fever and fever phobia
7. Clinical examination of newborn and neonatal resuscitation
8. Neonatal jaundice
9. Skin rash in children
10. Pediatric emergencies
11. Seizures
12. Dehydration – Acid base balance
13. Urinary Tract Infection
14. Acute gastroenteritis
15. Gastrointestinal bleeding and Idiopathic inflammatory bowel disease
16. Upper and lower respiratory tract Infections
17. CNS Infections
18. Antimicrobial drugs
19. Tuberculosis
20. Evaluation of full blood count and Iron deficiency anaemia
21. Thalassemia, sickle cell anaemia and rare forms of anaemia
22. Asthma
23. Common kidney conditions
24. Type I diabetes mellitus
25. Short stature and hypothyroidism
26. Arthritis in children
27. Cervical lymphadenitis
28. Malignant tumors
29. Cardiology
30. Common surgical problems
31. Common ENT and eye problems
32. Common orthopedic problems
33. Behavioral disorders
34. Genetics
35. Cushing syndrome
36. Adrenal Deficiency

Clinical Training VIII - Dermatology

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The clinical manifestations, diagnosis, medical and surgical management and prevention of the diseases of
- The skin and dermatological system

Course Content

- Most frequently encountered skin pathologies.
    - By obtaining a past clinical history with focus on dermatological pathologies, identification and expertise to describe the principal cutaneous lesions by means of identifying the correct symptomatology (basic lesions), indications and interpretation of the complementary studies used for the diagnosis of dermatological diseases, especially in the anatomopathological study
- Methods of diagnosis (history, physical examination and laboratory tests) of the above described diseases and conditions
- Medical and surgical treatment and prevention of the above described diseases and conditions

Educational Objectives

Upon successful completion of this course students should be able to:

- Identify the most frequently encountered skin pathologies.
- Diagnose the most frequently encountered skin pathologies.
- Manage the medical-surgical treatment of the most frequently encountered skin pathologies.

Guidelines

- ***Length:*** 112 contact hours; 2 weeks
- ***Site:*** dermatology department, outpatient clinics, plastic/reconstructive surgery, ambulatory care unit, burn ICU, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision making and adherence to bioethical principals.

Medical Knowledge

Demonstrate knowledge of the principal syndromes and illnesses, their underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients.

Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g.; CBC, chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.

Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations which arise in our health care system.

Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal,

seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on “Training Problems “published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign, abnormal laboratory value or known medical condition

1. Acne
2. Rosacea
3. Hidradenitis suppurativa
4. Psoriasis
5. Papulosquamous and inflammatory disorders
6. Severe cutaneous eruptions
7. Sexually transmitted diseases
8. Bacterial, Viral, Fungal, Parasitic infections of the skin
9. Bullous diseases
10. Skin lesion description
11. Skin cancers and precancerous lesions
12. Eczema-Dermatitis
13. Major Pediatric Dermatologic diseases
14. Genetic skin diseases
15. Scalp, Hair, Nail disorders

Clinical Training IX - Obstetrics & Gynecology

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The concepts and practices of obstetrics, including pregnancy, birth and puerperium, and contraceptive methods
- The clinical manifestations, diagnosis, medical and surgical management and prevention of the diseases of the gynaecological system

Course Content

- Pregnancy, birth and puerperium.
- Contraception and fertilization methods.
- Most frequently encountered gynaecological pathologies
    - Gynecological cancer and tumors of the genital tract, disturbances of the menopause, contraception, adolescent gynecology, inflammatory diseases of the pelvic area, endometriosis, other gynecological diseases, tumors and cancer of the breast.
- Methods of diagnosis (history, physical examination and laboratory tests) of the above described diseases and conditions
- Medical and surgical treatment and prevention of the above described diseases and conditions

Guidelines

- ***Length:*** 140 contact hours; 4 weeks
- ***Site:*** gastroenterology department, hematology department, outpatient clinics, endoscopy unit, chemotherapy unit, ambulatory care unit, emergency department, medical ICU, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision making and adherence to bioethical principals.

Educational Objectives

Upon successful completion of this course students should be able to:

- Discuss the characteristics of pregnancy, birth and puerperium.
- Carry out a physical examination of pregnant women and supervision of pregnancy.
- Describe the basis of contraception and fertilization methods.
- Identify the most frequently encountered gynecological pathologies.

- Diagnose the most frequently encountered gynecological pathologies by obtaining a past medical history and carry out a physical examination with focus on gynecological pathologies, to indications and interpretations of the complementary studies used for the diagnosis of gynecological diseases and the changes occurring in pregnancy, laboratory, imaging, anatomopathological tests, etc.
- Manage the medical-surgical treatment of the most frequently encountered gynecological pathologies.

Medical Knowledge: The student will learn:

- Health maintenance and preventive care for women, including age-related issues in cancer screening, screening for other common adult-onset illnesses, nutrition, sexual health, vaccination and risk factor identification and modification.
- Acute and chronic conditions common in women's general and reproductive health, including their diagnosis and treatment.
- Principles of physiology and pharmacology applicable to women from puberty through their reproductive life and menopause, especially pregnancy and age-related changes.
- Prenatal, intra-partum and post-partum care of normal pregnancy and common pregnancy-related complications as well as the care of women with acute or chronic illness throughout pregnancy.

Clinical Skills: The student will demonstrate competence in:
Communication skills: Interacting effectively and sensitively with patients, families, and with health care teams in verbal and written presentations. Recognize the important role of patient education in prevention and treatment of disease.

Verbal Presentations: Organize a case presentation to accurately reflect the reason for the evaluation, the chronology of the history, the details of physical findings, the differential diagnosis and the suggested initial evaluation. Include age specific information and precise description of physical findings. Justify the thought process that led to the diagnostic and therapeutic plan.

Written Documentation: Document the independent clinical thinking of the student. When using templates, or their own prior documentation, students should carefully adjust the note to reflect newly completed work and to ensure the note is a useful addition to the medical record. In settings where students are not permitted to document in the EMR, an alternative form of documentation needs to be established and evaluated by a preceptor.

History Taking: patients in more complex situations such as in the emergency and labor setting, collecting complete and accurate information and focusing appropriately. Describe how to modify the interview depending on the clinical situation— inpatient, outpatient, acute and routine settings including Physical Exams which are complete and focused depending on the indication and condition.

Clinical Problem Solving: Using data from history, physical, labs and studies to define problems, develop a differential diagnosis, and identify associated risks.

Clinical Decision Making: Incorporating patient data with patient needs and desires when formulating diagnostic and therapeutic plans incorporating cultural and ethical issues.

Evidence - Based Medicine Ability to conduct an evidence-based search surrounding a specific clinical question and to appropriately evaluate the literature to answer such question.

Self - Education: Recognizing knowledge deficits and learning needs through a reflective self-assessment process, plan or seek assistance in remediation of knowledge deficits, develop key critical thinking and problem solving skills. Seek feedback.

Professional Behavior: The student will be expected to:

- Demonstrate compassion, empathy and respect toward patients, including respect for the patient's modesty, privacy, confidentiality and cultural beliefs.
- Demonstrate communication skills with patients that convey respect, integrity, flexibility, sensitivity and compassion.
- Demonstrate respect for patient attitudes, behaviors and lifestyle, paying particular attention to cultural, ethnic and socioeconomic influences and values.
- Function as an effective member of the health care team, demonstrating collegiality and respect for all members of the health care team.
- Demonstrate a positive attitude and regard for education by demonstrating intellectual curiosity, initiative, honesty, responsibility, dedication to being prepared, maturity in soliciting, accepting and acting on feedback, flexibility when differences of opinion arise and reliability.
- Identify and explore personal strengths, weaknesses and goals.

Core Topics

General

History
Physical exam
Patient write up
Differential Diagnosis and management plan
Preventive care
Professional behavior and communication skills
Domestic violence and sexual assault

Obstetrics

Maternal-fetal physiology
Preconception care
Antepartum care
Intrapartum care
Care of Newborn in labor and delivery
Postpartum care
Breastfeeding
h. Abortion (spontaneous, threatened, incomplete, missed)
Hypertensive disorders of pregnancy
Isoimmunization
Multifetal gestation
Normal and abnormal labor m. Preterm labor

- Preterm rupture of membranes
- Third trimester bleeding
- Postpartum hemorrhage
- Postdates pregnancy
- Fetal growth restriction
- Antepartum and intrapartum fetal surveillance

Gynecology

- Ectopic pregnancy
- Contraception
- Sterilization
- Abortion
- Sexually transmitted diseases
- Endometriosis
- Chronic pelvic pain
- Urinary incontinence
- Breast disease
- Vulvar disease and neoplasm
- Cervical disease and neoplasm
- Uterine and ovarian disease and neoplasm

Endocrinology and Infertility

- Menarche
- Menopause
- Amenorrhea
- Normal and abnormal uterine bleeding
- Infertility
- Hirsutism and Virilization

Diagnosis by Imaging

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The fundamentals of diagnostic image interpretation and clinical indications for imaging examinations and special procedures
- The principles of protection from ionizing radiation

Course Content

- Fundamentals of the interaction of radiation and the human organism.
- Indications and contra-indications of the various imaging diagnostic procedures.
- Techniques used to obtain diagnostic images.
- Interpretation of the diagnostic images.
- Criteria for radiological protection.
- Principles of digital technology.

Educational Objectives

Upon successful completion of this course students should be able to:

- Describe the fundamentals of the interaction of radiation with the human organism.
- Assess and define the indications and contra-indications of the various diagnostic imaging procedures.
- Describe the diagnostic imaging techniques.
- Describe the basic semiology used in the various diagnostic procedures involving imaging techniques.
- Evaluate the radiographic images obtained.
- Apply the recommendations for radiological protection against ionizing radiation utilized in diagnostic and therapeutic procedures.
- Discuss the principles of digital technology as applied to diagnostic imaging.

Guidelines

- ***Length:*** 198 contact hours; 1 week
- ***Site:*** *imaging*/radiology units including CT, MRI, radiography, PET-CT, nuclear medicine, interventional radiology, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled classes learning sessions.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision making and adherence to bioethical principals.

Core topics & Medical Knowledge

Abdominal Ultrasound
Basic interpretation of abdominal ultrasound
Basic interpretation of abdominal CT
Basic interpretation of chest CT

Basic view box images – normal and abnormal
Breast imaging
Chest imaging
Interpretation of chest x-ray
Interventional Radiology
Radiological radiation, exposure & safety

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Clinical Bioethics & Legal Medicine

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The essential values and other elements of the medical profession, including the principal ethics and legal responsibilities.
- The application of the principles of social justice to professional practice and the respect to the autonomy, privacy, beliefs and culture of the patient.
- The methods and applications of forensic medicine and medical jurisprudence

Course Content

- Legal foundations of the practice of the medical profession.
- Ethical aspects of informed consent and confidentiality.
- Social and legal implications of death.
- Normal evolution of changes in the cadaver and postmortem diagnostic techniques.
- Basic aspects of the medical criminal investigation.
- Medical-legal documents.
- Professional values. Professional competences.
- Fundamentals of medical ethics.
- Ethical conflicts.

Educational Objectives

Upon successful completion of this course students should be able to:

- Describe the legal fundamentals applied to the practice of the medical profession.
- Adhere to and apply the professional values of excellence, altruism, the sense of duty, responsibility, integrity and honesty to the practice of the medical profession.
- Identify the need to maintain professional competences.
- Demonstrate that their approach to medical professional practice respects the autonomy, the beliefs and culture of the patient.
- Discuss the ethical aspects of informed consent and confidentiality.
- Demonstrate that they recognize, analyze and can advise on ethical conflicts.
- Demonstrate that they analyze the ethical/legal aspects of biomedical research.
- Identify, diagnose and give advice on the management of physical and mental injury.
- Discuss and analyze the social and legal implications of death.
- Describe and identify the normal evolution of the cadaver and the techniques used for postmortem diagnosis.
- Identify the basic aspects of medical criminal investigation.
- Draw up medical-legal documents.
- Demonstrate that they comprehend and describe the fundamentals and principles of bioethics.

Guidelines

- ***Length: 98 contact hours;*** 1 week

- ***Site:*** pathology labs, mortuary, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, classes, subspecialty conferences, learning sessions.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision making and adherence to bioethical principals.

Core topics & Medical Knowledge

Fundamentals of medical ethics.
Decisions at the Start and End of Life.
Consent.
Confidentiality and Disclosure/ Medical Negligence.
Diagnosing death; signs and changes after death
The scene of crime: Role of the forensic pathologist and clinical forensic practitioner
The autopsy
The Coroner's system: Death certificates; Inquest; Disposal of the dead.
Sudden and unexpected natural deaths
Identification
Mass disasters
Exhumations (single and multiple graves)
Human Rights and torture investigations
Assessment of trauma
Asphyxia and drowning
Deaths and the environment
Fires and explosions
Clinical and pathological aspects of alcohol and drug abuse
Preparation of reports and giving evidence in court
Paediatric forensic pathology

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.

- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Primary Care

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The diagnosis, management and prevention of the most common diseases encountered in primary care
- The special features of the doctor-patient relationship in primary care
- The functions and services provided by primary care

Course Content

- Primary care and its relationships with the various levels of care.
- Promotion of health and prevention of illness during the various stages of life.
- Management of the patient and the healthy person, taking into account their psychological, personal, family, occupational and social circumstances
- The family and the interaction of the familial environment with health promotion and the natural history of disease in the community
- Community oriented primary care (COPC): health needs assessment and outreach programmes in the catchment area of primary care
- Cooperation with other health and welfare services delivering care to the population
- Most frequently encountered reasons for consultations in the community.
    - Chronic conditions, acute & life threatening conditions, home care

Educational Objectives

Upon successful completion of this course students should be able to:

- Discuss the structure and function of Primary Care and its relationship to the various levels of care.
- Describe the vital environment of the sick persons and the interaction of education and culture in medical care.
- Explain the principal means used to promote health and prevent illness during the different stages of life.
- Identify the most frequent reasons claimed for consultation in the community.
- Establish an action plan focusing on the individual needs of the patient, his/her family and social environment.

Guidelines

- ***Length:*** 140 contact hours; 4 weeks
- ***Site:*** gastroenterology department, hematology department, outpatient clinics, endoscopy unit, chemotherapy unit, ambulatory care unit, emergency department, medical ICU, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.

- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision making and adherence to bioethical principals.

Medical Knowledge

Demonstrate knowledge of the principal syndromes and illnesses, their underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients.

Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g.; CBC, chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.

Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations which arise in our health care system.

Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

- Clinical examination, including recognition of common signs of gastrointestinal diseases: abdominal examination and findings, skin and mucosa, liver and spleen evaluation, volume status assessment
- Common gastrointestinal disorders (see Part D): recognition, evaluation, diagnosis, management
- Evaluation of endoscopy findings
- History taking and focus on risk factors for digestive diseases, family history, social and occupational history
- Clinical examination, including recognition of common signs of hematological diseases: skin and mucosa, lymph nodes, liver and spleen evaluation, immune status
- Common hematological disorders (see Part D): recognition, evaluation, diagnosis, management
- History taking and focus on risk factors for hematological diseases, family history, social and occupational history
- Peripheral blood findings and smear evaluation
- Arterial blood gases

- Blood culture
- Blood glucose examination using finger stick
- Blood transfusion
- Hand washing (including surgical scrubbing)
- Intramuscular injection
- Intravenous injection
- Nasogastric tube placement
- Oxygen supplementation
- Peripheral venous catheter placement
- Rectal examination
- Respiratory secretions culture
- Setting up syringe driver
- Skin suturing
- Skin swabs for culture
- Subcutaneous injections
- Suction of respiratory secretions
- Swabs from nose, throat and skin
- Urinary catheter insertion, female
- Urinary catheter insertion, male
- Urinary catheter removal
- Urinalysis using urine stick
- Vein puncture and blood drawing
- Wound care and basic wound dressing

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on “Training Problems “published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign, abnormal laboratory value or known medical condition

33. Acute abdominal pain
34. Ascites
35. Colostomy
36. Diarrhea
37. Functional disorder (irritable bowel syndrome, constipation, diarrhea)
38. Gastroesophageal reflux disease (GERD)
39. Hematemesis
40. Hematochezia
41. Hepatitis - Elevated liver enzymes (acute liver damage)
42. Inflammatory bowel disease (Crohn’s disease, Ulcerative colitis)
43. Liver cirrhosis
44. Pancreatitis
45. Peptic ulcer disease
46. Upper gastrointestinal bleeding
47. Vomiting
48. Anemia
49. “B” symptomatology
50. Bone marrow biopsy
51. Idiopathic thrombopenic purpura / Thrombotic thrombopenic purpura
52. Leukemia (AML, ALL, CML, CLL)
53. Lymphadenopathy
54. Multiple myeloma
55. Myelodysplastic syndromes (MDS)
56. Splenomegaly
57. Thalassemia syndromes
58. Abdominal pain
59. Anemia
60. Dyspepsia
61. GI bleeding
62. Irritable bowel
63. Jaundice
64. Weight loss

Clinical Training X - Ophthalmology

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The clinical manifestations, diagnosis, medical and surgical management and prevention of the diseases of the ophthalmologic system

Course Content

- Most frequently encountered ophthalmological pathologies.
- Palpebral and lacrimal pathologies, pathologies of the cornea, the lens, the retina, the sclera, the visual pathways and other related ophthalmological pathologies.
- Methods of diagnosis (history, physical examination and laboratory tests) of the above described diseases and conditions
- Medical and surgical treatment and prevention of the above described diseases and conditions

Educational Objectives

Upon successful completion of this course students should be able to:

- Identify the most frequently encountered ophthalmological pathologies
- Diagnose the most frequently encountered ophthalmological pathologies by obtaining a past clinical history and carrying out physical examination (ocular fundus, visual acuity, campimetry, etc) with focus on ophthalmological pathologies.
- Manage the medical-surgical treatment of the most frequently encountered ophthalmological pathologies.

