



Islamic Republic of Afghanistan
Ministry of Higher Education
Private Higher Education Institutes Directorate
Muslim Institute of Higher Education
Faculty of Medicine



Curriculum for MD Degree

۲۰۲۰

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

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Preface

All over the world in humanity communities' human's knowledge and academic level of society have been counted important as milestones of justice and stability of security on these communities. Therefore, for realization of this goal it is being needed to have in our country sustain and high-tech academic organizations to train and serve systematically all country's male and female students in various fields and courses in these organizations, that they will subsequently serve to their community and land. Indeed, for implementation and realization of this purpose Ministry of Higher Education has continuously struggled to its country's people to educate and train them in the torch of today's technology for its community's services. Thus, this war hit country will be oriented for progression and construction.

During these ten years' motivation and encouragement of Ministry of Higher Education Institute has been caused in different areas of country to generate and establish in state and private level tens higher and semi higher Institutes and universities in the country. Beside other private Institutes one of them is Muslim Institute of Higher Education which this higher education Institute started its activity practically according to community's whole health, cultural, economic and social problems, according to demands and necessities of Ghazni Capital of Islamic Civilization's people, with consultations, cooperation and discussions of civil communities and academic organizations, with obeying from all standards and benchmarks of Ministry of Higher Education Institute and after all legal processes in ۲۰۱۴ in Ghazni City Capital of Islamic Civilization.

Medical Faculty is one of the faculties in the frame of Muslim Institute of Higher Education that has been established in ۲۰۱۵ and started its practical activities. In this faculty during ۶ and half educational years' new standard credit system with MD level is taught to students, and for now ۳۳۷ students are present in Medical Faculty.

Academic Council of Faculty and related committees are always in effort to bring positive innovations for implementation of qualified and standardized system, for empowerment of capacities and to consider all bills, rules and regulations of Ministry of Higher Education Institute in teaching methods and in curriculum. Thus, students understanding in their field namely in health care increases and they find acquaintance with new health developments. One of those innovations that was created that was review of new teaching curriculum which after precise and deep researches in exist curriculum positive innovations were created. We are hopeful that this revised curriculum will help out with Medical Students and for sure it can be said that they will learn new methods and developments in their field for different problems and solutions for them, good result will be gained from.

Introduction to Medical Faculty

Medical Faculty in Muslim Higher Education Institute's structure started its academic performance in Ghazni City Capital of Islamic Civilization with great demands of respected people of Ghazni, with demands of well-serving civil communities, cultural communities

and political communities. So, it was necessary to establish this needed faculty and supply the required services for honored people of Ghazni. Finally, we with support of people and with motivation of people and Ministry of Higher Education formally set up Medical Faculty in ۲۰۱۵ in Muslim Institute of Higher Education

In Muslim Institute of Higher Education Medical Faculty with considerations of all Ministry of Higher Education's rules and regulations, bills, and principles, and with considerations of all nowadays medical norms and methods has developed in short period of time. And now it is ready to be in completion with country's other academic Institutes and centers. Medical Faculty in Muslim Institute of Higher Education believes that delivery of qualified and with high quality students with standardized health services system and finding of solutions to their problem is to serve to their community is its responsibility. Also the big goal of this faculty is to supply highly qualified academic and qualified medical services to the people particularly the goal is to graduate students with all exist standards and well-being for this faculty to have at the end highly trained MD male and female students to the community. In fact, this will help with all citizens of our nation to solve, recognize and find their dental and related problems in a sound way, beside this our community will keep its development steps continuous.

Medical Faculty's teaching curriculum has been revised with New Standard Credit System. Total course/ term of Medical Faculty lasts for ۶ and half years, that one studying year has two semesters. In order, one semester has been consisted from sixteen weeks and one teaching hour lasts for ۶۰ minutes. Of course, one practical teaching hour last for ۱۰۰ minutes. During each semester the eighth week is allocated for ۲۰% exam and at the end of semester the final examination is taken, the deadline for final exams is three weeks.

Current situation and circumstances of Madical Faculty in Muslim Higher Education Institute:

۱. Building

Muslim Institute of Higher Education has a specific building that all facilities that are needed in an academic and technical locations have been prepared with respects of all standards in such environments- Have adequate number of teaching classes, and rooms for academic and technical experiments. Furthermore, Muslim Institute of Higher Education has academic great environment and atmosphere for students and staff such as cafeteria, play grounds and entertainment park.

۲. Teaching Class

Muslim Institute of Higher Education has given enough classes to Medical Faculty which are prepared with modern technology, such as white boards, projectors, LCD, and so on.

In the above mentioned classes students of both shifts – Morning shift and Night shift are taught.

۳. Well-equipped Library and IT Center.

Muslim Institute of Higher Education has Well-equipped Library, IT Center which is having different cultural, social literature, law, economic, and medical studying enough materials, and beside these Medical Faculty has their own special medical library. Of course, it is mentionable that Muslim Institute of Higher Education has an internet club free for all staff and all students inside the area. Therefore, they can take advantages from it in their leisure time.

۴. Laboratory

For students' academic experiments and practices Muslim Institute of Higher Education has prepared special highly-Tech and well-equipped laboratories for example for Histology Classes, Microbiology Classes, Biochemistry Classes, Pathology Classes, and for scientific experiments.

Need Assessment

General Need Assessment

The General Assessment Necessity of Medicine Faculty in Muslim Institute of Higher Education with considerations of Provincial Hospitals, with considerations of Ministry of Public Health Districts' and Countryside's Clinics, and with considerations of Directorate of Local Hospital of Muslim has been done that plan and teaching program of this faculty has been revised according to its requirements and demands. Indeed, in this sequence a questionnaire was designed and was distributed for experienced doctors and physicians in the country's different hospitals- For districts' and local clinic's doctors and physicians. Thus, opinions regarding curriculum of medicine faculty from all experienced and highly-educated doctors were gathered and their demands have been considered in the new revision curriculum. Also, opinions of those students namely those students who are alumnus from medicine faculty and who are busy by getting master degree and Ph.D. out of the country have been considered in medicine faculty's teaching curriculum, and more importantly for better revision of teaching curriculum Kabul Medicine Faculty's teaching curriculum has been used for much better exercises. Medicine Faculty of Muslim Institute of Higher Education is integrated for more empowering its own position in different branches of medical activities and trainings that it had and has inside Afghanistan in regional level too. This Institute as an academic, qualified and impartial Institute will continue to its all medical activities based on academic, national and universal equipped with modern technology and modern teaching curriculum and nationally and universally accepted standards. And supply of medical and educational services and activities will be increased, and this faculty is integrated to continue its cooperation and persistency with other known same field organizations.

Educational Need Assessment

As we know that Afghanistan is a war hit country in few last and present years and that is why there is lack of adequate supply of educational, standardized and required services, and all educational organizations according to society's requirements, demands of labor forces, with qualified and well-known international standards has been existed back of its mission and vision. But, now country is going very nicely ahead and it is developing and growing in different sectors and has acceleration in this case, and economic conditions gotten better positions in some aspects, economic growth is even better now, and governmental, private and semi-governmental organizations need for their diverse activities and performance in different specific fields and sectors skillful and well-trained labor force, individuals and other employees. In fact, Afghanistan needs in all sectors particularly in modern medical sectors for Professionals, skillful, and for semi skillful labor forces and Medicine Faculty of Muslim Institute of Higher Education has sensed and perceived this occasion and has perceived that this is a whole and a big necessity and

demand of community's people in the country. Therefore, Medicine Faculty of Muslim Institute of Higher Education is proudly offering this well respected medical services to its community's people.

Introduction to MD Curriculum

Medical education is life-long process and MD curriculum is a part of the continuum of medical education, processing to house job, post-graduation training, continuous medical education and continuous Professional Development (CME/CPD).

Curriculum development is a dynamic process and works best in an environment conducive to learning, and thrives on monitoring, quality assurance and continuous quality improvement: it consists of not only the formal curriculum but also the informal learning that takes place through day-to-day interactions of students with peers, teachers, tutors, colleagues, other health care providers, the patients and their families.

Doctorate of Medicine (MD) Program (Professional Doctorate of Medicine)

Muslim Institute of Higher Education takes an approach to medical education, requiring all students to participate in the practice of medicine (PQM) courses. These courses span all 6 and half years with one year internship, allowing students to immediately begin clinical training during the first block of first year and providing the means for students to develop outstanding clinical thinking, interpersonal and technical skills and Professionalism while also studying the Basic Subjects, every intern is obligated to conduct a clinical research during the one year of internship program on an assigned issue by the research committee of the Muslim Institute of Higher Education and present it at the end of internship program. Only after completion of this 6 and half years' program, and presenting the scientific research papers; he/she is granted the Bachelor degree.

Practice of medicine (POM)

The three main components to the POM course are; Doctor-Patient-Society (DPS).

Clinical Apprenticeship program (CAP), problem-based Learning (PBL) and Case Based Learning (CBL) are learning methodologies that challenge student with daily and weekly clinical cases that integrate biomedicine, psychosocial issues, the art and science of clinical problem solving, and critical appraisal of the medical literature in small groups, facilitated by faculty tutors. The practice of medicine is a course that spans all 6 and half years; provide early patient exposure and the means to develop outstanding clinical thinking, technical skills, and a sense of Professionalism.

In the first two years, the practice of Medicine offers a clinical apprenticeship in which students are placed with a practicing primary care clinician; while students meet in small groups with faculty mentors to learn clinical assessment skills and to consider ethical, social, and Professional issues. In addition, problem-based learning is conducted through small-group and case-based tutorials.

Vision

We are a Faculty of medicine respected nationally for our values-centered excellence in teaching, research, clinical care, and leadership. We are distinguished for preparing graduates who promote justice and achieve excellence in their chosen fields while demonstrating and is to be the golden benchmark for academic excellence in the country.

Mission

The mission of the MIHE-Faculty of Medicine is:

- To prepare students for meeting and responding to the changing healthcare needs and expectations of the community. This will be achieved in full partnership with other healthcare providers and relevant sectors in the community;
- Providing innovating educational opportunities for medical students, preparing them to successfully pursue postgraduate training and continuous Professional development; Advancing scientific knowledge with important research discoveries;

- Improving health care in university hospitals and clinics;
- Emphasizing the colleague social responsibility in providing and promoting effective health care for different sectors of the community.

Values

The faculties and staff of the MIHE-faculty of medicine, commits to the Islamic doctrinal and cultural values as guides for our all decisions and behaviors.

Year I-II

The balance of the curriculum in year 1 and II is devoted to Basic Subjects. In year 1, instruction is concentrated on the study of normal human biology and function, with specific courses in review of Organic and Inorganic chemistry, Medical physics, Medical Biophysics, Gross and Microscopic Anatomy, Genetics, Molecular Cell Biology, first aids, English Language and information Communication technology.

In the year two instructions is focused on the study of Gross and Microscopic Anatomy Physiology, Embryology, Biochemistry and Immunology.

Years III-IV-V and VI

During the ½ and half years, the MD program consists of Pathology, Medicine, Surgery Pharmacology, Obstetrics &Gynecology, ENT, Pediatrics, Ophthalmology, Radiology and Imaging, Anesthesia, Dermatology, Psychiatry, Neurology, substance related disorders, Forensic Medicine, Clinical &Forensic Toxicology, Orthopedics, Fundamentals of Researches and Biostatistics, Nutrition, Social and behavioral science and a series of required clerkships designed to prepare students for graduate training while at the same time providing them with extensive exposure to a variety of fields sufficient to enable them to make appropriate career decision.

Statement of learning objectives

The all-embracing objective of the MD program is the graduation of physicians who are competent to the satisfaction of the faculties and the standards of the profession, in the following areas:

- Medical knowledge
- Patient care
- Interpersonal and communication skills
- Practice-based learning and improving
- Discipline-Based Practice
- Professionalism

The Program Learning objectives are informed by well-established standards of medical education and designed to reflect the unique strengths and goals of the MIHE Faculty of Medicine.

MEDICAL FACULTY OF MIHE seeks to educate students of medicine who understand domestic and global health issues and who are prepared to participate in health care decision-making. The educational program will build upon the attributes of each student by promoting the acquisition of knowledge and skill in health care policy, community health, medical education, global health and research. By adopting skills for life-long learning, graduate physician of MEDICAL FACULTY OF MIHE will be able to continue to grow as Professional throughout the rest of their medical careers. Also through the Institute's strong dedication to instruction in clinical skills, our students will be equipped with scientific knowledge and specific skills required to perform successfully during postgraduate training in their chosen specialties,

Outline of overall learning objective

For being as “ ½ and half Star” Medical Doctor the graduate must be:

- Knowledgeable
- Skillful
- Community Health Promoter
- Critical thinker (Problem Solver)
- Professional
- Researcher
- Leader & Role Model

I. Medical knowledge

Each graduate student will demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences as well as the application of this knowledge to serve as a physician in health care decisions.

By the time of graduation, students are expected to:

- Apply the scientific basis of the normal structure, development function, and relationships among the major organ systems of the body, to concepts of health and disease,
- Link biochemical, physiological, neurological, and immunological mechanisms, to their role in maintaining body homeostasis,
- Apply principles of pathophysiology to diseases and disorders;
- Evaluate the role of immunology and microbiology in health and disease.
- Compare and contrast the genetic processes and environmental influences on health and on disease and its treatment;
- Interpret the role of normal human biological, cognitive, psychological, and behavioral development across the life span as determinants of health and illness.
- Interpret the clinical, laboratory, pathologic, and radiologic manifestations of common diseases in patient care;
- Apply pharmacological principles to medical therapeutics;
- Apply principles of nutrition for maintaining optimal health and managing diseases;
- Apply the principles of epidemiology to the practice of medicine for the individuals the local and global communities;
- Discuss the scientific methods, clinical, and epidemiological researches as they relate to patient care.

II. Patient Care (Skills)

Each graduate will function in an inter-Professional health care team to deliver effective and compassionate patient-centered care.

By the time of graduation, students are expected to:

- Elicit a complete and accurate patient history including believes, spiritual and cultural issues and incorporate these into the comprehensive care of a patient;
- Perform an accurate and relevant screening and focused physical and mental status examinations;
- Perform common clinical procedures;
- Select appropriate physical examination techniques, laboratory tests, radiologic, and other clinical studies and interpret the results;
- Formulate a plan for the diagnosis and treatment of common medical conditions;
- Recognize life-threatening conditions and Institute appropriate initial care;
- Identify opportunities for early intervention, prevention, and health education,

III. Interpersonal and Communication Skills

Each graduate will communicate and interact effectively with patients, their families, and members of the inter-Professional health care team.

By the time of graduation, students are expected to:

- Demonstrate empathic patient-centered communication;
- Inform the patient and his/her representatives about the status of the patient's health and condition.
- Synthesize and present a coherent description of the patient's clinical condition based upon the information obtained from the patient and other resources;
- Demonstrate shared decision-making with patients including discussing the risk and benefits of medical interventions and obtaining informed consent;
- Demonstrate skills and strategies for engaging patients and their families in difficult situation (e.g end-of-life, medical errors, serious diagnosis, etc.);
- Collaborate effectively with other health care Professionals in caring for patients;
- Negotiate conflicts within health care teams.
- Consider the patient's culture, beliefs and level of health literacy for communicating effectively.

IV. Practice Based learning and system based learning

A. practice Based learning

Each graduate will demonstrate the ability to continuously evaluate patient care practice and raise and assimilate scientific evidence in order to improve the practice of medicine and are the safety and quality of patient care.

The time of graduation, students are expected to:

- Evaluate study design methods and results as they applied to evidence based medicine
- Apply relation and feedback to incorporate lessons learned into future practice.
- Utilize electronic and other resources in the practice of lifelong learning.
- Apply medical standards clinical practice guidelines in practice algorithms.
- Appropriately for individual patients or population
- Use students centered principals to teach colleges patients and the community at large about health and medical issues
- Critically apprise the effectiveness of diagnostic and their diabetic intervention

B. System Based Practice

Each graduate will recognize and respond to issues in the broader health care system and will effectively utilize system resources to provide optimal health care to the individual patient and the local and global community

The time of graduation student or expected to:

- Discuss the rule of advocacy and health care policy in improving patient care.
- Use system resource available to patient and community for health education treatment and rehabilitation
- Define the elements and the health care system that lead to distractive in health and access to health care
- Interpret information about the health of patient population and communities to identify needs and plan appropriate interventions in support of population health.
- Explain who diverse cultures believe systems impact perception of health and illness and response to symptoms diseases and diagnostic and therapeutic interventions

- Apply the principals of cost effective health care in patient care
- Analyze the organization, financing, and delivery of health care:
- Discuss the role of medical laws and interest in the health care system.

V. Medical Ethics & Professionalism

Each graduate will demonstrate a commitment to the highest standards of Professional responsibilities, adherence and believe to ethical principles

By the time of graduation, student are expected to:

- Apply the theories and principles that govern ethical decision making
- Demonstrate ethical behavior and Professionalism including:
- Compassionate treatment of patients:
- Respect for privacy and dignity:
- Honesty and integrity:
- Truthfulness:
- Patient advocacy:
- Demonstrate reliability, punctuality, dependability, and integrity in all Professional activities:
- Promote ethical and Professional behavior of peers:
- Recognize personal and Professional conflicts of interest.

VI. Leader and role model

Medical graduates are expected to demonstrate exemplary conduct and leadership potential in:

- Advancing patient and health care;
- Enhancing continuous medical education:
- Initiating, participating in and adapting to change, using scientific evidence and approaches:
- Enhancing the trust of public in the medical profession by being exceptional role models at work and also when away from work accept leadership if required:
- Provide leadership in issues concerning society.

VII. Researcher

Faculty of medicine graduates are expected to demonstrate constructive criticism, a spirit of enquiry, creativity and a research oriented attitude.

The graduates should be able to:

- Identify a researchable problem and critically review literature:
- Phrase succinct research questions and formulate hypotheses:
- Identify the appropriate research design in epidemiology and analytical tests in biostatistics to answer the research question:
- Collect, analyze and evaluate data, and present results where possible:
- Demonstrate ethics in conducting research.

Teaching and Learning Strategies

Active learning is the strategic approach in faculty of medicine, the learners interact more with the subject matters to construct and “own” knowledge. They are not empty vessels into whom

Faculty pour knowledge. Active learning activities promote thoughtful engagement, encourage analytical thinking and reasoning foster the integration and application of knowledge, and are designed around well-defined learning objectives. Students engage in solving problems, sharing ideas. Giving feedback, and teaching one another. Active

learning requires faculty who facilitate and emphasize the development of students' skills. Active learning requires collaboration in both teaching (e.g....working teams of instructors, instructional designers, educational technology Professionals, etc...) and learning (e.g.... small groups). Active learning incorporates assessment as part of curriculum and instruction to ensure coherence and consistency. Active learning can enhance academic achievement, promote retention and application of knowledge, enhance understanding and mastery of course content, improve critical thinking and problem solving, improve clinical competencies, enhance interpersonal skills, promote teamwork, increase student engagement, promote positive student attitudes, increase course satisfaction, and encourage self-directed lifelong learning.

The following learning methods, taken in part from Prince's (2004) review of active learning research, provides the generally accepted definitions and uses of common active learning terms:

Active learning is defined as any instructional method that engages students in the learning process. Active learning Requires students to do meaningful activities and think about what they are doing. While this definition could include traditional activities such as homework, in practice it refers to activities introduced into the classroom. The core elements of active learning are student activity and engagement in the learning is often contrasted to the traditional lecture where students passively receive information.

Collaborative learning can refer to any instructional method in which students work together in small groups toward a common goal. As such collaborative learning can be viewed as encompassing all group-based instructional methods, including cooperative learning in either contrast, some authors distinguish between collaborative and cooperative learning. In either interpretation, the core element of collaborative learning is the emphasis on student interaction rather than on learning as a solitary activity.

Cooperative learning can be defined as structured form of group work where students pursue common goals while being assessed individually. A common model of cooperative learning incorporates five specific tenets: individual accountability, mutual interdependence, face-to-face assessment of team functioning. The element held in common is focus on cooperative incentives rather than competition to promote learning.

Team-based Learning (TBL) is an instructional method that allows a single instructor to conduct multiple small group simultaneously in one classroom. TBL stresses the importance of Out-of-class learning based on learning objectives, emphasizes the importance of holding learners accountable for attending class prepared to participate, and provides guidelines for designing group learning tasks to maximize participation. Class time is shifted away from learning facts toward application and integration of information. The instructor retains control of content acting as both facilitator and content expert. TBL consist of repeating sequences of three phrases pre- class preparation, readiness assurance, and application of concepts.

Case- Based learning (CBL) is a learner- centered instructional approach where factually based, complex problems are used to stimulate discussion and collaborative analysis. CBL involves the interactive exploration of realistic and specific situations for which there is often no single correct solution.

Problem- Based Learning (PBL) is a type of CBL where problems are introduced at the beginning of the instruction cycle to provide the context and motivation for learning It is always active and usually collaborative or cooperative. PBL typically involves significant amounts of self- directed learning. Some evidence shows that PBL develops enhanced problem solving skills in medical students and that these skills can be improved further by coupling PBL with explicit instruction in problem solving.

E- Learning: as the letter "e" in e- learning stands for the word "electronic", e- learning would incorporate all education activities that are carried out by individuals or group working online or offline, and synchronously via networked or stand-alone computers and other electronic devices (Romiszowski, 2004).

