European University Cyprus

School of Medicine

Clinical Training Manual and Teaching Hospital Affiliation Agreement

February 2019

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Introduction

European University Cyprus (EUC), School of Medicine aims to assure quality in basic and clinical medical education. In line with General Medical Council (GMC) and the Accreditation Council for Graduate Medical Education (ACGME) requirements for clinical placements for medical students, the EUC curriculum "includes practical experience of working with patients throughout all years, increasing in duration and responsibility so that graduates are prepared for their responsibilities as provisionally registered doctors." According to these guidelines, EUC aims to "provide enough structure in clinical placements to enable students to demonstrate the "outcomes for graduates" across a range of clinical specialties."

The Clinical Training Manual (CTM) serves as a reference guide for clinical placements and training. The purpose of this manual is to explain how academic clinical training activities are supported and organized at EUC, in order to assist both students and clinical instructors throughout their clinical training activities. EUC Clinical Training Manual and Teaching Hospital Affiliation Agreement also provides the framework for EUC to establish comprehensive agreements with the individual organizations that provide clinical training for EUC medical students. In order to be in agreement with changes in governmental policies and regulations, as well as requirements outlined by the GMC and ACGME, the CTM is regularly reviewed and revised, accordingly.

The aim of the EUC CTM and Teaching Hospital Affiliation Agreement is to:

1. Ensure that the affiliated hospitals are aware their responsibilities in relation to teaching medical students
2. Ensure that the medical students are aware of their responsibilities in learning and in relation to patients' rights
3. Ensure that EUC medical students are effectively supervised during their clinical placement
4. Indicate means that EUC will evaluate the effectiveness of clinical placements
5. Ensure compliance with national and EU accrediting agencies and licensing requirements

To achieve these aims, the following have been specifically detailed in the CTM

- The structure of EUC clinical program, including educational goals and learning objectives
- The roles and responsibilities of each participant in the EUC medical education program with particular focus on the clinical affiliates
- The learning environment and opportunities required for the medical students to achieve competency
- Process and responsibilities of organizing clinical placements within the medical school and hospital
- Internal Quality Assurance – evaluation of effectiveness of clinical placements
- Selection process of those involved in clinical instruction

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. Clinical training

is continuously supervised by the academic staff of the School of Medicine of EUC, in close collaboration with clinical teaching staff of the affiliated training sites, and is performed according to the school clinical curriculum.

Clinical training at EUC:

- Is mandatory for all students of the School of Medicine.
- Takes place primarily during years 4 to 6 of medical studies
- Has a duration according to the European and International guidelines that corresponds to the year and course of study.

Vision, aim and objectives of clinical training

The overall objectives of the clinical training of medical students are:

- To familiarize students with the structure, the function and the capacities of the healthcare system
- To familiarize and introduce the students to the various levels and institutions of the healthcare system
- To develop clinical skills and successfully combine them with their theoretical knowledge
- To demonstrate and develop communication skills and teamwork
- To apply practical skills in real-life healthcare environments
- To develop professionalism in their daily clinical practice
- To establish the concept of clinical training during medical undergraduate studies
- To create an environment of mutual collaboration and develop ongoing relations between the School of Medicine and the collaborating healthcare sites
- Finally, to equip medical graduates with all necessary practical skills to pursue their postgraduate endeavors

Welcome Message

On behalf of the European University Cyprus School of Medicine faculty, clinical teaching personnel, staff and administration, welcome to the Clinical Training Core Program. Our exceptional and diverse faculty and personnel are fully committed to the dissemination of medical knowledge and the training of a new generation of competent physicians. We are dedicated to the teaching process as we constantly aim to improve and embrace modern principles of medical education. At EUC, we continuously strive towards providing an optimal learning environment by: 1) constantly improving our understanding of medical knowledge; 2) remaining innovative, both in our curriculum and teaching practices; and 3) inspiring our student to be passionate about providing their patients with the best possible care.

The Clinical Training Core at EUC is the last phase of the spiral, competency-based curriculum designed to introduce students to the best practices in patient care, using innovative teaching strategies, exposure to advanced simulation training, and much more. The horizontally integrated, spiral program of the first three years of the Structure – Function curriculum, where students learn clinical skills from their first year, was designed to ensure a smooth transition from basic to clinical science applications.

As we enter the Era of Bioinformatics, medical educators are challenged to seek innovative teaching methods that address the multitude and magnitude of scientific, technological and demographic factors that have converged to revolutionize today's approach to human health and well-being. These advancements not only bring challenges and new demands to today's physicians, but also to today's medical educators. EUC's mission is to prepare our students to excel in the art of healing, but also to become inspired innovators for the advancement of knowledge and patient-centered healthcare.

Our affiliation with state-of the art clinics and hospitals affords our students with a unique clinical learning experience. Each center is a foremost healthcare provider. With this exposure to an incredible diversity of patients, our graduates emerge fully prepared to practice medicine in this increasingly global society. Our aim is that our students experience a full spectrum of health care environments.

EUC is stepping to the forefront of global medical and health education. We are dedicated to preparing the healthcare leaders of tomorrow, with outstanding clinicians and scientists who will contribute to the advancement of science and medicine across the globe.

Professor E. Johnson
Acting Dean

PART I

Mission, Vision and 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

General Information

Clinical Training of medical students is the cornerstone of the EUC medical curriculum, where the multiplicity of activities in clinics and hospitals affiliated with EUC are selected to constitute unique learning environments for our medical students. Keeping in line with modern trends, Clinical Training (Clerkships) at EUC takes place in a variety of health care sites, including primary, secondary, and tertiary and community healthcare providers. As such, individualized joint agreements between EUC and its affiliated hospitals and clinical centers are devised to facilitate the clinical training program of our medical students.

While the healthcare providers of the hospital and clinic supervise the in-house educational program, every affiliated hospital and clinic adheres to the precepts and standards established by the EUC clinical curriculum, as outlined and detailed in the EUC CTM. Routine meetings between the EUC course directors and the heads of the clinical health care departments, facilitates open communication and clearly defined clinical educational goals.

The EUC School of Medicine has the ultimate and final right to evaluate the student's overall academic accomplishments within the clinical training program. The School of Medicine will determine whether or not: 1) a student is able to advance to the next level within the medical curriculum, 2) a student fails or passes, 3) remediation is required, whenever necessary, and 4) the student has fulfilled all necessary requirements to be granted a Doctor of Medicine (MD)

degree. The University ensures that all students fulfill health care requirements required by hospitals; and only assigns students to hospitals with academic qualifications consistent with the demands of the clinical program provided by the hospital.

All hospitals have been carefully selected to ensure their facilities meet EUC's standards. Each affiliated hospital and clinic demonstrates a continuing commitment to medical education and furnishes the necessary infrastructure to facilitate a successful clinical training program: integrating medical students into the health care team, providing access to the library and other ancillary facilities and supervising involvement with patients.

EUC follows the directives of the General Medical Council (GMC) publications *The Doctor as Teacher* and *Good Medical Practice,* which outline what is expected of doctors with teaching responsibilities, including those who supervise medical students. In alignment with the Principles of Good Medical Education and Training, EUC adheres to the following principles:

- Clinicians with responsibilities for teaching and training will be provided by EUC the opportunity to improve and develop appropriate knowledge, skills, attitudes and behaviors required for teaching medical students.
- Medical students and clinical instructors will have appropriate teaching and learning resources. These resources will be regularly reviewed and assessed.

Roles and Responsibilities for Clinical Training

EUC

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 Committee is comprised ex officio by the 5 Chairs / Directors of the Clinical Divisions. The Chairs appoint by majority vote, two additional full-time faculty members (any rank). The CTC reports to the Office of the Dean. The Chair of the Committee (Associate or Full Professor) is determined by majority vote by the entire Committee.

1. Constantinos Tsioutis, Lecturer
2. Aris Angouridis, Lecturer
3. Theoklis Zaoutis, Professor
4. Gehardt Friehs, Professor
5. George Hadjigeorgiou, Lecturer
6. Anastasia Symeou, Special Scientist
7. Pantelis Trompoukis, Assistant Professor
8. Nikos Karpettas, Lecturer

Clinical training assistant

A clinical training assistant is appointed to assist the CTC in various matters regarding clinical training coordination, including clinical training schedule preparation, communication with external parties (including hospitals, clinical instructors and the Ministry of Health), student vaccination forms, compensation of affiliated clinical sites and clinical instructors, on-site supervision of student attendance, etc.

Clinical training Assistants:	Mr. Charalambos Pittas Ms. Ourania Antoniou

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.

Clinical Divisions: Chairs & Chair Assistants

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

Surgery
Chair: Adamantios Michalinos, Lecturer
Chair Assistant: Dimitris Ntourakis, Lecturer
Clinical Prof Pediatric Surgery, Andreas Neofytou

Child & Maternal Health
Chair: Theoklis Zaoutis, Professor
Chair Assistant: Zoi Pana, Lecturer (Child)
Chair Assistant: Clinical Assistant Prof. Andreas Stavroulis

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

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

Contact Information

Questions can be addressed to:

Eva Charalambous, Administrator

at E.Charalambous@euc.ac.cy

The clinical training organogram is shown in **Appendix I.**

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.

Student Health & Safety Officer:	Dr. Constantinos Tsioutis
Assistant Health & Safety Officer:	Dr. Aris Angouridis
Nurse Assistant:	Mr. Charalambos Pittas

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.

Affiliated Hospitals

The teaching cornerstone during the core clinical rotations is the close relationship between the student and the attending physicians and/or residents who act as preceptors. Many hours are spent in small group discussions involving students and their clinical teachers as during bedside rounds. Together, they discuss the patient's history, working diagnosis, management, progress, etc. Students shadow their clinical instructors, to maximize their clinical exposure, while the clinical teaching team at each site must ensure that all medical students are monitored at all times. The roles and responsibilities of the affiliated hospital teaching staff and the clinical training organogram are shown in **Appendix I.**

Hospital Coordinator of Clinical Education (HCCE)

Based on the qualifications, the provisions of the agreements signed between the hospitals and the University and the recommendations of the hospital, EUC appoints for each affiliated hospital / clinic at least one local **Hospital Coordinator of Clinical Education (HCCE)** who is the hospital administrator responsible for the EUC student program and is the liaison with the School of Medicine. These designees may receive appointments to the School of Medicine's faculty that are commensurate with their qualifications and duties. A HCCE is on site at each clinical center and affiliated teaching hospital, and is responsible for overseeing the EUC medical student program at that health care site. Their principal role is to ensure quality and conformity with the EUC guidelines as described in the CTM. This includes overseeing rotation schedules, and determining the scope of student activities within the hospital / clinic. The HCCE reviews the overall program with a Dean or Deputy Dean at the time of their visits to the hospital and has continuous communication with the Clinical Training Committee and Department Clinical Coordinator (see below).

Department Clinical Coordinator (DCC)

Each Clinical Department appoints a **Department Clinical Coordinator (DCC**), who works at each respective hospital or clinic. The DCC is responsible administratively to the HCCE and academically to the corresponding Division Chair and Course Coordinator at EUC, School of Medicine. The DCC directly oversees the activities of the **Clinical Instructors** who teach students at the bedside. The DCC is responsible for the optimal daily function of the clinical training of students, completion of logbooks and student evaluation that take place in their department.

Clinical Instructors (CI)

The School of Medicine, in agreement with the HCCE and DCC, selects **Clinical Instructors**, based on their academic and teaching credentials. The CI is directly responsible for the actual bedside education of the medical students and for considering the student's progress against learning objectives set by the EUC clinical curriculum. The CI also determines the degree of supervision required by each student. As such, CIs should provide such supervision personally or arrange for its provision by one or more identified fully registered healthcare practitioners. While the CI may determine that another doctor can oversee the student in certain context, the responsibility for the student and their supervision ultimately remains with the CI. Following the selection of clinical instructors, EUC organizes train-the-trainer programs aimed at familiarizing CIs with the objectives and methods of clinical training.

EUC Medical Students Clinical Training

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.

Assignment of Students to Clinical Training Sites

The priority of EUC is to assure that all of our students are afforded an equal opportunity for high quality clinical training. EUC considers all clinical training sites affiliated with the School of Medicine equivalent in terms of the educational experiences they provide. Each student's placement in training sites and the rotation schedule is overseen by the **Clinical Training Committee**, along with each student's **Clinical Advisor.**

In order to start clinical training (clerkships) in years 4 - 6, students must:

1. Successfully complete all prerequisites according to the EUC School of Medicine requirements.
2. Be in financial good standing.

3. Have cleared health requirements and immunizations (Y.Y.7.1.12 (12), Cyprus Ministry of Health)
4. Be familiar with the Clinical Training Manual

Students are assigned to small groups (5-6 students) for their rotations. Within the department, these groups may be further subdivided.