Guidelines

- ***Length:*** 112 contact hours; 4 weeks
- ***Site:*** gastroenterology department, hematology department, outpatient clinics, endoscopy unit, chemotherapy unit, ambulatory care unit, emergency department, medical ICU, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision making and adherence to bioethical principals.

Medical Knowledge

Demonstrate knowledge of the principal syndromes and illnesses, their underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients.

Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g.; CBC, chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.

Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations which arise in our health care system.

Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

- Arterial blood gases
- Blood culture
- Blood glucose examination using finger stick
- Blood transfusion
- Hand washing (including surgical scrubbing)
- Intramuscular injection
- Intravenous injection
- Nasogastric tube placement
- Oxygen supplementation
- Peripheral venous catheter placement
- Rectal examination
- Respiratory secretions culture
- Setting up syringe driver
- Skin suturing
- Skin swabs for culture
- Subcutaneous injections
- Suction of respiratory secretions
- Swabs from nose, throat and skin
- Urinary catheter insertion, female
- Urinary catheter insertion, male
- Urinary catheter removal

- Urinalysis using urine stick
- Vein puncture and blood drawing
- Wound care and basic wound dressing

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on “Training Problems “published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign or abnormal laboratory value

1. Abdominal pain
2. Altered mental status
3. Anemia
4. Back pain
5. Chest pain
6. Cough
7. Chronic pain
8. Dyspepsia
9. Dyspnea
10. Dysuria
11. Fever
12. Fluid, electrolyte, and acid-base disorders
13. GI bleeding
14. Hemoptysis

15. Irritable bowel
16. Jaundice
17. Knee pain
18. Rash
19. Upper respiratory complaints
20. Weight loss

C. Patients presenting with a known medical condition.

1. Acute MI
2. Acute renal failure and chronic kidney disease
3. Asthma
4. Common cancers
5. COPD
6. Diabetes mellitus
7. Dyslipidemia
8. CHF
9. HIV
10. Hypertension
11. Inflammatory bowel disease
12. Liver disease
13. Nosocomial infection
14. Obesity
15. Peptic ulcer disease
16. Pneumonia
17. Skin and soft tissue infections
18. Substance abuse
19. Thyroid disease
20. Venous thromboembolism
21. Geriatric Issues
22. Cognitive Impairment
23. Osteoporosis
24. Polypharmacy
25. Incontinence
26. Falls, gait and balance problems
27. Failure to thrive
28. Pressure ulcers
29. Sensory impairments
30. Sleep disorders
31. Depression
32. Pain
33. Elder abuse and neglect
34. End-of-life

Clinical Training XI - Otorhinolaryngology

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The clinical manifestations, diagnosis, medical and surgical management and prevention of the diseases of the Ear, Nose and Throat

Course Content

- Most frequently encountered pathologies of the ear, nose and throat.
- Diseases of external, middle and inner ear, hearing loss, vertigo, tinnitus, facial nerve disorders, inflammations and tumors of the nose, epistaxis, injuries, deformities, inflammatory diseases and neoplastic lesions of the pharynx and larynx , voice disorders and dysphagia
- Methods of diagnosis (history, physical examination and laboratory tests) of the above described diseases and conditions
- Medical and surgical treatment and prevention of the above described diseases and conditions

Educational Objectives

Upon successful completion of this course students should be able to:

- Identify the most frequently encountered pathologies affecting the ear, nose and throat.
- Diagnose the most frequently encountered pathologies of the ear, nose and throat by obtaining a past clinical history and carrying out physical examinations with focus on the otorrhinolaryngological pathologies, indications and interpretation of the principal complementary studies in otorrhinolaryngology, audiometry, otoscopy, rhinoscopy, etc.
- Manage the medical-surgical treatment of the most frequently encountered pathologies of the ear, nose and throat.

Guidelines

- ***Length:*** 112 contact hours; 4 weeks
- ***Site:*** gastroenterology department, hematology department, outpatient clinics, endoscopy unit, chemotherapy unit, ambulatory care unit, emergency department, medical ICU, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions.
- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision making and adherence to bioethical principals.

Medical Knowledge

Demonstrate knowledge of the principal syndromes and illnesses, their underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients.

Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g.; CBC, chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.

Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations which arise in our health care system.

Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

- Arterial blood gases
- Blood culture
- Blood glucose examination using finger stick
- Blood transfusion
- Hand washing (including surgical scrubbing)
- Intramuscular injection
- Intravenous injection
- Nasogastric tube placement
- Oxygen supplementation
- Peripheral venous catheter placement
- Rectal examination
- Respiratory secretions culture
- Setting up syringe driver
- Skin suturing
- Skin swabs for culture
- Subcutaneous injections
- Suction of respiratory secretions
- Swabs from nose, throat and skin
- Urinary catheter insertion, female
- Urinary catheter insertion, male
- Urinary catheter removal
- Urinalysis using urine stick
- Vein puncture and blood drawing

- Wound care and basic wound dressing

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on “Training Problems “published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign or abnormal laboratory value

1. Abdominal pain
2. Altered mental status
3. Anemia
4. Back pain
5. Chest pain
6. Cough
7. Chronic pain
8. Dyspepsia
9. Dyspnea
10. Dysuria
11. Fever
12. Fluid, electrolyte, and acid-base disorders
13. GI bleeding
14. Hemoptysis
15. Irritable bowel
16. Jaundice
17. Knee pain

18. Rash
19. Upper respiratory complaints
20. Weight loss

C. Patients presenting with a known medical condition.

1. Acute MI
2. Acute renal failure and chronic kidney disease
3. Asthma
4. Common cancers
5. COPD
6. Diabetes mellitus
7. Dyslipidemia
8. CHF
9. HIV
10. Hypertension
11. Inflammatory bowel disease
12. Liver disease
13. Nosocomial infection
14. Obesity
15. Peptic ulcer disease
16. Pneumonia
17. Skin and soft tissue infections
18. Substance abuse
19. Thyroid disease
20. Venous thromboembolism
21. Geriatric Issues
22. Cognitive Impairment
23. Osteoporosis
24. Polypharmacy
25. Incontinence
26. Falls, gait and balance problems
27. Failure to thrive
28. Pressure ulcers
29. Sensory impairments
30. Sleep disorders
31. Depression
32. Pain
33. Elder abuse and neglect
34. End-of-life

Clinical Training XII - ER, Toxicology, Oncology & Palliative Care

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The clinical manifestations, diagnosis, medical and surgical management and prevention of the neoplastic diseases, including palliative care
- The management of medical emergencies and acute intoxications

Course Content

- Oncological diseases.
  - Cancer of the respiratory, digestive, nervous, endocrine, musculoskeletal, urinary, gynecological systems, the skin, and other systems
  - Leukaemia and other hematologic malignancies.
- Toxicology (different toxicological agents, poisoning and its management, environmental pollutants, including pesticides, forensic toxicology).
- Medical-surgical emergencies
  - Acute emergencies and life-threatening conditions
  - Management of the injured in major accidents and natural disasters
- Palliative medicine and treatment of chronic pain
- Methods of diagnosis (history, physical examination and laboratory tests) of above diseases and conditions
- Medical and surgical treatment and prevention of above diseases and conditions

Educational Objectives

Upon successful completion of this course students should be able to:

- Identify, diagnose and manage the treatment of oncological diseases.
- Identify, diagnose and manage the treatment of the principal intoxications.
- Identify, diagnose and manage the treatment of conditions associated with threatening life situations.
- To acquire the expertise to diagnose a cardiorespiratory arrest and to carry out the basic techniques for cardiopulmonary resuscitation. To gain knowledge about the techniques for advanced vital support.
- Identify the principles and basics of palliative medicine, and manage palliative care cases including basic aspects of home care.

Guidelines

- ***Length:*** 224 contact hours; 4 weeks
- ***Site:*** gastroenterology department, hematology department, outpatient clinics, endoscopy unit, chemotherapy unit, ambulatory care unit, emergency department, medical ICU, private office practice, additional sites, as available.
- **Orientation:** At the start of the clerkship an orientation is given. The clerkship director or designee discusses the program's goals and objectives, the responsibilities of the student, the schedule and assignments to preceptors and residents. The student is introduced to the key preceptors and staff members in the department.
- **Schedule:** The student must attend scheduled clinical conferences, grand rounds, morning visits, classes, subspecialty conferences, learning sessions.

- **Attending Rounds:** The student is involved in all patient care activities in the outpatient facility and inpatient unit.
- **Preceptor sessions:** A preceptor meets with students daily. The preceptor sessions will include clinical discussions that focus on problem solving, decision making and adherence to bioethical principals.

Medical Knowledge

Demonstrate knowledge of the principal syndromes and illnesses, their underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients.

Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g.; CBC, chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.

Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations which arise in our health care system.

Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

Clinical Skills

Take a comprehensive history and perform a complete physical exam. Formulate a comprehensive problem list, differential diagnosis; and articulate a basic therapeutic plan, employing concern for risks, benefits, and costs.

Analyze additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results change. Begin to develop proficiency in basic procedures, such as venipuncture, arterial puncture, nasogastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc.

- Arterial blood gases
- Blood culture
- Blood glucose examination using finger stick
- Blood transfusion
- Hand washing (including surgical scrubbing)
- Intramuscular injection
- Intravenous injection
- Nasogastric tube placement
- Oxygen supplementation
- Peripheral venous catheter placement
- Rectal examination
- Respiratory secretions culture
- Setting up syringe driver
- Skin suturing
- Skin swabs for culture
- Subcutaneous injections

- Suction of respiratory secretions
- Swabs from nose, throat and skin
- Urinary catheter insertion, female
- Urinary catheter insertion, male
- Urinary catheter removal
- Urinalysis using urine stick
- Vein puncture and blood drawing
- Wound care and basic wound dressing

Communication Skills

Verbal:

Basic competence in comprehensive case presentation
Basic competence in focused case presentation
Basic competence in explaining to a patient a simple diagnostic and therapeutic plan Basic informed consent scenario for a procedure

Written:

Competence in comprehensive case write-ups
Competence in brief case write-ups

Professional Behavior

- Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, maintenance of the patient encounter log and completion of the web-based educational program requirements.
- Demonstrate a commitment to quality, patient safety and self-directed improvement.
- Demonstrate competency and comfort in dealing with people of varying racial, cultural and religious backgrounds
- Demonstrate a commitment to treating all patients, families and other caregivers with respect.
- Participate fully with the patient care team and fulfill all responsibilities in a timely fashion.
- Maintain a professional appearance and demeanor.
- Demonstrate facility in working in concert with other caregivers, nutritionists and social workers / discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Core Topics & Patients

Students should make every effort to see patients with conditions listed below. This list is based on “Training Problems “published by the Clerkship Directors of Internal Medicine.

A. The healthy patient: health promotion and education, disease prevention and screening.

B. Patients with a symptom, sign or abnormal laboratory value

1. Abdominal pain
2. Altered mental status
3. Anemia
4. Back pain
5. Chest pain
6. Cough
7. Chronic pain
8. Dyspepsia
9. Dyspnea
10. Dysuria

11. Fever
12. Fluid, electrolyte, and acid-base disorders
13. GI bleeding
14. Hemoptysis
15. Irritable bowel
16. Jaundice
17. Knee pain
18. Rash
19. Upper respiratory complaints
20. Weight loss

C. Patients presenting with a known medical condition.

1. Acute MI
2. Acute renal failure and chronic kidney disease
3. Asthma
4. Common cancers
5. COPD
6. Diabetes mellitus
7. Dyslipidemia
8. CHF
9. HIV
10. Hypertension
11. Inflammatory bowel disease
12. Liver disease
13. Nosocomial infection
14. Obesity
15. Peptic ulcer disease
16. Pneumonia
17. Skin and soft tissue infections
18. Substance abuse
19. Thyroid disease
20. Venous thromboembolism
21. Geriatric Issues
22. Cognitive Impairment
23. Osteoporosis
24. Polypharmacy
25. Incontinence
26. Falls, gait and balance problems
27. Failure to thrive
28. Pressure ulcers
29. Sensory impairments
30. Sleep disorders
31. Depression
32. Pain
33. Elder abuse and neglect
34. End-of-life

Additional Requirements

Medical Therapeutics

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The methods of administering medical treatments, the safe prescription of pharmaceutical agents and the process of pharmacovigilance

Course Content

- Prescription and administration of the principal pharmacological groups
- Anti-inflammatory-drugs, analgesics, opioids and CNS stimulants, drugs acting on nervous system, anxiolytics and hypnotics, neuroleptics, anti-depressants, anti-epileptics, drugs used in anesthesia.
- Therapeutic supervision of drugs.
- Adherence to treatment.
- Pharmacovigilance and pharmacoeconomics.
- Clinical trials: fundamentals of design, implementation and evaluation of the outcomes

Educational Objectives

Upon successful completion of this course students should be able to:

- Prescribe and appropriately administer the principal groups of pharmacological agents.
- Explain the fundamentals applied in the therapeutic supervision of drugs.
- Describe the concepts of adherence to treatment, its indications, implications and complications/adverse effects related to administrations.
- Discuss the current systems of pharmacovigilance.
- Explain the fundamentals of pharmacoeconomics.
- Outline the development of procedures used in clinical trials.

Symptoms & Interpretation of Complementary Examination Procedures

Mission & Introduction

Description of the Core Clinical Training

The objective of the course is to familiarize students with

- The methods, applications and interpretation of diagnostic techniques

Course Content

Relationship between risk/benefit and cost/effectiveness of the diagnostic and therapeutic procedures.

- Integration of knowledge on:
  - Indications and limitations of the various complementary examinations.
  - Procedures and means required to carry out diagnostic explorations.
  - Interpretation of the results obtained by the diagnostic tests.

Educational Objectives
Upon successful completion of this course students should be able to:

- Accurately assess the risk/benefit and cost/effectiveness ratios of diagnostic procedures.
- Integrate and correlate the expertise acquired from other study courses to the indications of the various complementary examinations used in medicine: biochemical, hematological, immunological, microbiological, anatomopathological, imaging, electrophysiological and other tests and examinations.
- Demonstrate that they can integrate and correlate the knowledge acquired from other study courses encompassed in this curriculum to the procedures and methods required to carry out the various diagnostic techniques.
- Interpret and correlate in an integrated collective fashion the results of various diagnostic tests and demonstrate that they are cognizant in respect of their limitations.

Electives

Healthcare Management

Mission & Introduction
Description of the Core Clinical Training

The objective of the course is to familiarize students with:

- The organization, functions and management of health care systems and the impact of health care in improving the health of populations.
- The tools, methods and processes used for strategic planning, decision making and quality assurance / control in healthcare

Course Content

- Health system structure at a global, European, national and regional level.
- Planning, programming and assessment of health programs.
- Core functions and competencies of leaders and managers in healthcare.
- Essentials of health economics.
- Principles of quality management, audit and clinical governance.
- Managing crisis, stress, time, conflict and change.

Educational Objectives
Upon successful completion of this course students should be able to:

- Define the role of managers and leaders in healthcare, identify their core competencies and associate these with the structure of healthcare organizations and healthcare systems.
- Demonstrate that they comprehend healthcare planning and administration on a global, European, national and regional level.
- Demonstrate that they comprehend the economic and social implications that medical practice entails, taking into account valid effectiveness and efficiency criteria.
- Describe the principles of Occupational Health.

Clinical Embryology

Mission & Introduction

Description of the Core Clinical Training

This course is aiming to acquaint Medical students to a broad and concrete overview of the mechanisms causing major and minor birth defects after drug and environmental causative factors during pregnancy and neonatal life, to types of their prevention and to the clinical problems which arise for their repair and rehabilitation. Genetic Counseling methods and international Guidelines for birth defects prevention and their early diagnosis in pregnancy will be taught. The role of folic acid and healthy and enhanced nutrition before and during pregnancy will be analyzed. Viruses, bacteria, toxic substances, chemicals, endocrine disrupters, drugs, particulate matters and toxic nanoparticles bio-distribution throughout the embryonic/fetal and neonatal body which can have consequences to the developing human organism via their placenta blood barrier permeability will be taught. Incidence of genetic syndromes and epigenetic disturbances will be emphasized. Thus, the course is going to serve as a connective foundation upon which, clinical orientated problems and their prevention and repair in Clinical Embryology and Neonatology in Medical sciences will be based.