In brief our teaching – learning methodology fulfill by the following approaches:

- Lecture with Audio- Visual Aids;
- Laboratory practice;
- Small Group Tutorials (Problem Based Learning- PBL, case Based Learning- CBL etc);
- Beside Learning (Clerkship and Rotations);
- Role Play (Simulated or Standard patient in the future);
- Practice on Manikin and Moulage in Skill lab;
- Self- learning (Learning to Learn);
- E- learning;
- Conference;

Credit hours' guidelines

Introduction:

Credit hour is the unit by which an Institute measures its course work. The number of credit hours assigned to a course qualitatively reflects the outcomes expected, the mode of instruction, the amount of time spent in class, and the amount of outside preparatory work expected for the class.

A semester credit hour is the most commonly used system of measuring course work and is usually based on at least a 15-16 weeks calendar (16 weeks in MEDICAL FACULTY OF MIHE). Further, a class hour varies from 50 to 70 minutes (60 minutes in MEDICAL FACULTY OF MIHE) in various Institute. Many of the definitions refer to weekly student's class hour (WSCH).

Credits guidelines

One semester credit hour is assigned in the following ratio of components hour per week devoted to the course of study

A. Lectures

normally one theory credit hour is associated with a class meeting for 60 minutes per week for entire semester (16 weeks) or the equivalent 960 semester minutes, excluding final examinations

Examination and Mark Distribution

Semester Examination Timetable

- First Semester Final Examination Starting Date: Sixth July (10th Sartan)
- Second Semester Final Examination Starting Date: 20th December July (1th Jadi)

Distribution of Marks:

A. Subjects with practical course

1. Viva voce and practical exam score total 40 marks include
 - ✓ Practical 20 marks
 - ✓ Viva voce 20 marks
2. Second semester final exam (written paper). 60 marks

Total end semester examination score: 100 marks

B. Subjects without practical course

Viva Voce 20 marks

Final exam 80 marks

Total 100

Nisar Muslim Hospital

Nisar Muslim Hospital has established in ۲۰۰۷ in the central area of Ghazni City. Nisar Muslim Hospital is one of the leading hospital in Ghazni City. The goal is to provide the right care for the right patient at the right time.

The clinical environment consists of hospital inpatients, outpatients and community settings each with their own distinct challenges. It is in this environment that students learn what it means to be a real doctor. Skills such as history taking, physical examination, patient communication and Professionalism are best learnt in the clinical setting, medical knowledge is Directly applied to patient care. Students begin to be motivated by relevance and self- directed learning takes on a new meaning. Clinical teachers take their role as teachers of future generations of doctors seriously and with enthusiasm.

Beds= ۵۰

Departments: General Medicine, Pediatric Medicine, Emergency surgery, Urology, Orthopedics.

Pharmacist: ۳

Nurses: ۱۰

Technicians: ۳

Physiotherapist: ۲

Anesthesiologist: ۲

Laboratory technicians: ۲

Administrates: ۳

Workers: ۱۲

B. Laboratory skills

One credit hour for laboratory works requires 100 minutes per weeks and 1600 minutes for entire semester

Clerkship (bedside practice in university hospital and clinics)

One credit hour for clerkship minimally requires 100 minutes per weeks and 1400 minutes over the semester.

Assessments of students

Assessment is a critical component of instruction properly used, it can aid in accomplishing key curricular goals. The impact of decision regarding how and when to evaluate the knowledge and performance of your students cannot be overestimated.

Primary purpose of testing to communicate what you view as important. Tests are a power motivator of and student will learn what they believe you value.

Examination regulation

1. Attendance

70% attendance in a subject for appearing in the examination is compulsory provided he/she has 80% attendance in non-lecture teaching i.e. seminars, group discussions tutorials, demonstrations health facilities.

2. Internal assessment

- a. It would be based on day-to-day assessment, evaluation of student's assignment, preparation for seminars, clinical case presentations etc.
- b. Regular periodical examinations must be conducted thorough the course.
- c. Day to day records should be given importance during internal assessments.
- d. Weightage for the internal assessment shall be 30% for the total marks in each subject.

Some examples of internal assessment are as follows;

- a. Preparation of subject for student's seminars
- b. Preparation of clinical case for discussion
- c. Clinical case study/problem solving exercise
- d. Proficiency in carrying out a practical or skill in small research project
- e. Multiple choice questions (MCQ) test after completion of a system course
- f. Each item tested shall be objectively assessed and recorded
- g. Some of the items can be assigned as Home Work/ Vacation Work.

3. University Examinations

A. Theory papers

Theory papers will be prepared by the examiners as prescribed nature of questions will be short answers type/objective type in marks for each part indicated separately.

B. Practical/ clinical: will be indicated the laboratories or hospital wards. Objective will be to assess proficiency and skills conduct of experiments interpretation of data and logical conclusion, clinical cases should be prepared preferably include common diseases not esoteric syndromes or disorders. Emphasis should be on candida's capability and eliciting physical signs and their interpretation

C. Viva/ oral: include evaluation of management of approach and handling emergencies students' skills and interpretation of common investigative data, x-rays identification of specimens, ECG, etc. the examinations of to be designed with a view to ascertain whether the candidate has acquired the necessary for knowledge, minimum skills along with clear concepts of the fundamental which are competently. Evaluation will be carried out on in objective basis, question papers should preferably be of short structure/ objective type.

D. Clinical cases / practical: will take into account common basis which the students is likely to come in contact with practice.

E. Rare cases/ obscure syndromes in long cases shall not be put for final examination.

Techniques of assessment and evaluation

- Multiple choice questions (MCQ)
- Extended matching questions(EMQ)
- Short answer Questions (SAQ)
- Mini cases (MC)
- PBL or tutorial performance assistance (PBL TPA)
- Objective Structured Clinical Examination (OSCE)
- Traditional Clinical Examination
- Clinical Skills Learning Assessment (CSLA)
- Bedside Session Assessment (Logbook)
- Visits/Cases Repot Assessment

COURSE TITLE, CODE, CREDIT & DESCIPLINES

| Numbers | COURSE TITLES | SEMESTER | CREDITS | | | KIND OF COURSE | COURSE CODE |
|---------|--|----------|-------------------|---|---------|----------------------|-------------|
| | | | Knowledge Credits | Clerkship, Lab, or small group Tutorial | Credits | | |
| ١ | Islamic Studies | ١ | ١ | | ٨ | University Inclusive | MED٠١٠١ |
| | | ٢ | ١ | | | | MED٠٢٠١ |
| | | ٣ | ١ | | | | MED٠٣٠١ |
| | | ٤ | ١ | | | | MED٠٤٠١ |
| | | ٥ | ١ | | | | MED٠٥٠١ |
| | | ٦ | ١ | | | | MED٠٦٠١ |
| | | ٧ | ١ | | | | MED٠٧٠١ |
| | | ٨ | ١ | | | | MED٠٨٠١ |
| ٢ | Enviroment | ١ | ٢ | | ٢ | University Inclusive | MED٠٣٠٢ |
| ٣ | Contemporry history of Afghanistan | ١ | ٢ | | ٢ | University Inclusive | MED٠١٠٣ |
| ٤ | English Language | ١ | ٤ | | ٨ | University Inclusive | MED٠١٠٤ |
| | | ٢ | ٤ | | | | MED٠٢٠٤ |
| ٥ | Information-Communication Technology-ICT | ١ | ١ | ١ | ٤ | University Inclusive | MED٠١٠٥ |
| | | ٢ | ١ | ١ | | | MED٠٢٠٥ |
| ٦ | Research Method | ٦ | ١ | ١ | ٢ | University Inclusive | MED٠٦٠٦ |
| ٧ | Molecular Cell Biology | ١ | ٢ | ١ | ٦ | Basic Subjects | MED٠١٠٧ |
| | | ٢ | ٢ | ١ | | | MED٠٢٠٧ |
| ٨ | Medical Genetics | ١ | ١ | ١ | ٢ | | MED٠٣٠٨ |

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| | | | | | | | | |
|----|---|---|----|---|----|----------------|-------------------------|---------|
| ٩ | Inorganic | ١ | ١ | ١ | ٢ | Basic Subjects | MED٠١٠٩ | |
| | Organic Chemistry | ٢ | ١ | | ١ | | MED٠٢٠٩ | |
| ١٠ | Medical Physics | ١ | ٢ | ١ | ٣ | Basic Subject | MED٠١١٠ | |
| ١١ | Biophysics | ١ | ١ | | ١ | Basic Subject | MED٠١١١ | |
| ١٢ | Gross Anatomy | ٢ | ٣ | ١ | ١٢ | Basic Subject | MED٠٢١٢ | |
| | | ٣ | ٣ | ١ | | | MED٠٣١٢ | |
| | | ٤ | ٣ | ١ | | | MED٠٤١٢ | |
| ١٣ | Microscopic anatomy(histology) | ٢ | ٢ | ١ | ٦ | | MED٠٢١٣ | |
| | | ٣ | ٢ | ١ | | | MED٠٣١٣ | |
| ١٤ | Medical Embryology | ٣ | ٢ | ١ | ٣ | | MED٠٣١٤ | |
| ١٥ | Medical Physiology | ٣ | ٣ | ١ | ١٢ | | MED٠٣١٥ | |
| | | ٤ | ٣ | ١ | | | MED٠٤١٥ | |
| | | ٥ | ٣ | ١ | | | MED٠٥١٥ | |
| ١٦ | Cellular & Molecular Immunology | ٤ | ١ | ١ | ٢ | Basic Subjects | MED٠٤١٦ | |
| ١٧ | Medical Ethics & Professionalism | ٦ | ١ | | ١ | Professional I | MED٠٦١٧ | |
| ١٨ | Medical Biochemistry | ٣ | ٣ | ١ | ٨ | Basic Subjects | MED٠٣١٨ | |
| | | ٤ | ٣ | ١ | | | MED٠٤١٨ | |
| ١٩ | Medical Microbiology | ٤ | ٢ | ١ | ٦ | Basic Subjects | MED٠٤١٩ | |
| | | ٥ | ٢ | ١ | | | MED٠٥١٩ | |
| ٢٠ | Medical Parasitology | ٤ | ١ | ١ | ٢ | | MED٠٤٢٠ | |
| ٢١ | Pathology | ٥ | ٣ | ١ | ١٠ | | MED٠٥٢١ | |
| | | ٦ | ٢ | ١ | | | MED٠٦٢١ | |
| | | ٧ | ٢ | ١ | | | MED٠٧٢١ | |
| ٢٢ | Clinical Pharmacology | ٦ | ٢ | ١ | ٧ | | MED٠٦٢٢ | |
| | | ٧ | ٢ | ١ | | | MED٠٧٢٢ | |
| | | ٨ | ١ | | | | MED٠٨٢٢ | |
| ٢٣ | PUBLIC HEALTH | Basic of Public Health | ٦ | ١ | ١ | ٩ | Professional Subjects | MED٠٦٢٣ |
| | | Public Health, Nutrition | ٦ | ١ | | | | MED٠٦٢٣ |
| | | Epidemiology | ٨ | ١ | | | | MED٠٨٢٣ |
| | | Environmental and Occupational Health | ٩ | ١ | | | | MED٠٩٢٣ |
| | | Health Management | ١٠ | ١ | | | | MED١٠٢٣ |
| | | Research & Biostatistics | ١١ | ١ | ١ | | | MED١١٢٣ |
| | | Health Policy and Economics | ١١ | ١ | | | | MED١١٢٣ |
| ٢٤ | Behavioral Science and Health education | ١١ | ١ | | ١ | MED١١٢٤ | | |
| ٢٥ | Forensic Medicine | ١١ | ١ | ١ | ٢ | MED١١٢٥ | | |
| ٢٦ | Medicine | Physical Diagnosis | ٥ | ٢ | ٢ | ٢٤ | Professional I Subjects | MED٠٥٢٦ |
| | | RHD & Pulmonary Diseases | ٦ | ٢ | ٢ | | | MED٠٦٢٦ |
| | | Cardiovascular Diseases | ٧ | ٢ | ٢ | | | MED٠٧٢٦ |
| | | GIS diseases, Liver diseases & Nephrology | ٨ | ٢ | ٢ | | | MED٠٨٢٦ |
| | | Endocrine disorders & Rheumatic diseases | ٩ | ٢ | ٢ | | | MED٠٩٢٦ |

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|-------------------------------|------------|--|------------|----|----|--------------------|-------------------------|---------|
| | | Hematology | ۱۰ | ۲ | ۲ | | | MED۱۰۲۶ |
| ۲۷ | Surgery | First aids | ۱ | ۱ | ۱ | ۲۶ | Professional Subjects | MED۰۲۲۷ |
| | | Surgery ^۱ (basics of surgery) | ۵ | ۲ | ۲ | | | MED۰۵۲۷ |
| | | Surgery ^۲ (Emergency surgery) | ۶ | ۲ | ۲ | | | MED۰۶۲۷ |
| | | Surgery ^۳ (Abdominal surgery) | ۷ | ۲ | ۲ | | | MED۰۷۲۷ |
| | | Surgery ^۴ (Abdominal Surgery) | ۸ | ۲ | ۲ | | | MED۰۸۲۷ |
| | | Surgery ^۵ (Thoracic surgery) | ۹ | ۲ | ۲ | | | MED۰۹۲۷ |
| | | Neurosurgery | ۱۰ | ۱ | ۱ | | | MED۱۰۲۷ |
| | | Urology | ۱۱ | ۱ | ۱ | | | MED۱۱۲۷ |
| ۲۸ | | Orthopedics | ۱۱ | ۲ | ۲ | ۴ | MED۱۱۲۸ | |
| ۲۹ | | Infectious diseases | ۸ | ۲ | ۲ | ۴ | MED۰۸۲۹ | |
| ۳۰ | | Radiology and imaging | ۷ | ۱ | ۱ | ۴ | | MED۰۷۳۰ |
| | | | ۸ | ۱ | ۱ | | | MED۰۸۳۰ |
| ۳۱ | | Obstetrics | ۷ | ۲ | ۲ | ۸ | | MED۰۷۳۱ |
| ۳۲ | | Gynecology | ۸ | ۲ | ۲ | | | MED۰۸۳۲ |
| ۳۳ | | Anesthesia | ۹ | ۱ | ۱ | ۲ | MED۰۹۳۳ | |
| ۳۴ | | Dermatology & Venereal diseases | ۹ | ۲ | ۲ | ۴ | MED۰۹۳۴ | |
| ۳۵ | PEDIATRICS | Essentials of pediatrics, Gastrointestinal and Endocrine disorders in children | ۹ | ۱ | ۱ | ۶ | Professional 1 Subjects | MED۰۹۳۵ |
| | | Respiratory, cardiac, Hematologic & Renal disorders in children | ۱۰ | ۱ | ۱ | | | MED۱۰۳۵ |
| | | Infectious Diseases in children | | ۱ | ۱ | | | |
| ۳۶ | | Neonatology | ۹ | ۱ | ۱ | ۲ | MED۰۹۳۶ | |
| ۳۷ | | Pediatric surgery | ۱۰ | ۱ | ۱ | ۲ | MED۱۰۳۷ | |
| ۳۸ | | Otorhinolaryngology | ۱۰ | ۲ | ۲ | ۴ | MED۱۰۳۸ | |
| ۳۹ | | Neurology | ۱۰ | ۱ | ۱ | ۲ | MED۱۰۳۹ | |
| ۴۰ | | Ophthalmology | ۱۱ | ۲ | ۲ | ۴ | MED۱۱۴۰ | |
| ۴۱ | | Psychiatry | ۱۱ | ۱ | ۱ | ۲ | MED۱۱۴۱ | |
| ۴۲ | | Clinical & Forensic Toxicology | ۱۱ | ۱ | ۱ | ۲ | MED۱۱۴۲ | |
| ۴۳ | | Tuberculosis | ۹ | ۱ | ۱ | ۲ | MED۰۹۴۳ | |
| ۴۴ | | Substance use disorders | ۱۱ | ۱ | ۱ | ۲ | MED۱۱۴۴ | |
| Total credits of all Semester | | Theory | ۱۴۱ | | | Theory & Practical | | |
| | | Practical | Laboratory | ۲۹ | ۸۳ | ۲۲۴ | | |

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|-------------------------|--|-----------|--------|-----------|----|
| | | Clerkship | ٥٤ | | |
| Research theses credits | | | | | ٢ |
| Internship (House-job) | | | | | ٤٨ |
| TOTAL MD DEGREE CREDITS | | | Theory | Practical | |
| ٢٧٤ | | | ١٤١ | ١٣٣ | |
| | | | ٥١٪ | ٤٩٪ | |

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| ACADEMIC YEAR 1 | | | FIRST SEMESTER | | | | | | |
|----------------------------------|--|----------|----------------|---------|-----------|-----------|-----|----------------------|-------|
| NO | COURSE TITLE | Code | Pre-requisites | Credits | Knowledge | Clerkship | Lab | Small group tutorial | total |
| 1 | Contemporary history of Afghanistan | MED.1.03 | None | 2 | 22 | | | | 22 |
| 2 | Biophysics | MED.1.11 | None | 1 | 16 | | | | 16 |
| 3 | Molecular biology ¹ | MED.1.07 | None | 2 | 22 | | 22 | | 64 |
| 4 | English Language | MED.1.04 | None | 4 | 64 | | | | 64 |
| 5 | Information communication technology (ICT) | MED.1.05 | None | 2 | 16 | | 22 | | 48 |
| 6 | Islamic studies | MED.1.01 | None | 1 | 16 | | | | 16 |
| 7 | Inorganic chemistry | MED.1.09 | None | 2 | 16 | | 22 | | 48 |
| 8 | Medical Physics | MED.1.10 | None | 2 | 22 | | 22 | | 64 |
| 9 | Medical Genetics | MED.1.08 | None | 2 | 16 | | 22 | | 48 |
| TOTAL SEMESTER CREDITS AND HOURS | | | | 20 | 240 | | 160 | | 400 |

| ACADEMIC YEAR 1 | | | SECOND SEMESTER | | | | | | |
|----------------------------------|--|----------|--------------------------------|---------|-----------|-----------|-----|----------------------|-------|
| NO | COURSE TITLE | Code | Pre-requisites | Credits | Knowledge | Clerkship | Lab | Small group tutorial | total |
| 1 | Gross anatomy ¹ | MED.2.12 | None | 4 | 48 | | 22 | | 66 |
| 2 | Molecular biology ² | MED.2.07 | Molecular Biology ¹ | 2 | 22 | | 22 | | 64 |
| 3 | Microscopic anatomy ¹ (histology) | MED.2.13 | Biology and Anatomy | 2 | 22 | | 22 | | 64 |
| 4 | English language | MED.2.04 | None | 4 | 64 | | | | 64 |
| 5 | Information communication technology | MED.2.05 | None | 2 | 16 | | 22 | | 48 |
| 6 | Islamic study | MED.2.01 | None | 1 | 16 | | | | 16 |
| 7 | Organic chemistry | MED.2.09 | Inorganic Chemistry | 1 | 16 | | | | 16 |
| 8 | First aids | MED.2.27 | None | 2 | 16 | 48 | | | 64 |
| TOTAL SEMESTER CREDITS AND HOURS | | | | 20 | 240 | 48 | 128 | | 432 |

| ACADEMIC YEAR ٢ | | | FIRST SEMESTER | | | | | | |
|----------------------------------|-----------------------------------|----------|----------------------------------|---------|-----------|-----------|-----|----------------------|-------|
| NO | COURSE TITLE | Code | Pre-requisites | Credits | Knowledge | Clerkship | Lab | Small group tutorial | total |
| | | | | | | | | | |
| ٢ | Microscopic anatomy ٢ (histology) | MED.٣ ١٣ | General Histology | ٢ | ٢٢ | | ٢٢ | | ٦٤ |
| ٣ | Medical Physiology | MED.٣ ١٥ | Molecular biology, Gross Antomy | ٣ | ٤٨ | | ٢٢ | | ٨٠ |
| ٤ | Medical Eembryology | MED.٣ ١٤ | Biology anatomy and histology | ٢ | ٢٢ | | ٢٢ | | ٦٤ |
| ٥ | Medical biochemistry | MED.٣ ١٨ | Organic and Nonorganic Chemistry | ٣ | ٤٨ | | ٢٢ | | ٨٠ |
| ٦ | Islamic Studies | MED.٣ ٠١ | None | ١ | ١٦ | | | | ١٦ |
| ٧ | Enviroment | MED.٣ ٠٢ | None | ٢ | ٢٢ | | | | ٢٢ |
| TOTAL SEMESTER CRIDITS AND HOURS | | | | ٢١ | ٢٥٦ | | ١٦٠ | | ٤١٦ |

| ACADEMIC YEAR ٢ | | | SECOND SEMESTER | | | | | | |
|----------------------------------|---------------------------------|----------|---|---------|-----------|-----------|-----|----------------------|-------|
| NO | COURSE TITLE | Code | Pre-requisites | Credits | Knowledge | Clerkship | Lab | Small group tutorial | total |
| | | | | | | | | | |
| ٢ | Medical physiology | MED.٤ ١٥ | Molecular biology Gross & Microscopic anatomy | ٣ | ٤٨ | | ٢٢ | | ٨٠ |
| ٣ | Medical Biochmestry ٢ | MED.٤ ١٨ | Medical Biochemistry ١ | ٣ | ٤٨ | | ٢٢ | | ٨٠ |
| ٤ | Medical Micrbiology ١ | MED.٤ ١٩ | Molecular biology | ٢ | ٢٢ | | ٢٢ | | ٦٤ |
| ٥ | Medical parasitology | MED.٤ ٢٠ | Molecular cell biology | ٢ | ١٦ | | ٢٢ | | ٤٨ |
| ٦ | Cellular & Molecular Immunology | MED.٤ ١٦ | Molecular cell biology | ٢ | ١٦ | | ٢٢ | | ٤٨ |
| ٧ | Islamic studies | MED.٤ ٠١ | None | ١ | ١٦ | | | | ١٦ |
| TOTAL SEMESTER CRIDITS AND HOURS | | | | ٢٠ | ٢٢٤ | | ١٩٢ | | ٤١٦ |