Exposure to both common conditions, as well as more complex cases is achieved by:

- Evaluating the daily and weekly patient assignments
- Encouraging resident shadowing
- Rotation in inpatient, outpatient, special and emergency departments

The **Clinical Training Committee** in close collaboration with the **Division Chairs** and the **Course Coordinators** devises a student allocation and schedule. The **Clinical Training Committee** informs students of their hospital allocations and department rotation schedule. Students are also advised on their obligations, rights, course objective and mode of evaluations. Required safety measures are discussed and immunization records are examined.

The School is responsible for insurance coverage of the student against liability practice, as required by the relative legislation, in all clinical training settings that are involved in the medical studies of EUC.

Involvement of Students with Patients

Although the core of the student's educational experience is with the patients that they are assigned to, they will derive considerable benefit from exposure to other students' patients and by being present when attending's or consultants see their own patients. Students must record the patients they see into their logbook and have the encounter/procedure signed by the supervising CI**.** The DCC reviews the patient encounter log continuously and when completing the final clerkship evaluation form. The Office of the Dean and the EUC CTC also monitor the logbooks to ensure that each student has fulfilled the minimum requirements during each clerkship.

All students should be exposed to as many clinical situations as possible. Students shadow their CI, assist them and prepare for the acquisition of the duties of a resident. Their CI should record and sign student attendance and involvement in key clinical experiences. Students are expected to follow up at least one patient every week from admission to discharge. Together with the supervising doctor, they record admission data, perform physical examination, evaluate laboratory and imaging findings, pose a diagnostic path, assess and prioritize the different problems of the patient, discuss about further diagnostic and therapeutic choices, present the patient during clinical rounds, update the daily report, and assist in the preparation of discharge documentations (patient confidentiality at all times is preserved). Students should follow each patient daily on a daily basis, be fully informed of the patients' progress and actively participate with their team members in the performance of various practical skills. It is important that all fields are completed as requested, including skills or clinical conditions confirmation.

Students must remain compliant to guidelines by not using any patient identifiers, such as names, initials, date of birth, medical record numbers, pictures and others. The rationale is that students need to develop the clinical competencies required for graduation during their clinical years. These competencies are assessed in various ways: by faculty observation during rotations, by communication skills assessments, by completion of assignments and by clinical subject exams (e.g. OSCEs). In order to develop many of these competencies and meet the objectives required

for graduation, the school needs to ensure that each student sees enough patients and an appropriate mix of patients during their clinical terms.

One of the competencies that students must develop during their clinical training involves documentation. Documentation is an essential and important feature of patient care and learning how and what to document is an important part of medical education. Keeping an individual student Logbook becomes a student training exercise in documentation. The seriousness and accuracy with which students maintain and update their Logbook will be part of their assessment during the core rotations. All of these features of documentation – seriousness, accuracy, conscientiousness and honesty – are measures of professional behavior. Students should log only encounters with real patients, and not simulated patients, case presentations, etc.

During their clinical training, all students are supervised by their clinical instructors, who note down their observations in the individual student logbook. Student evaluation is described and completed in the logbook, including student attendance, performance of clinical skills, and essential course content observed and practiced. This is confirmed and signed by the clinical instructor of the respective department. The Clinical Course coordinators inspect the Logbook during and after each clinical training period.

Student Assessment

Students are assessed throughout their clinical training. Documentation of performance in accordance with learning objectives and competencies, will be achieved with the application of standardized assessment forms, such as mini-CEX, DOPS, etc. Logbooks document student competence in mandatory clinical skills, in association with a defined clinical competency roadmap.

1. Hospital Review

The Clinical Instructors and Department Clerkship Coordinators review and assess students' logbooks as part of their mid-core and final assessment.

Clinical Faculty will be asked to evaluate students on the ***Student Clerkship Evaluation Form*** **(Appendix II).**

2. EUC Review

The Clinical Training Committee and Clinical Advisors also review and assess students' logbooks as part of the mid-core and final assessment. During the mid-core formative evaluation they can comment on the completeness of the logbook and also ascertain whether students are seeing a good mix of patients. Insufficient entries may impact the grade students receive. Students are responsible to answer questions about the entries in their log. The clinical faculty and departments can use data in the students' logs to assess the quality of the program and the extent to which it offers students an appropriate clinical experience.

By collecting, collating and analyzing logs from all students, EUC is able to:

a. To monitor and evaluate the clinical experience at different hospitals, so as to answer questions, like "Have all of our students seen appendicitis? Have they all seen a patient with schizophrenia? Do all our affiliated hospitals expose our students to end-of-life issues? Are all students involved in communication with children and parents?" The ultimate aim is ***to document that all our clinical training sites provide excellent and comparable clinical experiences.***

b. To review the patient log of every clinical student, to identify those students that have gaps in their clinical experience according to the criteria and objectives defined by the Division Chairs and Course Coordinators for each course. **The Clinical Training Committee and Clinical Advisors** will notify students identified and point out the deficiencies in their clinical experience. Students will then be asked to remediate this deficiency.

The Logbook

The Logbook is a paper log used to document the competence of students in mandatory patient encounters, clinical skills and procedures **(Appendix III** shows an example of a Clerkship Logbook for Semester 8). Students must be certified in writing by a physician to perform these procedures. The certification needs to be done only once and can be done on any service during any rotation. Once certified, students can continue to perform these procedures without additional documentation but always under supervision. As a requirement for promotion into the fifth and sixth year, students must give their log with the appropriate signatures to their clinical coordinator. All procedures performed by medical students must be done under faculty supervision.

At the end of each clinical training period, the student provides the School with a confidential feedback form (**see Appendix V**). This aims to highlight the strengths of the clinical training courses and to show areas in need of improvement.

Following completion of their clinical training and the logbook, the student submits the logbook to the School Administration for evaluation by the academic clinical course coordinators. To confirm completion of the clinical training, the logbook has to be sufficiently completed, the number of absences for each course should be within allowed limits and the minimum successful grade should be achieved in each respective course.

Clinical Instructors Role in Student Logbook Monitoring

The individual student logbook, as defined by each clinical training course, aims to provide brief instructions on the learning objectives, expected outcomes and level of clinical exposure required.

Essential parts of the logbook include:

Patient assignment

Each student is expected to follow at least one patient every week from admission to discharge. When you are satisfied that the student has reached a competent standard, you should complete and sign the relevant entry.

History, Physical examination, Clinical skills, Essential course content

Students should be exposed to competencies and trained on clinical skills to a maximum possible degree. In addition, students should exhibit competence level in situations commonly encountered in the different clinical departments. Please rate student level according and sign.

Mini Clinical Evaluation Examination form (mini-CEX)

The miniCEX is a 15-minute snapshot of how students interact with patients. Students should perform this at least once in each department of their rotation, under your supervision, which you are kindly requested to complete and sign.

Student Attendance and Evaluation

Attendance is mandatory for students, unjustified absences are not allowed and the clinical instructor signs the attendance sheet of every student logbook routinely. Students that are absent

systematically, violate occupational rules or misconduct should be reported to the hospital coordinators.

Student training
Depending on the year of study and course content, students are expected to be exposed to competencies and trained on clinical skills to a maximum possible degree. Individual student logbooks provide a detailed description of learning objectives for each course of clinical training and fields that require completion by the clinical instructors.

Following and observing
Actions performed by the student, such as obtaining medical history, following patients or shadowing residents, performing various skills and being exposed to core clinical content, should be completed in the respective entry and evaluated accordingly as described in the student logbook. The clinical instructors need to confirm and sign all relevant entries.

Evaluating Students
The Role of the Clinical Instructor is also essential in the final assessment and evaluation of every student that has rotated through the department. As such, it is imperative that they complete and confirm all relevant entries.

Feedback
All clinical instructors are asked to provide feedback at the end of the clinical rotations period.

Professional Conduct and Responsibility

Conduct Code

Students are expected to demonstrate dedication to acquiring knowledge, skills, both cognitive and non-cognitive, and attitudes necessary to provide competent medical care. Students are expected to be responsible for their medical education and take an active role in the planning of their medical education. A student shall be dedicated to providing competent medical service with compassion and respect for human dignity. In all instances, the student must maintain the dignity of the person, including respect for the patient's modesty and privacy.

- **Nondiscrimination:** It is unethical for a student to refuse to participate in the Care of a person based on race, religion, ethnicity, socioeconomic status, gender, age, or sexual preference. It is also unethical to refuse to participate in the care of a patient solely because of medical risk, or perceived risk, to the student.
- **Confidentiality:** The patient's right to the confidentiality of his or her medical record is a fundamental tenet of medical care. The discussion of problems or diagnoses of a patient by professional staff/medical students in public violates patient confidentiality and is unethical. Under no circumstances can any medical record be removed from the institution, nor is photocopying of the record permitted. For presentations or rounds, students are permitted to extract information.
- **Professional Demeanor:** The student should be thoughtful and professional when interacting with patients and their families. Students should maintain a neat and clean appearance, and dress in attire that is generally accepted as professional by the patient population served.
- **Misrepresentation:** A student should accurately represent themselves to patients and others on the medical team, and clearly indicated that they are medical students.
- **Honesty:** Students are expected to demonstrate honesty and integrity in all aspects of their education and in their interactions with patients, staff, faculty and colleagues. Cheating, plagiarism

or assisting others in these acts will not be tolerated by EUC. The student must assure the accuracy and completeness of his or her part of the medical record. Each student is bound to know, understand and preserve professional ethics and has a duty to report any breach of these ethics by other students or health care providers through the appropriate channels.

- **Consultation:** Students should seek consultation and supervision whenever they believe that their care of a patient may be inadequate because of lack of knowledge and/or experience.
- **Conflict of Interests:** When a conflict of interest arises the welfare of the patient must always be of highest priority. Gifts, hospitality or subsidies offered by medical equipment, pharmaceutical or other manufacturers or distributors should not be accepted if acceptance would influence the objectivity of clinical judgment.
- **Sexual Misconduct:** The student will not engage in romantic, sexual or other nonprofessional relationships with a patient, while the student is involved with the patient's care. The student is not expected to tolerate inappropriate sexual behavior on the part of other medical personnel or patients.
- **Impairment:** The student will not use alcohol or drugs in a manner that could compromise patient care. The student is obligated to report persons of the health care team whose behavior exhibits impairment or lack of professional conduct or competence or who engage in fraud or deception.
- **Criticism of Colleagues:** It is unethical for a student to disparage without evidence the professional competence, knowledge, qualification or services of a colleague to a review (judicial) body, staff, students or a patient. It is also unethical to imply by word, gesture or deed that a patient has been poorly managed or mistreated by a colleague without tangible evidence.

- Professional relations among all members of the medical community should be marked with civility.
- The medical student will deal with professional, staff and peer members of the health team in a cooperative and considerate manner.
- **Evaluation:** Students are expected to respond to constructive criticism by appropriate modification of their behavior. When evaluating faculty performance, students may not include disparaging remarks, offensive language or personal attacks, and should maintain the same considerate, professional tone expected of faculty when they evaluate student performance.
- **Disclosure:** The patient must be well informed to make health care decisions. Information that the patient needs for decision-making should be presented in terms the patient can understand. If the patient is unable to comprehend, for some reason, there should be full disclosure to the patient's authorized representative.
- **Informed Consent:** Students are to understand the importance of obtaining informed consent from patients. However, students are not responsible for obtaining informed consent; it is the physician's responsibility.

Medical students who fail to maintain the highest degree of personal and professional integrity or whose behavior is not in keeping with achieving both cognitive and non-cognitive skills will be subject to review, disciplinary action and possible dismissal.

Attendance and Time-off Policies

Clinical rotations require a full-time commitment by students. The educational component of the 4th-6th years of medical studies consist of involvement with patient care as part of the healthcare team, attendance at all didactic activities, completion of assignments and self-directed learning. Students must be at the hospital at least five days a week with daily hours and night and weekend on call as scheduled by the clinical curriculum.

Each daily absence from clinical training activities is considered one absence and is noted in the Logbook. Unjustified absences, violation of occupational rules, professional misconduct or student engagement in activities other than those described in the curriculum, are to be inquired by the academic coordinator of the School of Medicine, EUC. Students are entitled up to three (3) justified absences for each course during the semester. In case of justified discontinuation of the clinical training, the student is obliged to complete the remaining period of clinical training in a new position.

If a student must be absent for a few hours or a day, permission must be obtained by the HCCE and/or DCC before leaving. Longer absences from a rotation without permission from the clerkship coordinator, DCC/HCCE and the Clinical Training Committee can be grounds for failure in that rotation. Absenteeism and/or tardiness can result in an “F” in professional behavior and loss of credit for any rotation.

Student Health and Safety

Compliance with health and safety measures is necessary for the proper function of clinical training. These measures concern safety of students, of healthcare workers, of patients and their chaperones.

When concerned over a safety issue or an incident, students should contact their CI, DCC and/or HCCE. In case of personal safety issues, such as injury or exposure, students should also immediately contact the CTC, either directly or through the Health and Safety Officer.