Course Content

In that regard, students will familiarize themselves with the following Modules:

- Genetic Counseling for Birth Defects.
- Endocrine disrupters and Birth Defects.
- Birth Defects caused by drugs, viruses, bacteria, toxic substances and multiple teratogenic environmental causative factors during pregnancy and neonatal life.
- Epigenetics and Clinical Embryology.
- Congenital Anomalies due to Genetic disorders. Clinical expression of Parental Diseases and Syndromes.
- Clinical expression of birth defects at the Craniofacial area.
- Clinical expression of birth defects at the Cardiovascular and the Respiratory System.
- Clinical expression of birth defects at the Gastrointestinal System.
- Clinical expression of birth defects at the Renal System.
- Clinical expression of birth defects at the Male and Female Reproductive System.
- Clinical expression of birth defects at the Neural System and the Sensory organs.
- Clinical expression of birth defects at the Skin, Muscular and Skeletal System and at the Upper and Lower extremities.
- Clinical expression of birth defects at the Umbilical Cord and the Placenta.
- Clinical and modern imaging modalities' methods for prenatal diagnosis of Birth defects.

Laboratory exercises:

- Observations of normal and pathological clinical embryonic cases from the systems described.
- Drawing methods for understanding the clinical expression of birth defects of the organs and systems described above and observations of various types of high fidelity 3D embryological models
- Clinical Seminars and Discussions of pathological clinical cases of birth defects in comparison with normal clinical appearance from the organs and systems described.

- Clinical Seminars and Discussions with videos for clinical cases of congenital malformations and birth defects from the modules described using videos and Computer Assisting Learning-CAL.

Educational Objectives

Upon successful completion of this course students should be able to:

- Demonstrate an understanding of clinical orientated problems in embryology influencing the developing of the human embryo and of each of its organs and systems.
- Illustrate, recognize, identify and describe the normal and abnormal embryonic development in comparison with the clinical problems raised after the influence of causative teratogenic and genetic factors.
- Understand the role of Clinical evaluation in Embryology for accurate diagnosis of birth defects.
- Understand the role of Clinical Genetic Counseling for birth defects prevention.
- Understand the role of Clinical rehabilitation and surgical repair of birth defects.
- Understand the role of Networking with diverse types of physicians and clinics for information of birth defects prevention.
- Describe and explain diagnostic methods as :the prenatal ultrasound 2D and 3D diagnosis, amniocentesis and other modern prenatal examination methods for diagnostic purposes of birth defects.

  All the above will acquaint Medical students to demonstrate effective self-assessment skills, communicative and collaborative skills, communication with peers, discussions in small groups with clinicians and presentation of Problem Based Learning and Clinical Discussions in human clinical cases of birth defects.

Laboratory skills

- Describe and explain prenatal diagnostic methods in collaboration with clinicians.
- Describe and identify clinical cases of birth defects into the human embryonic body.
- Understand the role of Genetic Counselling and Clinical Embryology for accurate diagnosis in diverse diseases demonstrating skills in critical thinking via Problem Based Learning and Clinical Discussions.
- Describe and identify stages of embryological and fetal, normal and defective differentiation of organs and systems from implantation of the blastocyst to the full term pregnancy.
- Identify tissue and organs' normal and defective embryological structure , from 3-D high fidelity embryological models, videos and Computer Assisting Learning-CAL.

Rehabilitation Medicine

Mission & Introduction
Description of the Core Clinical Training

This course is intended to give the student a broad overview of Rehabilitation Medicine. It is designed to acquaint students with the fundamental terms, concepts, and principles used in Rehabilitation Medicine, especially for disability and to serve as a foundation upon which the Rehabilitation plans for individual patients can be applied.

Course Content
The students will familiarize themselves with:

- The use of the International Classification of functionality, disability and health (ICF) of the WHO.
- The use of several assessment tools in Rehabilitation Medicine.
- The design of a Rehabilitation plan for acute musculoskeletal disorders of adult age.
- The design of a Rehabilitation plan for acute nervous system disorders of adult age.
- The design of a Rehabilitation plan for acute cardiopulmonary disorders of adult age.
- The design of a Rehabilitation plan for progressive musculoskeletal disorders.
- The design of a Rehabilitation plan for progressive nervous system disorders.
- The design of a Rehabilitation plan for progressive cardiopulmonary disorders.
- The design of a Rehabilitation plan for disorders in the developmental age (scoliosis, congenital disorders, cerebral palsy etc).
- The design of a Rehabilitation plan for injuries or disorders which will need the use of prosthesis.

Educational Objectives
Upon successful completion of this course students should be able to:

- Describe the concepts of functioning, disability and health (the WHO-ICF).
- Understand the epidemiology of disability, the principles of functional recovery and motor learning.
- Understand the disabling consequences of injury and diseases in the adult age, concerning acute and progressive musculoskeletal and neurological disorders, balance troubles in the elderly and the risk for falls, chronic obstructive pulmonary diseases, heart diseases and cancer diseases.
- Describe the disabling consequences of injury and diseases in the developmental age (e.g. scoliosis, congenital disorders, cerebral palsy).
- Understand essential methods of assessing patient's needs, including electromyography and diagnostic ultrasounds.
- Define the discharge planning and the concept of the interdisciplinary care.
- Describe the effectiveness of the several rehabilitation interventions (e.g. medications, exercise, physical modalities, manual therapy, cognitive rehabilitation, prosthetics and orthotics).
- Understand the ethical implications of working with people with disabilities, including the role of physician as advocate and the guardianship responsibilities, the economic implications of disability management and medicolegal issues.

Laboratory skills

- Explain the use of the International Classification of Functioning, Disability and Health (ICF)
- Use of several assessment tools.
- Analyse clinical cases and setting up the rehabilitation plan for possibly disabling disorders of the musculoskeletal, nervous and cardiopulmonary system
- Visit Physical and Rehabilitation Medicine Departments for developing clinical awareness of the main areas presented during the training lectures.

Research Methods & Scientific Writing

Mission & Introduction

Description of the Core Clinical Training

This is a basic introductory course in research methodology that will also include statistical analyses and covers a comprehensive range of topics for students that will allow them to apply quantitative/qualitative research using a critical thinking approach. Moreover, examples of clinical trial studies, protocols and international guidelines for that purposes will also be discussed. This is a theory-based course along with exercising on research proposition and with plenty of opportunities to apply the concepts via practical and interactive activities integrated throughout the course.

Course Content

Students will familiarize themselves with the following:

- Introduction to quantitative research
- Research question development
- Study design, sampling and confounding
- Types of data and displays of data and results
- Summarizing numeric and categorical data
- Numeric and categorical differences between groups
- Hypothesis testing and confidence intervals and p-values
- Parametric statistical tests and Non-Parametric tests
- Reliability and Validity of research data\
- Clinical trials/protocols/guidelines

Educational Objectives

Upon successful completion of this course students should be able to

- Analyze clinical data and be able to discuss and interpret as a research team in a seminal manner
- The use of complex research data and use statistical analysis to evaluate results
- Identify ethical matters on the use of animal and human samples for research
- Clinical Trials and protocols
- Formats and guidelines

Interventional Radiology

Mission & Introduction

Description of the Core Clinical Training

Modern imaging modalities (CT, MRI, Ultrasound, PET/CT and x-rays) have become the mainstay of diagnosis. In addition, these modalities offer guidance for novel minimally-invasive treatment options. The objective of this course is to provide an introductory but comprehensive review of the imaging findings of the most common anatomic pathologies in an organ based approach and describe the minimally-invasive treatment options.

Course Content

The course will begin with an introduction to the fundamentals of imaging physics, and will include references to plain x-ray films, computed tomography, magnetic resonance imaging, ultrasound and nuclear imaging. Emphasis will be given to aspects that will enable the students to improve their image interpretation skills.
The course will continue with a series of topics during which the normal anatomy/physiology will be presented. Relevant pathophysiology will then be taught to the students, followed by presentation of the available minimally invasive treatment option, as well as comparison with traditional treatment options.

Topics will include:

- Liver cancer. During this section we shall present normal hepatic anatomy and function, the pathophysiology of hepatocellular carcinoma and the option of transarterial chemoembolization.
- Gastrointestinal hemorrhage. We shall review the causes of GI hemorrhage, present the medical, surgical and minimally invasive options to address such hemorrhage and showcase the tools of the trade (catheters, coils, microspheres etc.)
- Liver cirrhosis: The students will learn the pathophysiology of liver cirrhosis, its consequences (hepatocellular carcinoma, portal hypertension) and treatment options for the latter (i.e. TIPSS)

A similar structure will followed for other topics and will include aortic/arterial disease, cerebrovascular disease, renal cancer, hepatico-pancreatico-biliary disease and other specialty interventions.

In addition to the above, the students will be given a basic introduction to medical research and relevant statistical methodology; they will develop the basic critical skill of judging scientific papers and present a paper of their choice.

Educational Objectives

Upon successful completion of this course students should be able to:

- Define the basic biophysics of imaging modalities (MRI, CT, Ultrasound, PET/CT and X-ray systems), as they apply to every-day clinical practice.
- Recognize and describe the relevant imaging findings, formulate a differential diagnosis and specify an investigational approach towards the final diagnosis.
- Describe the diagnosis, epidemiology, pathophysiology, and treatment options of each disease covered.
- Describe the novel, minimally-invasive treatment options available for each disease.

Details regarding the clinical clerkships can also be reviewed in Appendix I (Curriculum and Course Outlines). The competences that are required for medical school graduates in their clinical year are specified in the Clinical Training Manual (CTM), which is given to both students and clinical instructors at the beginning of their clinical studies. In order to ascertain patient safety, no student remains unsupervised during his/her clinical training. The EUC Medical School has created extensive procedures so that all medical students are overseen throughout their clinical training.

The curriculum committee oversees and ascertains that the clinical curriculum is adjusted according to scientific developments. As new medical developments pass into clinical practice, and with a deep appreciation of the needs of the Cypriot and International society for modern, up-to-date, healthcare delivery the academic faculty with the assistance of the EUC clinical instructors makes a concerted effort to adopt these new developments in the educational program of our students.

2.6 Program Structure, Composition and Duration

As described above (Section 2.1), the six-year curriculum at European University Cyprus is a competency-based integrated curriculum. Integration reflects courses that not only bring together the various basic disciplines, but also clinical, factual, experiential sources of information. The curriculum is fully integrated both horizontally (*systems-based*) and vertically (*spiral-design*) and is devised in three educational phases.

Phase I:	Foundations of Medicine	(years 1-2)
Phase II:	Foundations of Clinical Practice	(year 3)
Phase III:	Clinical Medicine Core	(years 4-6)

Horizontal integration brings together the various disciplines (e.g. Anatomy, Histology, Embryology, Physiology, Biochemistry) for each module, whereas vertical integration is aimed at bringing together basic and clinical sciences, in order to break the traditional divide between preclinical and clinical studies. *Vertical integration* is achieved by the early introduction to clinical skills and thinking. During the clinical years, students are called upon to review their foundation knowledge and actively search the deranged pathophysiological processes of their patients, by reviewing knowledge from basic biomedical courses. Other elements of professional development are addressed vertically in the program.

The EUC does not embrace complimentary (alternative) medicine. Given that the current evidence-based medicine advises against alternative medicine, such as homeopathy, the Medical School has renounced the teaching of alternative medicine. On the other hand, it actively promotes the idea of complementation, as medical students need to work in teams with other healthcare professionals, from the first year of their studies, so they improve their communication skills.

2.7 Program Management

Curriculum Committee

The Medical Curriculum is closely monitored and managed by the Curriculum Committee, which is headed by the curriculum coordinator. The Dean or Vice Dean works maintains a close interaction with the committee, and regularly scheduled meetings with the curriculum coordinator, Dean and Vice Rector of Academic affairs aim to ensure that the curriculum runs at the highest standards. When necessary, minor changes can be made to address the diversity of the student population, as well as any changes in medical knowledge. To facilitate the involvement of other stakeholders, the Advisory Board of the School, advises on any changes they recommend that should be incorporated in the curriculum. The Curriculum Committee is a very vital and active committee, which meets regularly to ensure that the medical curriculum runs smooth and unbiased. The Curriculum Committee also assesses formal evaluations of courses, so as to ensure that the courses are taught at the highest possible standards.

Clinical Training Committee

EUC has a formal administrative and academic structure for facilitating the clinical training of its medical students at its affiliated hospitals. The Dean, in collaboration with the Deputy Dean and Chair, oversees and is responsible for the Clinical Training (Clerkship) programs at EUC, School of Medicine. As such, they are not members of any clinical training committee. The School council appoints a seven-member **Clinical Training Committee (CTC),** who are all full-time faculty and Chairs of the Clinical Divisions (see below) and the committee elects by majority a **Chairman.** (When available, senior faculty members are selected as Chairs of the Clinical Divisions and the Chairman of the CTC). The Chairs appoint by majority vote, two additional full-time faculty members (any rank). The Office of the Dean can include additional full- or part-time faculty in the CTC, under special circumstances.

The Clinical Training Committee:

- Oversees the planning of clinical training for all years of study
- Assists the Dean in recruiting and assigning academic and clinical faculty in clinical training
- Are the liaison between the clinical training sites and the faculty responsible for academic program and course content (Hospital coordinators and Course Coordinators)
- Ensures optimal cooperation between all affiliated persons and sites
- Ensure appropriate training of scientific (clinical) collaborators and clinical instructors
- Ensures optimal function of clinical training courses across all years of study
- Ensures an environment of safe collaboration between the School and affiliated healthcare sites
- Assists the Dean in administrative, financial and other relevant obligations of the School of Medicine related to the clinical training
- Ensures that the learning objectives outlined for clinical training are achieved
- Ensures accurate, complete and objective student evaluation
- Works in collaboration with the academic and hospital coordinators, to solve any issues that may arise up during clinical training
- Oversees appropriate completion and evaluation of the logbooks

The medical program at EUC is comprised of 7 primary Divisions (5 of which are Clinical Divisions), to which the courses and subjects are distributed. The **Chairs of the Clinical Divisions** (Internal Medicine, Surgery, Child & Maternal Health, Social Medicine/Public health/Primary Care, and Neuroscience/Mental Health/Sensory Systems) are full-time senior faculty (Associate Professor or Professor) and are responsible for the overall academic content and coordination of the courses taught in that Division. They oversee clinical program and rotations at each affiliated hospital and ensure equality of training for EUC students across all clinical training sites.

The Division Chairs work with heads of each course (**Course Coordinators**) taught in that Division, who are also full-time faculty and coordinate the instruction of the course by full-time faculty and scientific / clinical collaborators (part-time teaching faculty). **Clinical Collaborators** are healthcare professionals who hold a medical specialization and a doctoral degree, as defined by the EUC Charter. Posts of Scientific (Clinical) Collaborators are contractual for the duration of one or two academic semesters, which may be renewed. The Council of School of Medicine identifies the needs for positions, which are confirmed by the Dean in consultation with the Vice-Rector of Academic Affairs and the Department of Human Resources. A Committee consisting of Departmental Faculty members assesses the scientific qualifications and experience of each candidate for each specific position/discipline and prepares a detailed report with supporting documentation. Based on the Committee's report, the final selection is made by the School Council.

2.8. Linkage with Medical Practice and the Health Sector

The Advisory Board includes representatives of professional bodies, governmental/regulatory bodies, public/private health administrators, and academic bodies, and hence is comprised of various experts and stakeholders in the Health Sector. A variety of clinical instructors, including the Hospital Coordinators of Clinical Education and the Department Clinical Coordinators, are involved in teaching EUC students, and as early as the preclinical years, these instructors provide valuable feedback to the curriculum committee regarding local and regional health problems that should be addressed. After consideration, the curriculum committee incorporates new material into the course contents to appropriately address new health issues, which have arisen.

As an international academic entity, European University Cyprus School of Medicine encourages and promotes agreements with international hospitals and research institutions of the highest caliber for EUC student summer externships. The externship experience promotes the idea of employability, as well as exposes the students to the real health sector. The international summer externships offered to the EUC Medical Student takes their experience with the health sector beyond the boundaries of Cyprus, to the international arena. This allows students to gain experience in environments and countries that they wish or expect to work in the future.

The Curriculum Committee actively gathers feedback from all stakeholders and Advisory Board and considers which modifications should and can be made in the program. The committee cannot modify the content or procedures of the program more than 10% each year and more than 50% at predetermined intervals following a formal Serf-Assessment Report (SAR) and revision process.

3. Assessment of Students

3.1 Assessment Methods

The EUC School of Medicine uses an array of various assessment methods. These methods are different from course to course, and are clearly defined in each course outline. The curriculum committee has approved course assessment methodologies, based on whether they appropriately evaluate the acquisition of defined learning outcomes for the course. Specifically, the committee ensures that the learning outcomes defined for each course are measurable and that the assessment methods selected accomplish this effectively. To ensure transparency, all course outlines are published on the School Website and they are visible to everybody.

Formative Assessments

Formative Assessments e-learning are available online (via Moodle, Blackboard) in the form of quizzes, images, diagrams, clinical scenarios, etc. Students usually attempt these formative assessment during laboratory hours.

Computer-based Interactive Quizzes During Laboratory Sessions:

Web-based quizzes are provided for the students during and at the end of the laboratory sessions. Students are able to repeat each quiz several times and see which answers were incorrect. The aim is for students to evaluate their knowledge and strengthen the learning process. Instructors have computer access to the results, both during the quiz time and afterwards. By reviewing the ongoing process, instructors are able to immediately define any weak areas that may need reinforcement in lecture or laboratory exercises.