Muslim Institute of Higher Education/Curriculum & Course Content for MD Degree

| ACADEMIC YEAR ۲ | | | FIRST SEMESTER | | | | | | |
|---|-----------------------------------|----------|--|-----------|------------|------------|-----------|----------------------|------------|
| NO | COURSE TITLE | Code | Pre-requisites | Credits | Knowledge | Clerkship | Lab | Small group tutorial | total |
| ۱ | Medical Microbiology ^۲ | MED.۰۰۱۹ | Microbiology ^۱ | ۲ | ۲۲ | | ۲۲ | | ۶۴ |
| ۲ | General pathology | MED.۰۰۲۱ | Molecular biology gross & microscopic anatomy and physiology | ۳ | ۴۸ | | ۲۲ | | ۹۶ |
| ۳ | Medical physiology ^۳ | MED.۰۰۱۰ | Molecular biology Gross & Microscopic anatomy | ۳ | ۴۸ | | ۲۲ | | ۹۶ |
| ۴ | Surgery (Basies of surgery) | MED.۰۰۲۷ | Basic Subjeects | ۴ | ۳۲ | ۹۶ | | | ۱۲۸ |
| ۵ | Medicine ۱ | MED.۰۰۲۶ | Basic Subjeects | ۴ | ۳۲ | ۹۶ | | | ۱۲۸ |
| ۶ | Islamic studies | MED.۰۰۰۱ | None | ۱ | ۱۶ | | | | ۱۶ |
| TOTAL SEMESTER CRIDITS AND HOURS | | | | ۲۰ | ۲۰۸ | ۱۹۲ | ۹۶ | | ۵۲۸ |

| ACADEMIC YEAR ۲ | | | SECOND SEMESTER | | | | | | |
|---|-----------------------------------|----------|---|-----------|------------|------------|-----------|----------------------|------------|
| NO | COURSE TITLE | Code | Pre-requisites | Credits | Knowledge | Clerkship | Lab | Small group tutorial | total |
| ۱ | Systemic Pathalogy | MED.۰۰۲۱ | General pathology | ۳ | ۳۲ | | ۲۲ | | ۶۴ |
| ۲ | Medicine | MED.۰۰۲۶ | Physical Diagnosis | ۴ | ۳۲ | ۹۶ | | | ۱۲۸ |
| ۳ | Surgery(Emergency surgery) | MED.۰۰۲۷ | Basies of surgery | ۴ | ۳۲ | ۹۶ | | | ۱۲۸ |
| ۴ | Public Health (nutration) | MED.۰۰۲۳ | None | ۱ | ۱۶ | | | | ۱۶ |
| ۵ | Clinical pharmacology | MED.۰۰۲۲ | Molecular cell biology, pathology, Biochemistry | ۳ | ۳۲ | | ۲۲ | | ۶۴ |
| ۶ | Medical Ethics & Professional ism | MED.۰۰۱۷ | Behavior science | ۱ | ۱۶ | | | | ۱۶ |
| ۷ | Islamic studies | MED.۰۰۰۱ | None | ۱ | ۱۶ | | | | ۱۶ |
| ۸ | Basic of public Health | MED.۰۰۲۳ | None | ۲ | ۱۶ | ۴۸ | | | ۶۴ |
| ۹ | Research Method | MED.۰۰۰۶ | None | ۲ | ۱۶ | ۴۸ | | | ۶۴ |
| TOTAL SEMESTER CRIDITS AND HOURS | | | | ۲۱ | ۲۰۸ | ۲۸۸ | ۶۴ | | ۵۶۰ |

| ACADEMIC YEAR ٤ | | | FIRST SEMESTER | | | | | | |
|----------------------------------|----------------------------------|---------|--|---------|-----------|-----------|-----|----------------------|-------|
| NO | COURSE TITLE | Code | Pre-requisites | Credits | Knowledge | Clerkship | Lab | Small group tutorial | Total |
| ١ | Clinical pharmacology | MED٠٧٢٢ | General pharmacology | ٣ | ٢٢ | | ٢٢ | | ٦٤ |
| ٢ | Surgery٤(abdominal surgery) | MED٠٧٢٧ | Principles of Surgery | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٣ | Systemic pathology | MED٠٧٢١ | General Pathology | ٣ | ٢٢ | | ٢٢ | | ٦٤ |
| ٤ | Medicine cardiovascular diseases | MED٠٧٢٦ | Physical Diagnosis | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٥ | Obstetrics | MED٠٧٣١ | Basic Subjectss | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٦ | Radiology & medical imaging | MED٠٧٣٠ | Medical physics, Medical & surgical diseases | ٢ | ١٦ | ٤٨ | | | ٦٤ |
| ٧ | Islamic studies | MED٠٧٠١ | None | ١ | ١٦ | | | | ١٦ |
| TOTAL SEMESTER CRIDITS AND HOURS | | | | ٢١ | ١٩٢ | ٣٢٦ | ٦٤ | | ٥٩٢ |

| ACADEMIC YEAR ٤ | | | SECOND SEMESTER | | | | | | |
|----------------------------------|--------------------------------|---------|--|---------|-----------|-----------|-----|----------------------|-------|
| NO | COURSE TITLE | Code | Pre-requisites | Credits | Knowledge | Clerkship | Lab | Small group tutorial | Total |
| ١ | Infection diseases | MED٠٨٢٩ | Clinical Microbiology | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٢ | Gynecology | MED٠٨٣٢ | None | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٣ | Surgery | MED٠٨٢٧ | Principles of Surgery | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٤ | Medicine | MED٠٨٢٦ | None | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٥ | Clinical pharmacology | MED٠٨٢٢ | Pharmacology module ١&٢ | ١ | ١٦ | | | | ١٦ |
| ٦ | Epidemiology | MED٠٨٢٣ | None | ١ | ١٦ | | | | ١٦ |
| ٧ | Radiologic and medical imaging | MED٠٨٣٠ | Medical physics, Medical & surgical diseases | ٢ | ١٦ | ٤٨ | | | ٦٤ |
| ٨ | Islamic studies | MED٠٨٠١ | None | ١ | ١٦ | | | | ١٦ |
| TOTAL SEMESTER CRIDITS AND HOURS | | | | ٢١ | ٢٠٨ | ٣٣٢ | | | ٦٢٤ |

| ACADEMIC YEAR ° | | | FIRST SEMESTER | | | | | | |
|----------------------------------|------------------------------------|-----------|-----------------------|---------|-----------|-----------|-----|----------------------|-------|
| NO | COURSE TITLE | Code | Pre-requisites | Credits | Knowledge | Clerkship | Lab | Small group tutorial | Total |
| ١ | Dermatology and Veneral Diseases | MED.٠٩ ٣٤ | None | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٢ | Surgery° (Thoraci surgery) | MED.٠٩ ٢٧ | Principles of surgery | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٣ | Neonatology | MED.٠٩ ٣٦ | None | ٢ | ١١ | ٤٨ | | | ٦٤ |
| ٤ | Medicine | MED.٠٩ ٢٦ | Basic Subjects | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٥ | Pediatrics | MED.٠٩ ٣٥ | None | ٢ | ١١ | ٤٨ | | | ٦٤ |
| ٦ | Environmental & occupational heath | MED.٠٩ ٢٣ | None | ١ | ١١ | | | | ٢٢ |
| ٧ | Tuberculosis | MED.٠٩ ٤٣ | Systemic Microbiology | ٢ | ١١ | ٤٨ | | | ٦٤ |
| ٨ | Anesthesia | MED.٠٩ ٣٣ | None | ٢ | ١١ | ٤٨ | | | ٦٤ |
| TOTAL SEMESTER CRIDITS AND HOURS | | | | ٢٨ | ١٧١ | ٦٩٠ | ٦٤ | | ١٢٥ |

| ACADEMIC YEAR ° | | | SECOND SEMESTER | | | | | | |
|----------------------------------|---|----------|-------------------------------------|---------|-----------|-----------|-----|----------------------|-------|
| NO | COURSE TITLE | Code | Pre-requisites | Credits | Knowledge | Clerkship | Lab | Small group tutorial | Total |
| ١ | Otorhinolaryngology | MED١٠ ٣٨ | | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٢ | Neurology | MED١٠ ٣٩ | Basic Subjects | ٢ | ١١ | ٤٨ | | | ٦٤ |
| ٣ | Neurosurgery | MED١٠ ٢٧ | Principles of surgery and Neurology | ٢ | ١١ | ٤٨ | | | ٦٤ |
| ٤ | Medicine | MED١٠ ٢٦ | Physical Diagnosis | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| ٥ | Pediatric surgery | MED١٠ ٣٧ | Basic of surgery | ٢ | ١١ | ٤٨ | | | ٦٤ |
| ٦ | Pediatric (respiratory and heart diseases, hematology and nephrology) | MED١٠ ٣٥ | Basic Subjects | ٤ | ٢٢ | ٩٦ | | | ١٢٨ |
| | Pediatrics (infectious diseases) | | Basic Subjects | | | | | | |
| ٧ | Health Management | MED١٠ ٢٣ | None | ٢ | ١١ | ٩٦ | | | ١٢٨ |
| TOTAL SEMESTER CRIDITS AND HOURS | | | | ٢٠ | ١٦٠ | ٥٢٨ | | | ٧٠٤ |

| ACADEMIC YEAR ٦ | | | LAST SEMESTER | | | | | | |
|----------------------------------|---|----------|---|---------|-----------|-----------|-----|----------------------|-------|
| NO | COURSE TITLE | Code | Pre-requisites | Credits | Knowledge | Clerkship | Lab | Small group tutorial | Total |
| ١ | Ophthalmology | MED١١ ٤٠ | | ٤ | ٣٢ | ٩٦ | | | ١٢٨ |
| ٢ | Urology | MED١١ ٢٧ | Principles of surgery, Internal Medicine and Gynecology | ٢ | ١٦ | ٤٨ | | | ٦٤ |
| ٣ | Psychiatry | MED١١ ٤١ | Professional | ٢ | ١٦ | ٤٨ | | | ٦٤ |
| ٤ | Orthopedics | MED١١ ٢٨ | Basic Subjectss | ٤ | ٣٢ | ٩٦ | | | ١٢٨ |
| ٥ | Forensic medicine | MED١١ ٢٥ | None | ٢ | ١٦ | | ٣٢ | | ٤٨ |
| ٦ | Clinical & forensic Toxicology | MED١١ ٤٢ | None | ٢ | ١٦ | | ٣٢ | | ٤٨ |
| ٧ | Biostatistics | MED١١ ٢٣ | Epidemiology | ١ | ١٦ | | | | ١٦ |
| ٨ | Health policy and Economics | MED١١ ٢٣ | None | ١ | ١٦ | | | | ١٦ |
| ٩ | Substance use disorders | MED١١ ٤٤ | None | ٢ | ١٦ | ٤٨ | | | ٦٤ |
| ١٠ | Behavioral Science and Health education | MED١١ ٢٤ | None | ١ | ١٦ | | | | ١٦ |
| TOTAL SEMESTER CRIDITS AND HOURS | | | | ٢١ | ١٩٢ | ٣٦٦ | ٦٤ | | ٥٩٢ |

COURSE CONTENTSM (SYLLABUS) DESCRIPTION

Introduction

The MD program courses divided into three phases: Basic Subjectss, Professional & Skill, and university inclusives.

Basic Subjectss s: Molecular cell biology, Genetics, Medical physics physics, biophysics and chemistry gross anatomy microscopic anatomy, embryology, biochemistry and physiology. Public health; forensic medicine, toxicology, pathology, pharmacology and microbiology.

Professional s: Basics of public healths, public health nutrition, environmental and occupational health, epidemiology, biostatistics, health management, fundamentals of health research, health policy and Economics, Research Method, Behavioral science.

Professional and skill: internal medicine, surgery, otorhinolaryngology, neonatology, pediatrics, psychiatry, tuberculosis, infectious diseases, clinical and forensic toxicology, pediatrics surgery, neurosurgery, obstetrics and gynecology, radiology and imaging, urology, anesthesia, dermatology and substance related disorders.

Medical Inclusive: Islamic studies, English Language, and information communication technology- ICT, Contemporary history of Afghanistan and Environment

ISLAMIC STUDIES

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absence is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory score is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scoring policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives:

This course is aimed at:

- To provide basic information about Islamic studies
- To enhance understanding of the student regarding Islamic civilization
- To improve students skill to perform prayer and other worships
- To enhance the skill of the students for understanding of issues related to faith and religious life.

Courses:

**ISLAMIC STUDIES MODULE **

| Discipline | | Basic Subjects | |
|-------------------|-----------|-------------------------------------|---|
| Department | | Islamic studies | |
| Course title | | Basic concepts of Islamic knowledge | |
| Pre-requisites | | None | |
| Course code | | MED ٠١ ٠١ | |
| Academic year | | \ | |
| Semester | | \ | |
| Number of credits | | \ | |
| | | Spring | |
| | | Knowledge | \ |
| | | Practical | |
| Weeks | Hours | | Topics and descriptions |
| | Knowledge | Practical | |
| ١ | ١ | | Basic concept of Islamic knowledge general information, information about the Islamic culture |
| ٢ | ١ | | Basic concept of Islamic knowledge, importance of knowledge in islam, quranic verses and hadith regarding education |
| ٣ | ١ | | Basic concept of Islamic knowledge characteristics of Islamic law, quranic verses and hadith regarding inventions and changes in human life |
| ٤ | ١ | | Memorization and translation of surah ٩٥-١١٤ |
| ٥ | ١ | | Daily duaa(prayers) according to hadith and Sunnah |
| ٦ | ١ | | Daily duaa(prayers) according to hadith and Sunnah |
| ٧ | ١ | | Daily duaa(prayers) according to hadith and Sunnah |
| ٨ | ١ | | Basic concept of Islamic knowledge characteristics of Islamic law, aim and objective if Islamic law |
| ٩ | ١ | | Basic concept of Islamic knowledge aim and objective of Islamic law |
| ١٠ | ١ | | Basic concept of Islamic knowledge social main deviations |
| ١١ | ١ | | Definition importance and ruling of hejab in Islam general information |
| ١٢ | ١ | | Definition importance and ruling of hejab In Islam value and importance |
| ١٣ | ١ | | Definition importance and ruling of hejab in islam concept of virtue |
| ١٤ | ١ | | Definition importance and reling of hejab in Islam quranic verses and hadith regarding hejab |
| ١٥ | ١ | | Definition importance and ruling of the hejab in Islam Islamic rules regarding makeup and women outgoing |
| ١٦ | ١ | | Definition importance and ruling of the hejab in Islam conditions for hejab. |

Textbook and reference books recommended last editions

كامل محمد محمد عويضة في فقه النساء

Format Book | ٥٠٤ pages, Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٠٦٦٠٥

أبو عبد الرحمن عادل بن سعيد فتاوى العلامة ناصر الدين الألباني

Format Book | ٦٧٢ pages. Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٦٨٣٤٤

Quranic Knowledge - Basic Information about the Holy Quran with Questions and Answers

Format Paperback Item Weight ١,٧٤ pounds Publisher InstantPublisher.com (March ١٨, ٢٠٢٢) Language: English Hardcover ٧٧٢ pages ISBN-١٠ ٣٢١٤٢٢٨٦٨X ISBN-١٣ ٩٧٨-٣٢١٤٢٢٨٦٨٤

The Study Quran: A New Translation and Commentary

Format Paperback Item Weight ٢,٥١ pounds Paperback : ٢٠٤٨ pages ISBN-١٣ ٩٧٨-٠٠٦١١٢٥٨٧٤,ISBN١٠ ٠٠٦١١٢٥٨٧

في الاجتماع السياسي و التنمية و الاقتصاد و فقه الاصلاح

Publisher الشبكة العربية, Language Arabic, ISBN١٠ ٩٩٥٣٥٣٣٢٢٦. ISBN١٣ ٩٧٨٩٩٥٣٥٣٣٢٢

الموارد الاقتصادية في النظام الاقتصادي الإسلامي

Publisher منتدى المعارف Language Arabic, ISBN١٠ ٦١٤٤٢٨٠٥٤٥, ISBN١٣ ٩٧٨٦١٤٤٢٨٠٥٤٦

لجامع فقه التدرج : في التشريع والتبليغ والتطبيق عمر

Format Paperback, Dimensions ١٥٠ x ٢٢٠mm, Publication date ٢٠ Aug ٢٠١٩, Publisher Noor Publishing,

Language Arabic, Edition Statement Aufl.ISBN١٠ ٦٢٠٠٠٦٨٦٢٣ ISBN١٣ ٩٧٨٦٢٠٠٠٦٨٦٢٠

ISLAMIC STUDIES 2

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

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- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives:

This course is aimed at:

- To provide basic information about Islamic studies
- To enhance understanding of the student regarding Islamic civilization
- To improve students skill to perform prayer and other worships
- To enhance the skill of the students for understanding of issues related to faith and religious life.

Courses:

ISLAMIC STUDIES MODULE ٢

| Discipline | | Basic Subjects | |
|-------------------|-----------|-----------------|---|
| Department | | Islamic studies | |
| Course title | | faith | |
| Pre-requisites | | None | |
| Course code | | MED ٠٢ ٠١ | |
| Academic year | | ١ | |
| Semester | | ٢ | Fall |
| Number of credits | | ١ | Knowledge |
| | | | Practical |
| Weeks | Hours | | Topics and descriptions |
| | Knowledge | Practical | |
| ١ | ١ | | Faith: General information regarding tawheed |
| ٢ | ١ | | Faith: Types of Tawheed, pillars of tawheed |
| ٣ | ١ | | Faith: conditions of tawheed, advantages of tawheed |
| ٤ | ١ | | Faith: general information about sherk |
| ٥ | ١ | | Faith: Types of sherk |
| ٦ | ١ | | Faith: Islamic rules for sherk and mushrek |
| ٧ | ١ | | Faith: Tawasul (To solicit) |
| ٨ | ١ | | Faith: belief in qaza and Qadar, Allah's prophets, Books, angels and day of fudgement |
| ٩ | ١ | | Tajweed |
| ١٠ | ١ | | Tajweed |
| ١١ | ١ | | Tajweed |
| ١٢ | ١ | | Memorization and translation of surah ٨٥-٩٤ |
| ١٣ | ١ | | Memorization and translation of surah ٨٥-٩٤ |
| ١٤ | ١ | | Memorization and translation of surah ٨٥-٩٤ |
| ١٥ | ١ | | Special Duaa(prayer according to Hadith and Sunnah |
| ١٦ | ١ | | Special Duaa(prayer according to Hadith and Sunnah |

Textbook and reference books recommended last editions

لجامع فقه التدرج : في التشريع والتبليغ والتطبيق عمر

Format Paperback, Dimensions ١٥٠ x ٢٢٠ mm, Publication date ٢٠ Aug ٢٠١٩, Publisher Noor Publishing, Language Arabic, Edition Statement Aufl.ISBN١٠ ٦٢٠٠٠٦٨٦٢٣ ISBN١٣ ٩٧٨٦٢٠٠٠٦٨٦٢٠

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Format Book | ٥٠٤ pages, Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٠٦٦٠٥

أبو عبد الرحمن عادل بن سعيد فتاوى العلامة ناصر الدين الألباني

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Quranic Knowledge - Basic Information about the Holy Quran with Questions and Answers

Format Paperback Item Weight ١,٧٤ pounds Publisher InstantPublisher.com (March ١٨, ٢٠١٦)

Language: English Hardcover ٧٧٢ pages ISBN-١٠ ١٦١٤٢٢٨٦٨X ISBN-١٣ ٩٧٨-١٦١٤٢٢٨٦٨٤

The Study Quran: A New Translation and Commentary

Format Paperback Item Weight ٢,٥١ pounds Paperback : ٢٠٤٨ pages ISBN-١٣ ٩٧٨-٠٠٦١١٢٥٨٧٤

في الاجتماع ISBN١٠ ٠٠٦١١٢٥٨٧٣

السياسي و التنمية و الاقتصاد و فقه الاصلاح

Publisher الشبكة العربية, Language Arabic, ISBN١٠ ٩٩٥٣٥٣٣٣٢٦. ISBN١٣ ٩٧٨٩٩٥٣٥٣٣٣٢

الموارد الاقتصادية في النظام الاقتصادي الاسلامي

Publisher منتدى المعارف Language Arabic, ISBN١٠ ٦١٤٤٢٨٠٥٤٥, ISBN١٣ ٩٧٨٦١٤٤٢٨٠٥٤٦

حقوق الإنسان السياسية في الإسلام والنظم العالمية

Format Book | ٤١٦ pages, Publisher DKI دار الكتب العلمية-بيروت Publication City/Country Lebanon

Language Arabic. ISBN١٣ ٩٧٨٢٧٤٥١٤٨٥٢٠

ISLAMIC STUDIES 3

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives:

This course is aimed at:

- To provide basic information about Islamic studies
- To enhance understanding of the student regarding Islamic civilization
- To improve students skill to perform prayer and other worships
- To enhance the skill of the students for understanding of issues related to faith and religious life.