The student Logbook contains details on student safety matters. In addition, the Clinical Practice Incidence Report Form (**Appendix IV)** should be completed and submitted to the School, in case of any incidence concerning student safety.

Immunization requirements

Before entering the clinical training and in order to approve their entry in healthcare settings, students should conform to the immunization requirements set by the Ministry of Health. **(Appendix V)**

Hand hygiene and isolation precautions

- Standard precautions and Hand hygiene are performed before and after contact with all patients. Indications and technique for hand hygiene follow the World Health Organization guidelines.

- Isolation precautions, personal protective equipment are additional measures that depend on the risk of transmission between patients and healthcare personnel (i.e. contact, droplet, and airborne precautions).
- Gloves are worn for invasive procedures, contact with non-intact skin, mucous membranes, or sterile sites, and at all activities that carry risk of exposure to body fluids or contaminated instruments.

Safe use and disposal of sharps

Incidents with sharps injuries can be prevented with basic practices:

- Do not pass sharps directly from hand to hand
- Always discard in appropriate sharps container immediately after use
- Do not break or bend needle
- Container should be kept within arms' length during use
- Do not attempt to replace cap

Assessment of Training Sites

Administrative and academic members of EUC perform site visits of each affiliated hospital or clinic on a regular basis. The purpose of these visits is to ensure compliance with School of Medicine standards, the clinical training curriculum and policies, to review the educational program and to discuss any problems that arise on site. The coordinators document the important features of the clerkship including the strengths and weaknesses of the program, feedback to the Clinical Training Committee and suggestions for the future.

Student Evaluations of Clinical Training

The university uses a questionnaire to collect student feedback on the core rotations. These questionnaires are in **Appendix VI** and will be sent to students automatically after the clerkship is over. Each division may modify the questionnaire to measure the extent that a specific clerkship rotation meet the departmental guidelines and objectives. Data from these questionnaires provides documentation, enabling the Deans, Department Chairs, HCCEs, DCCs and CIs to monitor and improve the educational program in each clerkship at each hospital based on student experience and opinion.

An aspect of professional behavior requires a commitment to improve the medical school. Given the importance of student feedback, the school of medicine only gives students credit for a core rotation and access to their evaluation after completion and submission of the relevant questionnaire. Answers are confidential. While our program can ascertain how many students responded, it cannot match a response to an individual student.

PART II

Clinical Training Curriculum

EUC Curriculum

The innovative six-year curriculum at the European University of Cyprus is fully integrated both horizontally (***systems-based***) and vertically (***spiral-design***) 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, 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. 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, thinking and clinical reasoning. 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 reformed Structure and Function curriculum at EUC engages multiple ***active and cooperative learning strategies***. ***Innovated and web-based educational resources*** have been tightly intercalated in the revised Structure & Function program. In the functional component, interactive anatomy, histology and embryology programs are regularly applied to provide insight into three-dimensional associations. In the structural component, virtual labs allow students to gain the experience of practical experiment without bench work in an interactive platform. Digital labs as a simulated model of the wet lab parallel our intensive integration of using high fidelity simulators for the physiology, pathophysiology, semiology and surgery practical sessions, among others. Simulation as one of the most prominent innovations in medical education over the last decade is a pivotal component of the structure & functional practical sessions.

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..

Clinical Training Spiral

1st year – **Foundations of Medicine I** are 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».

2nd year – **Foundations of Medicine II** are 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.

3rd year – **Foundations of Clinical Practice** focus is 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.

4th-6th years – **Clinical Medicine Core** forms the final turn of curriculum spiral, with the translation of knowledge and skills into practice, during clinical clerkships.

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

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 overall objectives of the clinical training of medical students are:

- To familiarize students with the structure, function and capacities of the healthcare system
- To develop clinical skills and successfully combine them with their theoretical knowledge
- To demonstrate and develop communication skills and teamwork
- To apply practical skills in real-life healthcare environments
- To develop professionalism in their daily clinical practice
- To establish the concept of clinical training during medical undergraduate studies
- To create an environment of mutual collaboration and develop ongoing relations between the School of Medicine and the collaborating healthcare sites
- Finally, to equip medical graduates with all necessary practical skills to pursue their postgraduate endeavors

The Clinical Training Curriculum

This comprises Years of study 4-6 (Semesters 7-12) and consists of the following courses:

Core Rotations	ECTS	Weeks
Clinical Training I (Respiratory & Cardiovascular)	15	6
Clinical Training II (Digestive System & Hematology)	15	6
Clinical Training III (Infectious Diseases and Clinical Microbiology)	9	3
Clinical Training IV (Endocrine system, Uro-Nephrological System & Male Genital Tract)	14	6
Clinical Training V (Musculoskeletal System)	7	6
Clinical Training VI (Nervous System & Psychiatry)	15	6
Clinical Training VII (Pediatrics)	12	5
Clinical Training VIII (Dermatology)	6	2.5
Clinical Training IX (Obstetrics & Gynecology)	8	3
Clinical Training X (Ophthalmology)	6	2.5
Clinical Training XI (Otorhinolaryngology)	5	2.5
Clinical Training XII (ER, Toxicology, Oncology & Palliative Care)	14	5
Additional Requirements		
Diagnosis by Imaging	7	2
Clinical Bioethics & Legal Medicine	6	2
Medical Therapeutics	6	1.5
Symptoms & Interpretation Of Complementary Examination Procedures	5	1.5
Primary Care	6	3
Electives		
Healthcare Management		
Clinical Embryology		
Rehabilitation Medicine		

Research Methods & Scientific Writing		
Interventional Radiology		

Competencies

The US Accreditation Council on Graduate Medical Education (ACGME) defines six domains thought to be useful in defining "competency"; these are called the core competencies - patient care, medical knowledge, practice-based learning and improvement, professionalism, systems-based practice, and interpersonal skills and communication. While these were initially developed for residency programs, today competencies are used at many levels of professional practice to define and measure an individual's ability and capability. EUC has devised a ***Clinical Competence Building Roadmap*** to guide both instructors and students during their clerkships. (**Appendix VII**)

The American Association of Medical Colleges (AAMC) has grouped competencies into the following 13 **Entrustable Professional Activities (EPAs)** as a basis for starting postgraduate training in the US.

Entrustable Professional Activities

1. Gather a History and Perform a Physical Examination
2. Prioritize a Differential Diagnosis Following a Clinical Encounter
3. Recommend and Interpret Common Diagnostic and Screening Test
4. Enter and Discuss Orders/Prescriptions
5. Document a Clinical Encounter in the Patient Record
6. Provide an Oral Presentation of a Clinical Encounter
7. Form Clinical Questions and Retrieve Evidence to Advance Patient Care
8. Give or Receive a Patient Handover to Transition Care Responsibility
9. Collaborate as a member of an Interprofessional Team
10. Recognize a Patient Requiring Urgent or Emergent Care, & Initiate Evaluation & management.
11. Obtain Informed Consent for Tests and/or Procedures
12. Perform General Procedures of a Physician
13. Identify System Failures and Contribute to a Culture of Safety and Improvement.

The emphasis of the EUC curriculum is on achieving and demonstrating competency. Student confidence in performing practical and clinical skills in different levels of their studies, is assessed by using a student questionnaire **(Appendix VIII).**

Outcome Objectives

Medical Knowledge

1. Apply the multidisciplinary body of basic sciences to clinical analysis and problem solving using:
   - The knowledge of normal structure, function, physiology and metabolism at the levels of the whole body, organ systems, cells, organelles and specific biomolecules including embryology, aging, growth and development.
   - The principles of normal homeostasis including molecular and cellular mechanisms.
   - The etiology, pathogenesis, structural and molecular alterations as they relate to the signs, symptoms, laboratory results imaging investigations and causes of common and important diseases.

2. Incorporate the impact of factors including aging, psychological, cultural, environmental, genetic, nutritional, social, economic, religious and developmental on health and disease of patients as well as their impact on families and caregivers.

3. Utilize the important pharmacological and non-pharmacological therapies available for the prevention and treatment of disease based on cellular and molecular mechanisms of action and clinical effects. Identify and explain factors that govern therapeutic interventions such as clinical and legal risks, benefits, cost assessments, age and gender.

4. Apply the theories and principles that govern ethical decision making in the management of patients. v. Evaluate and apply clinical and translational research to the care of patient populations.

Clinical Skills

1. Communicate effectively with patients, their families and members of the health care team.
2. Obtain a comprehensive and/or focused medical history on patients of all categories.
3. Perform physical and mental status examinations on patients of all categories appropriate to the patient's condition.
4. Document pertinent patient health information in a concise, complete and responsible way.
5. Select appropriate investigations and interpret the results for common and important diseases and conditions.
6. Recognize and communicate common and important abnormal clinical findings.
7. Develop a problem list and differential diagnosis based on the history, physical findings and initial investigations.
8. Apply effective problem solving strategies to patient care.
9. Perform routine and basic medical procedures.
10. Provide patient education for all ages regarding health problems and health maintenance.
11. Identify individuals at risk for disease and select appropriate preventive measures.
12. Recognize life threatening emergencies and initiate appropriate primary intervention.
13. Outline the management plan for patients under the following categories of care: preventive, acute, chronic, emergency, end of life, continuing and rehabilitative.
14. Continually reevaluate management plans based on the progress of the patient's condition and appraisal of current scientific evidence and medical information.

Professional Behavior

1. Establish rapport and exhibit compassion for patients and families and respect their privacy, dignity and confidentiality.
2. Demonstrate honesty, respect and integrity in interacting with patients and their families, colleagues, faculty and other members of the health care team.
3. Be responsible in tasks dealing with patient care, faculty and colleagues including health- care documentation.
4. Demonstrate sensitivity to issues related to culture, race, age, gender, religion, sexual orientation and disability in the delivery of health care.
5. Demonstrate a commitment to high professional and ethical standards.
6. React appropriately to difficult situations involving conflicts, nonadherence and ethical dilemmas.
7. Demonstrate a commitment to independent and lifelong learning including evaluating research in healthcare.
8. Demonstrate the willingness to be an effective team member and team leader in the delivery of health care.
9. Recognize one's own limitations in knowledge, skills and attitudes and the need for asking for additional consultation.
10. Participate in activities to improve the quality of medical education, including evaluations of courses and clerkships.

Assessment and Grading

The Course Coordinator must arrange for formative mid-core assessments of all students in order to discuss the student's performance including a review the Patient Encounter Logbook. These consist of individualized face-to-face meetings with each student. This assessment may entail consultations with the DCC and CIs at each respective clinical training site. The purpose of this assessment is to verbally provide students with qualitative feedback early enough in the clerkship to allow time for remediation of deficiencies. This meeting gives the Course Coordinator an opportunity to help students recognize their strengths. This discussion should include encouragement if the student is doing well or a warning with constructive criticism if the student is doing poorly. The mid-core assessment also gives medical students the opportunity to measure their progress in learning. Comments in the mid-core might be integrated in to the final evaluation.

Grading Policy for the clerkships

The Course Coordinator completes a final assessment form for each student in a core clerkship. The form requires narrative comments, grades in individual components and a final summative grade. The narrative comments summarize the student's clinical performance and, importantly, professional behavior. This includes attendance, rapport with patients and staff and the extent to which the students developed the required competencies for that core. This narrative section offers the faculty the opportunity to provide additional personalized evaluative information beyond the letter grade.

An additional section allows for constructive comments. Students should make every effort to review these comments as soon as possible after completion of a rotation. The opinions of the physicians who have worked with a student are critical for self-improvement by the student. In particular, constructive criticisms can help a student develop into a more competent physician.

The final grade in the clerkship represents a semi-quantitative average of following components:

1. Medical knowledge	50%
4. Clinical & Communication skills	40%
5. Attendance & Professional behavior	10%

Grading System:

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	

Components of Assessment (in Addition to Written Examinations)

Clinical Performance

The teaching physicians who work with the student during the rotation assess the student's clinical performance in three areas, which carry 20% of the grade. 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 mobilization / manipulation techniques / radiographic image evaluation / interpretation of results, etc. 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 patients (actors or electronic patient simulators). 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 the patient's 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. Grading 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. **(Appendix IX)**

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 and may be observed by a staff doctor, nurse practitioner, consultant or other.

The MiniCEX is intended to facilitate formative assessment of core clinical skills in 10- to 20-minute direct observation assessment of student-patient interactions. The observations are documented in the Logbook. The aim, ultimately, is to guide learning and improve performance through structured 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

Inadequate Performance

An F in any area requires a discussion between the student and the clinical coordinator, Division Chair, Course Coordinator, Chair and/or a Dean. Students who fail the entire year, not just a course/rotation, will be recommended for dismissal. In addition, the University reserves the right in the absence of due process or under ambiguous circumstances to put an I Grade (incomplete) notation on the transcript. In this case, the student must repeat the course/rotation.