Summative Assessments

1- Clinical Problems (Case-based, Problem-based learning)

The clinical problem serves to integrate basic sciences with clinical thinking. Student teams are given a clinical problem with several questions to be answered. The teams are given one week to use their knowledge of anatomy to address the problem and answer the questions. Students are encouraged to approach faculty from other departments or outside physicians to discuss their clinical problem, and to search the literature. After a week, each team formally presents their findings to the entire class. (Team grade)

2- Written Examinations:

Written examinations will consist primarily of board-level multiple choice questions many, which entail critical thinking clinical scenarios. Short answer questions are open ended, semi-structured questions that also incorporate foundation knowledge in a clinical scenario.

- Midterm written exam (includes material up to midterm)
- Final written exam (includes material from entire semester)

3- Practical Examinations:

Practical examinations include:

1- Spot Examinations:

- Interpretation of normal plain & special x-rays, Computerized Tomography (CT) Scan, Sonogram, MRI etc. and correlate with cross-sectional anatomy of the body
- Surface marking & living anatomy

- Histology slides
- Developmental stages

2- Objective structured practical examination (OSPE) will also be used. For example, for anatomy OSPE is used at assess anatomy laboratory skills with 2 station types: a procedure station, where students are asked to perform simple structured experiments and 2) a question-based station, where students need to analyze data and answer specific questions related to structure & function

Components of Clinical Training Assessment

Clinical Performance

The teaching physicians who work with the student during the rotation assess the student's clinical performance in three areas, each of which is 20% of the grade: medical knowledge, clinical skills and professional behavior. The more feedback the CC gets from different members of the medical staff that instructed the student, the more objective grades can be. The faculty assesses the extent to which the student has developed the competencies required for that rotation. These specific competencies appear in Section II of this manual in the curriculum for each of the core clerkships. The following general goals form the basis of all assessments.

- Medical Knowledge includes the knowledge of basic, clinical and social sciences; the pathophysiology of disease; the clinical signs, symptoms and abnormal laboratory findings associated with diseases and the mechanism of action of pharmaceuticals.

- Clinical Skills includes diagnostic decision making, oral and written case presentations, history and physical examination, test interpretation and therapeutic decision making. Students must be observed and evaluated at the bedside.

- Professional Behavior include the interaction with staff and patients, integrity, sensitivity to diversity, attendance and a commitment to lifelong learning and independent study.

- Communication Skills "as they relate to physician responsibilities, including communication with patients, families, colleagues, other health professionals and resolution of conflicts."

OSCEs

An objective structured clinical examination (OSCE) is designed to test clinical skill performance and competence in skills such as communication, clinical examination, medical procedures / prescription, exercise prescription, joint mobilisation / manipulation techniques, radiographic positioning, radiographic image evaluation and interpretation of results. It is a hands-on, real-world approach to learning that keeps examinees engaged, allows them to understand the key factors that drive the medical decision-making process, and challenges the professional to be innovative and reveals their errors in case-handling and provides an open space for improved decision-making, based on evidence-based practice for real-world responsibilities.

An OSCE usually comprises a circuit of short (the usual is 5–10 minutes although some use up to 15 minute) stations, in which each candidate is examined on a

one-to-one basis with one or two impartial examiner(s) and either real or simulated (actors or electronic patient simulators) patients. Each station has a different examiner, as opposed to the traditional method of clinical examinations where a candidate would be assigned to an examiner for the entire examination. Candidates rotate through the stations, completing all the stations on their circuit. In this way, all candidates take the same stations. It is considered to be an improvement over traditional examination methods because the stations can be standardized enabling fairer peer comparison and complex procedures can be assessed without endangering patients health.

As the name suggests, an OSCE is designed to be objective – all candidates are assessed using exactly the same stations (although if real patients are used, their signs may vary slightly) with the same marking scheme. In an OSCE, candidates get marks for each step on the mark scheme that they perform correctly, which therefore makes the assessment of clinical skills more objective, rather than subjective, structured – stations in OSCEs have a very specific task. Where simulated patients are used, detailed scripts are provided to ensure that the information that they give is the same to all candidates, including the emotions that the patient should use during the consultation. Instructions are carefully written to ensure that the candidate is given a very specific task to complete. The OSCE is carefully structured to include parts from all elements of the curriculum as well as a wide range of skills. A clinical examination - the OSCE is designed to apply clinical and theoretical knowledge. Where theoretical knowledge is required, for example, answering questions from the examiner at the end of the station, then the questions are standardized and the candidate is only asked questions that are on the mark sheet and if the candidate is asked any others then there will be no marks for them. Marking in OSCEs is done by the examiner. Occasionally written stations, for example, writing a prescription chart, are used and these are marked like written examinations, again usually using a standardized mark sheet. One of the ways an OSCE is made objective is by having a detailed mark scheme and standard set of questions. For example, a station concerning the demonstration to a simulated patient on how to use a metered dose inhaler [MDI] would award points for specific action, which are performed safely and accurately. The examiner can often vary the marks depending on how well the candidate performed the step. At the end of the mark sheet, the examiner often has a small number of marks that they can use to weight the station depending on performance and if a simulated patient is used, then they are often asked to add marks depending on the candidates approach. At the end, the examiner is often asked to give a "global score". This is usually used as a subjective score based on the candidates overall performance, not taking into account how many marks the candidate scored. The examiner is usually asked to rate the candidate as pass/borderline/fail or sometimes as excellent/ good/ pass/ borderline/ fail. This is then used to determine the individual pass mark for the station.

Clinical Evaluation Exercise (MiniCEX)

EUC incorporates the Clinical Evaluation Exercise (miniCEX) with the Logbook framework in order to assess clinical skills, attitudes and behaviors in the secondary care setting. By providing a short snapshot of how students interact with patients in a secondary care setting, it is used as an effect tool to collect evidence on competency attainment. The miniCEX is overseen by the clinical supervisor at each hospital and may be observed by a staff doctor, nurse practitioner, consultant or other. Observers should not be a peer or fellow clerkship trainee.

The MiniCEX is intended to facilitate formative assessment of core clinical skills in 10- to 20- minute direct observation assessment of clerk-patient interactions. The observations are documented in the Logbook. The aim, ultimately, is to guide clerkship learning and improve performance through structure feedback from the clinical instructors. Particular emphasis is place in areas such as communication, history taking, physical examination and professional practice.

Each mini-CEX focuses on specific aspects of the clinical encounter, including:

- History taking
- Medical interviewing skills
- Physical examination skills
- Professional qualities
- Counseling skills
- Clinical judgment
- Organization and efficiency

Direct Observation of Procedural Skills (DOPS)

Structured rating scale for assessing and providing feedback on practical procedures] will be modified and used for complex scenarios.

EUC Medical School uses the University pass and fail marking scheme.

At the end of each semester and Summer Session, the final grades are posted in the Students Portal, and are recorded on their permanent academic record in the Office of the Registrar.

Letter Grade	Grade Meaning	Grade Points	Percentage Grade
A	Excellent	4.0	90 and above
B+	Very Good	3.5	85-89
B	Good	3.0	80-84
C+	Above Average	2.5	75-79
C	Average	2.0	70-74
D+	Below Average	1.5	65-69
D	Poor	1.0	60-64
F	Failure	0	-
I	Incomplete	0	-
W	Withdrawal	0	-
P	Pass	0	-
AU	Audit	0	-
TR	Transferred	0	-

The grade "I" is awarded where a student has maintained a satisfactory level of performance but was unable to complete a major portion of course work (e.g. term paper or final exam), for reasons deemed acceptable by the instructor. It is the responsibility of the student to justify any failure to complete work required, and to reach an agreement as to how remaining course requirements will be satisfied. Following the award of an "I" mark and in consultation with the course instructor, the student is responsible for fulfilling any outstanding course requirements within the first weeks of the following semester. In exceptional cases, the instructor may extend the existing incomplete grade to the next semester. Failure to complete work within a specified period will result in an "F", which will be recorded as the final grade.

In order as to ensure that assessments cover knowledge, skills and attitude, the EUC Medical School uses a template, which assesses both professional behavior and skills in a formative and summative way. To ensure potential bias the students' papers are graded anonymously. External expertise is requested from time to time to ascertain pertinent level of assessment methods, (knowledge, skills and professional behavior).

In the case where a student believes that the grade received is different from what was expected, the EUC Charter defines the procedure for appeals. Specifically, the student must exhaust all possibilities of resolving the problem with the pertinent instructor first. If this does not lead to a resolution, the student may appeal against the grade by filing a petition with the Office of the Registrar. The Registrar will forward a copy of the petition to the pertinent Chairperson of Department, who will first ascertain that no error was made by the instructor, and if so will assign an anonymous re-evaluation of the final examination/project to another instructor. In the case of major discrepancy between the instructor's evaluation and the re-evaluation that will require change of grade, the average of the two evaluations will be assigned as the final grade to the final examination/project. Changes of grades resulting from an appeal require the endorsement of the Dean of School. For a petition to be reviewed, a student must appeal within four (4) weeks from the date the results are announced.

***Appeal / Grievance*.**
A committee consisting of a high-rank academic administrator, a high-rank faculty member and a high-rank external member will investigate all appeals / grievances.

Assessment / Examination Committee
The examination committee is responsible for providing guidance and for coordination of the school examinations.

The responsibilies of the examination committee include amongst others:

- Preparation of the School Guide for examinations, for all courses (including courses with written examinations and oral/practical examinations).
- Decisions on and approval of the midterm examinations schedule.
- Preparation and approval of the final examinations schedule.
- Preparation and approval of the re-take examinations schedule.
- Designation of invigilators and examiners during examinations.
- Decisions regarding special arrangements that need be made at the request of a student (eg.students with special needs or rescheduling for health or other serious reasons).
- Decisions concerning exemptions.
- Decisions concerning recording of examinations.
- Ensuring that examination grades correctly disclosed.
- Supervision of the timely submission and correctness of the grade rosters.
- Intervention in cases of student misconduct during an examination.
- Close collaboration with the School Chairperson for the evaluation and confirmation of students that failed courses or failed to achieve the required GPA to further their studies.
- Intervention in case of disturbance of order during an examination process.
- Ensuring that the examination are kept locked in designated areas within the School premises according to EUC policy.

The Examination Committee submits an annual report of its activities to the office of the Dean of the School of Medicine, EUC.

3.2. Relation Between Assessment and Learning

It is well-known that assessment has a powerful positive steering and motivational effect on learning, by conveying what the instructors considers as important. For that reason, the Medical Curriculum program has devised a sophisticated, multi-layered assessment strategy. Typical criterion-reflected tests, global rating scales are used for basic knowledge, clinical skills and problem solving. Lifelong learning requires that individuals not only work independently, but also can assess their own progress. Self-assessment is an integral part of the EUC medical curriculum with weekly self-assessment quizzes on Moodle, serving not only for students to monitor their progress in the class, but for them to learn a vital skill for lifelong learning. Oral exams (viva voce) have been shown to have poor content validity, with high inter-rater variability. Despite this, when mini, impromptu-oral exams are randomly given throughout the course, they help drive learning, by keeping students constantly involved with material and clearly indicating what the instructor deems important.

It is clear that one method of assessment is not enough. By using multiple assessment methods, we are able to capture most aspects of knowledge (cognition) and skills competency (behavior). Hence, clinical-context based MCQs and short answers are applied for knowledge, concepts and application of knowledge ***("Knows"*** and ***"Knows How"*** of Miller's Conceptual pyramid for clinical competence). Multi-station OSCEs and OSPEs will be used for ***"Show How"***, and DOPS for ***"Does".***

4. Students

4.1. Admission Policy and Selection

General Policy

The EUC School of Medicine prepares students to excel in the rapidly changing landscape of modern medicine through a curriculum grounded in foundational knowledge, skills acquisition, professionalism, and social accountability. The EUC medical graduate is someone for whom the teamwork, emotional intelligence, growth mindset and academic excellence, both professional and personal, have become a way of life. An effective, competitive student selection is central to achieving these aims.

The EUC School of Medicine demonstrates an open, fair and objective process for student selection. Details of the EUC admission policies and explanations of the admission process are made readily available to prospective applicants. A history of health issues will not jeopardize a career in medicine unless the condition impinges on professional fitness to practice. Students must declare information that may significantly influence their ability to practice medicine. Failure to do so, may lead to termination of their medical studies.

Completed Application Form

Applicants may apply online using the EUC School of Medicine Webpage. The application form may also be obtained either in person from the Office of Admissions, The completed application form together with a non-refundable application fee of €52 must be sent to the Director of Admissions, PO Box 22006, 1516 Nicosia, Cyprus.

Academic Records
Applicants must submit an official copy of their high school leaving certificate ('Apolyterion' or its equivalent, such as GCE A' Level, IB etc.) and mark sheet of their secondary school record together with the application. To be considered for admission, candidates must have an average grade of 18 or above (90% percentage grade or its equivalent) on their high school leaving certificate. All applicants will need to have passed Biology plus one more subject either in Chemistry, Math or Physics. The University reserves the right to consider applicants coming from other systems of education considered as equivalent to the Apolyterion or GCE A' level, IB qualifications.

Holders of a Bachelor Degree
Candidates who are holders of a Bachelor Degree from a recognized university in a relevant field can be considered for admission.

Proficiency in English Language
Candidates will need to have passed the GCSE or IGCSE with a grade of 'C' or above or IELTS with a grade of 6.5 or TOEFL with a score of 213 (550 paper based, 79-80 internet based) or other equivalent English examination.

Interview
All eligible candidates will be invited for interview in Cyprus. In some cases, the University may be able to conduct an interview online. The interview process is rigorous and thorough. Applicants should be prepared to discuss their personal motivation to study medicine, their hobbies and personal interests, as well as providing evidence of their academic credentials.

Confirmation of Offer
Selected candidates will need to confirm acceptance of the offer within one week of admission notification. Confirmation will require a down payment against tuition and the remaining amount will be settled in equal installments.
Conditional admission

Candidates who have successfully completed the first term of their final year of high school (lyceum) and satisfy all requirements for admission (see points 1-7) may apply for conditional admission. Successful candidates will be offered conditional admission, which will require the fulfillment of all admission conditions and in particularly the final grade on the high school leaving certificate (Lyceum) or GCE A-Level/International Baccalaureate (IB) results.
Note: Non-EU applicants will need an entry visa to Cyprus.

4.2. Student Intake

Student intake follows the specific criteria as defined on the accreditation approval documentation by the Cypriot Ministry of Education. The School of Medicine maintains records regarding the number of applicants and the ratio of the intake to those students not accepted.

4.3. Student Counseling and Support

EUC challenges and supports students in order to facilitate the development of their intellectual, emotional, recreational and career growth. The service attempts to help students in coping with various problems of a personal, emotional and/or interpersonal nature that may constitute obstacles to their adjustment to University, their academic success, and personal growth. Academic advising assists students in wisely selecting and pursuing their academic studies. The orientation program is designed to welcome new students to EUC community. Housing Office is committed to creating a safe and well maintained environment that promotes community and fosters student comfort and development. All international students are covered by a health insurance. An ATM service operates on campus and it is located in the cafeteria.

Counseling Center

Students in need of personal counseling should contact the Office of Student Affairs to arrange a confidential, one-on-one meeting with a qualified professional. The service is also available to academic and administrative personnel to help individuals cope with any emotional and psychological challenges. A counselor is available on campus for consultation by appointment throughout the academic year.

Student Advisors

The Advisors are full-time employees of the Student Advising Center, which assigns students to individual Advisors. A first meeting is arranged to discuss the student's interests and career objectives, and to decide on course options. A Registration Form is then completed and signed by both parties, to be submitted to the Office of the Registrar.

Students are encouraged to contact their Advisor at any time during the academic year. However, it is mandatory to meet at least once a semester to discuss course options. Meetings may be arranged during office hours or by appointment. The Student Advising Center is located at the ground floor of the West Block building.

Academic (Pre-Clinical) Advisors

Each student is also assigned an Academic Advisor, to track each individual student from year 1 through year 3 (semesters 1 – 6). Academic Advisors are full-time faculty of the School of Medicine, and are responsible for assisting the student in defining and developing realistic educational goals, in keeping with his/her abilities, skills, interests, and career aspirations. Academic Advisors are also responsible for ensuring the student is aware of university regulations and policies.

Clinical Training Advisors

The Clinical Training Committee assigns full-time faculty members to serve as **Clinical Training Advisors** to track each individual clinical student from year 4 through year 6

(semesters 7 – 12). Each advisor ensures that all requirements are correct and complete, including: reviewing evaluation, grades and graduation requirements and updating rotation schedules. Students must maintain contact with their **Clinical Training Advisor** throughout their clinical terms until graduation.

Clinical Training Advisors

1. Full-time faculty members, clinical doctors, assigned by Clinical Training Committee
2. Each advisor ensures that all requirements are correct and complete
3. Review evaluations, grades and graduation requirements and updating rotation schedules.
4. Students must maintain contact with their **Clinical Training Advisor** throughout their clinical terms until graduation.

Financial Aid

European University Cyprus offers academic scholarships and various forms of financial assistance to support potential candidates. Additionally, the Student Relationship Center assists students with the application process for the financial support of the Ministry of Education and Culture and the state subsidy.