Courses:

| ISLAMIC STUDIES MODULE ٣ | | | |
|---------------------------------|-----------|----------------------|--|
| Discipline | | University Inclusive | |
| Department | | Islamic studies | |
| Course title | | Worship | |
| Pre-requisites | | None | |
| Course code | | MED ٠٣ ٠١ | |
| Academic year | | ٢ | |
| Semester | | ٣ | Spring |
| Number of credits | | ١ | Knowledge |
| | | | Practical |
| Weeks | Hours | | Topics and descriptions |
| | Knowledge | Practical | |
| ١ | ١ | | Worships: General information regarding worships (Ebadat) |
| ٢ | ١ | | Worships: Types of Worships (Ebadat) |
| ٣ | ١ | | Worships: Pillars of Worships (Ebadat) |
| ٤ | ١ | | Worships: Conditions of Worships Worships (Ebadat) |
| ٥ | ١ | | Worships: Difference between obedience & Worships |
| ٦ | ١ | | Worships: Target of Worships |
| ٧ | ١ | | Worships: Worthy of Worships |
| ٨ | ١ | | Worships: Outcome of Worships |
| ٩ | ١ | | Worships: The Factors and Lethargy of Worship |
| ١٠ | ١ | | Worships: Bedaat(Inovation) in Worships |
| ١١ | ١ | | Worships: General information about philosophy of worship and philosophy of salath |
| ١٢ | ١ | | Worships: the prayer in summation (famat) Eid, and jenaza prayer |
| ١٣ | ١ | | Memorization and translation of : Surah ٧٨ – ٨٤ |
| ١٤ | ١ | | Memorization and translation of : Surah ٧٨ – ٨٤ |
| ١٥ | ١ | | Special Duaa (prayers): According to hadith and Sunnah |
| ١٦ | ١ | | Special Duaa (prayers): According to hadith and Sunnah |

Textbook and reference books recommended last editions

كامل محمد عويضة في فقه النساء

Format Book | ٥٠٤ pages, Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN ١٣ ٩٧٨٢٧٤٥١٠٦٦٠٥

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لجامع فقه التدرج : في التشريع والتبليغ والتطبيق عمر

Format Paperback, Dimensions ١٥٠ x ٢٢٠mm, Publication date ٢٠ Aug ٢٠١٩, Publisher Noor Publishing,

Language Arabic, Edition Statement Aufl. ISBN 10 620068623 ISBN 13 978620068620

The Study Quran: A New Translation and Commentary

Format Paperback Item Weight ٢,٥١ pounds Paperback : ٢٠٤٨ pages ISBN-13 978-

٠٠٦١١٢٥٨٧٤, ISBN 10 ٠٠٦١١٢٥٨٧٣ في الاجتماع

السياسي و التنمية و الاقتصاد و فقه الاصلاح

Publisher الشبكة العربية, Language Arabic, ISBN 10 9953533326,

ISBN 13 978995353332

الموارد الاقتصادية في النظام الاقتصادي الاسلامي

Publisher منتدى المعارف Language Arabic, ISBN 10 6144280545,

ISBN 13 9786144280546

أبو عبد الرحمن عادل بن سعيد فتاوى العلامة ناصر الدين الألباني

Format Book | ٦٧٢ pages. Publisher DKI, Publication City/Country Lebanon Language Arabic,

ISBN 13 9782745168344

ISLAMIC STUDIES 4

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives:

This course is aimed at:

- To provide basic information about Islamic studies
- To enhance understanding of the student regarding Islamic civilization
- To improve students skill to perform prayer and other worships
- To enhance the skill of the students for understanding of issues related to faith and religious life.

Courses:

ISLAMIC STUDIES MODULE ٤

| | | | |
|-------------------|-----------|---------------------------|--|
| Discipline | | Basic Subjects | |
| Department | | Islamic studies | |
| Course title | | Political System in islam | |
| Pre-requisites | | None | |
| Course code | | MED ٠٤ ٠١ | |
| Academic year | | ٢ | |
| Semester | | ٤ | Fall |
| Number of credits | | ١ | Knowledge |
| | | | Practical |
| Weeks | Hours | | Topics and descriptions |
| | Knowledge | Practical | |
| ١ | ١ | | Political System in islam |
| ٢ | ١ | | Political & Religion |
| ٣ | ١ | | Definition of Shariat |
| ٤ | ١ | | General information Related Political |
| ٥ | ١ | | Individual political rights, counsel in islam |
| ٦ | ١ | | Characteristics of political leaders, needs for slection of the leader |
| ٧ | ١ | | General information related dectatorate |
| ٨ | ١ | | Responsibilities of Islamic State |
| ٩ | ١ | | Charters tics of Islamic governments |
| ١٠ | ١ | | Islam and democracy |
| ١١ | ١ | | Basics of internal diplomacy in islam |
| ١٢ | ١ | | Basic of forign diplomacy in islam |
| ١٣ | ١ | | Memorization and translation of surah ٦١- ٨٤ |
| ١٤ | ١ | | Memorization and translation of surah ٧٨ – ٨٤ |
| ١٥ | ١ | | Special Duaa (prayer) according to hadith and Sunnah |
| ١٦ | ١ | | Special Duaa (prayer) according to hadith and Sunnah |

Textbook and reference books recommended last editions

لجامع فقه التدرج : في التشريع والتبليغ والتطبيق عمر

Format Paperback, Dimensions ١٥٠ x ٢٢٠mm, Publication date ٢٠ Aug ٢٠١٩, Publisher Noor Publishing, Language Arabic, Edition Statement Aufl.ISBN١٠ ٦٢٠٠٠٦٨٦٢٣ ISBN١٣ ٩٧٨٦٢٠٠٠٦٨٦٢٠

كامل محمد محمد عويضة في فقه النساء

Format Book | ٥٠٤ pages, Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٠٦٦٠٥

أبو عبد الرحمن عادل بن سعيد فتاوى العلامة ناصر الدين الألباني

Format Book | ٦٧٢ pages. Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٦٨٣٤٤

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The Study Quran: A New Translation and Commentary

Format Paperback Item Weight ٢,٥١ pounds Paperback : ٢٠٤٨ pages ISBN-١٣ ٩٧٨-

٠٠٦١١٢٥٨٧٤,ISBN١٠ ٠٠٦١١٢٥٨٧٣

في الاجتماع السياسي و التنمية و الاقتصاد و فقه الاصلاح

Publisher الشبكة العربية, Language Arabic, ISBN١٠ ٩٩٥٣٥٣٣٣٢٦. ISBN١٣ ٩٧٨٩٩٥٣٥٣٣٣٢٢

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

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- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives:

This course is aimed at:

- To provide basic information about Islamic studies
- To enhance understanding of the student regarding Islamic civilization
- To improve students skill to perform prayer and other worships
- To enhance the skill of the students for understanding of issues related to faith and religious life.

Courses:

ISLAMIC STUDIES MODULE ◦

| Discipline | | Basic Subjects | |
|-------------------|-----------|---------------------------|---|
| Department | | Islamic studies | |
| Course title | | Islam & Medical practices | |
| Pre-requisites | | None | |
| Course code | | MED ٠٥ ٠١ | |
| Academic year | | ٣ | |
| Semester | | ٥ Spring | |
| Number of credits | | ١ | |
| | | Knowledge | ١ |
| | | Practical | |
| Weeks | Hours | | Topics and descriptions |
| | Knowledge | Practical | |
| ١ | ١ | | Islam & Medical practices |
| ٢ | ١ | | General information about medical |
| ٣ | ١ | | Concept of health and medicines in Islamic studies |
| ٤ | ١ | | Definition of Health and Sickness |
| ٥ | ١ | | Importance of Medical in Islam |
| ٦ | ١ | | Verses and hadith related health |
| ٧ | ١ | | Medicines in previous Religions |
| ٨ | ١ | | Hygiene in Islam |
| ٩ | ١ | | Rules of prohibited things in Islam |
| ١٠ | ١ | | Verses and hadiths related protective procedures |
| ١١ | ١ | | Individual and social Hygiene |
| ١٢ | ١ | | Harms and prohibition of narcotics and alcoholic Beverages |
| ١٣ | ١ | | Verses and Hadith related to alcoholic beverage prohibition |
| ١٤ | ١ | | Narcotic protection |
| ١٥ | ١ | | Orders of scholars related use of narcotics |
| ١٦ | ١ | | Health benefits of fasting |

Textbook and reference books recommended last editions

لجامع فقه التدرج : في التشريع والتبليغ والتطبيق عمر

Format Paperback, Dimensions ١٥٠ x ٢٢٠mm, Publication date ٢٠ Aug ٢٠١٩, Publisher Noor Publishing, Language Arabic, Edition Statement Aufl.ISBN١٠ ٦٢٠٠٠٦٨٦٢٣ ISBN١٣ ٩٧٨٦٢٠٠٠٦٨٦٢٠

كامل محمد محمد عويضة في فقه النساء

Format Book | ٥٠٤ pages, Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٠٦٦٠٥

أبو عبد الرحمن عادل بن سعيد فتاوى العلامة ناصر الدين الألباني

Format Book | ٦٧٢ pages. Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٦٨٣٤٤

Quranic Knowledge - Basic Information about the Holy Quran with Questions and Answers

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The Study Quran: A New Translation and Commentary

Format Paperback Item Weight ٢,٥١ pounds Paperback : ٢٠٤٨ pages ISBN-١٣ ٩٧٨-

٠٠٦١١٢٥٨٧٤,ISBN١٠ ٠٠٦١١٢٥٨٧٣ في الاجتماع

السياسي و التنمية و الاقتصاد و فقه الاصلاح

Publisher الشبكة العربية, Language Arabic, ISBN١٠ ٩٩٥٣٥٣٣٣٢٦.

ISBN١٣ ٩٧٨٩٩٥٣٥٣٣٣٢٢

الموارد الاقتصادية في النظام الاقتصادي الاسلامي

Publisher منتدى المعارف Language Arabic, ISBN١٠ ٦١٤٤٢٨٠٥٤٥, ISBN١٣ ٩٧٨٦١٤٤٢٨٠٥٤٦

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Learning objectives:

This course is aimed at:

- To provide basic information about Islamic studies
- To enhance understanding of the student regarding Islamic civilization
- To improve students skill to perform prayer and other worships
- To enhance the skill of the students for understanding of issues related to faith and religious life.

Publisher الشبكة العربية, Language Arabic, ISBN١٠ ٩٩٥٣٥٣٣٣٢٦. ISBN١٣ ٩٧٨٩٩٥٣٥٣٣٣٢٢
الموارد الاقتصادية في النظام الاقتصادي الاسلامى

Publisher منتدى المعارف Language Arabic, ISBN١٠ ٦١٤٤٢٨٠٥٤٥, ISBN١٣ ٩٧٨٦١٤٤٢٨٠٥٤٦

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Learning objectives:

This course is aimed at:

- To provide basic information about Islamic studies
- To enhance understanding of the student regarding Islamic civilization
- To improve students skill to perform prayer and other worships
- To enhance the skill of the students for understanding of issues related to faith and Basic Subjects life.

Courses:

ISLAMIC STUDIES MODULE V

| Discipline | | University Inclusive | |
|-------------------|-----------|-------------------------------|---|
| Department | | Islamic studies | |
| Course title | | Versus and seeratun nabi(puh) | |
| Pre-requisites | | None | |
| Course code | | MED ٠٧ ٠١ | |
| Academic year | | ٤ | |
| Semester | | ٧ Spring | |
| Number of credits | | ١ | Knowledge |
| | | | Practical |
| Weeks | Hours | | Topics and descriptions |
| | Knowledge | Practical | |
| ١ | ١ | | Verses of surah Al- baqara related to faith (Verse no-٢٨٤-٢٨٦) |
| ٢ | ١ | | Verses of surah Al-Hujarat Relaed to Adab Al-Nabi(Verse No١-١٨) |
| ٣ | ١ | | Verses of surah Al-Mumenoon Related to Characteristics of faithful(Verse No ١-١١) |
| ٤ | ١ | | Verses of sural Al-Furqan Related to Social Ethics (Verse No ٦٣-٧٧) |
| ٥ | ١ | | Verses of surah Al-Inam Related to Ahdam(Verse No ١٥٢-١٥٤) |
| ٦ | ١ | | Life of Muhammad Bin Abdullah SAQ(Before Prophet hood) |
| ٧ | ١ | | Life of Holy Prophet (SAW) in Makkah |
| ٨ | ١ | | Important lessons Derived from the life of Holy Prophet (PBH) in Makkah |
| ٩ | ١ | | Life of Holy Prophet (SAW) in Madina |
| ١٠ | ١ | | Important events of life of Holy prophet (PBH) in Madina |
| ١١ | ١ | | Important lissons derived from the life of Holy prophet in Madina |
| ١٢ | ١ | | Basic concepts of Hadith |
| ١٣ | ١ | | History of Hadith |
| ١٤ | ١ | | Kinds of Hadith |
| ١٥ | ١ | | Uloon ul Hadith |
| ١٦ | ١ | | Ethical values of Islam |

Textbook and reference books recommended last editions

كامل محمد محمد عويضة في فقه النساء

Format Book | ٥٠٤ pages, Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٠٦٦٠٥

أبو عبد الرحمن عادل بن سعيد فتاوى العلامة ناصر الدين الألباني

Format Book | ٦٧٢ pages. Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٦٨٣٤٤

لجامع فقه التدرج في التشريع والتبليغ والتطبيق عمر

Format Paperback, Dimensions ١٥٠ x ٢٢٠mm, Publication date ٢٠ Aug ٢٠١٩, Publisher Noor Publishing, Language Arabic, Edition Statement Aufl.ISBN١٠ ٦٢٠٠٠٦٨٦٢٣ ISBN١٣ ٩٧٨٦٢٠٠٠٦٨٦٢٠

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في الاجتماع السياسي والتنمية والاقتصاد و فقه الاصلاح

Publisher الشبكة العربية, Language Arabic, ISBN١٠ ٩٩٥٣٥٣٣٣٢٦. ISBN١٣ ٩٧٨٩٩٥٣٥٣٣٣٢٦

الموارد الاقتصادية في النظام الاقتصادي الإسلامي

Publisher منتدى المعارف Language Arabic, ISBN١٠ ٦١٤٤٢٨٠٥٤٥, ISBN١٣ ٩٧٨٦١٤٤٢٨٠٥٤٦

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

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- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Learning objectives:

This course is aimed at:

- To provide basic information about Islamic studies
- To enhance understanding of the student regarding Islamic civilization
- To improve students skill to perform prayer and other worships
- To enhance the skill of the students for understanding of issues related to faith and religious life.

Courses:

ISLAMIC STUDIES MODULE ^

| Discipline | | University Inclusive | |
|-------------------|-----------|----------------------|---|
| Department | | Islamic studies | |
| Course title | | Islamic Economic | |
| Pre-requisites | | None | |
| Course code | | MED ٠٨ ٠١ | |
| Academic year | | ٤ | |
| Semester | | ^ | |
| Number of credits | | ^ | |
| | | Knowledge | ١ |
| | | Practical | |
| Weeks | Hours | | Topics and descriptions |
| | Knowledge | Practical | |
| ١ | ١ | | Basic concepts of Islamic economic system |
| ٢ | ١ | | Means of distribution of wealth in Islamic economics |
| ٣ | ١ | | Islamic concept of Riba |
| ٤ | ١ | | Islamic Ways of trade & commerce |
| ٥ | ١ | | Zakat in Islam: Zakat in Money, Gold and Silver |
| ٦ | ١ | | Zakat in Islam: Who is in Need for Zakat and How to pay Zakat |
| ٧ | ١ | | Zakat in islam |
| ٨ | ١ | | Zakat in Islam |
| ٩ | ١ | | Zakat in lalam |
| ١٠ | ١ | | Basic Concepts of social system of Islam |
| ١١ | ١ | | Elements of Family |
| ١٢ | ١ | | Memorization and Translation of Surah Noor |
| ١٣ | ١ | | Memorization and Translation of Surah Ahzab |
| ١٤ | ١ | | Memorization and transliton of Surae Yaseen |
| ١٥ | ١ | | Memorization and translation of Surae Hujrat |
| ١٦ | ١ | | Special (Dua, prayers) according to Hadith and Sunah |

Textbook and reference books recommended last editions

كامل محمد عويضة في فقه النساء

Format Book | ٥٠٤ pages, Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٠٦٦٠٥

أبو عبد الرحمن عادل بن سعيد فتاوى العلامة ناصر الدين الألباني

Format Book | ٦٧٢ pages. Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٦٨٣٤٤

لجامع فقه التدرج : في التشريع والتبليغ والتطبيق عمر

Format Paperback, Dimensions ١٥٠ x ٢٢٠mm, Publication date ٢٠ Aug ٢٠١٩, Publisher Noor Publishing, Language Arabic, Edition Statement Aufl.ISBN١٠ ٦٢٠٠٠٦٨٦٢٣ ISBN١٣ ٩٧٨٦٢٠٠٠٦٨٦٢٠

كامل محمد عويضة في فقه النساء

Format Book | ٥٠٤ pages, Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٠٦٦٠٥

أبو عبد الرحمن عادل بن سعيد فتاوى العلامة ناصر الدين الألباني

Format Book | ٦٧٢ pages. Publisher DKI, Publication City/Country Lebanon Language Arabic, ISBN١٣ ٩٧٨٢٧٤٥١٦٨٣٤٤

Quranic Knowledge - Basic Information about the Holy Quran with Questions and Answers

Format Paperback Item Weight ١,٧٤ pounds Publisher InstantPublisher.com (March ١٨, ٢٠٢٢) Language: English Hardcover ٧٧٢ pages ISBN-١٠ ٣٢١٤٢٢٨٦٨X ISBN-١٣ ٩٧٨-

٣٢١٤٢٢٨٦٨٤

The Study Quran: A New Translation and Commentary

Format Paperback Item Weight ٢,٥١ pounds Paperback : ٢٠٤٨ pages ISBN-١٣ ٩٧٨-

٠٠٦١١٢٥٨٧٤,ISBN١٠ ٠٠٦١١٢٥٨٧٣

في الاجتماع السياسي و التنمية و الاقتصاد و فقه الاصلاح

Publisher الشبكة العربية, Language Arabic, ISBN١٠ ٩٩٥٣٥٣٣٣٢٦.