A student can be given credit for a rotation if there is an F in any one area as long as the final grade is passing. The university will not approve this student for graduation until the successful completion of remediation. An F in any area requires a discussion between the student and the clinical coordinator, Division Chair, Course Coordinator, Chair and/or a Dean. Students who fail the entire year, not just a course/rotation, will be recommended for dismissal. In addition, the University reserves the right in the absence of due process or under ambiguous circumstances to put an I Grade (incomplete) notation on the transcript. In this case, the student must repeat the course/rotation.

A formal mechanism exists for identifying and helping a student whose achievement is not up to standard. If CI or DCC judge a student to be marginal, the Course coordinator is notified. The student shall be informed as early as possible during the clerkship and given assistance and counseling. Depending on the seriousness of the problem, the division coordinator, and Dean may be involved.

Thus, a three-tiered system for dealing with student problems exists at all clinical sites. Initially a student's CI and/or DCC discuss a student's behavior or attitude with the student. This is done at the time of the mid-core assessment or at any other time that is appropriate. Many times counseling the student is sufficient. If the problem recurs, a pattern develops or a single problem appears serious, the HCCE is notified. The HCCE might meet with and counsel the student. If the problem is serious enough, the HCCE notifies the Clinical Training Committee and Deans' office. The Dean of the School of Medicine has the ultimate responsibility for dealing with students' problems.

Clinical Training I (MED407) Respiratory & Cardiovascular

Description

Students shadow residents and consultants in departments of pulmonology, cardiology, thoracic surgery and vascular surgery. They are assigned to patients, whom they follow from admission to discharge and act as attending physicians, under the supervision of their clinical instructors. The overall objective of this rotation is for students to familiarize with the responsibilities of physicians, including obtaining history, performing physical examination, performing differential diagnoses, proposing investigation and management plans, observing patients' daily progress, completing medical charts and discharging.

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 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:*** 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.

Assessment

Grade Components

- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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 (MED417) - Digestive System & Hematology

Description

Students shadow residents and consultants in departments of gastroenterology, general abdominal surgery, and hematology. They are assigned to patients, whom they follow from admission to discharge and act as attending physicians, under the supervision of their clinical instructors. The overall objective of this rotation is for students to familiarize with the responsibilities of physicians, including obtaining history, performing physical examination, performing differential diagnoses, proposing investigation and management plans, observing patients' daily progress, completing medical charts and discharging.

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:*** 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.

Grade Components

- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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

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 (MED408) - Infectious Diseases and Clinical Microbiology

Description

Students shadow residents and consultants in departments of internal medicine / infectious diseases, intensive care units and microbiology. They are assigned to patients whom they follow from admission to discharge and act as attending physicians, under the supervision of their clinical instructors. In clinical microbiology, they familiarize with the daily functions of the department of microbiology and with the basic principles of infection control in healthcare settings.

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:*** 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.

Grade Components

- *Medical knowledge* *50%*
- *Clinical & Communication skills* *40%*

- *Attendance & Professional behavior 10%*

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

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

Description

Students shadow residents and consultants in departments of endocrinology, urology, and nephrology (including transplant units and hemodialysis units). They are assigned to patients, whom they follow from admission to discharge and act as attending physicians,

under the supervision of their clinical instructors. The overall objective of this rotation is for students to familiarize with the responsibilities of physicians, including obtaining history, performing physical examination, performing differential diagnoses, proposing investigation and management plans, following patients' daily progress, completing medical charts and discharging.

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 physical examination 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:*** 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, 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.

- ***Assessment***
- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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

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

Description

Students shadow residents and consultants in departments of orthopedics and trauma, and rheumatology. They are assigned to patients, whom they follow from admission to discharge and act as attending physicians, under the supervision of their clinical instructors. The overall objective of this rotation is for students to familiarize with the responsibilities of physicians, including obtaining history, performing physical examination, performing differential diagnoses, proposing investigation and management plans, following patients' daily progress, participating in surgery, completing medical charts and discharging.

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:*** 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, 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.

Assessment

- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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

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

- Back pain
- Chronic pain
- Osteoporosis
- Falls, gait and balance problems
- Arthritis examination
- Arthritis differential diagnosis
- Gait assessment
- GALS examination
- Knee aspiration
- Muscle strength
- Plaster placement
- Plaster removal
- Acute trauma
- Arthritis, inflammatory
- Arthritis, non-inflammatory
- Arthroplasty

- Osteoporosis
- Rheumatoid arthritis
- Sacroiliitis

Clinical Training VI (MED519) - Nervous System & Psychiatry

Description

Students shadow residents and consultants in departments of neurology, neurosurgery and psychiatry. They are assigned to patients, whom they follow from admission to discharge and act as attending physicians, under the supervision of their clinical instructors. The overall objective of this rotation is for students to familiarize with the responsibilities of physicians, including obtaining history, performing physical examination, performing differential diagnoses, proposing investigation and management plans, following patients' daily progress, participating in surgery, completing medical charts and discharging.

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.

- Intracraneal hypertension syndrome, cephalalgeas, vertiginous syndromes, cerebelar 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* 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.

Assessment

- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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, 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

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

- Cranial nerve examination
- Cerebellar tests
- Cerebrovascular event (stroke)
- Huntington's disease
- Intracranial hemorrhage
- Lower motor neuron disease
- Lumbar puncture
- Motor system examination
- Multiple sclerosis
- Neurological examination
- Parkinson's disease
- Peripheral neuropathy
- Sensory system examination
- Tendon reflexes
- Upper motor neuron disease
- Alcohol misuse screening
- Alcohol misuse / withdrawal
- Anxiety disorder
- Cognitive status assessment
- Dementia
- Depression
- Psychiatric history
- Psychosis
- Substance abuse
- Altered mental status
- Geriatric Issues
- Cognitive Impairment
- Falls, gait and balance problems
- Sensory impairments
- Sleep disorders

Clinical Training VII (MED510) - Pediatrics

Description

Students shadow residents and consultants in departments of pediatrics and pediatric surgery. They are assigned to patients, whom they follow from admission to discharge and act as attending physicians, under the supervision of their clinical instructors. The overall objective of this rotation is for students to familiarize with the responsibilities of physicians, including obtaining history, performing physical examination, performing differential diagnoses, proposing investigation and management plans, following patients' daily progress, participating in surgery, completing medical charts and discharging.

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:* 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.

Assessment

Grade Components

- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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

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

- Communication skills with children, adolescence and parents.
- Vaccines
- Developmental milestones in children
- Infant and child nutrition
- Breast feeding
- Fever and fever phobia
- Clinical examination of newborn and neonatal resuscitation
- Neonatal jaundice
- Skin rash in children
- Pediatric emergencies
- Seizures
- Dehydration – Acid base balance
- Urinary Tract Infection
- Acute gastroenteritis
- Gastrointestinal bleeding and Idiopathic inflammatory bowel disease
- Upper and lower respiratory tract Infections
- CNS Infections
- Antimicrobial drugs

- Tuberculosis
- Evaluation of full blood count and Iron deficiency anaemia
- Thalassemia, sickle cell anaemia and rare forms of anaemia
- Asthma
- Common kidney conditions
- Type I diabetes mellitus
- Short stature and hypothyroidism
- Arthritis in children
- Cervical lymphadenitis
- Malignant tumors
- Cardiology
- Common surgical problems
- Common ENT and eye problems
- Common orthopedic problems
- Behavioral disorders
- Genetics
- Cushing syndrome
- Adrenal Deficiency

Clinical Training VIII (MED520) - Dermatology

Description

Students shadow residents and consultants in departments of dermatology (including outpatient offices and clinics). They are assigned to patients, whom they follow from admission to discharge and act as attending physicians, under the supervision of their clinical instructors. The overall objective of this rotation is for students to familiarize with the responsibilities of physicians, including obtaining history, performing physical examination, performing differential diagnoses, proposing investigation and management plans, observing dermatological surgery, following patients' daily progress, completing medical charts and discharging.

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:* 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.

Assessment

Grade Components

- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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

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

- Acne
- Rosacea
- Hidradenitis suppurativa
- Psoriasis
- Papulosquamous and inflammatory disorders
- Severe cutaneous eruptions
- Sexually transmitted diseases
- Bacterial, Viral, Fungal, Parasitic infections of the skin
- Bullous diseases
- Skin lesion description
- Skin cancers and precancerous lesions
- Eczema-Dermatitis
- Major Pediatric Dermatologic diseases
- Genetic skin diseases
- Scalp, Hair, Nail disorders

Clinical Training IX (MED611) - Obstetrics & Gynecology

Description

Students shadow residents and consultants in departments of obstetrics and gynecology (including outpatient offices and clinics and maternity departments). They are assigned to patients, whom they follow from admission to discharge and act as attending physicians, under the supervision of their clinical instructors. The overall objective of this rotation is for students to familiarize with the responsibilities of physicians, including obtaining history, performing physical examination, delivery, proposing investigation and management plans, following patients' daily progress, completing medical charts and discharging.

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 gynecological 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:* 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.

Assessment

Grade Components

- *Medical knowledge* *50%*
- *Clinical & Communication skills* *40%*
- *Attendance & Professional behavior* *10%*

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.
- 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 - ntrapartum 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 (MED322)

Description

Students familiarize with the basic concepts of imaging methods and with their use in everyday clinical practice.

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:* 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.

Assessment

Grade Components

- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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 (MED428)

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:* 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.

Assessment

Grade Components

- *Medical Knowledge –(Subjective assessment by preceptors, attending, etc & OSCE)*

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 (MED631)

Description

Students familiarize with the essentials of primary care and its various levels of care, including primary prevention of illness, managing the patient and the healthy person, cooperation with other health and welfare services and with other specialists, visiting home care, long-term care, nursing homes.

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:* 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.

Assessment

Grade Components

- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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

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

- Acute abdominal pain
- Ascites
- Colostomy
- Diarrhea
- Functional disorder (irritable bowel syndrome, constipation, diarrhea)
- Gastroesophageal reflux disease (GERD)
- Hematemesis
- Hematochezia
- Hepatitis - Elevated liver enzymes (acute liver damage)
- Inflammatory bowel disease (Crohn's disease, Ulcerative colitis)
- Liver cirrhosis
- Pancreatitis
- Peptic ulcer disease
- Upper gastrointestinal bleeding
- Vomiting
- Anemia
- "B" symptomatology
- Bone marrow biopsy
- Idiopathic thrombopenic purpura / Thrombotic thrombopenic purpura
- Leukemia (AML, ALL, CML, CLL)
- Lymphadenopathy
- Multiple myeloma
- Myelodysplastic syndromes (MDS)

- Splenomegaly
- Thalassemia syndromes
- Abdominal pain
- Anemia
- Dyspepsia
- GI bleeding
- Irritable bowel
- Jaundice
- Weight loss

Clinical Training X (MED621) - Ophthalmology

Description

Students shadow residents and consultants in departments of ophthalmology (including outpatient offices and clinics and maternity departments). They are assigned to patients, whom they follow from admission to discharge and act as attending physicians, under the supervision of their clinical instructors. The overall objective of this rotation is for students to familiarize with the responsibilities of physicians, including obtaining history, performing physical examination, observing specialized diagnostic and invasive methods in ophthalmology, proposing investigation and management plans, following patients' daily progress, completing medical charts and discharging.

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:* 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.

Assessment

Grade Components

- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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

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

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

- Abdominal pain
- Altered mental status
- Anemia
- Back pain
- Chest pain
- Cough
- Chronic pain
- Dyspepsia
- Dyspnea
- Dysuria
- Fever
- Fluid, electrolyte, and acid-base disorders
- GI bleeding
- Hemoptysis
- Irritable bowel
- Jaundice
- Knee pain
- Rash
- Upper respiratory complaints
- Weight loss

C. Patients presenting with a known medical condition.

- Acute MI
- Acute renal failure and chronic kidney disease
- Asthma
- Common cancers
- COPD
- Diabetes mellitus
- Dyslipidemia
- CHF
- HIV
- Hypertension
- Inflammatory bowel disease
- Liver disease
- Nosocomial infection
- Obesity
- Peptic ulcer disease
- Pneumonia
- Skin and soft tissue infections
- Substance abuse
- Thyroid disease
- Venous thromboembolism
- Geriatric Issues
- Cognitive Impairment
- Osteoporosis
- Polypharmacy
- Incontinence
- Falls, gait and balance problems

- Failure to thrive
- Pressure ulcers
- Sensory impairments
- Sleep disorders
- Depression
- Pain
- Elder abuse and neglect
- End-of-life

Clinical Training XI (MED612) - Otorhinolaryngology

Description

Students shadow residents and consultants in departments of ENT (including outpatient offices and clinics). They are assigned to patients, whom they follow from admission to discharge and act as attending physicians, under the supervision of their clinical instructors. The overall objective of this rotation is for students to familiarize with the responsibilities of physicians, including obtaining history, performing physical examination, observing specialized diagnostic and invasive methods in otorhinolaryngology including surgery, proposing investigation and management plans, following patients' daily progress, completing medical charts and discharging.