Academic scholarships are offered on an annual basis to high schools in Cyprus in order to reward outstanding academic performance at the secondary level of education

EU Students

The Cyprus Government has established a Package of Measures targeted to student welfare. The scheme aims to sponsor part of the student's accommodation expenses, food, purchase of books and computer. EU students are eligible to apply for the grant which is heaving based on socio-economic criteria. For more information regarding the regulations and application procedure regarding this grant please contact the Student Relationship Center.

Cypriot Students

Each year the Cyprus Government accepts applications to provide government funding for each academic year of full time study as follows:

- A basic amount of € 2562,00 to all students who complete one year of full time study.

- An amount € 3417,00 to all students who complete one year of full time study and the family has three or more children.

The government subsidy is offered provided the income of the student does not exceed € 17,086 during the respective academic year. Qualified students are Cypriot nationals, permanent resident of the republic and EU nationals. The Student Relationship Center helps eligible students with their applications

4.4. Student Representation

Medical students are represented at the level of the Department and School Council, as well as in the University Senate. The students use anonymous evaluation forms for each course and this evaluation is taken seriously by the curriculum committee to remediate any issue.

Student Union

Students have the opportunity to participate in campus governance and to voice their views in the development of the University by participating in the Student Union. The twenty-one-member committee is elected every Fall Semester and represents the student body on matters of relevance and interest to them. Apart from arranging various student activities, the Student Union is responsible for organizing the General Assembly in which all students participate and present their views on various issues concerning academic and student life. The Student Union exists and functions under the rules and regulations stipulated by its constitution. More details about the aim and goals of the Student Union are found in the constitution, which is available to all students at the Student Union Office located in the East block building.

4.5 Student Mental Health Support

The School of Medicine of the EUC is committed to provide to students scientific excellence and education. Our aim has been to address the multiple needs of students to support them throughout their academic journey. Studying abroad constitutes a major transition in student life. This is further challenged by the high academic standards of studying Medicine. The underpinning philosophy of our School stems from the fundamental values of the World Health Organization about health and wellbeing, emphasizing the role of physical, mental and social health in academic achievement and later life. Congruent with this, we have developed a network of academic and mental health services and resources so as to facilitate our students adapt to the new academic environment, enhance their capacity to personal autonomy and independence and provide additional help to those facing increased stress levels, learning difficulties and other psychosocial problems which are often associated with poor academic performance.

Many students hesitate to disclose their difficulties to universities due to fear of discrimination; however, mental health difficulties are extremely common. There is no standard definition of what constitutes a mental health difficulty. It may include disorders such as depression, anxiety (e.g. panic attacks) as well as schizophrenia, bipolar disorder, obsessive-compulsive disorder (OCD), eating disorders, self harm or even difficulties such as sleeping problems, high stress levels, difficulties in concentration, studying, fail to follow the schedule etc.

Mental health difficulties are more common than we think. Conditions like depression and anxiety count for at least half of the general practitioners visits than any other physical condition. It is estimated that one in four individuals worldwide seek help for mental health problems every year. Our mental health is affected by multiple factors and can be triggered by transitions or stressful events and periods that make us more vulnerable. Mental health problems can be successfully tackled as long as we seek for adequate,

appropriate and effective care. Thus, we would like to invite our students to share their academic and mental health concerns with us, at any stage of their academic life: before the admission process, after recruitment, at any level of their studies. All students are treated equally independently of their socio-cultural background, gender, preferences, physical and mental health difficulties. We value the social diversity and we use mentoring and support to promote the multicultural character of our school.

Students can ask for an appointment with academic counselors to disclose their fears, difficulties and mental health problems. They should expect to:

a) Be treated equally

b) Have some discussion about the nature of their difficulties and how they interfere with their academic performance

c) Develop a plan for action. The plan is mutually developed by the academic counselor and the student and may include counseling, study-groups, referral to mental health professional and reasonable adjustments so as to tailor the academic requirements to the student needs so as to ensure an optimal academic life.

EUC, School of Medicine is committed to build an inclusive and supportive academic community that supports equality of opportunity for everyone.

5. Academic Staff / Faculty

5.1. Recruitment and Selection Policy

The EUC Charter clearly defines the policies for faculty selection and appointment. Recognizing the University's commitment to excellence in teaching and research and aiming at ensuring the recruitment, selection, and appointment of faculty members with high potential and ability, as well as at providing support for the continued development of their skills as good teachers and researchers, the Senate adopts the following Faculty Selection

Procedures:

Needs assessment – Advertising vacancy

- Early in the Spring Semester (as a general rule), the Human Resources department (henceforth H.R. department), in consultation with the Vice Rector of Academic Affairs, instructs the Schools to consider possible vacant positions for the forthcoming year.

- The decision to employ additional faculty member should be based on the identified departmental/school needs, which ensure that there will be sufficient instructors to support academic programs in the coming year(s). It is additionally based on variables such as projected student population, likely demand for specific programs and anticipated offerings of courses, faculty leave of absence or teaching load reduction due to research and/or pursuit of higher degrees, etc. The faculty vacancies are announced c/o the Department of Human Resources in daily Press and the University webpage.

- The Department Chairperson, with the approval of the Council of the Department, identifies vacant position(s) and forwards them to the Dean of the School. Consequently, the Dean of the School forwards the Department/School suggestions to the Vice Rector of Academic Affairs. After a consultation between the Vice Rector of Academic Affairs and the H.R. department, the latter makes the final decision. After a final decision has been reached, the Dean forwards the list with the vacant position(s) to the Rector, for Senate approval. Vacant position(s) should be specific indicating position, desired rank, and specialization.

- The H.R. department develops the advertising note and makes all the necessary arrangements for its distribution to the relevant advertising media: including local newspapers, higher education journals, University website as well as through Job Search agencies.

- The advertising vacancy requests that the applicants should send a complete dossier, which would ideally include the following documents:
    - Cover letter and vita;
    - Official transcripts of all undergraduate, graduate and PhD studies;
    - A research proposal
    - Candidate's Teaching & Research Portfolio consisting of: Statement of Teaching Philosophy - Statement of Research Philosophy - Teaching

Evaluations (where applicable)

- Three external letters of recommendation, preferably from recognized experts in the candidate's field of expertise (submitted independently of the candidate). These can also be from former supervisors or colleagues with whom the applicant has collaborated, preferably over the last five years. The letters should not be from relatives of the applicant.
- List of publications and research funding

Note: All of the candidate's minimal qualifications for appointment to the appropriate rank must have been completed, prior to the deadline of the advertised vacancy for the submission of the required dossier, as described above.

Faculty Selection Committee

- The Dean of the School, in consultation with the Chairperson of the Department, forms a Faculty Selection Committee.
- The Faculty Selection Committee members:
    a. The Faculty Selection Committee should consist of a minimum of three full- time faculty members who hold a higher rank to the one the candidate is considered for, except for the rank of Professor, for which the faculty members should hold the rank of Professor. In the case that the conditions in a School are such, where there are not faculty members available in a higher rank, then the Committee can be constituted by additional Faculty members of another Department/School in a higher rank. In the case that the above provisions are not possible, the Committee can also consist of Department/School members in an equal, to the one the candidate is considered for, rank.
    b. The Dean, in consultation with the Department Chairperson, designates the Chair and the members of the Faculty Selection Committee, which should consist of appropriate academic members (based on the academic discipline of the announced vacancy (ies) and the nominations received).
    c. The Dean, in consultation with the Department Chairperson, may designate up to 2 (two) non-voting Department members holding the specialization of the applicant.
    d. The Dean, in consultation with the Department Chairperson, may designate up to 2 (two) non-voting Department members holding the specialization of the applicant.
    e. The Dean, in consultation with Department Chairperson, may designate external faculty member (s) either from other departments of EUC or from other academic institutions to participate in the Faculty Selection Committee.
    f. The final composition of the Faculty Selection Committee is approved by the Council.
    g. The Department Chair may invite Student Representatives to participate in the Demonstration (Demo) Lecture by the candidate.

Evaluation points (where feasible) for each application are:

a. Specialization or/and professional activities
b. Teaching experience/skills
c. Research
d. References
e. Publications
f. Service to the community/society
g. National / International academic recognition of accomplishment / achievements / Funding and Grants

h. Teaching potential and communicative abilities
i. Invitations to teach due to reputation/or/and key note speeches
j. Evidence of effective postdoctoral, graduate and undergraduate supervision where applicable (theses, projects, and internships).
k. New courses developed; involvement in curriculum development.
l. Compliance / Compatibility with the wider University Culture

Ensures that selection criteria and methods of assessment are applied consistently for all candidates.

Acknowledgement of receiving application and application evaluation

Applications are submitted to the H.R. department, which acknowledges the receipt of the documents to the applicant. The H.R. department forwards the complete file containing all the documents submitted by the respective applicants to the Department Chairperson through the Dean of the School.

The Department Chairperson reviews the documentation and if additional information is needed he/she contacts the applicant. A copy of all the documents submitted by each applicant is distributed to the members of the Faculty Selection Committee.

The Faculty Selection Committee:

- Confirms and evaluates the submitted documentation/ information/degrees, in terms of their validity;
- Ensures that all of the candidate's minimal qualifications (e.g. Doctorate title) for appointment to the appropriate rank were completed, prior to the deadline of the advertised vacancy for the submission of the required dossier;
- Reviews and evaluates the applicants' credentials: selects applicants who meet the criteria, eliminates those applicants who are clearly unqualified, and decides on those candidates to invite for an on-campus interview;

In the case of a limited number of suitable candidates, the Faculty Selection Committee can use its discretion to decide to continue or not the selection process. The Faculty Selection Committee, through its Chair, communicates its suggestions to the Department Chairperson, who informs the Dean of the School. The School Dean respectively informs the Vice Rector of Academic Affairs and the H.R. department, as well as the Rector, for Senate approval.

In the case of non-suitable candidates, the Chair of the Faculty Selection Committee informs the Department Chairperson about the Committee's decision not to recommend any candidate. The Department Chairperson informs the Dean of the School, who subsequently informs the H.R. department, as well as the Vice Rector of Academic Affairs. The recruitment process is terminated. The H.R. department informs the applicants accordingly and prepares a new advertising vacancy.

On-campus Interviews

The Faculty Selection Committee through its Chair invites candidates for on-campus interviews.

The interview (max. 1.1/2 hrs) for each candidate is composed of two parts: (a) One part is a discussion mainly focusing on the candidate's research interests, teaching experience, refereed publications, service to the community and academic recognition

(See Point 2.3: Evaluation points); whereas (b) the other part consists of a demonstration (demo) lecture (20-30 min), during which the candidate makes a mock-up lecture presentation, on a pre-assigned topic, to the Faculty Selection Committee and possibly Student Representatives of the department council, who may be invited to participate. The demonstration lecture only applies for the ranks of Lecturer and Assistant Professor.

In case the rank of the position under consideration is that of Professor /or Associate Professor, the Faculty Selection Committee can use its discretion on the nature of the interview.

Selection and Appointment

The Faculty Selection Committee evaluates candidates according to the set criteria and makes recommendations according to the policies, as to the acceptability, strengths, and weaknesses of the candidates.

The present, during the meeting, Faculty Selection Committee members, by vote, reach to an agreement on the ranking of suitable candidates. Moreover, prior to making a conclusive hiring suggestion, among the suitable candidates, it is highly advisable that the Faculty Selection Committee reaches to a decision, in regards to the candidate's rank of appointment, based on the 'framework of minimum suggested/expected requirements in Research and Scholarly Publications and/or recognized creative work for Faculty Ranking'. Additionally, the Faculty Selection Committee, prior to reaching a decision, should take into consideration the potential compatibility of the candidate.

Each eligible voting member shall have one vote in Committee meetings and Committee elections. In case of a tie, the Chair of the Committee shall cast the winning vote.

The Faculty Selection Committee forwards its report to the Department Chairperson within two months after the approval of the composition of the Committee by the Council of Department. The report includes the following information:

- The number of applications received
- The criteria used in determining the short list
- The names of persons who are not short-listed, followed by relevant comments
- The names of persons who are short-listed and invited for the interview
- The final ranking of the persons that appear in the short list and the committee's recommendation, followed by relevant comments
- The rank of appointment for the person(s) whose hiring is suggested, as well as the discipline in which the applicant(s) is/are suggested.

The Department Chairperson presents the Report of the Faculty Selection Committee to the Department Council during its next meeting, for approval. Continuing, the decision of the Departmental Council, accompanied by the Faculty Selection Report and all relevant application material, is forwarded to the Dean of the School, who forwards his/her recommendation, together with the decision of the Council of Department and all documents, to the School Council. The School Council reaches to a decision during its next meeting; whereas the decision of the Council of the School and all documents are forwarded to the Senate via the Rector, within 10 working days after the School Council decision.

The Senate determines that all procedural guidelines have been properly followed. The Senate's approval, together with all documents, is forwarded by the Rector to the

University Council.

The Council, after examining the legality of the procedures followed in alignment to the Charter, the Internal Regulations and the relevant Laws, ratifies the decision.

The Department of Human Resources

The decision of the University's Council is forwarded to the H.R. department for appropriate action. In consultation with the selected candidate and the Department Chairperson and Dean, the H.R. department clarifies the appointment's starting date and other contract details. The H.R. department sends an official appointment letter to the selected candidate asking for his/her approval. Once the candidate's official positive reply has been received and the contract has been signed, the H.R. department sends appropriate letters to unsuccessful candidates and informs the Department Chairperson and Dean.

Records

Full records of the process are kept in the appropriate files of the School. In addition, a complete record with the Faculty Selection Report, memorandum(s) of the Department and School decisions, as well as the Curriculum Vitae of the successful applicant(s) is/are also kept by the Office of the Rector/Vice Rector of Academic Affairs and the H.R. department.

Measures to Prevent Discrimination in Appointments

Recognizing the desire of the University to prevent discrimination and to be in compliance with the Cyprus and E.U. legislation, the Senate reaffirms the commitment of the University to non-discrimination in employment decisions. Whenever an academic staff vacancy occurs, the following conditions must be observed:

The Faculty Selection Committee gives careful and detailed consideration to all qualified applicants regardless of race, religious beliefs, color, sex, disability, marital status, age or ancestry.

When interviewing candidates for a vacant staff position, the Faculty Selection Committee, may not request information about religious beliefs, political affiliations, family or marital status, age, ancestry or place of origin or physical disability, which could lead to discriminatory action.

5.2 Staff Activity and Staff Development

The EUC Medical School has developed various faculty development programs including the Faculty Professional Development Program, the Train the Trainers Program, among others.

Faculty Professional Development Program:
Faculty members attend a 28 hours of core compulsory courses in the Faculty Professional Development Program. Core courses include:

Core	**Axis 1** - Professional Development of Academic Staff	2 hrs
Core	**Axis 2 – Unit 1** - Designing the learning process through the incorporation of new technologies	2
Core	**Axis 2 – Unit 3** - Distance Education	4
Core	**Axis 4 - Unit 2** - Assessing Student Population Needs	2
Core	**Axis 5 - Unit 1** - Knowledge and Learning	4
Core	**Axis 5 - Unit 2** - Methods and Techniques of Teaching	4
Core	**Axis 6 - Unit 1** - Assessment and Evaluation in Higher Education	2
Core	**Axis 6 - Unit 2** - Types of Evaluation	4
Core	**Axis 7** - Hybrid Learning	4

In addition, 8 hours of elective courses are offered to further faculty professional development. These include:

Elective	**Axis 2 – Unit 2**- Professional Development of Academic Staff and the Integration of new technologies in education – Using Mobile Devices	4
Elective	**Axis 2 - Unit 4** - Professional Development of Academic Staff and the Integration of new technologies in education	4
Elective	**Axis 4 - Unit 1** - Assessing Student Population Needs	2
Elective	**Axis 5 - Unit 3** - How to make the best presentation	1
Elective	**Axis 5 - Unit 4** - Interactive Learning Methods and Peer Teaching	2
Elective	**Axis 6 – Unit 3** - Assessment and Evaluation in Higher Education	3

“Train-the-Trainers” Program:

To facilitate teaching activities of the clinical scientific collaborators and the clinical instructors, the Medical School hosts “Train-the-Trainers” seminars on-campus. Topics covered in these seminars include:

- *School rules and regulations*
- *Preclinical training. Integration and implication of the S&F curriculum*
- *Introduction to Simulation.*
- *Task trainers with explanation of procedure, use of checklists*
- *Complex scenario on simulator, use of checklist, evaluation and debriefing*
- *Structure of clinical training*
- *Logbooks*
- *Essentials of an OSCE)*
- *Mini-CEX: brief evaluation of how a student takes a medical history*
- *Practical Demonstrations include:*
    - *Complex simulation scenario*
    - *Mock OSCE stations with actor/mannequin*

New Faculty Orientation (NFO) Program:

The School of Medicine has established the New Faculty Orientation (NFO) seminar, which aims to familiarize new faculty (primarily full-time, but also part-time) with the educational model of EUC, the basic principles and means of teaching, and EUC rules and policies.