ISBN١٣ ٩٧٨٩٩٥٣٥٣٣٣٢٢

الموارد الاقتصادية في النظام الاقتصادي

الاسلامى

Publisher المنتدى المعارف

Language Arabic, ISBN١٠ ٦١٤٤٢٨٠٥٤٥, ISBN١٣ ٩٧٨٦١٤٤٢٨٠٥٤٦

ENVIRONMENT

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٧٥% with reasonable excuse.
- More than ٧٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

At the end of the course, the Student should be able to:

- Describe the physical environment inside the home, at the workplace and in the community, and its impact of health and disease;
- Describe the family environment;
- Suggest appropriate methods for improving the internal/external environment;
- Define safe water. describe the sources of water (tap, hand pump, well);
- State the criteria (national and WHO) for safe water;
- Describe appropriate methods for making water safe at the domiciliary level;
- Describe sources of waste and methods of waste control at individual and community levels
- Define air pollution, causes of air pollution and describe appropriate measures of control;
- Describe the effects of noise and radiation of health
- Describe the common vectors of diseases and methods of vector control;
- Describe the various insecticides that are used for victor control;
- Describe insecticide resistance;
- Occupational health in health workers; medical measures, engineering measures, legislation;
- Monitoring the workplace, control of occupational exposures, toxic chemicals, physical factors, biological agents;

- Occupational health in health worker, organization, diagnosis and prevention of diseases in health workers, identification of occupational health problem in special group, identification of occupational health problem in special group

ENVIRONMENT

| Discipline | | | University Inclusive | | |
|-------------------|-----------|-----------|--|---|---|
| Department | | | Environmental & o health | | |
| Subject | | | Environmental & health | | |
| Course code | | | MED ٠٦ ٠٢ | | |
| Class | | | I | | |
| Semester | | ١ | Fall | | |
| Number of credits | | ٢ | Theory | | ٢ |
| | | | Practical | | |
| Weeks | Hours | | Topics | Descriptions | |
| | Knowledge | Practical | | | |
| ١ | ٢ | | Concepts foundation of environment | Concepts foundation of environment | |
| ٢ | ٢ | | The importance of studying the environment | The importance of studying the environment | |
| ٣ | ٢ | | History | History of environment issues | |
| ٤ | ٢ | | Concepts of environment | Definition and general information of environment and division of environment | |
| ٥ | ٢ | | The relationship environment and science | The relationship between the environment and science | |
| ٦ | ٢ | | Risk factor of environment | Risk factor of environment chemical, biological, mechanical, psychosocial | |
| ٧ | ٢ | | Noise pollution | Noise pollution and its effects waste and sewages | |
| ٨ | ٢ | | Population growth | Population growth and its impact on the environment | |
| ٩ | ٢ | | Diversity of life | Diversity of life and its importance | |
| ١٠ | ٢ | | Global warning | Global warning phenomenon greenhouse effect | |
| ١١ | ٢ | | Control measures | Personal protective measures, instruments sterilization, Ventilation, disposal of waste | |

| | | | | |
|----|---|--|--|---|
| ١٢ | ٢ | | Key principle in environment safety and health | Rights and duties; workers' rights, employers' responsibilities, governments' duties |
| ١٣ | ٢ | | Personal environment | Family planning program Children, young people, elderly |
| ١٤ | ٢ | | Air | Air pollutant, indoor and outdoor air pollution, general methods for control |
| ١٥ | ٢ | | Air | Foodborne illness and causes, inorganic and organic chemical contaminant and additives, antibiotic, antibiotic and hormone use in farm animal, care in food preservation and handling food sanitation program |
| ١٦ | ٢ | | Water | General information, sources of drinking water, human uses of water, ways exposure, impact of waterborne diseases, drinking water and chemicals, drinking water standards, water-purification processes |

Textbooks & reference books recommended (last edition)

Handbook of environment

Format Paperback | ٢١٢٨ pages, Dimensions ١٠٨ x ١٨١ x ٧٢mm | ١,٠٣٠g, Publication date ٠١ Jan ٢٠٢٢, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, ISBN١٠ ٠١٩٨٧٦٦٣٢٧, ISBN١٣ ٩٧٨٠١٩٨٧٦٦٣٢٧, Bestsellers rank ١٠٩,٤١

Biological Monitoring of Chemical Exposure in the Workplace

Format Paperback | ٣١٢ pages, Dimensions ١٧٣ x ٢٥٠mm, Publication date ٠١ Mar ١٩٩٧ Publisher World Health Organization, Publication City/Country Geneva, Switzerland, Illustrations note tables, ISBN١٠ ٩٥١٨٠٢١٥٨٩, ISBN١٣ ٩٧٨٩٥١٨٠٢١٥٨٥

Cherileyn , Tellman environment Health and Hygien

Format Paperback | ٤٩٦ pages, Dimensions ١٧٦ x ٢٤٥ x ٢٧,٩٤mm | ٨٩٠g, Publication date ٠١ Jun ٢٠٠٧, Publisher Francoism, Imprint Allen & Unwin Publication City/Country Australia Language English, ISBN١٠ ١٧٤١٧٥٠٥٨X, ISBN١٣ ٩٧٨١٧٤١٧٥٠٥٨٤, Bestsellers rank ٤٤٨,٨١

David L, Goetsch. Occupational Safety and Health

Format Paperback | ٧٣٢ pages, Dimensions ٢٣٢ x ٢٧٩ x ٢٧mm | ١,٤٦٦g, Publication date ٢٧ Aug ٢٠١٤, Publisher Pearson Education Limited, Publication City/Country Harlow, United Kingdom, Language English, Edition Statement ٨th edition, ISBN١٠ ١٢٩٢٠٦١٩٩٥ ISBN١٣ ٩٧٨١٢٩٢٠٦١٩٩٣, Bestsellers rank ٢,٢٦٠,٠٨٩

Daniel , Wayne Biostatistics , afoundation for analysis in the health sciences

Format Paperback | ٧٢٠ pages, Dimensions ٢٠٠ x ٢٥١ x ٢٥mm | ١,٢٢٤g, Publication date ١٣ Nov ٢٠١٨, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement ١١th Edition, ISBN١٠ ١١١٩٢٨٢٣٧٣, ISBN١٣ ٩٧٨١١١٩٢٨٢٣٧٣

James F, Jekel , environment, biostatistics and preventive medicine

Format Paperback Dimensions ٢٣٢ x ٢٧٦mm, Publication date ١٨ May ٢٠٠٧, Publisher Saunders, Language English, Edition Statement ٣rd ed.ISBN١٠ ١٤٥٥٧٥٥٥٧٥ ISBN١٣ ٩٧٨١٤٥٥٧٥٥٥٧٨

BK Mahajan, methodes in biostatistics

Format Paperback | ٤٨٨ pages, Dimensions ١٤٠ x ٢٣٢mm, Publication date ٢٨ Feb ٢٠١٨ Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Edition Revised, Edition Statement ٩th Revised edition, ISBN١٠ ٩٣٥٢٧٠٣١٠٣ ISBN١٣ ٩٧٨٩٣٥٢٧٠٣١٠٤

CONTEMPORARY HISTORY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۳۰% with reasonable excuse.
- More than ۳۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۳۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Brief Description

The subject of contemporary history is one of the specialized subject of history that is taught in tow credits in one semester students study and pass this subject from the contemporary history of Afghanistan from the establishment of the new afghan government led by Ahmad Shah Abdali to Habibullah Khan to get in formation awareness of historical events and happenings of this course can help to from student's awareness and historical experience aware of his historical experience they can help improve and shape new structures in society.

Course description

At the end of the course, the Student should be able to:

- Acquiring scientific knowledge to strength rational approach to the contemporary history of the country.
- Strength the skills of using the historical lessons of Afghanistan for the present and future.
- Strength teaching and researcher skills in the field of contemporary history of Afghanistan.
- Understanding and analyzing the positive and negative features of contemporary history of the country.
- Understanding the texts and paradigms that dominate contemporary history grapey

CONTEMPORARY HISTORY

| Discipline | | University Inclusive | | |
|-------------------|-----------|----------------------|---|--|
| Department | | contemporary history | | |
| Subject | | contemporary history | | |
| Course code | | MED ۰۱ ۰۳ | | |
| Class | | I | | |
| Semester | | ۱ | | |
| Number of credits | | ۲ | | |
| | | Theory | ۲ | |
| | | Practical | | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Practical | | |
| ۱ | ۲ | | How gay established durani | How gay established durani government |
| ۲ | ۲ | | The reign of Ahmad Shah Abdali | The reign of Ahmad Shah Abdali ۱۷۴۷-۱۷۷۳ |
| ۳ | ۲ | | The reign of Timor Shah | The reign of Timor Shah ۱۷۷۳-۱۷۹۳ |
| ۴ | ۲ | | A review of the eight years rule of the Shah | A review of the eight years rule of the Shah ۱۷۹۳-۱۸۰۴ |
| ۵ | ۲ | | Recognition of the first government of Shah Mahmood | Recognition of the first government of Shah Mahmood ۱۸۰۱-۱۸۰۴ |
| ۶ | ۲ | | Recognition of the first government of Shah Shuja | Recognition of the first government of Shag Shuja ۱۸۰۴-۱۸۰۹ |
| ۷ | ۲ | | Socio economic and political situation in the time Abdalian | Socio economic and political situation in the time Abdalian |
| ۸ | ۲ | | The decline of the durani family | The decline of the durani family and the rise of the Barkzai to power |
| ۹ | ۲ | | Announcement of the Emirate of Dust Mohammad Khan | Announcement of the Emirate of Dust Mohammad Khan |
| ۱۰ | ۲ | | British occupation of Afghanistan | British occupation of Afghanistan ۱۸۳۹-۱۸۴۲ |
| ۱۱ | ۲ | | The reign of Sher Ali Khan ۱۸۶۳-۱۸۶۶ | The reign of Sher Ali Khan ۱۸۶۳-۱۸۶۶ and reign of Afzal Khan and Azam Khan ۱۸۶۶-۱۸۶۸ |
| ۱۲ | ۲ | | The second reign of Sher Ali Khan | The second reign of Sher Ali Khan ۱۸۶۸-۱۸۷۸ |
| ۱۳ | ۲ | | The Second British occupation of Afghanistan | The Second British occupation of Afghanistan ۱۸۷۸-۱۸۸۰ |

Muslim Institute of Higher Education/Curriculum & Course Content for MD Degree

| | | | | |
|----|---|--|--|--|
| ۱۴ | ۲ | | Cultural and social situation of Afghanistan | Cultural and social situation of Afghanistan in the nineteenth century |
| ۱۵ | ۲ | | The reign of Abdulrahman Khan | The reign of Abdulrahman Khan ۱۸۸۰-۱۹۰۱ |
| ۱۶ | ۲ | | The economic situation of Afghanistan | The economic situation of Afghanistan from the beginning of the nineteenth century to the beginning of the twentieth century |

Textbooks & reference books recommended (last edition)

Culture of Mir Mohammad Sadiq ۱۳۹۰

Ansari faroozi ۱۳۹۹ compact history of Afghanistan

Habibi Abdulhi ۱۳۷۳ constitution movements in Afghanistan

Reshtia Said Qasim ۱۳۷۷ Afghanistan in nineteenth century

Ghobar Mir Ghulam Mohammad ۱۳۹۰ Afghanistan in Rout of history

MOLECULAR BIOLOGY

Attendance policy

- Regular student attendance at all.
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- More than ۲۰% of absente is within result in disqualification from the final content exam

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- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

The cell biology course provides a basic understanding of the structure and function of cellular organelles and components and the functional interaction of the cell with its microenvironment the course stresses a novel approach to the study of the cell within its social context and imparts onto students the concept that the cell is no longer perceived as the smallest unit of function but it is rather the cell and its microenvironment including neighboring cells, the extra cellular matrix (ECM) and the soluble mediators. The concept of dynamic reciprocity” is stressed throughout the course, in brief, imparting on students that the cell regulates the composition of its microenvironment which in turn the dictates cell function. Classes are centered on discussion oriented lectures to encourage critical things and emphasize the significant things of research as a tool to achieve knowledge.

Learning objectives

Upon successful completion of this course, participants will be able to:

- Describe the general principles of gene organization and expression in both prokaryotic and eukaryotic organisms
- Interpret the outcome of experiments that involve the use of recombinant DNA technology and other common gene analysis techniques
- Discuss the various macromolecular components of cell and their function
- Describe the structure and function of Biological membranes including the rules of gradients in energy transduction

- Explain the basic pathways and mechanisms in biological energy transduction from oxidation metabolites to synthesis of ATP
- Explain various levels of gene regulation and protein function including single transduction and cell cycle control
- Relate properties of cancerous cells to mutational changes in gene function
- Students will apply their knowledge of cell biology to selected examples of changes are losses and cell function. These can include responses to environmental or physiological changes, are alterations of cell function brought about by mutation.

Course contents

| MOLECULAR BIOLOGY MODULE 1 | | | | |
|-----------------------------------|-----------|-------------------|---------------------------|--|
| Discipline | | Basic Subjects | | |
| Department | | Biology | | |
| Course title | | Molecular biology | | |
| Pre-requisites | | None | | |
| Course code | | MED 01 07 | | |
| Academic year | | 1 st | | |
| Semester | | 1 Spring | | |
| Number of Credits | | 3 | | Knowledge 2 practical 1 |
| | | | | |
| weeks | hours | | Topics | Detrition |
| | Knowledge | Laboratory | | |
| 1 | 1 | 1 | Background | History and background, evolutionary classification of the cell |
| | 1 | | Organization of cell | The prokaryotic cell, morphological organization of the prokaryotic cell prokaryotic cells are structurally simpler than eukaryotic structure of the plasma membrane multiplication of the cell the genetic material of the prokaryotic cell |
| 2 | 2 | 1 | Eukaryotic cell structure | Why the cell is considered the basic unit of life implication of the cell theory eukaryotic cell structure membranes divide the cell into compartment |
| 2 | 2 | 1 | The nucleus | Structure of the nucleus the nuclear envelope structure and function the chromatin and chromosome |
| 4 | 1 | 1 | Endoplasmic Reticulum | Distinguish between smooth and rough endoplasmic reticulum Relationship between endoplasmic reticulum and other internal membranes the structure of RER the function of the RER, the Glycosylation in RER the structure and function or SER |
| | 1 | | Ribosome | Function of ribosome(protein synthesis) structure and subunits of ribosome disorders and ribosomal diseases switchman diamond syndrome Dyskeratosis congenital diamond black fan anemia cartilage hair hypoplasia |

| | | | | |
|----|---|---|--|--|
| ٥ | ٢ | ١ | The Golgi apparatuses | Structure function trace the path of proteins synthesized in RER ad they processed Modified and stored by Golgi complex transport of proteins to specific destinations complementary integral membrane protein vesicle SNAREs target SMAREs disorder and diseases muopolysaccharidosis alzimer inclusion cell inclusion cell disorders |
| ٦ | ١ | ١ | Lysosome | Structure and function of lysosome enzymes primary lysosome digestive vacuole residual body autophagy membrane and Ph |
| | ١ | | PREIZISOME | Lysosome storage disorder Glycogen type ٢ Taysachs diseases |
| ٧ | ٢ | ١ | Mitochondria | Morphology and function of mitochondria shape size distribution umber of mitochondria chemical composition of mitochondria chemical composition of mitochondria outer membrane structure inner membrane structure mitochondria and apoptosis genome of the mitochondria mutation occurs in mitochondria DNA Diseases and disorder Neuropathy ataxia and retinitis pigmentosa the chloroplast |
| ٨ | ٢ | ١ | Cytoskeleton | Eukaryotic cells contain cytoskeleton microtubule structure function size & chemical composition microtubule associated protein (kinesin, dynein & dyneclin) |
| ٩ | ١ | ١ | Cytoskeleton | Cilia & flagellum function size chemical composition microfilaments intermediate filament nuclear envelope and nuclear pore complex inclusions glycogen lipid droplets lipofuscin |
| | ١ | | Glycocalyx | Chemical composition membrane receptors foe extra cellular matrix (integrin protein) |
| ١٠ | ٢ | ١ | Biological membrane | Lipid bilayer with associated proteins fluid mosaic model of membrane structure the biological membranes are two dimensional fluids biological membranes fuse and form closed besivles the membrane proteins membrane proteins include integral and peripheral proteins proteins oriented asymmetrically across the bilayer protein function in transport information transfer and as enzyme |
| ١١ | ٢ | ١ | Cell Membrane & selective permeability | Transport through the cell membrane random motion of particles leads to diffusion osmosis diffusion of water dialysis turgor pressure internal hydrostatic pressure |
| ١٢ | ١ | ١ | Carrier mediated transport | Active and passive transport facilitated defusion carrier mediated transport transport systems |
| | ١ | | Exocytosis / endocytosis | Large paricles transport through the cell membrane exocytosis endocytosis phagocytosis and pinocytosis receptor mediated endocytosis |
| ١٣ | ٢ | ١ | Contacts between cells | Cellular junctions anchoring junction(epithelial sheet) desmosomes adhering junction tight junction Gap junction plasmodesmate |
| ١٤ | ٢ | ١ | Chemistry of life | Organic component of the cell carbon atoms for and enormous variety of structures the isomers structure Geometric & Enantiomers carbohydrates monosaccharaides disaccharides polysaccharides |

| | | | |
|----|---|---|--|
| 10 | 2 | 1 | Proteins the most versatile cellular components protein synthesis chain initiation chain elongation chain termination amino acids structure classification kinds biological buffers peptide bonds important classes of proteins and function four levels of organization (proteins) primary secondary tertiary and quaternary structure of protein |
| 16 | 2 | 1 | Lipids triacylglycerol phospholipid carotenoids steroids |

Textbook and reference books recommended last editions

Medical cell biology stevan R Goodman

Format Hardback | 336 pages, Dimensions 216 x 276 x 21,85mm | 1,25g, Publication date 01 Dec 2007, Publisher Elsevier Science Publishing Co Inc, Imprint Academic Press Inc, Publication City/Country San Diego, United States, Language English, Edition Statement 3rd edition, Illustrations note Approx. 400 illustrations (100 in full color), ISBN10 0123704088 ISBN13 9780123704080, Bestsellers rank 1,189,73

Molecular cell biology Harvey Lodish Arnold berk

Format Hardback | 1320 pages, Dimensions 216 x 276 x 40mm | 2,62g, Publication date 20 Jun 2016, Publisher W.H.Freeman & Co Ltd, Publication City/Country New York, United States Language English, Edition Revised, Edition Statement 4th Revised edition, Illustrations note 1320 p., ISBN10 1471874444, ISBN13 9781471874440, Bestsellers rank 60,200

The cell A Molecular approach Geoffrey M Cooper

Format Hardback | 500 pages, Dimensions 210 x 297 x 40mm | 2,19g, Publication date 11 Dec 2010, Publisher Sinauer Associates Inc.,U.S., Publication City/Country Sunderland, United States, Language English, Edition Revised, Edition Statement 1st ed. 2010, Illustrations note 500 p.,ISBN10 1605300631, ISBN13 9781605300634, Bestsellers rank 827,897

Essential Cell Biology Bruce Albert Dennis Brey

Format Paperback | 864 pages, Dimensions 216 x 279 x 32mm | 1,71g, Publication date 17 Feb 2014, Publisher WW Norton & Co, Imprint Garland Publishing Inc, Publication City/Country United States, Language English, Edition New edition, Edition Statement 4th New edition, Illustrations note 860 Illustrations, color,ISBN10 0810344004, ISBN13 9780810344001, Bestsellers rank 67,662

Loose-Leaf Version for Molecular Cell Biology & Launchpad for Molecular Cell Biology (1 Month Access

Format Mixed media product | 1170 pages, Dimensions 213 x 277 x 41mm | 2,30g, Publication date 30 Jun 2016, Publisher W. H. Freeman, Language English, Edition Statement 4th ed. ISBN10 13196776X, ISBN13 97813196776X, Bestsellers rank 2,208,81

Molecular Cell Biology of Potato Yellow Dwarf Virus N and P Protein

Format Paperback | 102 pages, Dimensions 102 x 229 x 9mm | 231g, Publication date 30 Jul 2018, Publisher Scholars' Press, Publication City/Country United State, Language English, Edition Statement Aufl. Illustrations note black & white illustration,ISBN10 3639664264, ISBN13 9783639664263

MOLECULAR BIOLOGY MODULE ٧

| Discipline | | | Basic Subjects | | |
|-------------------|-----------|------------|--|--|---|
| Department | | | Molecular biology and medical genetic | | |
| Course title | | | Molecular biology | | |
| Prerequisite | | | Molecular biology | | |
| Course code | | | MED .٧ .٧ | | |
| Class | | | ١ | | |
| Semester | | | ٢ | | |
| Number of credits | | | ٣ | | |
| | | | Knowledge | | ٢ |
| | | | practical | | ١ |
| Weeks | Hours | | Topics | Descriptions | |
| | Knowledge | Laboratory | | | |
| ١ | ١ | ١ | Chemistry of life | Non organic component of the cell the water the ph scales other non organic component of the cell | |
| | ١ | | Nucleic acid | Structure function kind DNA, RNA mRNA tRNA rRNA | |
| ٢ | ٢ | ١ | Nucleotides | Structure nitrogen base adenine thymine cytosine guanine & uracil Energy transferring cellular function cyclic AMP | |
| ٣ | ٢ | ١ | Enzyme | Enzyme and cell metabolism method of study localization of enzymes function of enzymes inhibition of enzyme activity reversible inhibition irreversible inhibition | |
| ٤ | ١ | ١ | Energy | The bioenergetics free energy open systems steady state thermodynamic laws | |
| | ١ | | Non organic component of the cell | The water the constant of equilibrium the ph scales | |
| ٥ | ٢ | ١ | The genetic material in eukaryotic and prokaryotic cells | The DNA structure crick and Watson model replication of DNA replication is seciconservative | |
| ٦ | ٢ | ١ | The genetic material in eukaryotic and prokaryotic cells | Replication in prokaryotic cells error in replication how gene works the function of genes the generic code | |
| ٧ | ٢ | ١ | The Gene | Gene expression transcription translation the role of ribosomal RNA | |

| | | | | |
|----|---|---|------------------------------|--|
| ٨ | ٢ | ١ | | Prokaryotic regulation structural genes the trp operon the lac operon |
| ٩ | ٢ | ١ | Eukaryotic regulation | Transcriptional control posttranscriptional control translational control post translational control |
| ١٠ | ٢ | ١ | Genetic Engineering | Historical background the recombinant DNA the r NDA methods grew out of research in microbial genetics the restriction enzyme molecular scissors the method of forming rDNA |
| ١١ | ٢ | ١ | Biotechnology | Classic biotechnology product of classic biotech molecular biotechnology red biotech green biotech blue biotech |
| ١٢ | ٢ | ١ | The product of biotech | The Ecol bacteria in biotech DNA cloning transgenic bacteria the growth hormone protein dissolves blood colts in heat therapy organs for transplant xenotransplantation |
| ١٣ | ٢ | ١ | The stem cells | Embryonic stem cell adult stem cell transcription factors antigens |
| ١٤ | ٢ | ١ | Differentiation of stem cell | Differentiation of hematopoietic stem cell red blood cells B lymphocytes T lymphocytes natural killer cells neutrophils eosnophils monocytes macrophages |
| ١٥ | ٢ | ١ | Gene, Gene therapy | Gene structure & function Gene is the basic structure unit of heredity genome the Genetic code genes specify enzymes Gene specify polypeptides the sickle cell anemia |
| ١٦ | ٢ | ١ | Gene therapy | The goal of Gene therapy Gene therapy & Gnetic Diseases identify defected Gene and replacing with normal Gene switching of off Genes how Gene therapy work types of gene therapy vectors In gene therapy virus naked DNA risk with gene therapy and other problems |

Textbook and reference books recommended last editions

Medical cell biology stevan R Goodman

Format Hardback | ٣٣٦ pages, Dimensions ٢١٦ x ٢٧٦ x ٢١,٨٤mm | ١,٢٤٧g, Publication date ٠١ Dec ٢٠٠٧, Publisher Elsevier Science Publishing Co Inc, Imprint Academic Press Inc, Publication City/Country San Diego, United States, Language English, Edition Statement ٣rd edition, Illustrations note Approx. ٤٥٠ illustrations (١٥٠ in full color), ISBN١٠ ٠١٢٣٧٠٤٥٨٨ ISBN١٣ ٩٧٨٠١٢٣٧٠٤٥٨٠, Bestsellers rank ١,١٨٩,٦٣