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:* 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.

Assessment

Grade Components

- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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

A. The healthy patient: health promotion and education, disease prevention and screening.
B. Patients with a symptom, sign or abnormal laboratory value

- Abdominal pain
- Altered mental status

- Anemia
- Back pain
- Chest pain
- Cough
- Chronic pain
- Dyspepsia
- Dyspnea
- Dysuria
- Fever
- Fluid, electrolyte, and acid-base disorders
- GI bleeding
- Hemoptysis
- Irritable bowel
- Jaundice
- Knee pain
- Rash
- Upper respiratory complaints
- Weight loss

C. Patients presenting with a known medical condition.

- Acute MI
- Acute renal failure and chronic kidney disease
- Asthma
- Common cancers
- COPD
- Diabetes mellitus
- Dyslipidemia
- CHF
- HIV
- Hypertension
- Inflammatory bowel disease
- Liver disease
- Nosocomial infection
- Obesity
- Peptic ulcer disease
- Pneumonia
- Skin and soft tissue infections
- Substance abuse
- Thyroid disease
- Venous thromboembolism
- Geriatric Issues
- Cognitive Impairment
- Osteoporosis
- Polypharmacy
- Incontinence
- Falls, gait and balance problems
- Failure to thrive
- Pressure ulcers
- Sensory impairments
- Sleep disorders
- Depression
- Pain

- Elder abuse and neglect
- End-of-life

Clinical Training XII (MED622) - ER, Toxicology, Oncology & Palliative Care

Description
Students shadow residents and consultants in departments of accidents & emergency and oncology (including outpatient offices and clinics) and also visit palliative care settings. The overall objective of this rotation is for students to familiarize with the various structures involved and with the responsibilities of physicians, including practical and theoretical matters.

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:*** 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.

Assessment

Grade Components

- *Medical knowledge 50%*
- *Clinical & Communication skills 40%*
- *Attendance & Professional behavior 10%*

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

A. The healthy patient: health promotion and education, disease prevention and screening.
B. Patients with a symptom, sign or abnormal laboratory value

- Abdominal pain
- Altered mental status
- Anemia
- Back pain
- Chest pain
- Cough

- Chronic pain
- Dyspepsia
- Dyspnea
- Dysuria
- Fever
- Fluid, electrolyte, and acid-base disorders
- GI bleeding
- Hemoptysis
- Irritable bowel
- Jaundice
- Knee pain
- Rash
- Upper respiratory complaints
- Weight loss
- Patients presenting with a known medical condition.
- Acute MI
- Acute renal failure and chronic kidney disease
- Asthma
- Common cancers
- COPD
- Diabetes mellitus
- Dyslipidemia
- CHF
- HIV
- Hypertension
- Inflammatory bowel disease
- Liver disease
- Nosocomial infection
- Obesity
- Peptic ulcer disease
- Pneumonia
- Skin and soft tissue infections
- Substance abuse
- Thyroid disease
- Venous thromboembolism
- Geriatric Issues
- Cognitive Impairment
- Osteoporosis
- Polypharmacy
- Incontinence
- Falls, gait and balance problems
- Failure to thrive
- Pressure ulcers
- Sensory impairments
- Sleep disorders
- Depression
- Pain
- Elder abuse and neglect
- End-of-life

Additional Requirements

Medical Therapeutics (MED530)

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 (MED661)

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

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

Description

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

Description

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

Description

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 interpretate as a research team in a seminal manner
- The use of complex research data and use statistical anlysis 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

Description
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.

PART III

Clinical Centers and Affiliated Hospitals

EUC is committed to providing our students with a rich variety of experiences and opportunities for training. We have an outstanding and diverse group of affiliated clinical training sites, including Medical Centers and Hospitals, in Cyprus, Greece and Germany.

EUC Affiliation Agreements follow the guidelines established by the Cypriot Ministry of Health, European Union accreditation policy and the Association of American Medical Colleges affiliation agreement project.

The aim of the uniform agreement of EUC with each affiliated Medical Center is to provide consistency and standardized expectations for both parties, and ensure clinical training of EUC students at the highest level.

The Clinical Training Affiliation Agreement is shown in **Appendix X.**

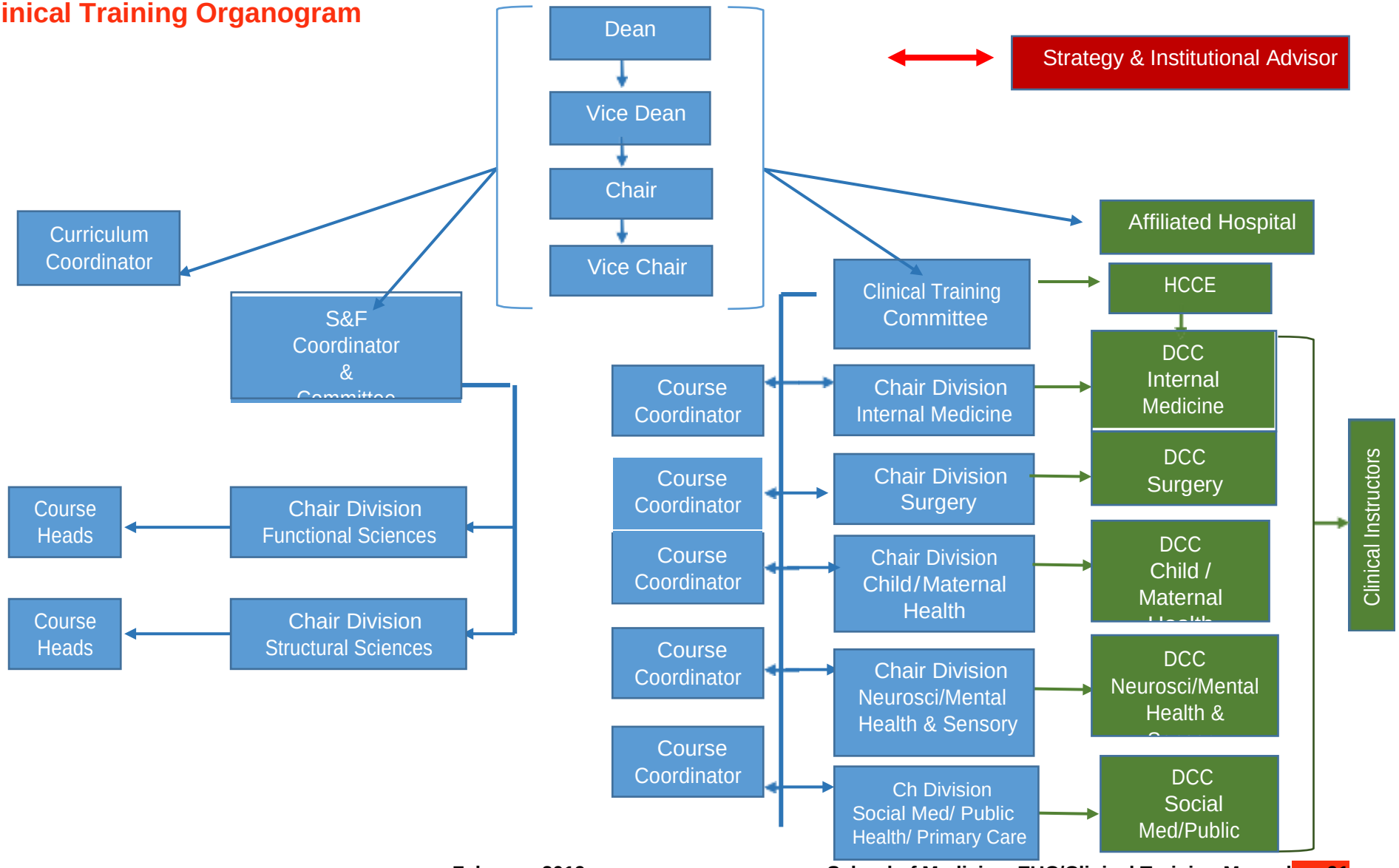
Affiliated Clinical Center or Hospital

- Location
- Description
- Link to web-site
- Teaching Staff (Curriculum Vitae) **(Appendix XI)**

PART IV

List of Appendices

APPENDIX I
Clinical Training Organogram



Roles & Responsibilities for Clinical Training

Responsibilities EUC

Clinical Training Committee (CTC)

1. 7-member Committee comprising the 5 Division Chairs and 2 voted members
2. Oversees the planning of clinical training for all years of study
3. Assists the Dean in recruiting and assigning academic and clinical faculty in clinical training
4. Are the liaison between the clinical training sites and the faculty responsible for academic program and course content (Chairs of Clinical Divisions and Course Coordinators)
5. Ensures optimal cooperation between all affiliated persons and sites
6. Ensure appropriate training of scientific (clinical) collaborators and clinical instructors
7. Ensures optimal function of clinical training courses across all years of study
8. Ensures an environment of safe collaboration between the School and affiliated healthcare sites
9. Assists the Dean in administrative, financial and other relevant obligations of the School of Medicine related to the clinical training
10. Ensures that the learning objectives outlined for clinical training are achieved
11. Ensures accurate, complete and objective student evaluation
12. Works in collaboration with the academic and hospital coordinators, to solve any issues that may arise up during clinical training
13. Oversees appropriate completion and evaluation of the logbooks

Clinical Training Advisors

1. Full-time faculty members 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.

Chairs of Clinical Divisions

1. Full-time senior faculty members (Associate or Full Professor) chair each clinical Division:
    - Internal Medicine
    - Surgery
    - Child & Maternal Health
    - Social Medicine
    - Neuroscience & Sensory Systems
2. Responsible for overall academic content and coordination of the courses taught in that division.
3. Work with head of each course (Course Coordinators) taught in that division
4. Oversee clinical program and rotations at each affiliated hospital
5. Ensure equality of training for EUC students across all clinical training sites.

Course Coordinators (CC)

1. Full- or Part- time faculty
2. Head of course taught in Division
3. Coordinate the instruction of individual courses by themselves and other full-time faculty and scientific / clinical collaborators (part-time teaching faculty)
4. Responsible for outlining teaching objectives and competencies for the course
5. Prepare Syllabi, Course Plans, Session Plans and relevant academic documentation
6. Prepare and oversee course exams and submit course grades

Responsibilities of Affiliated Hospital Teaching Staff

Hospital Coordinator of Clinical Education (HCCE)

1. Is the hospital administrator responsible for the EUC student program (including scheduling rotations, delineating holidays and vacation time, determining the scope of student activities, dealing with student concerns and being responsible for acute medical problems that students might develop)
2. Is the liaison with the School of Medicine
3. May receive formal appointments to the School of Medicine's faculty that are commensurate with their qualifications and duties
4. Is to supervise the clinical program and ensure its quality and its conformity with the University's guidelines as described in the CTMAA and the Faculty Handbook
5. Reviews the overall program with a Dean or Deputy Dean at the time of their visits to the hospital
6. Is a member of the Clinical Training Committee, the main advisory body to the Dean for the clinical terms

Department Clerkship Coordinator (DCC)

1. Is appointed for each core rotation in which EUC students participate at each affiliated hospital.
2. Is responsible administratively to the HCCE and academically to the appropriate Departmental chair and Division coordinator of EUC
3. Is responsible for checking that the students; logbooks are kept updated daily.
4. Grants permission for absences
5. Arranges for formative mid-core assessments of all students

Clinical Instructors (CI)

1. Teach students at the bedside
2. Assess students medical knowledge, clinical and communication skills and professional behavior
3. Serve as a role model
4. Notify CC if student is marginal

Appendix II
Student Clerkship Evaluation Form – Final

Students Name:

Clerkship:
Rotation Dates:
Course Name:

Submitted by:
Department Clerkship Coordinator (DCC):
Hospital Name:
Confirmed by HCCE:

Review of Logbook by DCC

Evaluator:

	Satisfactory	Unsatisfactory
Medical Knowledge	☐	☐
Clinical Skills	☐	☐
Communication Skills	☐	☐
Professional Behavior	☐	☐
Logbook Check	☐	☐

MiniCEX _____

Feedback

FINAL GUIDELINES ☐ **GRADE FOR EVALUATING STUDENTS**

Required Narrative Summary: This section enables the faculty to provide evaluative information qualifying the letter grade.

GRADES
Policy
The final grade in the clerkship represents a semi-quantitative average of five components. The first four reflect subjective faculty evaluations. Students should be evaluated based on the following:

1. **Medical Knowledge (50%)** – knowledge of basic, clinical and social sciences; the pathophysiology of disease; clinical signs, symptoms and abnormal laboratory findings associated with diseases and the mechanism of action of pharmaceuticals.
2. **Clinical & Communication Skills (40%)** – diagnostic decision making, case presentation, history and physical examination, communication and relationships with patients and colleagues, test interpretation and therapeutic decision making. Students must be observed and evaluated at the bedside. Communication skills as they relate to physician responsibilities, including communication with patients, families, colleagues, other health professionals and resolution of conflicts."
3. **Attendance & Professional Behavior (10%)** – their interaction with staff and patients, integrity, sensitivity to diversity and attendance.