Typical NFO program:

New Faculty Orientation
September 12, 2018
Venue: M1 3rd floor

New Faculty Orientation (NFO) – Fall 2018		
	Presentation	**Speaker**
9:00-9:15	**Welcome Addresses**	Professor K. Gouliamos, Rector Dr. C. Hadjikyrianou, President and CEO
9:15-9:30	**Welcome & Introductions to the Medical School**	Professor E. Johnson, Vice Dean
9:30-9:50	**EUC Faculty Affairs** • Personnel Head count • HR Dept. Overview • Code of Conduct & Ethics • Exelsys	Human Resources Dept.
9:50-10:00	**Technicalities** • Email account set up • Telephone extension	MIS Department

	• EUC identity card • Moodle accounts • Use of Blackboard	
10:00-10:15	**Introduction to the Medical Curriculum** • Challenge of working with international students	Prof. Elizabeth Johnson, Deputy Dean
10:15-10:30	**Introduction to School of Medicine Policies** • Student Absences • Student rules • Lab coats • Department Meetings • Office hours	Prof. Ioannis Patrikios, Chairperson
Coffee Break		
11:00-11:20	**Managing your class** • Grades/ Class Rosters • Exams • Important deadlines for class planning • Preparing your ppt presentations (template requirements) • Documentation of teaching (session & laboratory plans) • Student Grievances	Prof. Theodoros Xanthos , Vice Chairperson
11:20-11:40	**Clinical Training Program** • Collaborating Hospitals • Student rotations • Vaccinations • Bed-side training – working with Clinical Instructors • Train-the-trainers program for Clinical Instructors	Dr. Constantinos Tsioutis, Lecturer
11:40-12:00	**Laboratory Teaching Sessions** • Laboratory rotations • Use of simulation • Skills training • CAL • Virtual teaching tools • OSCEs • OSPEs	Dr. Dimitrios Ntourakis, Lecturer
12:00-12:15	**Introduction to Laboratory Management** • Documentation / Set up of labs • Working with Technicians / Nurses - scheduling • Rules for working with simulators	Mr. Andreas Yiallouris, Head Technician

12:15-12:30	**Using Teaching Services** • Moodle • Uploading your ppt • Uploading your lab plans • Using virtual teaching tools	Dr. Ilias Nikas, Lecturer
12:30-12:45	**Working with Research** Administration Services	Prof. Andreas Efstathiou, Vice Rector of Research
12:45-1:00	**Strategies and Initiatives for Research**	Prof. Anastasios Stephanou, Director of Research
1:00-1:15	**Graduate Programs** • MSc : Infectious Diseases	Dr. Constantinos Tsioutis, Lecturer
1:15-1:25	**Introduction to Core Facilities**	Mr. Andreas Yiallouris, Head Technician
1:25-1:30	**Closing Remarks**	Prof. Elizabeth Johnson, Deputy Dean
1:30 – 3:00	**School - Campus tour & Lunch in the Cafeteria**	
3:00-4:00	**Break Out 1:** **Setting up your clinical practice in Cyprus (M1)**	Dr. Constantinos Tsioutis, Lecturer
	Break Out 2: **Research & collaboration opportunities at EUC (M2)**	Prof. Ioannis Patrikios, Chairperson Prof. Anastasios Stephanou, Director of Research
4:00-5:00	**Break Out 3: Tips & Tricks for settling in Nicosia (M3)**	Ms. Eva Charalambous, Administrator Ms. Tasoulla Jensen, Secretary
	Break Out 4: Using New Assessment Methods in Your Teaching (M1)	Prof. Theodoros Xanthos, Vice Chairperson Dr. Dimitrios Ntourakis, Lecturer
	Break Out 5: Using Moodle & Blackboard (M2)	Dr. Ilias Nikas, Lecturer

Balance Between Teaching and Other Academic Activities of Faculty

Teaching Hours Reduction for Research Purposes

The University rewards members of staff who excel in research by awarding them Teaching Hours Reduction (THR). A THR may be awarded if the member of staff fulfills the conditions in one or more of the three schemes outlined below.

A member of staff may be awarded a THR under more than one of the schemes described below if he/she is eligible. The minimum teaching per semester can be reduced down to 6 hours per week based on the accumulated research load reduction hours. An exemption may be considered for Deans and Chairs.

All allocations of THR under the three schemes outlined below will be made after a recommendation of an ad-hoc committee chaired by the Vice Rector for Research and External Affairs. The committee will take into account scheduling constraints and other

considerations for the sustainable development of research activity at the university. The committee will meet at an appropriate time in each semester in order to make the THR allocations in time for the preparation of the schedule of classes for the next semester.

Award of a THR for participation in research projects

Members of staff are eligible to apply for a Teaching Hours Reduction (THR) when conducting funded research for the full duration and until the completion of relevant funded projects. Should their application meets with success, funded project coordinators are entitled to a three-hour teaching reduction per semester for the whole duration of the project, whereas research partners are eligible for a THR equivalent to at least one third of the duration of the project.

Based on the policy of the University with regard to THR requests, Faculty, research and Other Teaching Personnel (OTP) members are expected to submit a written request to the Chairperson of his/her Department before the beginning of the academic year/semester. The Chairperson will process the THR request by way of making a relevant recommendation to the Dean of School. The Dean will then forward his/her recommendation to the Vice Rector for final approval. After the deadline expires, applications for teaching hours reduction will not be accepted.

The deadlines for submitting a request for teaching load reduction per semester are the following:

For the Fall Semester: 1st of May
For the Spring Semester: 31st of October

If a research proposal was awarded a grant after the special case of approval of a research/grant proposal (i.e. RPF, EU etc) while an academic year is in progress, a THR request should be submitted and be approved prior to the beginning of the next semester, during which the teaching load reduction will be applied. The research project should commence at least one month before the beginning of the next semester for the THR to be awarded.

Award of a THR for writing a book

A three-hour teaching reduction per semester will be awarded for the purpose of writing a book upon submission of a publishing contract by a reputable publisher. A total of two THR allocations (maximum 6 credits) will be made under the scheme for each book contract. The same deadlines and application procedure apply as in the scheme described in section 7.1.

Award of a THR by accumulation of points

A third scheme for the award of a THR takes into account the research activity of members of staff and the points they have accumulated according to the tables given in Appendix D. A THR of 3 hours per week is awarded to faculty members once they accumulate 100 (one hundred) points and the same number of points are automatically deducted from his/her accumulated total. Points accumulated over time but not utilized by a member of staff will simply remain at his/her disposal.

Note that members of staff may consider the year 2016 as the starting point for calculating points accumulated through research. The calculation of points will be valid after it has been approved by the Dean of the School and the Vice Rector for Research and External Affairs.

Internal Research Awards

The University's "Internal Research Awards" (IRA) are launched on an annual basis by the Senate Research Committee, are announced by the Vice Rector for Research & External Affairs and financed by the University Research Fund and external sponsors as

described in Section 5.1.4 above.

Purpose
IRAs are awarded to EUC faculty in order to pursue research and other creative work. IRAs provide support for exploratory research projects, which might result in proposals submitted for external funding or in creative work that is likely to enhance the recognition of the faculty and research personnel and the University at large. IRAs may be used for funding travel, equipment, supplies, PhD student assistants' scholarships, student assistants, research assistants and other expenses. Funding for this program comes from the University Research Fund.

Eligibility for the awards
All full-time faculty members of the University who have the rank of Assistant Professor or higher are eligible to apply for the awards. Specific eligibility criteria may apply for each type of award.

Application Procedure
The Vice Rector for Research and External Affairs initiates the selection process by issuing a call for proposals. The deadline for the submission of proposals will be announced. Application materials will be available from the office of the Vice Rector for Research and External Affairs and the proposals will be submitted electronically to the office of the Vice Rector.

Basic Principles and Standards of Evaluation of Faculty

Teaching
Effective teaching is given the greatest weight and other factors cannot compensate for a failure to satisfy it. It involves mastery of the subject matter, the ability to stimulate the intellectual capabilities of students, and effectiveness in communicating the skills, methods and content of one's discipline. It includes a spirit of study necessary to keep courses continually revised and the undertaking of efforts to sustain and improve teaching skills. Effective teaching also includes success in stimulating the intellectual development of one's colleagues through disciplinary and interdisciplinary work, including course development and participation in faculty training schemes/programs organized by the University and/or other Educational Institution(s), seminars and colloquia.

Research
European University Cyprus requires scholarly work that may be made public in various forms. All research, however, must involve the deployment of disciplined learning, closely informed by thorough research, for the sake of edifying and serving audiences that extend beyond the boundaries of the immediate University community.

Research can take many forms, such as published research in various forms, article(s) in a scholarly periodical(s), chapter(s) in scholarly publication(s), book(s), paper(s) presented at a professional conference(s), contribution in research conference/event organization or any other form of artistic activity and research (i.e. composition and arrangement of music works, performance and conducting of music works, workshops, master classes, clinics and seminars) or any other equivalent form.

Service to the University, Community, and Profession, and Self- Development
In addition, to support the University's mission, purpose and objectives, the University also assumes of its faculty a congenial and collegial relationship. This includes civility in discourse and a willingness to carry one's share of the load in teaching, advising, participation in institutional research, and committee work. The quality of contributions,

not merely the numbers of committees and assignments, remains a significant consideration.

The University values contributions to planning and governance, leadership in achieving the goals of the University (which include student recruitment and retention), working with students outside the classroom and extending the resources of the University to the wider community

Significant and extended service to professional societies, committees pertaining to higher education formed and appointed by the government, and academic associations; contribution in event organization; training activity; appraisals of manuscripts submitted for publication to university presses or scholarly journals; grant proposals/applications submitted to government agencies or learned and professional societies; review of grant applications submitted to government agencies or learned and professional societies: all of these activities would count as instances of professional development. As educators, professional development includes activities and efforts to improve teaching/instructional capabilities, qualifications, etc. No amount of these activities, however, should compensate for deficiencies in Teaching or Research.

Evaluation of Faculty

Each full-time faculty member and special teaching personnel is evaluated every two years and the evaluation document(s) are submitted to the Chairperson by June 30.

One form of scholarship per year (e.g. research, publication, etc.) will be minimal requirements for each member with the rank of faculty. Each faculty member engages in the process of self-evaluation as a positive force towards continued professional development and accomplishment. The aim of this initial step in the review process is to demonstrate the faculty member's performance in the areas of (i) Teaching, (ii) Research, and (iii) Service to the University, Community, and Profession and Self -Development.

The School recognizes that any of the following evaluation categories may receive different weight at particular periods in a faculty member's careers. For instance, some faculty members may be striving more intensively to develop new methods of teaching, while other members may be more fully engaged in the pursuit of research. The general weight of each evaluated area are as follows:

Teaching: 30-60%
Research: 30-60%
Community / University Service 10-30%

Teaching

Based on above Basic Principles and Standards, the faculty members (and accordingly the special teaching personnel members) should prepare a list/statement that discusses accomplishments in courses taught, and activities aimed at sustaining and improving teaching effectiveness. It involves mastery of the subject matter, the ability to stimulate the intellectual capabilities of students, and effectiveness in communicating the skills, methods and content of one's discipline. It includes a spirit of study necessary to keep courses continually revised, and the undertaking of efforts to sustain and improve teaching skills.

Effective teaching also includes success in stimulating the intellectual development of one's colleagues through disciplinary and interdisciplinary work, including course development and participation in faculty training schemes/programs organized by the University and/or other Educational Institution(s), seminars and colloquia. Effort and energy in activities such as course development, course revision, and/or development of

new technologies/instructional publication/activities/methodology and/or teaching material to enhance the learning environment should be noted, as well as summaries of student evaluations.

Research
Based on above Basic Principles and Standards, the faculty member should prepare a list/statement that discusses current research in progress and/or completed. Research can take many forms, such as published research in various forms, article(s) in scholarly periodical(s), book(s), chapter(s) in scholarly publication(s), paper(s) presented at professional conference(s), contribution in research conference/event organization or any other form of artistic activity and research (i.e. composition and arrangement of music works, performance and conducting of music works, workshops, master classes, clinics and seminars) or any other equivalent form.

The faculty member is encouraged to note the degree of support received from the University (e.g. teaching load reduction, time-off, research grant, etc.) that contributed to the completion of his/her scholarly endeavors.

Service to the University, Community and Profession, and Self - Development

Based on above Basic Principles and Standards, the faculty member should prepare a list/statement that discusses contributions made to the University and the Community in the area of service. Activities such as committee memberships and offices held, participation in special education/training programs, outreach activities classroom working and recruitment of students, and working with students outside the classroom should be outlined. Activities demonstrating involvement in community service and commitment to social responsibility should be noted, such as membership in community organizations and volunteer work; also other activities extending the resources of the University to the wider community.

Significant and extended service to professional societies, committees pertaining to higher education formed and appointed by the government, and academic associations; appraisals of manuscripts submitted for publication to university presses or scholarly journals; grant proposals/applications submitted to government agencies or learned and professional societies; review of grant applications submitted to government agencies or learned and professional societies; contribution in event organization; participation in training seminars; pursuing of additional qualification/degrees; etc. will be taken into consideration.

A checklist (criteria) for each performance category with indicative rating of each activity/behavior and a Description of Each Behavior has been developed based primarily on the suggestions made by the faculty, the above basic principles and standards, and the content of the above evaluation categories.

Rating of Performance
Performance in each of the above categories is rated according to the following scale:

Truly Outstanding:	5 points
Exceeds Normal Expectations:	4 points
Completely Satisfactory:	3 points
Needs Improvement:	2 points
Below Expectations/Weak Performance:	1 point

Process of Faculty Evaluation

The interim performance feedback review process will provide the basis for the review of the performance of faculty (and accordingly the special teaching personnel member). In doing so, both the faculty and the administration reaffirm their commitment to the principles of academic freedom.

Interim Performance Feedback Review

- The Review is based on the above stated Evaluation Categories, and is related to the University's and School's mission, purpose, strategy and objectives.
- The Chair and Dean are charged with conveying the expectations to faculty.
- An Interim Performance Feedback Review is used for recording an individual's performance, and is submitted to the Chair by each faculty member by June-July of the interim year.
- The Chair and Dean jointly review/assess each faculty member. A formulated Performance Evaluation Scoring Worksheet is used for assessing Faculty every two years. All appropriately completed and signed review documents of each faculty are submitted by the Dean to the Review Committee in September.
- The Review Committee consists of the Chair, the Dean, one high-rank Faculty member and a representative of the Administration. The appointed faculty members and the administration representative review the evaluation documents in the Dean's office prior to the Review Committee meeting. The committee reviews the evaluation documents, gives instructions for clarification/remedy in cases of ambiguity, verify the outcome of the annual review of each faculty member, and make the final assessment. [It is the right of the evaluated member to refuse the participation of any of the appointed faculty members. However, the Chair and Dean coordinate the review of the faculty members. The outcome of the assessment by the Review Committee is normally decided by consensus, otherwise by majority.
- The Chair and Dean, jointly meet with each faculty member under evaluation to discuss the results of the review/assessment.

6. Educational Resources

6.1. Physical Facilities

Learning environment at the Medical School provides diverse physical locations and contexts to facilitate student learning. These learning environments have both a direct and indirect influence on student learning, including their engagement in what is being taught, their motivation to learn, and their sense of well-being, belonging, and personal safety.

The EUC School of Medicine has facilities dedicated to preclinical years and the theoretical and skills training of the students during their clinical years. Facilities enable dynamic learning, and provide state-of-the-art teaching tools, including the active incorporation of technology to enhance student learning. Facilities include dedicated ***Anatomical Model Rooms, Microscopy Rooms***, ***Computer Assisted Learning (CAL)*** rooms, wet labs, Complex simulation rooms, as well as hospital ward and consultation rooms. European University Medical school consist of state of the art ***Wet Laboratories*** for Medical Biochemistry, Cell Biology/Genetics and Basic/Medical Microbiology were are fully equipped with latest apparatuses according to safety standards and guidelines. The above-mentioned laboratories are multidisciplinary labs were students facing techniques found in high standard diagnostic and clinical laboratories.

The clinical training initiated from the first year at EUC and is supported by dedicated educational spaces. EUC houses four ***Complex Simulation Laboratories***, which allow educators to simulate in a controlled environment, patient scenarios covering the entire span of the medical education of EUC students from Body Systems in Health (Years 1-2), Body Systems in Disease (Year 3) and Core Clinical Courses (Years 4-6). Manikins selected to fit the needs of learning outcomes and meet the quality standards. The School, houses both male and female simulators, a baby and a next generation birth delivery simulator. The simulation space, includes dedicated debriefing rooms allowing an interactive discussion between instructor and class as they analyze the course of the events and actions taken during the simulation. State-of-the-art audiovisual support compatible for recording of simulation scenarios and events, for later study and analysis and dedicated control centers promoting careful monitoring of the scenario and student-learning environment.

Clinical skill acquisition is a central cornerstone in the EUC curriculum and is further enhanced with a modern ***Simulated Hospital Ward*** that is fully equipped with various apparatuses, including ECG and ultrasound machines. Hospital ward is used not only in the clinical courses, such as Clinical Practicum, Introduction to Clinical Skills, Semiology, Surgery, among others, but also in basic science courses, such as Physiology, Pathophysiology, and Anatomy. Three ***Simulated Consultation Rooms*** with adjacent debriefing rooms help students to learn physical examination procedures and doctor-patient interaction. These spaces are also used for the OSCE (Objective Structured Clinical Examination) exams.