Molecular cell biology Harvey Lodish Arnold berk

Format Hardback | ١٣٢٠ pages, Dimensions ٢١٦ x ٢٧٦ x ٤٥mm | ٢,٦٢٥g, Publication date ٢٥ Jun ٢٠١٦, Publisher W.H.Freeman & Co Ltd, Publication City/Country New York, United States Language English, Edition Revised, Edition Statement ٨th Revised edition, Illustrations note ١٣٢٠ p., ISBN١٠ ١٤٦٤١٨٧٤٤٤٤, ISBN١٣ ٩٧٨١٤٦٤١٨٧٤٤٤٥, Bestsellers rank ٦٥,٢٠٠

The cell A Molecular approach Geffrey M Cooper

Format Hardback | ٥٠٠ pages, Dimensions ٢١٠ x ٢٩٧ x ٤٠mm | ٢,١٩٩, Publication date ١١ Dec ٢٠١٥,

Publisher Sinauer Associates Inc.,U.S., Publication City/Country Sunderland, United States, Language English, Edition Revised, Edition Statement 1st ed. 2010, Illustrations note 000 p.ISBN10 060300631, ISBN13 978160300634, Bestsellers rank 827,

Essential Cell Biology Bruce Albert Dennis Brey

Format Paperback | 864 pages, Dimensions 216 x 279 x 32mm | 1,716g, Publication date 17 Feb 2014, Publisher WW Norton & Co, Imprint Garland Publishing Inc, Publication City/Country United States, Language English, Edition New edition, Edition Statement 4th New edition, Illustrations note 860 Illustrations, color, ISBN10 0810344004, ISBN13 9780810344001, Bestsellers rank 77,772

Loose-Leaf Version for Molecular Cell Biology & Launchpad for Molecular Cell Biology (1 Month Access

Format Mixed media product | 1170 pages, Dimensions 213 x 277 x 41mm | 2,309g, Publication date 30 Jun 2016, Publisher W. H. Freeman, Language English, Edition Statement 4th ed. ISBN10 13196776X, ISBN13 978131967762, Bestsellers rank 2,208,81

Molecular Cell Biology of Potato Yellow Dwarf Virus N and P Protein

Format Paperback | 102 pages, Dimensions 102 x 229 x 9mm | 231g, Publication date 30 Jul 2018, Publisher Scholars' Press, Publication City/Country United State, Language English, Edition Statement Aufl. Illustrations note black & white illustration, ISBN10 3639664264, ISBN13 9783639664263

MEDICAL GENETICS

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

Medical genetics is a rapidly advancing field of medicine is now recognized that genetic mechanism play a fundamental role in the pathogenesis and treatment of disease and the maintenance of health. This course is designed to provide and overview of human genetic concept and clinical disorder that have a genetic component. The course seeks to teach the students to apply their knowledge of the principles of human genetics to a variety of clinical problems. Its surveys many clinical areas including cytogenetic, molecular genetics, biochemical genetic, population genetics and clinical genetics. The course is organized roughly according to genetic etiology and pathophysiology.

Learning objectives

The educational learning objectives are largely derived from the American college of medical genetics recommendation about graduate education in medical genetics and the Core Curriculum in Genetic recommended by the association of professors of human and Medical genetics.

At the end of course students should be able to:

- Describe the organization of the genome and regulation gene expression as it relates to medical genetics disorders and diagnosis
- Describe the types and extent of genetic variation seen in the human genome and explain how these variations affect diseases states and diversity of normal variation

- Obtain a family history and draw and interpret a pedigree
- Perform pedigree analysis and apply principles of inheritance in calculating genetic risk for a variety of genetic disorders and patterns of inheritance and incorporate knowledge of population genetics to calculate risk based on carrier frequency within a population
- Explain and identify non-Mendelian mechanism such as reduced penetrance, variable expressivity, uniparental disomy, epigenetics, mosaicism, genomic imprinting unstable repeat expansion
- Identify the clinical presentation and etiology of genetic disorders including: single gene disorders, disorders of chromosome, abnormalities, inborn errors of metabolism, multifactorial genetics disorders and cancer genetics. Identify the effects of teratogens and in utero infection and identify patterns of dysmorphology

Course contents

| MEDICAL GENETICS | | | | |
|-------------------------|-----------|------------------------|--|---|
| Discipline | | Basic Subjects | | |
| Department | | Biology | | |
| Course title | | Medical genetics | | |
| Prerequisite | | Molecular cell biology | | |
| Course code | | MED ٠٣٠٨ | | |
| Academic year | | ١ | | |
| Semester | | ٢ | spring | |
| Number of credits | | ٣ | Knowledge | ١ |
| | | | practical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ١ | | Background | Historical background and role of genetics in medicine |
| ٢ | ١ | | Definition of the relative terms | Homozygous parents heterozygous parents sex determination the genotypes of parents gametes and offspring should be shown fertilization allele homozygous and heterozygous genotype phenotype dominance recessive incomplete dominance |
| ٣ | ١ | | Origin of the science of genetics | Work of Gregor Mendel leading to the expression of his findings in two laws: law of segregation law of independent assortment |
| ٤ | ١ | | Monohybrid di hybrid and poly hybrid cross | Study of the inheritance to the second filial generation of two unlinked traits using the Punnett square technique definition of linkage heterozygote crossed with a dihybrid recessive organism |
| ٥ | ١ | | Drosophila melanogaster | Attractive and marvelous traits of Drosophila in genetic researches |
| ٦ | ١ | | The origin of medical genetics | Single gene disorders chromosomal disorders multiple gene disorders |
| ٧ | ١ | | Cellular and molecular base of genetics | The cell DNA the genetic material structure replication structure of chromosome |

| | | | |
|----|---|------------------|---|
| 8 | 1 | The Gene | The structure of nucleus genes pseudo genes extra genic DNA junk DNA satellite DNA Minisatellite DNA hypervariable minisatellite DNA Microsatellite DNA |
| 9 | 1 | Mutation | Types of mutation substitution insertion deletion |
| 10 | 1 | Chromosome | Morphology typed of chromosome view point of location of centromere length sex chromosomes somatic chromosome |
| 11 | 1 | Cell division | The cell cycle check points and p ⁵³ role CDC and byvlin proteins mitosis prophase metaphase anaphase and telophase |
| 12 | 1 | Meiosis | Meiosis 1 and meiosis 2 prophase 2 metphase 1, 2 amaphase 1, 2 andphase 1, 2 telophase 1, 2 |
| 13 | 1 | Twins | Types of wwins fraternal identical IVF in vitro fertilization |
| 14 | 1 | Twins | Conjoined twins, the result of multifactorial traits with twins |
| 15 | 1 | Gene reciprocity | Epistatic Gene complementary genes polymeric gene |
| 16 | 1 | Gene reciprocity | Multiple gene inheritance the blood groups RH factor lethal gene modifier gene |

Textbooks & Reference books recommended Last Editions

Medical Genetics leyn B jorde phd

Format Paperback | 302 pages, Dimensions 219 x 276 x 10,44mm | 1,116,00g, Publication date 01 Jan 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 7th Revised edition, Illustrations note Approx. 291 illustrations (200 in full color), ISBN10 0323097378, ISBN13 9780323097371, Bestsellers rank 630,86.

Essentials of medical Genetics for health Professional s laura M, Hauder Mac Clary

Format Paperback Item Weight. 1.5 ounces, 236 pages, ISBN-10 0763709600, ISBN-13 978-0763709600, Product Dimensions: 7.0 x 0.53 x 9.20 inches, Publisher: Jones & Bartlett Learning; 1st Edition (October 1, 2010), Language English

Thompson Thompson Genetics in medicine, Roderick R McLnnes PhD Medical Genetics at a Glance Forian J Pretchard

Format Paperback | 232 pages, Dimensions 215 x 277 x 13mm | 622g, Publication date 22 Sep 2013, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 3rd Edition, ISBN10 0470706049, ISBN13 9780470706049 Bestsellers rank 318,076

Emery's Elements of Medical Genetics Sine Ellard PhD

Format Mixed media product | 416 pages, Dimensions 216 x 280 x 19,00mm | 1,300g, Publication date 01 Jan 2000, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE, Publication City/Country London, United Kingdom, Language English Edition Revised, Edition Statement 12th Revised edition, Illustrations note 400 ills. ISBN10 0443100404, ISBN13 9780443100401, Bestsellers rank 2,100,603

INORGANIC AND ORGANIC CHEMISTRY**Course Objective**

Upon completion of inorganic & organic chemistry course the student should understand:

- The basic structure of atoms, ions and molecules and ways to quantitatively describe the properties of atoms and molecules
- The concept of chemical equilibrium and the energies that drive chemical reactions an introduction to the field of thermodynamics
- To make the students knowledgeable about the fundamentals of carbon chemistry
- To make the students knowledgeable about solution and electrolytes
- To understand the concepts of hydrocarbomes and halogen compounds
- To make the students knowledgeable about alcohol and phenol ether ester and toils
- To make the student knowledgeable about carbonyl compounds acids and hydrobybnlics

Course contents

| INORGANIC CHEMISTRY | | | | |
|----------------------------|-----------|--------------------|------------------|--|
| Discipline | | Basic Subjects | | |
| Department | | CHEMISTRY | | |
| Course title | | IRAGANIC CHEMISTRY | | |
| Prerequisite | | NONE | | |
| Course code | | MED 0109 | | |
| Class | | 1 | | |
| Semester | | Spring | | |
| Number of credits | | 2 | | Knowledge 1 practical 1 |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| 1 | 1 | 1 | Introduction | The chemistry role in the medical agriculture and industries chemistry laws mass onseration difinit proporations |
| 2 | 1 | 1 | Atom structure | Ideas about structure of atom electron protonand neutron radioactivity alpha beta and Gama Rays nuclear |
| 3 | 1 | 1 | Chemical bonding | Valance bonding energy configuration electronic of atom and molecular structure |

| | | | | |
|----|---|---|---|--|
| ٤ | ١ | ١ | Chemical bonding | Valance bonding energy configuration electronic of atom and molecular structure |
| ٥ | ١ | ١ | | Mechanism of formation bonding types of bond hybridization |
| ٦ | ١ | ١ | Classification of inorganic compounds | Oxides, hydroxide acids and salts |
| ٧ | ١ | ١ | Solutions | Type of solution, concentration unit the effect of pressure of solubility henry law medicals impotence solubility of liquids in liquids |
| ٨ | ١ | ١ | | Colligative properties of solution division osmosis and osmotic pressure |
| ٩ | ١ | ١ | | Isotonic hypertonic and hypotonic solution and their importance in medical roult's law viper pressure of solution medical uses |
| ١٠ | ١ | ١ | | Strong in weak electrolytes solution in Ostwald law their importance in medical acids bases amphotits |
| ١١ | ١ | ١ | | Ionization of water ph ph such as active acide in criteria and medical importance |
| ١٢ | ١ | ١ | Hydrolysis | Medical importance the h ⁺ and oh ⁻ ion physiological effects the in the organism |
| ١٣ | ١ | ١ | Basics in chemical thermodynamics & internal energy | The first law of thermodynamic processes isochoric isobaric and iso thermic thermo comical |
| ١٤ | ٢ | ١ | | Comparisons of standard enthalpy heat of neutralization heat of solubility result hess law in uses of the first law thermodynamic in biological system |

| | | | | |
|----|---|---|---|--|
| 15 | 1 | 1 | Bioorganic elements macro and micro element | Introduction cu, Zn, Mg, Mo, Cr, Co, F ^v , CL ^v , Br ^v , i ^v , Ni, Va, K, Pb |
| 16 | 1 | 1 | | |

Textbooks & Reference Books recommended last editions

Janice Grozinsky organic chemistry Philadelphia MC Graw Hill.co

Format Loose-leaf | 278 pages Dimensions 213 x 272 x 23mm | 2,22g, Publication date 02 Jan 2019, Publisher McGraw-Hill Education, Language English, Edition Statement 1th ed. Illustrations note Illustrations, unspecified, ISBN10 1260470638, ISBN13 9781260470630.

Alan Johns chemistry an introduction to for medical and health science New York Wiley.com

Format Paperback | 270 pages, Dimensions 189 x 244 x 16mm | 027g, Publication date 17 Jun 2000, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 1. Auflage, ISBN10 0470092890, ISBN13 9780470092897 Bestsellers rank 1,004,29

Atul sinhal the Pearson Guide to inorganic chemistry New York pearson.com Education.co

Format Paperback | 484 pages, Publisher Pearson Education India, Publication City/Country Delhi, India, ISBN10 8131726970, ISBN13 9788131726976

Goplan R Textbook of inorganic chemistry CRC University press, amazone.co.UK

Format Hardback | 960 pages, Dimensions 102 x 229 x 70,96mm | 2,72g, Publication date 03 Jul 2012, Publisher Taylor & Francis Inc, Imprint CRC Press Inc, Publication City/Country Bosa Roca, United States, Language English, Edition Statement New.ISBN10 1466018146 ISBN13 9781466018148, Bestsellers rank 2,876,101

ORGANIC CHEMISTRY

| Discipline | | Basic Subjects | | |
|-------------------|-----------|-------------------|-----------------------------------|--|
| Department | | Chemistry | | |
| Course title | | Organic chemistry | | |
| Prerequisite | | None | | |
| Course code | | MED . ۲ . ۹ | | |
| Academic year | | ۱ | | |
| Semester | | ۲ | Fall | |
| Number of credits | | ۱ | Knowledge practical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ۱ | ۱ | | Introduction hydrocarbons | The alkanes (homologous series structure isomeric and nomenclature introduction hydrocarbons confirmation of aliphatic compounds preparation of alkane physicochemical properties of alkanes |
| ۲ | ۱ | | Hydrocarbons | Cycloalkanes nomenclature isomerism of cis trans conformation analysis movement of rings physiccemical properties |
| ۳ | ۱ | | Introduction hydrocarbons | The alkenes homologous series structure isomerism and nomenclature cis trans isomerism introduction hydrocarbons preparation of alkenes physical properties chemical properties of alkenes additional reaction dimerization substitution reactions alkenes |
| ۴ | ۱ | | Introduction hydrocarbons | The alkynes homologous series structure isomerism nomenclature introduction hydrocarbons preparation of alkynes physical properties chemicals properties of alkynes additional reaction |
| ۵ | ۱ | | Introduction dienes | Classification nomenclature physical chemical properties chemical reaction |
| ۶ | ۱ | | Hydrocarbons | The aromatic hydrocarbons introduction homology and nomenclature physical and chemical properties electrophilic & nucleophile reaction and substitution relations |
| ۷ | ۱ | | Hydrocarbons | Preparation of aromatic compound of medical and uses |
| ۸ | ۱ | | Condensed ring aromatic compounds | Naphthalene anthrachene phenanthrene homologous series addition and substitution reacting medical importance and uses |

| | | | | |
|----|---|--|-------------------------------|--|
| 9 | 1 | | Nonbenzene aromatic structure | Importance and uses halogen compounds aromatic and aliphatic displacement and elimination reaction medical uses importance |
| 10 | 1 | | Alcohol and phenol | Classification of hydroxyl compounds nomenclature preparation side reaction |
| 11 | 1 | | Alcohol and phenol | Physical and comical properties of alcohol and phenols medical uses impotence |
| 12 | 1 | | Carbonyl compounds | Ethers ester and thioles definition nomenclature physical chemical properties |
| 13 | 1 | | Aldehyde and ketone | Definition nomenclature & properties additional substation reaction preparation medical importance and uses |
| 14 | 1 | | Carbocyclic acid | Definition preparation properties and medical importance uses |
| 15 | 1 | | Amines | Aminoacids and other compounds |
| 16 | 1 | | Chemistry of heterocyclic | Nomenclature biological activity heterocyclic compounds classification and their properties |

Textbooks & Reference Books recommended last editions

Janice Grozinsky organic chemistry Philadelphia MC Graw Hill.co

Format Loose-leaf | 2784 pages Dimensions 213 x 274 x 43mm | 2,427g, Publication date 02 Jan 2019, Publisher McGraw-Hill Education, Language English, Edition Statement 7th ed. Illustrations note Illustrations, unspecified, ISBN10 1260470638, ISBN13 9781260470638.

Alan Johns chemistry an introduction to for medical and health science New York Wiley.com

Format Paperback | 270 pages, Dimensions 189 x 244 x 8mm | 526g, Publication date 17 Jun 2005, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 1. Auflage, ISBN10 0470092890, ISBN13 9780470092897 Bestsellers rank 1,004,29

Atul sinhal the Pearson Guide to inorganic chemistry New York pearson.com Education.co

Format Paperback | 484 pages, Publisher Pearson Education India, Publication City/Country Delhi, India, ISBN10 8131226970, ISBN13 9788131226976

Goplan R Textbook of inorganic chemistry CRC University press, amazon.co.UK

Format Hardback | 960 pages, Dimensions 152 x 229 x 70,96mm | 2,074g, Publication date 03 Jul 2012, Publisher Taylor & Francis Inc, Imprint CRC Press Inc, Publication City/Country Bosa Roca, United States, Language English, Edition Statement New. ISBN10 1466018146 ISBN13 9781466018148, Bestsellers rank 2,876,101

GROSS ANATOMY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

The broad goals of teaching of graduate students in anatomy are to providing comprehensive knowledge of the gross structure of human body to provide a basis for understanding the clinical correlation of organs or structures involved and the anatomical basis for the disease presentation

Learning objectives:

At the end of the course the student should be able to:

- Comprehend the normal gross structure and position of all body organs
- Comprehend the connection and relationship between the all parts of the body

Skills

- **Upper limb:** dissection: pectoral and scapular axillary and shoulder region arm forearm
- **Prosected parts:** joints plam and dorsum of hand
- **Thorax dissection:** chest wall mediastinum pleura lungs heart
- **Abdomen dissection:** anterior abdominal wall and inguinal region external genitalia viscera and posterior abdominal wall and nerve plexus
- **Pelvis dissection:** pelvic visvera blood vessels and nerves
- **Prosected parts:** perineum including ischoi rectal fossa

- **Lower limb dissection:** gluteal region front and back of thigh popliteal fossa front back and lateral side of leg and dorsum of foot
- **Prosected parts:** sole of the foot and joints
- **Head & neck dissection:** superficial and deep dissection of face and neck orbit and eye ball submandibular region temporal and infratemporal fossa cranial cavity naso and oropharyngeal regions ear larynx and pharynx

A-Neuro anatomy

- Gross specimen of full brain, meninges spinal cord prosected specimens to demonstrate visual system auditory and vestibular pathways and major functional areas
- Stained sections of brain and spinal cord at various levels to demonstrate cranial nerve nuclei ascending and descending tracts thalamic nuclei and important functional areas

B-Demonstrations

- Bones of skull and vertebral column
- Brain and spinal cord
- Cross sectional anatomy
- Radiological anatomy

C-Topographic Skills

- Demonstrate surface marking of important organs
- Localize important pulsation and the structures against which pressure can be applied in case of bleeding from particular artery
- Demonstrate muscle testing and movements at joints
- Locate sites for lumbar puncture sternal puncture pericardial tapping and liver biopsy
- Locate veins for vein puncture
- Locate the site for emergency tracheostomy
- Locate the subcutaneous positions of large veins

Teaching and Learning Methodology

The general pattern of teaching methodology followed by all the faculty members and teaching staff in the department is:

Υ- Lectures

Discussing the topic in detail in one hour lecture time

Υ- Skills

- **Dissection:** is done by students on the cadavers and is being assisted supervised by a team of teachers some prosected specimen dissection are shown on ultra scope which is telecasted on TV monitors fitted in dissection Hall
- **Videos** of some dissections are also shown on TV after the completion of dissection of the part region to recapitulate the details of the part region dissected
- **Self-assessment** MCQs are given at the end of dissection of each region and discussed with teacher in charge
- **Handouts** are Given at the end of completion of part region to the students to recapitulate and remember the Gross anatomy and neuroanatomy
- **In neuroanatomy.** The stained sections at various level of brain and spinal cord are shown on slides and computers to localize the cranial nerve nuclei and trace the origin course and termination of ascending and descending tracts in order to understand the effects produced as a result of lesions
- **Demonstrations:** mainly the bones of the entire body few dissected specimens are taught in small groups

By a combination of the above teaching Learning tools and modalities the student is able to understand the development gross structure of the organ systems and gain an insight into the structure function correlation this

combined with the knowledge of applied clinical anatomy provides an understanding of the anatomical basis of health and disease