Grading System:

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	

Appendix III
Individual Student Logbooks – Example Semester 8

Student name: **Student's Reg. No:**

COVER PAGE

SCHOOL OF MEDICINE

CLINICAL TRAINING LOGBOOK

MED408: Clinical Training III (Infectious Diseases and Clinical Microbiology)

MED418: Clinical Training IV (Endocrine System, Uro- Nephrological System and Male Genital Tract)

MED322: Diagnosis by Imaging

CLASS 2014/20: 4th YEAR MEDICAL STUDENTS

Academic Year 2017-18: Spring Semester 2018

OBJECTIVES

The clinical training program for MED408: Clinical Training III (Infectious Diseases and Clinical Microbiology), MED418: Clinical Training IV (Endocrine System, Uro- Nephrological System and Male Genital Tract) and MED322: Diagnosis by Imaging, is intended to provide essential knowledge, for medical students of EUC at the affiliated private and public training healthcare centers.

The **overall objective** is to enrich students with theoretical knowledge, practical skills and safety information about the relevant departments, including inpatient wards, interventional units, outpatient clinics and accidents & emergency departments, and to identify the roles and responsibilities of medical doctors, as well as the professional and clinical conduct in these settings.

Students must observe and *develop different clinical and communication skills and apply knowledge gained* from previous years in real-life clinical settings.

EVALUATION CRITERIA

All Clinical Training Courses in the EUC Medical School are evaluated based on a combination of examinations performed in the EUC campus and clinical performance in the clinical area. For joint clinical training fields, a *minimum 50% performance* is required in each subject area before the overall final degree can be calculated.

The **examination carries 70%** of all grade assigned by each instructor of the theoretical component (collaborator), of which 30% is during a formal midterm exam and 40% is assigned in a final exam, including OSCE assessment. The **clinical performance carries 30%** of all grade, of which 10% is assigned based on the attendance reports and 20% is based on logbook recording of each student's clinical merit throughout the semester.

Note. you are required to *submit the completed logbook upon conclusion of your clinical rotations* at the end of the semester. Any delay or lack of compliance will lead to grade deduction and/or course failure.

GUIDE FOR STUDENTS

This logbook is a comprehensive training guide for your clinical rotation. Attendance is mandatory at all assigned clinical departments times and within the designated timeframe. Accurate completion is required, to provide sufficient evidence regarding the extent of your training and achieved level of competence.
For academic matters, please contact the Academic Contact Person of the respective hospital. In case of clinical issues, please contact the Hospital Coordinator of the respective hospital, as designated in page 3.

Professional Standards
During your clinical rotation, you should at all times:

- Demonstrate respectful and courteous behavior towards patients, chaperons and colleagues.
- Maintain patient confidentiality.
- Comply with hospital policy and procedure and adhere to the School's Code of Conduct.
- Work with enthusiasm and take advantage of all learning opportunities.

Professional Appearance
Students must wear the school dress and the school ID badge must be worn and remain visible at all times. Footwear must enclose the foot with heels < 5cm. Single piercing jewelry limited to the ears and one small stud in the nose are permitted. Rings or other jewelry are strongly discouraged (wedding bands are acceptable). Hair longer than shoulder length should be tied back or contained in net. Facial makeup should be subtle and kept to a minimum. No artificial nails. Fingernails should be kept short (<0.5 cm long). No caps/hats, unless part of required uniform or for religious purposes.

Signatures
The School of Medicine of EUC considers falsification of signatures to be an unprofessional act of forgery. Any suspicion of falsification of signatures within the logbooks will be further investigated. If you experience difficulty in obtaining needed signatures, please discuss the issue with the hospital coordinator at the site of your placement, and also complete the self-reflection diary accordingly. The faculty of the School of Medicine is always willing to provide support.

Parts B, C & D. Patient assignment, History, Physical examination, Clinical skills, Essential course content
All students should be exposed to as many clinical situations as possible. Students assist doctors and prepare for the acquisition of the duties of a resident. You should record your attendance and involvement (as determined by the clinical instructor) in key clinical experiences, and ask the clinical instructor to sign the entry. You are expected to follow up at least one patient every week from admission to discharge. Together with the supervising doctor, you record admission data, perform physical examination, evaluate laboratory and imaging findings, pose a diagnostic path, assess and prioritize the different problems of the patient, discuss about further diagnostic and therapeutic choices, present the patient during clinical rounds, update the daily report, and assist in the preparation of discharge documentations (patient confidentiality at all times is preserved). You follow your patients daily, are fully informed of the patients' progress and actively participate with your team members in the performance of various practical skills.
Please note the following:

- grades will be *not* be assigned if the fields are not completed as requested.
- signing any of the skills or clinical conditions confirms that you have gained sufficient theoretical and/or practical knowledge for official evaluation.

Part E. Mini Clinical Evaluation Examination form (mini-CEX)
The miniCEX is a 15-minute snapshot of how you interact with patients. You are requested to perform this procedure at least once in each discipline, under the supervision of your clinical

instructor. Request from one of the supervising clinical Instructors to complete and sign accordingly.

Part F. Self-reflection diary
You must ensure that feedback is completed for all weeks and departments of clinical rotation.

GUIDE FOR CLINICAL INSTRUCTORS AND LEARNING PRIORITIES

Student Attendance and Evaluation
Attendance is mandatory for students and the clinical instructor signs the attendance sheet (Part A) of every student routinely. Actions performed by the student, as described below, are also signed by the clinical instructor. The role of the clinical instructor is also essential in the final assessment and evaluation of every student that has rotated through their department.

Part B. Patient assignment
Each student is expected to follow at least one patient every week from admission to discharge, as presented in Part B. Patient assignment/Resident shadowing. When you are satisfied that the student has reached a competent standard, you should complete and sign the relevant entry.

Parts C & D. History, Physical examination, Clinical skills, Essential course content
Students should be exposed to competencies and trained on clinical skills to a maximum possible degree, as described in Part C. History, Physical examination, Clinical skills. In addition, students should exhibit competence level in situations commonly encountered in the different clinical departments, as described in Part D. Essential course content. Please rate student level according to the following scale and sign: O:observed (not performed), 1.exceptional, 2.satisfactory, 3.average, 4.needs improvement, 5.unsatisfactory.

Part E. Mini Clinical Evaluation Examination form (mini-CEX)
The miniCEX is a 15-minute snapshot of how students interact with patients. Students should perform this at least once in each clinical discipline, under your supervision, which you are kindly requested to complete and sign.

Feedback
You will be asked to complete a prepared feedback form at the end of the clinical rotations period.

LEARNING PRIORITIES OF MED408, MED418 & MED322

Based on the theoretical and practical background of our students and according to the school syllabus, clinical training should focus on the following skills and clinical content:

Infectious diseases and Clinical microbiology:

- Clinical examination, including recognition of common signs of infectious diseases: fever, systematic symptoms, SIRS criteria and the sepsis continuum, upper and lower respiratory tract symptoms, diarrhea, arthritis, rash
- Common infectious disorders (see Part D): recognition, evaluation, diagnosis, management
- Common community-acquired and healthcare-associated infections
- History taking and focus on infection characteristics, risk factors, travel, social, occupational history
- Systematic inflammatory response assessment and management

Endocrinology:

- Clinical examination, including recognition of common signs of endocrine diseases: weight changes, mood changes, hypotension/hypertension, skin disorders, organ dysfunction, etc
- Common endocrine disorders (see Part D): screening, recognition, evaluation, diagnosis, management
- History taking and focus on endocrine diseases and metabolism: risk factors, family history, social history
- Investigation, evaluation and management of common endocrine/metabolic disorders

Nephrology:

- Clinical examination, including recognition of common signs of renal diseases: edema, hypotension/hypertension, mental status changes, rash, weight loss, etc
- Common renal disorders (see Part D): recognition, evaluation, diagnosis, management
- History taking and focus on renal diseases, inflammatory disorders and electrolyte imbalances: past medical history, risk factors, exposures, family history, social history
- Investigation, evaluation and management of common renal disorders
- Evaluation and management of the patient with end-stage renal disease

Urology/Male genital system:

- Clinical examination, including recognition of common signs of urological diseases: urinary colic, urine retention, hematuria, erectile dysfunction etc
- Common urological disorders (see Part D): recognition, evaluation, diagnosis, surgical & medical management
- History taking and focus on diseases of the male genital tract: past medical history, risk factors, exposures, family history, social history
- Investigation, evaluation and management of common disorders of the male genital tract
- Evaluation and management of the patient with urological disease

Medical imaging:

- Familiarization with basic imaging practices (see Part D): abdominal ultrasound, breast imaging, chest imaging, interventional Radiology, radiological radiation exposure & safety
- Basic interpretation of common imaging modalities: chest x-ray, abdominal ultrasound, abdominal CT, chest CT

SAFETY MEASURES FOR MEDICAL STUDENTS

It is important to follow indicated measures for personal and patient safety at all times during your clinical rotations. When concerned over a safety issue or an incident, contact immediately your clinical instructor or supervisor. In cases of personal safety issues, such as injury or exposure, you should also contact immediately the Faculty of the School of Medicine.

Vaccination
Students should be immunized according to the University immunization agreement.

Hand hygiene and isolation precautions
1. Standard precautions and Hand hygiene are performed before and after contact with all patients. Indications and technique for hand hygiene follow the World Health Organization guidelines.
2. Isolation precautions, personal protective equipment are additional measures that depend on the risk of transmission between patients and healthcare personnel (i.e. contact, droplet, and airborne precautions).
3. Gloves are worn for invasive procedures, contact with non-intact skin, mucous membranes, or sterile sites, and at all activities that carry risk of exposure to body fluids or contaminated instruments.

Safe use and disposal of sharps
Incidents with sharps injuries can be prevented with basic practices:

- Do not pass sharps directly from hand to hand.
- Do not break or bend needle.
- Do not attempt to replace cap.
- Always discard in appropriate sharps container immediately after use. Container should be kept within arms' length during use.

PART A. ATTENDANCE REGISTRY

For each day of clinical training, please record your arrival and departure time and request from one of the supervising Clinical Instructors to **sign your logbook at the end of each day.**

Clinical Instructors are requested sign your attendance at the end of each day					
	DATE	**WARD**	**Arrival Time**	**Depart.Time**	**C.I Stamp & Signature**
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Clinical Instructors are requested sign your attendance at the end of each day					
	DATE	**WARD**	**Arrival Time**	**Depart.Time**	**C.I Stamp & Signature**
31					
32					
33					
34					
35					
36					
37					
38					
39					

ACCIDENTS & EMERGENCY SHIFT ATTENDANCE REGISTRY

For each day of A&E practice, please record your arrival and departure time and request from one of the supervising Clinical Instructors to sign your logbook **at the end of each day.**

Clinical Instructors are requested sign your attendance at the end of each day						
	DATE	**A&E Placement**	**C.I. Name**	**Arrival Time**	**Departure Time**	**C.I Stamp & Signature**
1						
2						
3						
4						
5						
6						

PART B. PATIENT ASSIGNMENT / RESIDENT SHADOWING (at least 1 case/week)

	DATES	WARD	Assigned Patient Code and Condition	C.I Stamp & Signature
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				

	DATES	WARD	Assigned Patient Code and Condition	C.I Stamp & Signature
18				
19				
20				
21				
22				
23				

PART C. HISTORY, PHYSICAL EXAMINATION, CLINICAL SKILLS

For each field below, the C.I. must confirm the performance of each of the following skills, using the following scale:

O: observed (not performed), 1.exceptional, 2.satisfactory, 3.average, 4.needs improvement, 5.unsatisfactory.

Note 1: grades will be **not** be assigned if the fields are not completed as requested.

Note 2: signing any of the clinical conditions below confirms that the respective student has gained sufficient theoretical and/or practical knowledge for official evaluation.