An important learning environment provided by EUC is the ***Skills Training Laboratory***. This dedicated space provides stations with equipment and checklist available for students to learn the following skills: 1) obtaining arterial blood gases, 2) suturing, 3) intubation, 4) nasopharyngeal intubation, 5) urine catheterization (male-female), 6) intravenous lines, 7) lumbar puncture, 8) hand hygiene, 9) blood pressure measurement, 10) capillary blood glucose measurement.

6.2. Clinical Training Resources

The curriculum of the School of Medicine, European University Cyprus (EUC) is of total duration of 5685 hours and includes theoretical and clinical training, according to the European Directive 2013/55/EU of the European Council. Students' clinical training is an integral part of their education, of total duration of more than 2200 hours. Clinical training takes place in pre-determined sites of the public and private sector, following appropriate planning.

The available training sites for EUC medical students include primary, secondary and tertiary hospitals with sufficient patient wards and diagnostic departments, laboratories, etc to allow for clinical training to be organized with appropriate rotations throughout all main disciplines as outlined in the EUC Medical Curriculum. The clinical training is continuously supervised by trained personnel of the School of Medicine of EUC, in collaboration with the clinical coordinators of the hospitals and the clinical instructors of the various departments, and is performed according to the predefined clinical training program.

Clinical Training Sites:

Public

- Larnaca General Hospital
- Nicosia General Hospital

- Archbishop Makarios III General Hospital (Nicosia)

Private

- Aretaieion private Hospital (Nicosia)
- Apollonion private Hospital (Nicosia)
- American Medical Center (Nicosia)
- Theocharides laboratory (Nicosia)
- Cyprus Institute of Neurology and Genetics (Nicosia)
- German Oncology Center (Limassol)
- Arodafnousa Hospice Center (Nicosia)
- Hippocrateon private Hospital (Nicosia)
- Ophthalmos center (Nicosia)

External Sites

- IASO Children's Hospital (Athens)
- IASO Maternity and Gynecological Clinic (Athens)
- Hygeia private hospital (Athens)

In addition to rotations in hospitals and clinics, clinical training of EUC Medical Students is also complemented training in the skills laboratories, simulators, and standardized patient encounter rooms, available at the EUC School of Medicine Campus.

6.3. Information Technology

The School of Medicine has actively embraced modern technology, including information technology in learning environments, teaching, research and health information.

The School incorporates online programs, such as "***Blackboard***" and "***Moodle***" to underline and coordinate their courses. All students and faculty have a Moodle account. These programs allow speedy access to information and quick turnaround of evaluation and messaging. More importantly these systems allow all instructors, assessors, and students to examine the curricular content of interest at any site and any at any time.

Teaching at EUC is actively supported by ***Computer-Assisted Learning (CAL),*** Virtual reality (VR), and Human patient simulators modules. Lecture rooms house audio/visual recording options, allowing students to review lectures and practical exercises. A large database of free software is made available to the EUC students that supports their study and deepens their knowledge. ***Virtual Reality*** programs with state of the art software and hardware, are actively used for course, such as Anatomy and Histology.

Stressing the dedication of EUC to information technology, Microsoft has selected European University Cyprus to be its partner institution for the establishment of the only ***Microsoft Innovation Center*** in Cyprus. The operation of The Microsoft Innovation Center (MIC) at European University Cyprus has had an enormous impact on students, faculty, IT professionals, researchers, and the community at large.

6.4. Medical Research and Scholarship

Medical research and scholarship are tightly woven into the EUC medical curriculum. For example, from the basic science courses, students are requested to examine recent

developments in published biomedical research, both basic and clinical in nature. As the School believes that communication of scientific knowledge is an essential learning tool, as well as skill, students work in small teams (team-based learning) to present the details of the publication they studied in a poster-presentation and mini-oral presentation. This allows the student to be introduced to scientific methods by example. Many of the scientific methods that are used in these published studies that the students analyze are methods that the students have already been introduced to, such as PCR, DNA isolation, cell culture, tissue handling, etc. In addition, the medical curriculum offers an elective course to its students on ***Research Methods and Scientific Writing***. While the EUC Medical School medical students have presented in international scientific congresses (Diabetes UK, PanHellenic Orthopaedic Congress, European Association For The Study of Diabetes, European Teratology Society), as well as published scientific papers in international journals (*Archives of Hellenic Medicine, EC Neurology, Cell Death and Disease, Experimental and Clinical Endocrinology and Diabetes*).

Recently, EUC has recently been recognized by the ***Harvard T.H. Chan School of Public Health*** as official site center to offer a certificate course entitled ***"Principles and Practice of Clinical Research"*** to interested senior medical students and faculty. The topic is clinical research and involves the whole spectrum from clinical trials, to study design, manuscript writing, basic statistics and applied statistics, or data analysis just to mention a few topics. Participants range from medical students, to MDs, PhDs, biostatisticians, epidemiologists, nurses to pharmacists and dentists.

Many of the Student Summer Externships offered by EUC School of Medicine are at internationally renowned research centers (Refer to externship list below, section 6.6 Educational Exchanges). A recent addition to the extensive list of summer research opportunities for EUC medical students is the ability for a summer externship of 8 weeks at the Weizmann Institute of Science, Hebrew University of Jerusalem in the laboratory of Nobel Laureate, Ada Yonath.

School of Medicine Research Center (SMRC)

The organization of the EUC School of Medicine is based on EUC directives and international standards, and it has been founded in collaboration with distinguished scholars from Cyprus and abroad. It serves as the regional "educational medical-platform", providing high-caliber education in medicine and healthcare, targeting not only residents of Cyprus, but also international medical student candidates from Europe, Asia, the Americas, African and the Middle East. With an emphasis on interdisciplinary approaches, EUC is becoming one of the leading research institutions in Cyprus. EUC has developed an intense action in a wide spectrum of ICT, Health and Socioeconomic Sciences and Medical Humanities, through coordination or participation in national, international and European Union-funded research programs.

The aim of the SMRC is to become globally recognized for excellence in scientific discovery, collaboration and the rapid translation of new knowledge into practice than improve human health.

To achieve this vision, the SMRC will:

- Nurture, support and invest in a scientific culture that rewards innovation and collaboration
- Strengthen our research training infrastructure and create new educational models and curricula that advance scientific excellence
- Develop strategic external interactions and partnerships
- Increase awareness, understanding and support for SMRC biomedical and clinical research

Strategic Initiatives of the SMRC:

- Identify and invest in areas of research strength that make best use of the School of Medicine resources to advance human health and well-being
- Advance the School of Medicine's capacity in translational research
- Promote research excellence through effective organizational systems and infrastructure
- Enhance training, career development and mentoring opportunities for the next generation of biomedical researchers
- Promote, nuture and support a professional rewarding culture for researchers at SMRC
- Increase awareness, appreciation and understanding of the valued of research at SMRC to both internal and external stakeholders and the public

Both faculty and students have access to basic and clinical research facilities provided at the Medical School and collaborating centers. A fully equipped bench is available in the wet labs, as well as equipment for modern, molecular biology, biochemical and genetic studies (e.g. PCR, DNA/RNA isolation, cell cultures, etc.). Faculty and students also have access to experimental research laboratories and other resources at the American Medical Center and the German Oncology Center. All sites facilitate basic research projects, and translational clinical studies. These labs supplied with the latest equipment for imaging, cell culture, DNA isolation etc. with direct involvement in clinical application.

6.5. Educational Expertise

The EUC School of Medicine has members of its faculty who are medical educators who are also members of the curriculum committee, giving the Medical School a unique opportunity to remain update with current thought in medical education. Curriculum changes and development, as well as for the development of new teaching and assessment methods, the curriculum committee has the option of calling on the expertise of internationally recognized medical educators.

6.6. Educational Exchanges

The School of Medicine encourages various forms of educational exchange, including ERASMUS programs, transfer of medical students, and collaboration of external institutes for externships of students, among others.

Transfer Students

The School of Medicine has developed a procedure whereby students who have started their university education elsewhere and wish to apply for admission to EUC as transfer students can do so. The process which can also be completed online, requires official transcripts of all academic records from each institution previously attended, including high school, college, or university, and official course descriptions or syllabus, in English, for all work completed at the college or university previously attended. Once these items have been procured, the Office of Admissions is able to evaluate the potential transfer of credits. Credit may be awarded as parallel credit, where the course involved at least the same amount of class time and approximately the same content as the University's equivalent; or as an elective, where the course was related to the student's major and/or career goals. Any credits transferred are not included in the calculation of GPA.

Student Externships

EUC medical students have the opportunity to participate in summer externships in prestigious highly ranked institutions all over the world for additional clinical and research training. The student experiences at these sites greatly enrich the EUC student by providing them the opportunity to learn in a wide variety of environments.

No	University	Country
1	University of Rome "Tor Vergata" (English Speaking) Surgery, Cardiology, Medicine, Hygiene, Medical Biochemistry, Clinical Medicine, Cosmetics / Research	Italy
2	University of Southampton Medical Nutrition/Research	UK
3	Barts and the London School of Medicine Queen Mary, University of London. Neuroscience, Neurotrauma and Neurodegeneration / Research	UK
4	AHEPA Thessaloniki Neurology/Neuroimmunology/Research	GR
5	Shriners Hospitals for Children SHC Springfield Massachusetts (SHC Springfield can provide in hospital housing and meals at no charge) Pediatrics, orthopedics /Research	USA

6	Aristotle University of Thessaloniki Thessaloniki Greece Obstetrics - Gynecology - Maternal Fetal Medicine	GR
7	AXEPA Hospital Aristotle University of Thessaloniki Internal Medicine	GR
8	Hippokrateion General Hospital Aristotle University of Thessaloniki Neonatology	GR
9	Hippokration Hospital Aristotle University of Thessaloniki Pediatrics – Infectious Diseases	GR
10	Papageorgiou General Hospital Aristotle University of Thessaloniki Orthopedics	GR
11	Aristotle University of Thessaloniki Forensic Medicine and Toxicology	GR
12	Molecular Microbiology and Immunology Alpert Medical School and Brown University Rhode Island Hospital	USA
13	American University of Beirut,	Lebanon
14	Golestan University of Medical Sciences	IRAN
15	Oxford Medical Transplant Surgery	UK
16	Perelman School of Medicine | University of Pennsylvania- Research Infectious Diseases	USA
18	University Clinical Halle (Saale) Institute for Medical Immunology	Germany
19	Thrombosis and Hemostasis Center Service d'Hematologie Biologique, Hopital Tenon, Group Universitaire de l'Est Parisien, INSERM U938, Research Group "Cancer-Hemostasis-Angiogenesis. Faculty of Medicine Sorbonne University, Paris	France
20	Diabetes Renal Clinic Guy's and St.Thomas' NHS Foundation Trust	UK
21	Cardiology Thessaloniki AHEPA	GR
22	Orthopedics Larissa	GR

23	Weizman Institute of Science, Hebrew University of Jerusalem	Israel

ERASMUS and Inter-Institutional Agreements

Erasmus Work Placements (traineeships) are a fantastic opportunity for students to test their career ambitions, test their motivation and gain credit towards their European University Cyprus degree. They will immerse themselves in another culture, improve their language skills, make new friends and gain all important work experience. Working abroad will dramatically boost their confidences, enhance their CV and develop graduate level skills and global employability competencies

Students in Higher Education may spend a study and/or a traineeship period in another participating country in the framework of agreed arrangements between universities and traineeship Organizations. They generally receive a grant to help offset the mobility costs of studying in another country, such as travel, language preparation and differences in the cost of living. Their award depends on several elements, which vary from Country to Country. Full academic recognition for the study and traineeship period carried out abroad must be ensured before departure, generally by the means of an ECTS Learning Agreement. The program is open to all higher education students (up to and including doctorate) from a participating country, except for students enrolled in their first year of Higher Education.

The School of Medicine has appointed a full-time faculty member to the EUC ERASMUS committee as the Faculty of Medicine Contact person, who oversees EUC student traineeships and incoming exchanges. At present, the School of Medicine has 11 signed ERASMUS + Academic Agreements allowing for student exchanges, including:

1. Universitat Degli Studi Di Roma Tor Vergana ITALY
2. Universita degli Studi "G.d'Annunzio" Chieti-Perscara ITALY
3. University of Szeged-Szegedi HUNGARY
4. Tudomanyegyetem UNIVERSIDAD DEL PAÍS VASCO/ Euskal Herriko Unibertsitatea (UPV/EHU) SPAIN
5. Aristotle University of Thessaloniki GREECE
6. University of Crete GREECE
7. University of Thessaly GREECE
8. University of Ioannina GREECE
9. School of Medicine-Free University of Brussels BELGIUM
10. School of Medicine-Pecs University HUNGARY
11. School of Medicine-University of Tirana ALBANIA

7. Program Evaluation

7.1. Mechanisms for Program Monitoring and Evaluation

Every 3 years, each academic program of study undergoes a self- assessment and an extended Program Self-Assessment Report (SAR) is produced. The Self Evaluation for the programs of study is a continuous process that deals with Standards and Guidelines for Quality Assurance in the European Higher Education Area, including:

1. Policy for quality assurance
2. Design and approval of program
3. Student-centered learning, teaching and assessment
4. Student admission, progression, recognition and certification
5. Teaching staff and Research
6. Learning resources and student support
7. Information management
8. Public information
9. On-going monitoring and periodic review of programs
10. Cyclical external quality assurance

For the production of the SAR (Self- Assessment Report), the cooperation among the Office of the Rector, the HR Department, the School Administrators, the Program Coordinators, the Department Chairs and the Deans of each school is necessary. The Program Coordinator selects a minimum of 5 teachers to answer an online questionnaire in the PROSE System regarding the Quality of a program.

The methodology is based on an integrated assessment approach combining both qualitative and quantitative aspects. The quantitative analysis uses Likert scale, as the qualitative analysis uses three open-ended questions. The results obtained through the use of both methods (qualitative and quantitative) are consistent and indicate the general profile of the program and also the status

After the completion of the PROSE process, the Coordinators need to select a minimum of 5 students, based on diversity, in order to interview them.
Based on the feedback received from the faculty members (PROSE results), on feedback obtained from student interview results and the data provided by HR Department, the Program Coordinator describes and analyses the main strong and weak points of the program evaluated. Furthermore, the program coordinator is responsible in cooperation with the Chair of the department, to propose some actions for improvement, also taking in to consideration the following factors:

1. Academic recognition / Accreditation
2. Professional Recognition / Accreditation
3. Advisory Boards (composed of involved stakeholders)
4. Link to the Industry / profession
5. Internationalization

The objective of this procedure is to ensure the continuous improvement of programs of study offered by EUC. Also, to evaluate, whether it complies, on institutional level, with European Standards and Guidelines.

The Report provides information and quotes aspects of the program. The analysis begins with the program description, the technical description and Qualitative evaluation, as well as the courses evaluation, the students' evaluation, student's performance and students' workload. Section 3 covers the assessment of the ways in which the program is supported

and assured, including infrastructure support, faculty, research and services offered. Section 4 covers student's admission process, student's demographics, progress and employability. Section 5 presents Programs status, the SWOT analysis (Strengths, Weaknesses Opportunities, Threats) and a suggested plan for improvement. The report concludes with a summary of the Program Self – Evaluation process, its main results and the main suggested actions for Improvement

7.2. Teacher and Student Feedback

The administration department sends out anonymous questionnaires to students to evaluate each course. The Curriculum Coordinator and the Chair gather this feedback and convey the findings to the curriculum committee for review and action. The Curriculum coordinator performs formal interviews on the faculty members and gathers qualitative information, regarding the course they have taught. All concerns expressed by students and faculty are taken into consideration in the curriculum development committee and then all proposed changes need the approval of the Departmental Council and the School Council.

In addition to the optional course and instructor evaluations at the end of the semester, the School of Medicine has also developed an evaluation form for its part-time faculty, including scientific collaborators and clinical instructors. The aim of these evaluations is to optimize basic science and clinical training experiences.

7.3. Performance of Students and Graduates

The first class of the EUC School of Medicine will graduate in Spring 2019. Performance of cohorts of students and graduates will be assessed according to 1) quality of residency programs they enter, and 2) performance on residency entry exams (i.e. USMLE). These will be benchmarked against student entrance qualifications, student background information, the EUC student selection process, and specific features of the EUC medical curriculum. The aim is to use this information to improve and evolve the medical curriculum to be compatible with the needs of the graduating medical doctor in the modern, international health sector, as well as identify means to improve both student selection and guidance.

7.4. Involvement of Stakeholders

The principal stakeholders of the EUC School of Medicine, including the Deans, Chair, Council, Curriculum Committee, Advisory Board, student and staff representatives' work are involved in the program monitoring and evaluation, as described above. The stakeholders have access to the SAR evaluation results, and all other evaluation. As the Advisory Board includes representatives of professional bodies, governmental/regulatory bodies, public/private health administrators, and academic bodies, regularly scheduled Advisory Board meetings allows the Medical School to seek feedback on the medical curriculum and other academic matters of the school.