Course content

| GROSS ANATOMY MODEL ١ | | | | |
|------------------------------|-----------|---|----------------------------------|---|
| Discipline | | Basic Subjects | | |
| Department | | Human anatomy | | |
| Course title | | Anatomy (Osteology, muscles and joints) | | |
| Prerequisite | | None | | |
| Course code | | MED ٠٢ ١٢ | | |
| Academic year | | ١ | | |
| Semester | | ٢ | Fall | |
| Number of credits | | ٤ | Knowledge | ٣ |
| | | | practical | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ١ | | General information | ١. Descriptive anatomical terms; ٢. Basic structures |
| ٢ | ٢ | | Bones of the upper & lower limbs | Part one the human osteology Bones of the upper limb: clavicle, scapula, humerus, the radius, the ulna, the skeleton of the hand bones of the lower limb: hip bone the pelvis as a whole the femur patella tibia and fibula the skeleton of the foot |
| ٣ | ٢ | ١ | The vertebral column | The vertebral column: structure of a typical vertebrae atypical cervical vertebrae atlas & axis the sacrum & coccyx |
| ٤ | ٢ | ١ | The skull | The skull: general review of the skull the skull as seen from the front the skull as seen from above, the skull as seen from behind the skull as seen the lateral side |
| ٥ | ٢ | ١ | The skull | The skull as seen from below the cranial fossae foramina of the skull the nasal cavity and Para nasal sinuses the mandible and hyoid bones |
| ٦ | ١ | ١ | The back | Cutaneous nerves of the back joints between vertebrae in the back ligaments back musculature superficial group of back muscles intermediate group of back muscles deep group of back muscles sub occipital muscles nerves of the back |
| ٧ | ٢ | ١ | The upper limb | Regions of the upper limb the pectoral region the axilla axillary artery vein and lymph nodes symph nodes of the upper limb the brachial plexus and tis branches the mammary glands |

| | | | | |
|----|---|---|---|--|
| ٨ | ٣ | ١ | The scapular region & the arm | The scapular region muscles & intramuscular spaces nerves of the scapular region arteries of the scapular region the free upper limb utaneous nerves and veins the arm compartments of the arm contents of the anterior compartment of the arm |
| ٩ | ٣ | ١ | The arm | Contents of the posterior compartment of the arm the cubital fossa the forearm & Hand General review of structure on fort of the forearm & hand contents of the anterior compartment of the forearm muscles and fascia of the wrist & hand |
| ١٠ | ٣ | ١ | The wrist & Hand | Small muscles of the hand nerves of the forearm & hand arteries of the forearm & hand back of the forearm & hand general review of structure contents of the lateral compartment contents of the posterior compartment blood vessels of the posterior compartment |
| ١١ | ٣ | ١ | Nerves & Joints of the Upper Limb | Nerves of the free upper limb: median ulnar and racial nerves Joints of the upper limb: Sternoclavicular Joint acormioclaviular joint the shoulder joint the elbow joint distal radio ulnar joint wrist joint carpal joints carpo metacarpal joints metacarpi phalangeal joints and nterphalangeal joints |
| ١٢ | ٣ | ١ | The lower limbs | Introduction to the lower limb nerves main arteries veins and lymph nodes of the lower limb regions of the lower limb the gluteal region muscles of the gluteal region arteries of the gluteal region the front & medial side of the thigh General review muscles femoral triangle adductor canal femoral sheath |
| ١٣ | ٣ | ١ | The thigh | Contents of the anterior compartment of the thigh muscles femoral artery femoral vein lymph nodes of the anterior compartment contents of the medial compartment of the thigh muscles profunda femoris artery & vein obrutator artery & vein the back of thigh general review contents of the posterior compartment of thigh |
| ١٤ | ٣ | ١ | Popliteal fossa & back of the leg | Popliteal fossa the front and lateral side of the leg general review contents of the medial compartment of the thigh muscles profound femoris artery vein obturator artry & vein the back of thigh general review contents of the posterior compartment of thigh |
| ١٥ | ٣ | ١ | The sole of the foot | The sole of the foot general review muscle layers of the sole of the foot muscles of the sole of the foot arteries of the sole nerves of the lower limb lumbar nerves and lumbar plexus |
| ١٦ | ٣ | ١ | Lumber & sacral plexus and joints of the lower limb | Sacral ventral rami & sacral plexus the superior & inferior gluteal nerves nerve to quadratus femoris posterior cutaneous nerve of thigh perforating cutaneous nerve the sciatic nerve and pudendal nerves joints of the lower limb joints and ligaments of pelvis hip joint knee joint ankle joint inter tarsal joints tarso metatarsal joints metatarso phalangeal joints interphalangeal foints |

Textbooks & Reference books Recommended Last Editions

Cunningham's manual of practical anatomy

Format Paperback | ٤٣٦ pages, Dimensions ١٩٦ x ٢٦٧ x ٢٠mm | ١,٠٣٨g, Publication date ٠٧ Aug ٢٠١٨, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Revised, Edition Statement ١٦th Revised edition, ISBN١٠٠١٩٨٧٤٩٣٨٤, ISBN١٣٩٧٨٠١٩٨٧٤٩٣٨٧, Bestsellers rank ١,٤٩٨,١٧

Clinical Anatomy for medical student

Format Paperback | 270 pages, Dimensions 129 x 198 x 10,2 mm | 340g, Publication date 02 Jul 2017, Publisher Taylor & Francis Inc, Imprint Productivity Press, Publication City/Country Portland, United States, Language English, Illustrations note 10 Illustrations, color ISBN10 1498782191, ISBN13 9781498782197, Bestsellers rank 337,104

Jean Baasy Neuroanatomy

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Clinical Anatomy for medical student HAROLD

Format Hardback | 000 pages, Dimensions 106 x 234 x 30,4 mm | 939g, Publication date 10 Oct 2018, Publisher Franklin Classics, Language English, 11 Edition Illustrations note Illustrations, black and white, ISBN10 0342227632, ISBN13 9780342227630

GROSS ANATOMY ٢

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

The broad goals of teaching of graduate students in anatomy are to providing comprehensive knowledge of the gross structure of human body to provide a basis for understanding the clinical correlation of organs or structures involved and the anatomical basis for the disease presentation

Learning objectives:

At the end of the course the student should be able to:

- Comprehend the normal gross structure and position of all body organs
- Comprehend the connection and relationship between the all parts of the body

Skills

- **Upper limb:** dissection: pectoral and scapular axillary and shoulder region arm forearm
- **Prosected parts:** joints plam and dorsum of hand
- **Thorax dissection:** chest wall mediastinum pleura lungs heart
- **Abdomen dissection:** anterior abdominal wall and inguinal region external genitalia viscera and posterior abdominal wall and nerve plexus
- **Pelvis dissection:** pelvic visvera blood vessels and nerves
- **Prosected parts:** perineum including ischoi rectal fossa

- **Lower limb dissection:** gluteal region front and back of thigh popliteal fossa front back and lateral side of leg and dorsum of foot
- **Prosected parts:** sole of the foot and joints
- **Head & neck dissection:** superficial and deep dissection of face and neck orbit and eye ball submandibular region temporal and infratemporal fossa cranial cavity naso and oropharyngeal regions ear larynx and pharynx

A-Neuro anatomy

- Gross specimen of full brain, meninges spinal cord prosected specimens to demonstrate visual system auditory and vestibular pathways and major functional areas
- Stained sections of brain and spinal cord at various levels to demonstrate cranial nerve nuclei ascending and descending tracts thalamic nuclei and important functional areas

B-Demonstrations

- Bones of skull and vertebral column
- Brain and spinal cord
- Cross sectional anatomy
- Radiological anatomy

C-Topographic Skills

- Demonstrate surface marking of important organs
- Localize important pulsation and the structures against which pressure can be applied in case of bleeding from particular artery
- Demonstrate muscle testing and movements at joints
- Locate sites for lumbar puncture sternal puncture pericardial tapping and liver biopsy
- Locate veins for vein puncture
- Locate the site for emergency tracheostomy
- Locate the subcutaneous positions of large veins

Teaching and Learning Methodology

The general pattern of teaching methodology followed by all the faculty members and teaching staff in the department is:

Υ- Lectures

Discussing the topic in detail in one hour lecture time

Υ- Skills

- **Dissection:** is done by students on the cadavers and is being assisted supervised by a team of teachers some prosected specimen dissection are shown on ultra scope which is telecasted on TV monitors fitted in dissection Hall
- **Videos** of some dissections are also shown on TV after the completion of dissection of the part region to recapitulate the details of the part region dissected
- **Self-assessment** MCQs are given at the end of dissection of each region and discussed with teacher in charge
- **Handouts** are Given at the end of completion of part region to the students to recapitulate and remember the Gross anatomy and neuroanatomy
- **In neuroanatomy.** The stained sections at various level of brain and spinal cord are shown on slides and computers to localize the cranial nerve nuclei and trace the origin course and termination of ascending and descending tracts in order to understand the effects produced as a result of lesions
- **Demonstrations:** mainly the bones of the entire body few dissected specimens are taught in small groups

By a combination of the above teaching Learning tools and modalities the student is able to understand the development gross structure of the organ systems and gain an insight into the structure function correlation this

combined with the knowledge of applied clinical anatomy provides an understanding of the anatomical basis of health and disease

Course content

| GROSS ANATOMY MODEL ٢ | | | | |
|------------------------------|-----------|------------------------------------|--|--|
| Discipline | | Basic Subjects | | |
| Department | | Gross anatomy | | |
| Course title | | Anatomy thorax, abdomen and pelvis | | |
| Prerequisite | | None | | |
| Course code | | MED .٣ ١٢ | | |
| Academic year | | ٢ | | |
| Semester | | ٣ | Spring | |
| Number of credits | | ٤ | Knowledge | ٣ |
| | | | practical | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٢ | ١ | The thoracic cavity joint of the thorax | Come elementary facts about walls of the thorax thoracic cage thoracic apertures and intercostal spaces the thoracic cavity introduction to the trachea bronchi lungs and pleura introduction to the heart & pericardium other structure in the mediastinum joints of ribs with vertebral column joints between ribs costal cartilages and sternum |
| ٢ | ٢ | ١ | Walls of the thorax and blood supply | Walls of the thorax muscles of the thorax the diaphragm arteries of the thoracic wall venous drainage of the thorax azygos system of veins lymphatic drainage of the thoracic walls innervation of the thoracic walls |
| ٣ | ٢ | ١ | The mediastinum and lungs | The thoracic cavity the mediastinum the pleurae trachea & principle bronchi the lungs the bronchial tree bronchopulmonary segments pulmonary arteries & veins bronchial arteries & veins innervation lymphatic drainage of the lungs |
| ٤ | ٢ | ١ | The middle mediastinum and heart | The middle mediastinum: pericardium the heart exterior of the heart interior of the heart cardiac chambers, valves of the heart cardiac skeleton |
| ٥ | ٢ | ١ | Coronary vasculature cardiac innervation | Coronary vasculature veins of the heart coronary lymphatics cardiac conduction system cardiac innervation pulmonary trunk & ascending aorta superior mediastinum: contents |
| ٦ | ٢ | ١ | Superior mediastinum | Nerves of the superior mediastinum thoracic duct posterior mediastinum esophagus thoracic aorta azygos system of veins thoracic duct in the posterior mediastinum sympathetic trunks anterior mediastinum surface anatomy |
| ٧ | ٣ | ١ | The abdomen | Part six the abdomen general description relationship to the other regions key features development of the gut skin & muscles of the abdominal walls vertebral level ١١ major arteries & venous shunt in the abdomen portocaval anastomoses pervertebral plexus & viscera supplied by it |

| | | | | |
|----|---|---|--|--|
| ٨ | ٣ | ١ | Abdominal wall and groin | Regional anatomy surface topography abdominal wall: fascia & muscles flat muscles transversalis fascia vertical muscles extraperitoneal fascia & peritoneum innervation arterial supply & venous drainage lymphatic drainage groin inguinal canal inguinal hernias |
| ٩ | ٣ | ١ | Abdominal viscera | Abdominal viscera peritoneum & the peritoneal cavity organs abdominal part of esophagus stomach small intestine large intestine liver gall bladder pancreas duct system for bile spleen arterial supply anterior branches of abdominal aorta celiac trunk |
| ١٠ | ٣ | ١ | Blood supply of the abdomen | Superior mesenteric artery inferior mesenteric artery venous drainage lymphatic's innervation sympathetic tanks parasympathetic innervation enteric system posterior abdominal region posterior abdominal wall bones muscles |
| ١١ | ٣ | ١ | Posterior abdominal region and kidneys | Viscera: kidneys ureters suprarenal glands vasculature abdominal aorta inferior vena cava lymphatic system |
| ١٢ | ٣ | ١ | The pelvis & perineum | Nervous system in the posterior abdominal region surface anatomy part seven the pelvis & perineum general description functions component parts relationship to the other regions key features |
| ١٣ | ٣ | ١ | Pelvic cavity and joint | Pelvis: bones joints orientation true pelvis pelvic inlet pelvic wall pelvic outlet pelvic floor perineal body |
| ١٤ | ٣ | ١ | Pelvic viscera | Viscera: gastrointestinal system rectum anal canal urinary system ureters bladder urethra reproductive system in men testes epididymis ductus deferens seminal vesicle prostate bulbo-urethral glands in women ovaries broad ligament uterus uterine tubes cervix vagina fascia peritoneum |
| ١٥ | ٣ | ١ | Sacral & coccygeal plexuses | Nerves somatic plexuses sacral & coccygeal plexuses sacral plexus sciatic nerve pudendal verve other braches ro the sacral plexus coccygeal plexus visceral plexuses blood vessel arteries veins lymphatics |
| ١٦ | ٣ | ١ | Perineum | Perineum: borders & ceiling ischio anal fossae and their anterior recesses anal triangle urogenital triangle structures in the superficial perineal pouch erectile tissue penis clitoris greater vestibular glands muscles superficial features of the external genitalia in men in women superficial fascia of the urogenital triangle somatic nerves visceral nerves blood vessels veins lymphatic's |

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Clinical Anatomy for medical student

Format Paperback | ٢٧٠ pages, Dimensions ١٢٩ x ١٩٨ x ١٥,٢٤mm | ٣٤٠g, Publication date ٠٢ Jul ٢٠١٧, Publisher Taylor & Francis Inc, Imprint Productivity Press, Publication City/Country Portland, United States, Language English, Illustrations note ١٠ Illustrations, color ISBN١٠ ١٤٩٨٧٨٢١٩١, ISBN١٣ ٩٧٨١٤٩٨٧٨٢١٩٧, Bestsellers rank ٣٣٧,١٥٤

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combined with the knowledge of applied clinical anatomy provides an understanding of the anatomical basis of health and disease

Course content

| GROSS ANATOMY MODULE ٣ | | | | |
|-------------------------------|-----------|----------------|----------------------------------|--|
| Discipline | | Basic Subjects | | |
| Department | | Human Anatomy | | |
| Course title | | Anatomy | | |
| Prerequisite | | None | | |
| Course code | | MED .٤ ١٢ | | |
| Academic year | | ٢ | | |
| Semester | | ٤ | Fall | |
| Number of credits | | ٤ | Knowledge | ٣ |
| | | | practical | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٣ | ١ | Skull & cranial cavity and brain | Part eight the head and neck general description regional anatomy skull cranial cavity meninges brain & its blood supply brain blood supply of the brain venous drainage dural venous sinuses cranial nerves and types of fibers in peripheral nerves |
| ٢ | ٣ | ١ | Cranial nerves and face | Cranial nerve nuclei olfactory nerve optic nerve oculomotor nerve trochlear nerve trigeminal nerve abducens nerve facial nerve vestibule cochlear nerve glossopharyngeal nerve vagus nerve accessory nerve hypoglossal nerve FACE muscles of the face orbital nasal & oral groups other facial muscles parotid gland innervation of the face arteries of the face veins of the face lymphatic drainage of the face |
| ٣ | ٣ | ١ | Scalp and orbital cavity | The scalp arteries veins & lymphatic drainage of the scalp the orbits the eyelids lacrimal apparatus fissures and foramina in the orbit fascial specializations muscles of the orbit vessels of the orbit and nerves of the orbit THE Eyeball walls of the eyeball anterior & posterior chambers lens& vitreous humor the EAR external ear & tympanic membrane |
| ٤ | ٣ | ١ | The ear and infra temporal fossa | Middle ear internal ear transmission of sound introduction to the temporal & infratemporal fossae temporo mandibular joint masseter muscle temporal fossa infratemporal fossa sphenomandibular ligament medial & lateral pterygoid muscles mandibular nerve medial & lateral pterygoid muscles mandibular nerve chorda tympani & lesser petrosal nerve maxillary artery pterygoid plexus of veins pterygopalatine fossa gateways & contents of the pterygopalatine fossa |
| ٥ | ٣ | ١ | The neck | The neck cervical fascia facial compartment superficial venous drainage anterior triangle of the neck muscles vessels nerves posterior triangle of the neck muscles vessels nerves |

| | | | | |
|----|---|---|---|--|
| ٦ | ٣ | ١ | Pharynx | Root of the neck blood vessels nerves lymphatics lymphatics in the neck pharynx skeletal framework pharyngeal wall nasopharynx oropharynx laryngopharynx |
| ٧ | ٣ | ١ | Larynx and the nasal cavities | Larynx laryngeal cartilages extrinsic ligaments intrinsic ligaments laryngeal joints laryngeal cavity intrinsic muscles functions of the larynx vessels & nerves the nasal cavities introduction skeletal framework external nose paranasal sinuses walls roof & floor of the nasal glands |
| ٨ | ٣ | ١ | The oral cavity | Anterior & posterior nares blood vessels of the nasal cavities innervation & lymphatic drainage the oral cavity introduction skeletal framework wall of the oral cavity the floor the tongue salivary glands |
| ٩ | ٣ | ١ | The oral cavity | Parotid submandibular & sublingual glands vessels & nerves roof palate soft palate muscles vessels & nerves of the plate the oral fissure & lips or pharyngeal isthmus teeth & gingivae blood supply of the teeth blood supply of the gingivae innervation of the teeth & gingivae part nine endocrine glands of the head & neck carotid sinus & carotid body hypophysis cerebri |
| ١٠ | ٣ | ١ | Endocrine gland of the head & neck and the spinal cord | The pineal gland thyroid & parathyroid glands carotid sinus part ten the central nervous system introduction grey & white matters the spinal cord spinal nerves & Spinal segments gross anatomy of the brainstem medulla oblongata |
| ١١ | ٣ | ١ | The brain | Gross anatomy of the pons & midbrain internal structure of the brainstem gross anatomy of the cerebellum gross anatomy of the cerebral hemispheres external view supero lateral surface further subdivision of the super lateral surface further subdivisions of the superolateral surface medial surface inferior surface |
| ١٢ | ٣ | ١ | The brain | Some internal structure of a cerebral hemisphere important functional areas of the cerebral cortex tracts of the spinal cord & brainstem descending tracts ascending tracts |
| ١٣ | ٣ | ١ | The diencephalon | Connections of the cerebellum the diencephalon thalamus hypothalamus met thalamus epithalamium sub thalamic region basal ganglia olfactory region & limbic system white matter of the cerebral hemispheres |
| ١٤ | ٣ | ١ | Ventricles of the brain & CSF and blood supply of the brain | Internal capsule commissures of the brain ventricles of the brain & CSF the lateral ventricles third ventricle fourth ventricle cavity and floor lateral walls roof the CSF & blood brain barrier blood supply of the brain arteries supplying the brain & the circle of willis |
| ١٥ | ٣ | ١ | Pathways of special senses | Venous drainage of the brain pathways of special senses the visual pathway for smell pathway or hearing pathway or taste part eleven the autonomic nervous system general description |
| ١٦ | ٣ | ١ | Autonomic nerves | Sympathetic nervous system parasympathetic & enteric nervous system short review of the chapter |

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MEDICAL HISTOLOGY (MICROANATOMY)

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Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

The goals of the course are to provide foundation of the fundamental concepts of the microscopic anatomy of the human body to develop an understanding how organ integrity and function are maintained by the organization of cells and tissues and to promote critical thinking of the clinical consequences of cellular disorders and tissue related diseases intracellular pathogens cancer and diabetes

Learning (Outcomes) Objectives:

Upon completion of this course students will be able to:

- Differentiate between disease and normal cells
- Describe the pathological processes that create the diseased state at the cellular level
- Identify the primary cell types of each organ in the human body at the light and electron microscopic levels
- Identify the primary stains used in identifying normal and diseased cells and describe the chemistry of the staining process
- Identify and describe the function of all major cellular organelles