Clinical Skill	Performance & CI initials I	Performance & CI initials II	Performance & CI initials III	Performance & CI initials IV	Performance & CI initials V
History, patient file and physical examination					
History taking					
Perform differential diagnosis					
Present case orally					
Evaluate laboratory findings					
Write a referral to another specialty					
Write a discharge note					
Complete blood test form					
Perform and interpret electrocardiogram					
Perform full physical examination					
Perform Head/Eyes/Ear/Nose/Throat examination					
Perform neurological examination					
Endocrine system					
Obtain and interpret blood sugar					
Interpret an oral glucose tolerance test					
Interpret abnormal thyroid tests					
Patient with dyslipidemia (any)					
Interpret a bone densitometry test (eg.DEXA)					
Infectious Diseases / Clinical Microbiology					
Diagnostic tests: Sampling, transfer & preparation of					

Clinical Skill	Performance & CI initials I	Performance & CI initials II	Performance & CI initials III	Performance & CI initials IV	Performance & CI initials V
specimens, Microbial culture, Gram-stain, Microscopy					
Recognize and interpret different antibiograms					
Recognize methods applied to detect resistance mechanisms					
Follow-up on cultures and their correlation to the patient's condition					
Basic infection prevention & control measures					
Patient with upper respiratory tract infection					
Patient with lower respiratory tract infection					
Immunosuppressed patient with infection					
Urinary tract infection					
Central nervous system infection					
Nosocomial infection definitions					
Nephrology					
Calculate and interpret creatinine clearance					
Urine sediment microscopy					
Patient in hemodialysis					
Kidney biopsy					
Patient with fistula					
Radiology					
Interpretation of chest x-ray					
Basic interpretation of abdominal ultrasound					
Basic interpretation of abdominal CT					
Basic interpretation of chest CT					
Urology					
Patient with urinary colic					

Clinical Skill	Performance & CI initials I	Performance & CI initials II	Performance & CI initials III	Performance & CI initials IV	Performance & CI initials V
Patient with kidney stone disease					
Lithotripsy					
Prostate examination					
Prostate biopsy					
Urine retention					
Urethral catheterization (male & female)					
Performance of procedures (alphabetical order)					
Arterial blood gases					
Blood culture					
Blood glucose examination using finger stick					
Hand washing (including surgical scrubbing)					
Injection of intramuscular drug					
Injection of intravenous drug					
Nasogastric tube placement					
Oxygen supplementation					
Peripheral venous catheter placement					
Rectal examination					
Respiratory secretions culture					
Setting up syringe driver					
Skin suturing					
Skin swabs for bacterial, fungi and viral culture					
Subcutaneous injections					
Suction of respiratory secretions					
Swabs from nose, throat and skin					
Urinary catheter insertion, female					
Urinary catheter insertion, male					
Urinary catheter removal					
Urine assessment. Mid-stream urine					
Urinalysis using urine stick					
Vein puncture and blood drawing					
Wound care and basic wound dressing					

Clinical Skill	Performance & CI initials I	Performance & CI initials II	Performance & CI initials III	Performance & CI initials IV	Performance & CI initials V

PART D. ESSENTIAL COURSE CONTENT

For each section, the clinical instructors must confirm the maximum competence level reached by assigning the following indication using the following scale and sign:

O: observed (not performed), 1.exceptional, 2.satisfactory, 3.average, 4.needs improvement, 5.unsatisfactory.

Note 1: grades will be **not** be assigned if the fields are not completed as requested.

Note 2: signing any of the clinical conditions below confirms that the respective student has gained sufficient theoretical and/or practical knowledge for official evaluation.

INFECTIOUS DISEASES / CLINICAL MICROBIOLOGY (MED408)

CORE AREA	PERFORMANCE & COMMENTS
Applied antimicrobial stewardship principles	
Bloodstream infection	
Community-acquired infection (any)	
Immunosuppression and infection	
Pneumonia	
Skin & soft tissue infection	
Surgical site infection	

Clinical Instructor 1 (sign): **Clinical Instructor 2 (sign):**

ENDOCRINE SYSTEM (MED418)

CORE AREA	PERFORMANCE & COMMENTS
Diabetes mellitus	
Hyperthyroidism	
Hypothyroidism	
Lipid disorders	
Osteoporosis / Metabolic bone disease	
Surgical treatment of thyroid disease	

Clinical Instructor 1 (sign): **Clinical Instructor 2 (sign):**

UROLOGICAL SYSTEM AND MALE GENITAL TRACT (MED418)

CORE AREA	PERFORMANCE & COMMENTS
Kidney stone disease	
Male subfertility	
Obstructive uropathy	
Prostate cancer	
Prostate hypertrophy	

Clinical Instructor 1 (sign): **Clinical Instructor 2 (sign):**

NEPHROLOGICAL SYSTEM (MED418)

CORE AREA	PERFORMANCE & COMMENTS
Acute renal failure	
Glomerulonephritis (any)	
Hemodialysis	
Kidney transplantation	
Kidney vasculitis (any)	

Clinical Instructor 1 (sign): **Clinical Instructor 2 (sign):**

RADIOLOGY (MED322)

CORE AREA	PERFORMANCE & COMMENTS
Abdominal Ultrasound	
Basic view box images – normal and abnormal	
Breast imaging	
Chest imaging	
Interventional Radiology	
Radiological radiation, exposure & safety	

Clinical Instructor 1 (sign): **Clinical Instructor 2 (sign):**

PART E1. mini-Clinical evaluation exercise (mini-CEX)

The miniCEX is a 15-minute snapshot of how you interact with patients. You are requested to perform this procedure at least once in each discipline, under the supervision of your clinical instructor. Request from one of the supervising clinical Instructors to complete and sign accordingly.

Discipline: <u>Endocrinology</u>

Clinical department: **Date:** **Clinical instructor Stamp:**

Brief summary of case:

Please score the student on the scale shown. Note that your scoring should reflect the performance of the trainee against that which you would reasonably expect at their year of training and level of experience.

Well below expectation for stage of training	Below expectation for stage of training	Borderline for stage of training	Meets expectations for stage of training	Above expectations for stage of training	Well above expectations for stage of training	Unable to comment
Medical Interviewing Skills:						
Physical Examination Skills:						
Counselling and Communications Skills:						
Clinical Judgement:						
Consideration for Patient/Professionalism:						
Organisation/Efficiency:						

Based on the above, rate the level of overall competence the student has shown:

…… Below level expected for stage of training (Basic consultation skills resulting in complete history and/or examination findings. Limited clinical judgement following encounter)

…… Performed at the level expected for stage of training (Sound consultation skills resulting in adequate history and/or examination findings. Basic clinical judgement following encounter)

…… Performed above the level expected for stage of training (Good consultation skills resulting in a sound history, and/or examination findings. Solid clinical judgement following encounter consistent stage of training)

…… Performed at the level expected of a graduate (Excellent and timely consultation skills resulting in a comprehensive history and/or examination findings in a complex or difficult situation. Good clinical judgement following encounter)

Which aspects of the encounter were done well:

Suggestions for development:

PART E2. mini-Clinical evaluation exercise (mini-CEX)

The miniCEX is a 15-minute snapshot of how you interact with patients. You are requested to perform this procedure at least once in each discipline, under the supervision of your clinical instructor. Request from one of the supervising clinical Instructors to complete and sign accordingly.

Discipline: Infectious diseases

Clinical department: **Date:** **Clinical instructor Stamp:**

Brief summary of case:

Please score the student on the scale shown. Note that your scoring should reflect the performance of the trainee against that which you would reasonably expect at their year of training and level of experience.

Well below expectation for stage of training	Below expectation for stage of training	Borderline for stage of training	Meets expectations for stage of training	Above expectations for stage of training	Well above expectations for stage of training	Unable to comment
Medical Interviewing Skills:						
Physical Examination Skills:						
Counselling and Communications Skills:						
Clinical Judgement:						
Consideration for Patient/Professionalism:						
Organisation/Efficiency:						

Based on the above, rate the level of overall competence the student has shown:

…… Below level expected for stage of training (Basic consultation skills resulting in complete history and/or examination findings. Limited clinical judgement following encounter)

…… Performed at the level expected for stage of training (Sound consultation skills resulting in adequate history and/or examination findings. Basic clinical judgement following encounter)

…… Performed above the level expected for stage of training (Good consultation skills resulting in a sound history, and/or examination findings. Solid clinical judgement following encounter consistent stage of training)

…… Performed at the level expected of a graduate (Excellent and timely consultation skills resulting in a comprehensive history and/or examination findings in a complex or difficult situation. Good clinical judgement following encounter)

Which aspects of the encounter were done well:

Suggestions for development:

PART E3. mini-Clinical evaluation exercise (mini-CEX)

The miniCEX is a 15-minute snapshot of how you interact with patients. You are requested to perform this procedure at least once in each discipline, under the supervision of your clinical instructor. Request from one of the supervising clinical Instructors to complete and sign accordingly.

Discipline: Nephrology

Clinical department: **Date:** **Clinical instructor Stamp:**

Brief summary of case:

Please score the student on the scale shown. Note that your scoring should reflect the performance of the trainee against that which you would reasonably expect at their year of training and level of experience.

Well below expectation for stage of training	Below expectation for stage of training	Borderline for stage of training	Meets expectations for stage of training	Above expectations for stage of training	Well above expectations for stage of training	Unable to comment
Medical Interviewing Skills:						
Physical Examination Skills:						
Counselling and Communications Skills:						
Clinical Judgement:						
Consideration for Patient/Professionalism:						
Organisation/Efficiency:						

Based on the above, rate the level of overall competence the student has shown:

…… Below level expected for stage of training (Basic consultation skills resulting in complete history and/or examination findings. Limited clinical judgement following encounter)

…… Performed at the level expected for stage of training (Sound consultation skills resulting in adequate history and/or examination findings. Basic clinical judgement following encounter)

…… Performed above the level expected for stage of training (Good consultation skills resulting in a sound history, and/or examination findings. Solid clinical judgement following encounter consistent stage of training)

…… Performed at the level expected of a graduate (Excellent and timely consultation skills resulting in a comprehensive history and/or examination findings in a complex or difficult situation. Good clinical judgement following encounter)

Which aspects of the encounter were done well:

Suggestions for development:

PART E4. mini-Clinical evaluation exercise (mini-CEX)

The miniCEX is a 15-minute snapshot of how you interact with patients. You are requested to perform this procedure at least once in each discipline, under the supervision of your clinical instructor. Request from one of the supervising clinical Instructors to complete and sign accordingly.

Discipline: <u>Urology</u>

Clinical department: Date: Clinical instructor Stamp:

Brief summary of case:

Please score the student on the scale shown. Note that your scoring should reflect the performance of the trainee against that which you would reasonably expect at their year of training and level of experience.

Well below expectation for stage of training	Below expectation for stage of training	Borderline for stage of training	Meets expectations for stage of training	Above expectations for stage of training	Well above expectations for stage of training	Unable to comment
Medical Interviewing Skills:						
Physical Examination Skills:						
Counselling and Communications Skills:						
Clinical Judgement:						
Consideration for Patient/Professionalism:						
Organisation/Efficiency:						

Based on the above, rate the level of overall competence the student has shown:

…… Below level expected for stage of training (Basic consultation skills resulting in complete history and/or examination findings. Limited clinical judgement following encounter)

…… Performed at the level expected for stage of training (Sound consultation skills resulting in adequate history and/or examination findings. Basic clinical judgement following encounter)

…… Performed above the level expected for stage of training (Good consultation skills resulting in a sound history, and/or examination findings. Solid clinical judgement following encounter consistent stage of training)

…… Performed at the level expected of a graduate (Excellent and timely consultation skills resulting in a comprehensive history and/or examination findings in a complex or difficult situation. Good clinical judgement following encounter)

Which aspects of the encounter were done well:

Suggestions for development:

PART F. SELF REFLECTION DIARY

You are encouraged to record your concerns and suggestions. Please provide any positive or negative remarks regarding your clinical training. Your feedback is valuable to help improve the clinical teaching, but it will *not* affect your grading. In addition to this diary, you will be requested to complete a confidential feedback form upon conclusion of your rotations.

	WARD	Strengths	Weaknesses	Suggestions for Improvement

	WARD	Strengths	Weaknesses	Suggestions for Improvement

Appendix IV
Clinical Practice Incidence Report Form

Any incident regarding breach of safety issues, health and safety exposure of a student of EUC, professional misconduct or violation of occupational rules should be directly communicated to the Clinical instructor, Department Clinical Coordinator and/or Hospital Coordinator of Clinical Education (HCCE), as well as to the Clinical Training Committee (CTC) either directly or through the EUC Health and Safety Officer.

The following form should be completed by involved students and submitted to the CTC of the School of Medicine, EUC.

Date: **Department / Placement:**

Involved student/s:

Other involved individuals:

Event description:

Actions taken – Persons informed:

Student/s signature:

For administration use (CTC response):

Appendix V
Health Requirements for Clinical Rotation

Students need to have all mandatory health requirements completed, documented and cleared, before they can start their clinical rotation. Students must send all documents to the office of the Clinical Training Committee, Eva Charalambous, Administrator at E.Charalambous@euc.ac.cy.

EUC health requirements include:

TB SCREENING AND IMMUNIZATION RECORD

A. TUBERCULOSIS SCREENING
Screening consists of a 2-step skin PPD test or an interferon gamma release assay blood test, e.g. QuantiFERON - TB Gold within 1 year prior to the start of their rotation.