8. Governance and Administration

8.1. Governance

Senate

The Senate of the University is the supreme academic authority of the University and is responsible for the academic work of the University, both in teaching and in research, and for the regulation and superintendence of the education and discipline of the students of the University. The Senate has the following powers:

- to regulate and control, all teaching, courses of study and the conditions qualifying for admission to the various titles, Degrees and other distinctions offered by the University;
- to regulate the admission of persons to programs of study;
- to review from time to time and to make recommendations to the Council concerning the duties and conditions of service of the academic staff;
- to recommend to the Council the appointment of Professors, Associate Professors, Assistant Professors, Lecturers, Other/Special Teaching Personnel;
- to recommend to the Council the establishment of new academic posts in the University and if it thinks fit to recommend that any vacant post be not filled;
- to recommend to the Council the appointment other persons of the academic staff whose appointment is not provided for elsewhere in this Charter;
- to regulate all University examinations;
- to prescribe the requirements of the University for matriculation;
- to grant Degrees and other academic distinctions to persons who shall have pursued in the University a program of study approved by the Senate and shall have passed the examinations of the University under the conditions laid down in the Internal Regulations;
- to grant Diplomas or Certificates to persons who have pursued a program of study approved by the Senate under conditions laid down by it;
- to grant Honorary Degrees, the title of Honorary Professor, Emeritus Professor or other University distinctions;
- to accept such examinations and periods of study at such Universities and other places of learning as the Senate may approve as equivalent to such examinations and periods of study in the University as the Senate may determine;
- to accept courses of study in any other institution which in the opinion of the Senate possesses the means of affording the proper instruction for such courses as equivalent to such courses of study in the University as the Senate may determine;
- to determine what formalities shall attach to the conferment of Degrees and other distinctions;
- to revoke any Degree or other distinction conferred by the University, and all privileges connected therewith, if the holder has been convicted of a crime for which he has been sentenced to imprisonment and the Senate considers that such crime is one which renders him unfit to be a Member or Graduate of the University;
- to be responsible for the collections of the University Library;
- to recommend to the Council the institution of Fellowships, Scholarships, Studentships, Prizes and other aids to study and research;
- to make recommendations to the Council on any academic matter of interest to the University;
- to regulate the use of academic dress in the University;
- to regulate the discipline of the University and to determine in what manner disciplinary powers shall be exercised

8.2. Academic Leadership

Dean and Deputy Dean

The Dean of School of Medicine is the chief academic and administrative officer of the School and is elected (by simple majority) for a period of three years, and may serve for a maximum of three terms, of which no more than two can be consecutive. He/she shall moderate all regular and special meetings of the School. The Dean is accountable/reports to the Rector. He/she provides leadership in the School in formulating educational policy, and is responsible for the management of the School's resources and staff management. He/she acts as agent of the School in executing School policy, and serves as the medium of communication for all official business of the School with other University authorities and bodies, the students and the public. The Dean has ultimate responsibility for the general welfare and development of the School. More specifically, he/she serves as both leader and resource manager in matters concerning recruitment, development and welfare of current members, program development and quality assurance, long range planning, School organizational patterns, and policy formulation.

Chair and Vice Chair

The Chair of School of Medicine is the chief academic and administrative officer of the School and is elected (by simple majority) for a period of two years, and may serve for a maximum of three terms, of which no more than two can be consecutive. The duties of the Chair include:

- Curricular/Program Development,
- Assists in the preparation of new or revised programs / courses of his/her Department;
- Prepares the schedule of courses and ensures that a balanced and appropriate offering of courses at all levels and in the proper sequence is made each semester so as to safeguard the uninterrupted progress of each program of study to meet student needs.
- Participates in the recruitment and selection of faculty members;
- Encourages and facilitates faculty development;
- Conducts the first-level annual evaluation of the Department's faculty and submits recommendations to the Dean of School;
- Recommends to the Dean of School faculty appointments, permanency status, as well as disciplinary actions;
- Hears informal faculty grievances at the Department level and cooperates in formal grievance procedures.
- Identifies resource needs (faculty, staff, facilities, other)
- Develops annual Departmental budgets for allocating funds for instruction, research, and faculty development;
- Ensures the quality of teaching and research, while continuing to engage in his/her own teaching/scholarship activities;
- Reviews faculty applications for faculty leave for conference participation, etc and appropriately allocates budgeted funds;
- Seeks to create/foster positive student-faculty relationships in the Department.
- Supervises academic advising in the Department, and assigns students to faculty academic advisors;
- Counsels students on career planning, continuing education and job placement.
- Provides orientation for all new students entering the programs of the Department;
- Ensures that students' rights are preserved, and is the first contact in the resolution of disputes between faculty and students.
- Ensures the observance of timetables, schedules, calendars of activities / events

/ projects of the Department;
- Ensures that course outlines comply with course syllabi.

Council of the Medical School

The School Council is the policy formulating body of the School. In general, the council coordinates the work of the Committees and advises the Dean on any matters concerning the planning, development, and general welfare of the Medical School. The council is composed of the Dean, Chair, elected faculty members and a student representative. The Council deals with the following:

- Planning and development;
- Policy issues;
- Annual budgets and support/facility requirements;
- Faculty development;
- School Organizational/Structural changes/requirements;
- The nominating and setting of the terms of reference for the formation of task forces outside the domain of existing standing committees to research issues/matters pertinent to the conduct of the School's business;
- Issues to be discussed at standing committees, such as design/revision of academic/curricular programs;
- Issues/Proposals forwarded by other members of the School for general discussion;
- The establishment of policies and procedures for hearing student grievances

Committees

Clinical Training Committee

EUC has a formal administrative and academic structure for facilitating the clinical training of its medical students at its affiliated hospitals. The Dean, in collaboration with the Deputy Dean and Chair, oversees and is responsible for the Clinical Training (Clerkship) programs at EUC, School of Medicine. As such, they are not members of any clinical training committee. The School council appoints a seven-member **Clinical Training Committee (CTC),** who are all full-time faculty and Chairs of the Clinical Divisions (see below) and the committee elects by majority a **Chairman.** (When available, senior faculty members are selected as Chairs of the Clinical Divisions and the Chairman of the CTC). The Chairs appoint by majority vote, two additional full-time faculty members (any rank). The Office of the Dean can include additional full- or part-time faculty in the CTC, under special circumstances.

The Clinical Training Committee:

- Oversees the planning of clinical training for all years of study
- Assists the Dean in recruiting and assigning academic and clinical faculty in clinical training
- Are the liaison between the clinical training sites and the faculty responsible for academic program and course content (Hospital coordinators and Course Coordinators)
- Ensures optimal cooperation between all affiliated persons and sites
- Ensure appropriate training of scientific (clinical) collaborators and clinical instructors

- Ensures optimal function of clinical training courses across all years of study
- Ensures an environment of safe collaboration between the School and affiliated healthcare sites
- Assists the Dean in administrative, financial and other relevant obligations of the School of Medicine related to the clinical training
- Ensures that the learning objectives outlined for clinical training are achieved
- Ensures accurate, complete and objective student evaluation
- Works in collaboration with the academic and hospital coordinators, to solve any issues that may arise up during clinical training
- Oversees appropriate completion and evaluation of the logbooks

The medical program at EUC is comprised of 7 primary Divisions (5 of which are Clinical Divisions), to which the courses and subjects are distributed. The **Chairs of the Clinical Divisions** (Internal Medicine, Surgery, Child & Maternal Health, Social Medicine/Public health/Primary Care, and Neuroscience/Mental Health/Sensory Systems) are full-time senior faculty (Associate Professor or Professor) and are responsible for the overall academic content and coordination of the courses taught in that Division. They oversee clinical program and rotations at each affiliated hospital and ensure equality of training for EUC students across all clinical training sites.

The Division Chairs work with heads of each course (**Course Coordinators**) taught in that Division, who are also full-time faculty and coordinate the instruction of the course by full-time faculty and scientific / clinical collaborators (part-time teaching faculty). **Clinical Collaborators** are healthcare professionals who hold a medical specialization and a doctoral degree, as defined by the EUC Charter. Posts of Scientific (Clinical) Collaborators are contractual for the duration of one or two academic semesters, which may be renewed. The Council of School of Medicine identifies the needs for positions, which are confirmed by the Dean in consultation with the Vice-Rector of Academic Affairs and the Department of Human Resources. A Committee consisting of Departmental Faculty members assesses the scientific qualifications and experience of each candidate for each specific position/discipline and prepares a detailed report with supporting documentation. Based on the Committee's report, the final selection is made by the School Council.

Student Health and Safety Officer

An Occupational medicine specialist, a General Physician or an Internist is appointed to oversee health requirements and vaccinations of all students and keep record of any health issues that might arise (eg.acute conditions that affect student attendance or performance). It is clear that the Student Health and Safety Officer is not responsible for management of any acute or chronic health conditions of the students of EUC.

Curriculum Committee

The curriculum committee examines the structure, content, outcomes, competencies, teaching methodologies, and forms of assessment applied in the Medical Curriculum on a regular basis.

Assessment / Examination Committee

The examination committee is responsible for providing guidance and for coordination of the school examinations. (as described above) The Examination Committee submits an annual report of its activities to the office of the Dean of the School of Medicine, EUC.

Current Academic Leadership & Committees

Dean, School of Medicine
Prof. George Petrikkos

Deputy Dean, School of Medicine
Prof. Elizabeth O. Johnson

Chair, School of Medicine
Prof. Ioannis Patrikios

Vice Chair, School of Medicine
Prof. Theodoros Xanthos

Strategy & Institutional Advisor
Advisor of Clinical Studies & Hospital Affiliations
Prof. Vasilios Zerris

Clinical Divisions: Chairs & Chair Assistants

Internal Medicine
Chair: Constantinos Tsioutis, Lecturer
Chair Assistant: Aris Angouridis, Lecturer

Surgery
Chair: Ingeborg Friehs, Associate Prof.
Chair Assistant: Dimitrios Ntourakis, Lecturer

Child & Maternal Health
Chair: Theoklis Zaoutis, Prof.
Chair Assistant: Pantelis Trompoukis, Asst. Prof.

Neuroscience, Mental Health & Sensory Systems
Chair: Gerhardt Friehs,, Prof.
Chair Assistant: George Hadjigeorgiou, Lecturer

Social Medicine (Public Health & Primary Care)
Chair: Anastasia Symeou, Special Scientist
Chair Assistant: Eirini Aggapidaki, Lecturer

Administrator:

Eva Charalambous, Administrator

Clinical Training Committee (CTC):

1. Constantinos Tsioutis, Lecturer
2. Ingeborg Friehs, Associate Professor
3. Theoklis Zaoutis, Professor

4. Gehardt Friehs, Professor
5. Anastasia Symeou, Special Scientist
6. Pantelis Trompoukis, Assistant Professor
7. George Hadjigeorgiou, Lecturer

Student Health & Safety Officer:	Dr. Constantinos Tsioutis
Assistant Health & Safety Officer:	Dr. Androula Pavli
Nurse Assistant:	Mr. Charlambos Pittas

Assessment/Examination Committee:

1. Prof. Anastasis Stephanou (Chair)
2. Prof. Theodoros Xanthos
3. Asst.Prof.Pantelis Trompoukis
4. Dr.Eirini Agapidaki
5. Dr.Ilias Nikas
6. Dr.Dimitris Ntourakis
7. Dr.Aris Angouridis
8. Eva Charalambous (secretary)

Curriculum Committee:

1. Prof. Theodoros Xanthos (Chair)
2. Dr. Dimitris Ntourakis
3. Prof. Anastasis Stephanou
4. Dr. George Hadjigeorgiou
5. Prof. Theoklis Zaoutis
6. Dr. Constantinos Tsioutis
7. Dr. Nikos Karpettas
8. Eva Charalambous (secretary)

8.3. Educational Budget and Resource Allocation

The academic budget for resourcing the curriculum and educational needs has a clear line of responsibility in the EUC School of Medicine.

Dean and Chair
The Dean and Chair of School of Medicine identify resource needs (faculty, staff, facilities, other) and develop annual Departmental budget for allocating funds for instruction, research, and faculty development.

Council of the Medical School
The proposed annual budget and support/facility requirements are discussed and approved by the School Council.

Rector and Senate
The Rector of the University participates in the institutional planning and budgeting, as well as oversees planning and budgeting of the School of Medicine. The Senate approves the academic budget.

8.4 Administration and Management

The School of Medicine has the administrative and professional staff that supports the full implementation of the activities and educational program.

The ***School Administrator*** manages the academic and administrative operations of the School and serves as the liaison between the School and other departments across the University (academic or otherwise) for determining University-wide policy, procedures, and services. Among the various duties, the Administrator prepares School/Department documents; attends council meetings, keeps minutes and follows up with appropriate individuals to ensure agreed upon action is taken; prepares and forwards to the Senate, via the Rector's Office, all relevant documentation, liaises with other institutions, external agencies and government departments, administers procedures in relation to faculty promotion and hiring (sets up meetings, circulates relevant documentation and keeps minutes), etc.

The secretary of the School of Medicine is not a conventional secretary in any other School or Department. The secretary in the School of Medicine is in effect the ***"Secretariat of the School".*** Among various activities the school secretary, provides daily assistance to students and handles possible grievances and acts as liaison between students, teaching personnel, the Administration and the Dean; processes, proofreads and archives course outlines, mid-term examinations and final examinations, prepares cancellation notes, e-mail correspondence, student sms notifications for cancellations and rescheduling of classes, preparation notes for rescheduled classes and has the responsibility of drafting the class cancellation report every month, processes final grades, etc.

8.5 Interaction with Health Sector

The EUC Medical School represented by the Dean and Chair, has devised multilayered constructive interactions with the health and health related sectors. In addition to the formalized agreements between the Medical School and various national and international hospitals for engagement of students and faculty necessary for the Clinical Training of the EUC Medical Students, has devised other interactions with the health sector. Clinical Training Resources and affiliated healthcare centers in Cyprus and Greece are detailed in paragraph 6.2.

Summer Externships

EUC medical students have the opportunity to participate in summer externships in prestigious highly ranked institutions all over the world for additional clinical and research training. The student experience at these sites greatly facilitate providing the EUC student with the qualifications they need to serve in the health sector. For details see 6.6.Educational Exchanges.

Other actions of the Medical School in collaboration with local and international healthcare organizations include:

European antibiotic awareness day 2017 & 2018:

During this meeting, an educational event took place with invited speeches on the importance of prudent use of antibiotics and the adverse effects of antimicrobial resistance. Furthermore, in collaboration with the local student society (Medical Students Society), flyers were prepared and disseminated inside and outside the EUC premises. The significance of this action and the leading local role of EUC on a European level were underlined in the official website of the European Society on Clinical Microbiology and Infectious Diseases (ESCMID).

Educational seminar on Infection prevention and control:

To coincide with the World day of Hand hygiene of the World Health Organization, a 2-day educational seminar on infection prevention and control took place with the initiative of the Medical School of EUC in May 2017, in collaboration with various other partners [the European Committee of Infection Control (EUCIC), the Cyprus Society of Chemotherapy and Infections (CSCI), the Mediterranean Institute of research and education on prevention and treatment of infectious diseases, the Cyprus Nurses and Midwives Association-Branch of Infection Control Nurses, and the Cyprus Medical Students Association (CyMSA)]. The event was awarded with CME & CNE and more than 150 participants registered. The event faculty consisted of invited experts and students of EUC, whereas the educational activities were not only educational lectures but also practical workshops.

Educational program on healthcare-associated infections for nurses:

A collaborative work between the Ministry of Health, the School of Nursing EUC, and the School of Medicine EUC, resulted to a 70-hour educational program on healthcare-associated infections for nurses of private and public institutions of Cyprus, from November 2017 to March 2018.

Researcher's Night – Exploring the Brain

The "Researcher's Night" is a popular science event organized by the European Commission. On this night almost all European countries organize events giving the chance for researchers to present their work to the public.

The Researcher's Night in Cyprus was hosted at the Nicosia State Exposition under the auspices of the Cyprus the Research Promotion Foundation (RPF) in collaboration with academic and research institutions. The European University of Cyprus had a strong presence with activities concerning public safety, astrophysics, and copyright laws.

The EUC School of Medicine presented a joint project organized by the Anatomy and Histology labs in collaboration with the Neurosurgical Institute of Ioannina. "Exploring the Brain" is a project grouping together 5 different interactive activities with the goal of motivating the public to explore the structure and function of the brain.

Social Responsibility – Community Actions Include:

The School of Medicine sponsors several community based activities, including:

Anatomy Workshop for School Children,

The School of Medicine of the European University Cyprus in collaboration with the department of Science Education organised an Anatomy workshop for children. Fourth grade pupils visited the anatomy lab. There, for one-and-a-half hours, they played, interacted and learned the structure and function of the musculoskeletal system under the supervision of 2nd and 3rd year medical students.

Brain Awareness Week March 2018, Niarchos Center, Athens, Greece

EUC students participate & present in the Session "Brain & Education" with presentations and activities to improve awareness on the brain for both the young and old. This effort is part of the Federation of European Neuroscience Societies (FENS) project to expand brain research in Europe – Education, Behavior and Brain Development.

9. Continuous Renewal

EUC School of Medicine examines the structure, content, outcomes, competencies, teaching methodologies, and forms of assessment applied in the Medical Curriculum on a regular basis. This is achieved by the efforts of the Curriculum Committee, who regularly discusses and interacts with the Administration, Faculty, Staff and students, allowing for correction of any deficiencies. In addition, and as described above, every 3 years, the school program prepares a self- assessment and an extended Program Self-Assessment Report (SAR) is produced. The Self Evaluation for the programs of study is a continuous process that deals with Standards and Guidelines for Quality Assurance in the European Higher Education Area.

Appendix I - Medical curriculum and course outlines