B. MANDATORY IMMUNIZATIONS

1. Measles, mumps, rubella

Students are required to submit either a history of 2 doses of MMR (measles, mumps, rubella) vaccination or laboratory copies of sufficient serum IgG titers for measles, mumps, and rubella. If any of the serum IgG titers indicated non- immunity, students must submit evidence of a MMR vaccination obtained after the non-immune titer date.

2. Hepatitis B

Completion of the hepatitis B series (3 vaccinations) is a mandatory requirement. Students need to submit the dates of vaccination and the results of a serum hepatitis B surface antibody test obtained after the series was completed. If the hepatitis B titer result indicates non-immunity, students should submit proof of one additional vaccine after the titer result date. Students should also check with their personal physician who may advise further vaccines and titers.

3. Tdap vaccination within ten years is mandatory

C. ADDITIONAL VACCINATIONS
Depending on the clinical training site, students might also need to review the health form recommendations for other vaccinations (eg. polio, hepatitis A, varicella zoster, influenza).

D. ANNUAL REQUIREMENTS
After starting clinical training, and to continue, students will be required to submit the following on an annual basis:

1. Tuberculosis screening (as described above)
2. Any changes in their immunization history.

Appendix VI

Confidential Student Feedback and Comments Form

CLINICAL TRAINING _____
STUDENT CONFIDENTIAL FEEDBACK AND COMMENTS
Course code
Semester - Year

Dear colleague,

We would like to thank you for your time to complete this feedback form. This is an *anonymous and confidential* form and will only be used by the Faculty of the School of Medicine, European University Cyprus. We ask from you to add any comments that you believe might be of significance, concerning each department of your rotation. Your contribution will help us improve the content and quality of the clinical rotations program.
This feedback form has two parts. The first is a table that we ask from you to complete; the second part concerns comments and suggestions that you may have.

In the following table, please complete each parameter using a scale from 1-5 for each department:
1.Strongly agree. **2**.Agree. **3**.Neutral. **4**.Disagree. **5**.Strongly disagree.

	Department content was educational	**Clinical instructors showed interest in student training**	**Clinical instructors' use of English was sufficient**	**Duration of rotation was longer than necessary / Number of visits were more than necessary**
Department A				
Department B				
Department C				

Comments: Please add any comments that you may have and believe that will help us improve the clinical training during the upcoming semesters. These comments may concern the clinical rotations program in general, or specific departments.

Appendix VII
Clinical Competence Building Roadmap

Year	Knowledge	Attitude	Skills	Milestone	Deliverables
1	Structure and function – human body in health	Introduction to patient-doctor relationship Health and safety	Hand hygiene Glove use/disposal Initiating medical interview Vital signs Multicultural and interdiscplinary communication	Graded mpr101 course – first clinical orientation visit plus ward simulation workshops	-year 1 logbook -recorded video sessions on interdisciplinary communication -written assessment on clinical communication problems
2	Structure and function – human body in health and structured approach to the patient (transition year)	Dealing with conflict/anger Working with teams Recognizing opportunities for prevention and health promotion	Nutritional screening History taking Ecg recording Physical examination of a healthy patient Venous blood sampling Iv catheterization Abgs Sc/im injections Mantoux test	First clinical placement in primary care in semester 3 / First formative osce in semester 4	-year 2 logbook -recorded video sessions on team work and history taking -10 completed history and examination sets
3	Structure and function – human body in disease	Breaking the news Passing information	Suturing Wound care Iv/io placement Ngt/peg insertion U/c placement Intubation/airway management Recognizing abnormal signs/symptoms Performing basic differential diagnosis	Formative and summative osce in each semester Optional certification in bls	-year 3 logbook -recorded video sessions on complete primary/secondary assessment stations

4	Core clinical competences – adults	Triage / assessing patient severity Conducting a structured clinical approach (from history to treatment) Managing intimate examinations Using decision support algorithms and scores	Diagnosis and treatment: cardiovascular / respiratory / gi / blood and lymphatics / urinary and endocrine system Obtaining cultures Appropriate choice and interpretation of common imaging modalities	Opportunity for elective clinical rotations in coooperating hospitals abroad	-year 4 logbook -use of mini cex and dops as assessment tools in the clinics (wpba)
5	Core clinical competences – mental and child services	Clinical approach to non cooperative patients (minors, mental disability) Bioethical considerations	Diagnosis and treatment: musculoskeletal / nervous system and skin, mental and children's health		-year 5 logbook -use of mini cex and dops as assessment tools in the clinics (wpba)
6	Core clinical competences – mother health and emergencies	Multicultural approach to care Dealing with disability (sensory/motor/cognitive) Breaking the news (death / cancer / toxic agent use / abortion / stillbirth) Working in teams in stressful conditions (crisis management)	Diagnosis and treament: Reproductive system, eye and ent conditions, poisonings and emergencies Observation of advanced skills (lp, cvc, chest tube, biopsy)	Clinical elective Free electives in both semesters with a potential research direction Eligibility for als/ atls / phtls accreditation Usmle exam (to practice in usa)	-year 6 logbook -lpa assessment -use of mini cex and dops as assessment tools in the clinics (wpba) -completion of individual portfolio for residency applications -graduation / issue of medical license

Appendix VIII
Student Confidence in Performing Practical and Clinical Skills Questionnaire

Understanding student confidence in performing practical and clinical skills. 4th Year students, May 2017.

This is an anonymous questionnaire prepared by the clinical training coordinators of the School of Medicine of EUC.
Our aim is to understand your confidence in performing practical and clinical skills and to improve the quality of your training. All personal information will be kept confidential. Results of this questionnaire won't be used for personal or promotional purposes.
Completion of this questionnaire requires less than 5 minutes.
Thank you in advance for your contribution.

*Required

1. Gender *

Mark only one oval.

- ◯ Male
- ◯ Female

Please answer the following questions based on "How confident do you feel..." performing the following actions, on a scale from 1 to 5, where:

1 = Not confident at all
2 = Mostly Not confident
3 = Not sure - Average confident
4 = Mostly confident
5 = Totally confident

2. 1 ...Communicating with a patient who presents acutely with a complaint *

Mark only one oval.

- Not confident at all
- Mostly Not confident
- Not sure - Average confident
- Mostly confident
- Totally confident

3. 2 ...Obtaining a full medical history of a patient who presents acutely with a complaint. *

Mark only one oval.

- Not confident at all
- Mostly Not confident
- Not sure - Average confident
- Mostly confident
- Totally confident

4. 3 ...Performing a full respiratory examination on a patient with a respiratory problem. *

Mark only one oval.

- Not confident at all
- Mostly Not confident
- Not sure - Average confident
- Mostly confident
- Totally confident

5. 4 ...Performing a full cardiovascular examination on a patient with a cardiovascular problem. *

Mark only one oval.

- Not confident at all
- Mostly Not confident
- Not sure - Average confident
- Mostly confident
- Totally confident

6. 5 ...Performing a full neurological examination on a patient with a neurological problem. *

Mark only one oval.

- Not confident at all
- Mostly Not confident
- Not sure - Average confident
- Mostly confident
- Totally confident

7. 6 ...Performing differential diagnosis in a patient who presents with one or more symptoms. *

Mark only one oval.

- Not confident at all
- Mostly Not confident
- Not sure - Average confident
- Mostly confident
- Totally confident

8. 7 ...Proposing an investigation plan in a patient who presents with one or more symptoms. *

Mark only one oval.

- Not confident at all
- Mostly Not confident
- Not sure - Average confident
- Mostly confident
- Totally confident

9. 8 ...Successfully placing a peripheral vein catheter in a patient. *

Mark only one oval.

- Not confident at all
- Mostly Not confident
- Not sure - Average confident
- Mostly confident
- Totally confident

10. 9 ...Successfully placing a urinary catheter in a patient. *

Mark only one oval.

- Not confident at all
- Mostly Not confident
- Not sure - Average confident
- Mostly confident
- Totally confident

11. 10 ...Successfully obtaining arterial blood gases from a patient. *

Mark only one oval.

- Not confident at all
- Mostly Not confident
- Not sure - Average confident
- Mostly confident
- Totally confident

Appendix IX
Comprehensive Clinical Competency Assessment - OSCEs

EUC School of Medicine approves all students for graduation who have successfully completed the curriculum. Students who have not who have not developed clinical skill competencies required for graduation are required to undergo remediation and pass a comprehensive clinical skill examination.

A comprehensive clinical competency assessment is designed for graduation purposes and includes a rigorous assessment of the clinical skills of senior medical students. It assesses the candidate's capacity to take a history, conduct a physical examination, select and interpret investigational data, formulate diagnostic and management plans, communicate effectively with patients, relatives and other health workers, and prescribe medicines safely and accurately.

Structure
The exam is a 12-station OSCE examination in clinical skills, which is administered by a team of examiners at each site, over a period of three hours and thus requires a single morning or afternoon for every 12 applicants. Details of the OSCE examination will be provided by EUC coordinators.

Format
The OSCE stations are designed to assess the proficiency of candidates in the fundamental skills acquired during their five core clinical rotations;

- taking a history in Medicine, Psychiatry, Pediatrics, Obstetrics & Gynecology
- performing a physical examination of the cardiovascular, respiratory, abdominal and neurological systems
- performing a physical assessment of a surgical patient
- completing an exercise in physical diagnosis by interpreting the history, examination and investigational data findings in an integrated case
- communicating a specific issue to a patient or relative against the background of an ethical dilemma
- ordering or prescribing medicines accurately and safely in a defined clinical scenario

Attributes and attitudes The aim of undergraduate medical education is to develop postgraduate trainees who possess attributes and attitudes that will ensure they are initially competent to practice safely and effectively and have the basis for further training in any branch of medicine and for lifelong learning. Attributes should be developed to an appropriate level for the graduate's stage of training.

Clinical skills and professional behavior
In terms of clinical skills assessment the attributes and attitudes defined as outcome objectives in the MD Program are listed below:

Assessment in the exam
In light of the outcome objectives outlined above each station is utilized to assess candidates and allocate marks according to the following criteria:

History taking

- interpersonal and communications skills
- ability to direct and adjust questioning
- ability to obtain pertinent facts
- clinical reasoning in relation to diagnosis and management

Physical examination

- interpersonal skills
- examination technique
- ability to elicit and demonstrate physical signs
- ability to interpret the examination findings and form a differential diagnosis and management plan

Communication skills

- initiating the consultation and information gathering
- providing information that is understandable and appropriate
- ability to direct, negotiate and adjust the consultation
- ability to build a relationship and show empathy

Integrated case

- ability to identify key issues in the history
- ability to seek for specific examination findings
- ability to interpret electrocardiograms, radiological images, functional data, hematology and biochemical results with appropriate management

Safe prescribing

- ability to complete all aspects of a drug chart accurately and legibly
- ability to prescribe correct dose, timing, route and duration of medication appropriately
- ability to adjust medication correctly according to defined clinical scenarios
- ability to maintain patient safety at all times

Characteristics and structure of an OSCE:

An OSCE usually consists of a circuit of short stations (usually 5–10 minutes duration), during which candidates are examined on real or simulated patients (actors or electronic simulators). Candidates rotate through the stations, completing all the stations on their circuit. In this way, all candidates take the same stations.

Objective: candidates get marks for each step that they perform correctly (a preformed checklist is used).

Structured: stations have very specific tasks and instructions given to the candidate, to the assessors and to the actors/simulators are very specific

Clinical examination: the OSCE is designed to apply clinical and theoretical knowledge.

When theoretical knowledge is examined, answering questions from the assessor requires that the questions are standardized and the candidate is only asked questions that are on the mark sheet; if for example, the candidate is asked any others then there will be no marks for them.

Preparation for OSCE

The OSCE will take place in two given time periods for each discipline: 1.mock OSCEs during the semester, which are not graded but serve the purpose of preparing for the finals, and 2. the final OSCE in January, which are graded. For your convenience, you may assign an OSCE coordinator in your course, to be directly implicated in preparations and OSCE sessions.

1. ***Mock OSCE:*** each scenario should last 10-12 minutes. They can include both a clinical scenario and one clinical skill. For the mock OSCE, students can rotate in groups of 4-6 persons and not necessarily individually. However, for the clinical skills (separate lab), it is advisable that students rotate individually, so that they all have the opportunity to practice.

2. ***Final OSCE*:** these will be performed one-to-one (no group rotations) and each station should last no more than 6 minutes. Their content is much briefer compared to the mock OSCE and therefore should focus to evaluate fewer abilities/skills.

How OSCE stations are scored

- A detailed mark scheme/checklist is available with a standard set of questions. Each item on the checklist carries a grading coefficient.
- During observation, a preformed checklist is completed by the assessor for each student. The assessor can often vary the marks depending on how well the candidate performed the step.
- At the end of the mark sheet, the assessor often has a small number of marks that they can use to weight the station depending on total student performance.
- Each station is worth the same as every other station. Total score is the average of all station scores.