Skills

- Routine and special stained slides of all the tissues and organs of body
- Slide show to demonstrate filtration barrier of kidney alveolar septum tight junctions of capillaries and such relevant areas
-

| MEDICAL HISTOLOGY MODULE ١ | | | | |
|-----------------------------------|-----------|---------------------|--|---|
| Discipline | | Basic Subjects | | |
| Department | | Histology | | |
| Course title | | General histology | | |
| Prerequisite | | Biology and Anatomy | | |
| Course code | | MED ٠٢ ١٣ | | |
| Academic year | | First | | |
| Semester | | ٢ | Fall | |
| Number of credits | | ٣ | Knowledge | ٢ |
| | | | practical | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٢ | ١ | Introduction | General information cytology general histology systemic histology |
| ٢ | ٢ | ١ | Method of study | Basic principle on histological techniques tissue preparation section method smear method special methods microscopy |
| ٣ | ٢ | ١ | Instruments | Microscopy light microscope resolution magnification lens type of microscopes electron microscope and phase contrast microscope polarizing microscope Examination of living cell and tissues |
| ٤ | ٢ | ١ | Cell components | Organization of the human body cells tissues organs systems ectoplasm organelles inclusions nucleus cell cycle |
| ٥ | ٢ | ١ | Intercellular substance and tissue fluid | Cell injury components and functions tissues definition histogenesis embryologic origin regeneration function and pathological changes |
| ٦ | ٢ | ١ | Epithelial tissues | Definition histogenesis general characteristics specialization of the surfaces of epithelia classification of epithelia simple and stratified histophysiology pathological changes |
| ٧ | ٢ | ١ | Glands | Definition histogenesis classification exocrine and endocrine glands histophysiology |
| ٨ | ٢ | ١ | Connective tissue | Cells fibroblasts macrophages mast cells plasma cells adipose cells leukocytes intercellular substance ground substance fibers collagen reticular elastic matrix histogenesis histophysiology |

| | | | | |
|----|---|---|----------------|--|
| ٩ | ٢ | ١ | Adipose tissue | Unilocular multilocular adipose tissue histological structure histogenesis histophysiology |
| ١٠ | ٢ | ١ | Cartilage | Histogenesis perichondrium types hyaline fibrous elastic cartilage growth regressive changes regeneration histophysiology |
| ١١ | ٢ | ١ | Bone | Periosteum and endosteum types of bone tissue compact and spongy primary and secondary bone cells osteoblasts osteo progenitors osteocytes osteoclasts bone matrix homorganic organic matrix histogenesis intramembranous ossification endochondral ossification growth and remodeling of bone fracture repair |
| ١٢ | ٢ | ١ | Bone & joints | Histophysiology of the bone & effects of different factors on the bone definition & kinds of joints synarthrosis anphythrosis diarthrosis |
| ١٣ | ٢ | ١ | Nerve tissue | Neuron types of neurons histophysiology degeneration and regeneration nerve fibers Schwann cells myelin sheath neuralgia nerve endings synapses sensory nerve endings motor nerve endings |
| ١٤ | ٢ | ١ | Muscles | General characteristics types skeletal muscles organization of muscles as an organ histogenesis morphology innervations motor end plate histogenesis contraction regeneration cardiac muscles characteristics intercalated disks differences between skeletal and cardiac muscles smooth muscles |
| ١٥ | ٢ | ١ | Blood | General consideration formed elements of blood erythrocytes shape structure histophysiology erythrocytes leukocytes classification number types histophysiology neutrophils basophiles eosinophil's lymphocytes monocytes platelets plasma |
| ١٦ | ٢ | ١ | Hematopoiesis | Hematopoietic organs intrauterine extra uterine bone marrow monophyletic theory maturation of erythrocytes normoblastic and megaloblastic erythropoietin granulocytes hematopoiesis lymphocytes monocytes origin of platelets regulation of hematopoiesis micro environmental factors humeral factors |

Textbooks and reference books recommended last edition

Human histology alan steven

Format Mixed media product | ٤٦٤ pages, Dimensions ٢١٦ x ٢٨٠ x ٢٢,٣٠mm | ١,٣٦٠g, Publication date ٣٠ Nov ٢٠٠٤, Publisher Elsevier - Health Sciences Division, Imprint Mosby Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement ٣rd Revised edition, Illustrations note ٨٧٠ ills. ISBN ١٠ ٠٣٢٣٠٣٦٦٣٥ ISBN ١٣ ٩٧٨٠٣٢٣٠٣٦٦٣٤, Bestsellers rank ٣١٨,٥٢٧

Karuses essential human histology for medical student Kraus Williams

Format Paperback | ٣٢٠ pages, Dimensions ١٨٩ x ٢٤٦ x ١٧mm | ٥٧٢g, Publication date ١١ Jul ٢٠٠٥, Publisher Universal Publishers, Publication City/Country Florida, Language English, Illustrations note black & white illustrations, ISBN ١٠ ١٥٨١١٢٤٦٨٦, ISBN ١٣ ٩٧٨١٥٨١١٢٤٦٨٦ Bestsellers rank ١,٩٧١,٣٤٧

Histology a text and atlas Michael H Ross

Format Paperback | ٩٢٨ pages, Dimensions ٢١٣ x ٢٧٧ x ٣٣,٠٢mm | ٢,٠٤٣g, Publication date ٠١ Oct ٢٠١٠, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement ٧th revised international , Illustrations note Illustrations (chiefly col.) ISBN ١٠ ١٤٥١١٠١٥٠٣, ISBN ١٣ ٩٧٨١٤٥١١٠١٥٠٣, Bestsellers rank ٢١٢,٢٥٢

Clinical and functional histology for medical students recharad S Snells

Format Hardback | ٨٢٧ pages, Dimensions ١٨٠ x ٢٤٠ x ٤٤,٤٥mm | ٢,٠١٧g, Publication date ٠١ Jan ١٩٨٤,
Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English,
Illustrations note Illustrations some col.), ISBN١٠ ٠٣١٦٨٠٢١٦٦ ISBN١٣ ٩٧٨٠٣١٦٨٠

MEDICAL HISTOLOGY (MICROANATOMY) ۲

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

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Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

The goals of the course are to provide foundation of the fundamental concepts of the microscopic anatomy of the human body to develop an understanding how organ integrity and function are maintained by the organization of cells and tissues and to promote critical thinking of the clinical consequences of cellular disorders and tissue related diseases intracellular pathogens cancer and diabetes

Learning (Outcomes) Objectives:

Upon completion of this course students will be able to:

- Differentiate between disease and normal cells
- Describe the pathological processes that create the diseased state at the cellular level
- Identify the primary cell types of each organ in the human body at the light and electron microscopic levels
- Identify the primary stains used in identifying normal and diseased cells and describe the chemistry of the staining process
- Identify and describe the function of all major cellular organelles

Skills

- Routine and special stained slides of all the tissues and organs of body
- Slide show to demonstrate filtration barrier of kidney alveolar septum tight junctions of capillaries and such relevant areas
-

| MEDICAL HISTOLOGY MODULE ٢ | | | | |
|-----------------------------------|-----------|-------------------|--------------------|---|
| Discipline | | Basic Subjects | | |
| Department | | Histology | | |
| Course title | | System histology | | |
| Prerequisite | | General Histology | | |
| Course code | | MED ٠٣ ١٣ | | |
| Academic year | | second | | |
| Semester | | ٣ | Spring | |
| Number of credits | | ٣ | Knowledge | ٢ |
| | | | practical | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٢ | ١ | Information | Definition general information about the structure of the organs parenchyma stoma hollow and solid srgans moist membranes |
| ٢ | ٢ | ١ | Circulatory system | Heart layers of the heart endocardium myocardium pericardium cardiac skeleton cardiac valves impulse conducting system histophysiology pathological changes clinical commiseration |
| ٣ | ٢ | ١ | Blood vessels | Arteries: general structure tunics vasa vacuum innervations large elastic arteries muscular or distributing arteries arterioles histophysiology changes in the arteries with age clinical come derations veins: veins of large and medium caliber venues valves of the veins clinical |
| ٤ | ٢ | ١ | Respiratory system | Conducting portion nasal cavity respiratory epithelium vestibule olfactory respiratory region para nasal sinuses pharynx nasopharynx naopharynx |
| ٥ | ٢ | ١ | Digestive system | Introduction histological structure oral cavity layers lips histologic structure in different regions tongue papillae taste buds teeth and associated structure general come deration enamel dative cement pulp periodontal membrane gingiva |
| ٦ | ٢ | ١ | Digestive tube | Basic pattern of the structure of the alimentary canal esophagus layers mucosa sub mucosa muscularis serous and adventitia Glands histophysiology stomach regions layers glands cell types protective mechanism histophysiology small intestine segments plica circulars villi microvilli layers cells glands histophysiology large intestine segments layers glands cells appendix return and anal canal difference between small and large intestine histophysiology clinical considerations. |

| | | | | |
|----|---|---|--|---|
| ٧ | ٢ | ١ | Organs associated with the digestive tract | Salivary glands: minor salivary glands major salivary glands basic structure serous cells mucous cell myoepithelial cells duct system pancreas structure exocrine pancreases endocrine pancreases liver general structure blood supply liver lobules cell types sinusoid portal area central vein hepatic change histophysiology bile ducts intrahepatic bile ducts extra hepatic bile ducts gallbladder general structure histophysiology peritoneum and mesentery definition and layers clinical considerations |
| ٨ | ٢ | ١ | Integumentary system | Skin basic facts about skin structured epidermis layers & cells keratinization melanin production dermis subcutaneous tissue histophysiology cutaneous appendage shares nail sebaceous glands sweat glands sweat glands clinical considerations |
| ٩ | ٢ | ١ | Defense system | Introduction leukocytes mononuclear phagocyte system immune system thymus gland histological organization cortex medulla histophysiology effects of different factors on thymus bursa definition and functions lymph nodes geological organization capsule and trabecular lymph sinuses and lymphatic vessels cortex medulla histophysiology spleen general structure white pulp red pulp capsule and trabecular blood supply histophysiology tonsil general structure and histophysiology clinical considerations |
| ١٠ | ٢ | ١ | Endocrine system | Definition hypothesis definition adenohipophysis pars distal secretary sells pars tubercles pars intermediate neuron secretary cells histophysiology clinical consideration thyroid |
| ١١ | ٢ | ١ | Urinary system | kidney nephrons renal corpuscle proximal convoluted tubule loop of gently distal convoluted tubule collection tubules renal interstitial blood circulation juxtglomerular apparatus histophysiology extra renal passage ureter urinary bladder urethra clinical considerations. |
| ١٢ | ٢ | ١ | Male reproductive system | Definition and functions of primary sex organs secondary sex organs testis histological structure somniferous tubules cells representing stages in spermatogenesis cells of sterol spermatozoa interstitial cells blood testis barrier excretory genital ducts epididymitis ducts deference accessory genital glands bulb urethral glands prostate seminal vesicle penis histological structures erection mechanisms clinical consideration |
| ١٣ | ٢ | ١ | Female genital system | Ovarian follicles primordial follicles growing follicles ovulation follicles corpus lutein corpus albinos histological structure histophysiology oviduct gross structure histological structure histophysiology uterus gross structure histological Sayers myometrium endometrium perimetrium histophysiology vagina histological structure external genitalia and pregnancy lips clitoris vestibular glands placenta definition growth histological structure placenta barrier secretions breasts definition histological structure breast changes in deferent stage clinical considerations |

| | | | | |
|----|---|---|---------------------------------|---|
| ١٤ | ٢ | ١ | Sense organs | General information eye layers external fibrous coat sclera cornea limbos meddle vascular coat choroids ciliary's body iris internal nervous coat retina photoreceptors histophysiology refractive media aqueous humor lens vitreous body optic nerve accessory structure conjunctive dye lid lachrymal apparatus histological structure in deferent physiologic status and clinical considerations |
| ١٥ | ٢ | ١ | Gustatory organ olfactory organ | Definition taste buche olfactory mucosa olfactory epitheloum histophysiology and clinical considerations ear external ear auricle external auditory meatus histophysiology middle ear walls histological structures histophysiology internal ear osseous labyrinth cochlea semicircular canals membranous labyrinth organ of equilibrium organ of hear histophysiology and clinical considerations |
| ١٦ | ٢ | ١ | Nervous system | Peripheral nervous system nerve ganglia peripheral nerve histophysiology central nervous system gray natter and white matter brain cerebrum brain stem cerebellum spinal cord mining durra natter arachnoids parameter choroids plexus cerebrospinal fluid clinical considerations |

Textbooks and reference books recommended last edition

Human histology alan steven

Format Mixed media product | ٤٦٤ pages, Dimensions ٢١٦ x ٢٨٠ x ٢٢,٣٥mm | ١,٣٦٥g, Publication date ٣٠ Nov ٢٠٠٤, Publisher Elsevier - Health Sciences Division, Imprint Mosby Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement ٣rd Revised edition, Illustrations note ٨٧٥ ills. ISBN١٠ ٠٣٢٣٠٣٦٦٣٥ ISBN١٣ ٩٧٨٠٣٢٣٠٣٦٦٣٤, Bestsellers rank ٣١٨,٥٢٧

Karuses essential human histology for medical student Kraus Williams

Format Paperback | ٣٢٠ pages, Dimensions ١٨٩ x ٢٤٦ x ١٧mm | ٥٧٢g, Publication date ١١ Jul ٢٠٠٥, Publisher Universal Publishers, Publication City/Country Florida, Language English, Illustrations note black & white illustrations, ISBN١٠ ١٥٨١١٢٤٦٨٦, ISBN١٣ ٩٧٨١٥٨١١٢٤٦٨٢ Bestsellers rank ١,٩٧١,٣٤٧

Histology a text and atlas Michael H Ross

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Clinical and functional histology for medical students recharad S SnellsFormat Hardback | ٨٢٧ pages, Dimensions ١٨٠ x ٢٤٠ x ٤٤,٤٥mm | ٢,٠١٧g, Publication date ٠١ Jan ١٩٨٤, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Illustrations note Illustrations some col.), ISBN١٠ ٠٣١٦٨٠٢١٦٦ ISBN١٣ ٩٧٨٠٣١٦٨٠

MEDICAL EMBRYOLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٧٥% with reasonable excuse.
- More than ٧٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

COURSE DESCRIPTION

The medical embryology course covers embryologic development from ovulation through birth and is organized by organ systems an introductory overview lecture followed by complete syllabus lecture notes CDs with animations of embryologic development and supplementary textbooks in library reserve

Learning objectives

- To understand the basic principles of embryology including genetic ingeritance and stages involved in development of the organs and systems form the time of conception till birth
- The student should recognize the critical stages of normal development and the effents of common teratogens genetic mutation and environmental hazards on it
- He/She should be able to explain the developmental basis of the occurrence of major variations abnormalities and congenital anomalies

Skills

Developmental anatomy

- Models to demonstrate various stages of early fetus and different organ development
- Slides of ovary and testis to show follicles and stages of maturation of spermatozoa early chick embryos to understand the development of tissues and organs form conception till term

EMBRYOLOGY

| Discipline | | | Basic Subjects | | |
|-------------------|-----------|------------|------------------------------------|--|--|
| Department | | | Histology | | |
| Course title | | | Medical embryology | | |
| Prerequisite | | | Biology anatomy and histology | | |
| Course code | | | MED . ٠٣ ١٤ | | |
| Academic year | | | First | | |
| Semester | | ٢ | Fall | | |
| Number of credits | | ٣ | Knowledge | ٢ | |
| | | | practical | ١ | |
| Weeks | Hours | | Topics | Descriptions | |
| | Knowledge | Laboratory | | | |
| ١ | ٢ | ١ | Introduction | Definition history parts of embryology location of embryology | |
| ٢ | ٢ | ١ | Reproductive system | The female genital system the male genital system | |
| ٣ | ٢ | ١ | Progenesis | Gametes gametogenesis ovarian cycle clinical correlates | |
| ٤ | ٢ | ١ | Development | Prenatal live postnatal live | |
| ٥ | ٢ | ١ | First week of development | Cleavage development in days ٣ rd & ٤ th , development in days ٦ th development in days ٧ th clinical correlates | |
| ٦ | ٢ | ١ | Second week of development | Development in days ٨ th development in days ٩ th , development in days ١١ th development in days ١٣ th clinical correlates | |
| ٧ | ٢ | ١ | Third week if development | Gastrulation the primitive cardiovascular system notochord formation allantoises development of germ disc clinical or relates neurolation development of somites development of intraembryonic coelom development of trophoblasts | |
| ٨ | ٢ | ١ | Third week of development | Gastrulation the primitive cardiovascular system notochord formation allantoises development of germ disc clinical or relates meurolation development of somite's development of intraembryonic coelom development of trophoblasts | |
| ٩ | ٢ | ١ | Embryonic period | Organogenesis third to eight weeks differentiation of ectoderm differentiation of mesoderm differentiation of endoderm differentiation of somite's clinical correlates brief organogenesis clinical correlates | |
| ١٠ | ٢ | ١ | Fetal period | Differentiation of fetus clinical correlates monthly change time of birth | |
| ١١ | ٢ | ١ | Fetal period | Fourth week development of fetal period clinical correlates premature & post mature babies | |
| ١٢ | ٢ | ١ | Extra embryonic membrane formation | Extra embryonic membrane placenta amnion chorion clinical correlates | |

| | | | | |
|----|---|---|--|---|
| ١٣ | ٢ | ١ | Extraembryonic M formation | Fetal membrane in twins clinical correlates |
| ١٤ | ٢ | ١ | Parturition | Postnatal period fetoneonatal circulation |
| ١٥ | ٢ | ١ | Extra normal change in prenatal period | Teratology definition essential of teratology kinds of teratogens revolution in prenatal period clinical correlates |
| ١٦ | ٢ | ١ | Effect on embryogenesis | Genetics and human development molecular biology of human development in vitro fertilization prenatal diagnosis |

Textbooks & Reference books recommended last edition

Embryos, Genes and Birth Defects Patrizia Ferretti Second Edition

Format Hardback | ٥٦٢ pages, Dimensions ١٧٠ x ٢٥١ x ٣٦mm | ١,٠٥٦g, Publication date ١١ Jul ٢٠٠٦, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement ٢nd Edition, ISBN١٠٠٤٧٠٠٩٠١٠٣, ISBN١٣٩٧٨٠٤٧٠٠٩٠١٠

The Developing Human Keith L. Moore

Format Paperback | ٥٢٢ pages, Dimensions ٢١٦ x ٢٧٦ x ٢٥,٤mm | ١,٤٢٨,٨٢g, Publication date ٢٥ Mar ٢٠١٩, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ١١th Revised edition, Illustrations note Approx. ١٤٠٠ illustrations (١٤٠٠ in full color) ISBN١٠٠٣٢٣٦١١٥٤٠, ISBN١٣٩٧٨٠٣٢٣٦١١٥٤١, Bestsellers rank ٩٢,٦٠٣

Embryology for medical students sant

Format Paperback | ٣٤٠ pages, Dimensions ١٤٠ x ٢١٠mm | ٤٦٥g, Publication date ٣٠ Dec ٢٠٠٨ Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition Statement ٢nd Revised edition, ISBN١٠٨١٨٤٤٨٣٦٧٨, ISBN١٣٩٧٨٨١٨٤٤٨٣٦٧

MEDICAL PHYSIOLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
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- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

The broad goal of the teaching of graduate students in physiology is providing a comprehensive knowledge of the normal function of the organ systems of the body and their interactions to facilitate understanding of the physiological basis of health and changes in disease

Learning objective

A.Knowledge

At the end, a medical student In physiology should be able to explain:

- Explain the normal functioning of all the organ systems of the body and their interaction;
- Narrate the comrtibution of each organ system to the maintenance of homeostasis;
- Elucidate the physiological aspects of normal growth and development;
- Describe the physiological response and adaptations to environmental stresses;
- List the physiological principles underlying pathogenesis and treatment of disease.

B.Skills

At the end of the course the student should be able to:

- Conduct experiments designed for study of physiological phenomena;
- Interpret experimental/ investigative data;

- Distinguish between normal and abnormal data derived as a result of tests which he/she has performed and observed in the laboratory

A-Human physiology

- Use and care of microscope and microscopic examination of blood
- PCV, ESR, osmotic fragility
- Hemoglobin estimation and blood indices
- RBC count
- WBC count
- Examination of peripheral blood smear
- Differential WBC count – normal, abnormal anemias
- ABO grouping RH typing
- Bleeding time clotting time
- Recording of BP effects of posture and exercise
- Recording of arterial only
- Respiratory movements demonstration
- General examination
- Examination of respiratory system
- Examination of CVS
- Examination sensory system
- Examination of motor system
- Examination reflexes
- Examination of cranial nerves

B-experimental physiology

- Muscle nerve preparation effects of different types of stimuli
- Simple muscle twitch
- Two successive stimuli repetitive stimuli and fatigue
- Genesis of tetanus and Starling's law of muscle demonstration
- Effects of variations of temperature on muscle contraction
- Velocity of nerve impulse (demonstration)
- Normal cardiogram of frog's heart and effect of heat and cold.
- Effect of temperature on frog's heart
- Refractory period of frog's heart
- Properties of cardiac muscle – all or none law, summation of
- Subminimal stimuli (demonstration)
- Effect of vagal stimulation on frog's heart
- Perfusion of frog's heart – action of ions, action of drugs

c- Demonstrate simple muscle twitch and normal cardiogram

Others can be demonstrated with e- modules / recorded graph

- Demonstration (with E-modules / recorded graph / clinical postings)
- Heart perfusion (videos)
- Intestinal movements (videos)
- Electroencephalogram (EEG)
- Electromyogram (EMG)
- Audiometry
- Spirometry

MEDICAL PHYSIOLOGY MODULE ١

| Discipline | | Basic Subjects | | |
|-------------------|-----------|--|---|--|
| Department | | Histology | | |
| Course title | | Cell, blood & immunity, respiration & GI Tract | | |
| Prerequisite | | Molecular biology, gross & | | |
| Course code | | MED .٣١٥ | | |
| Academic year | | First | | |
| Semester | ٣ | Fall | | |
| Number of credits | ٤ | Knowledge | ٣ | |
| | | practical | ١ | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٢ | ١ | Neurons & membrane potential | Structure of neuron classification membrane potential and action potential |
| ٢ | ٢ | ١ | Synapse & neurotransmitters | Structure and components of synaps mechanism of symaptic transmission neurotransmitters synaptic transmission neurotransmitters synaptic response and summation |
| ٣ | ٢ | ١ | Muscle contraction | Brief anatomy and physiology composition steps of contraction energetic event of muscle contraction smooth muscles |
| ٤ | | ١ | Blood function and cells | Characteristic of the blood, blood function, blood composition(rbc, wbc & platelets), plasma |
| ٥ | | ١ | Hemoglobin | Hemoglobin, iron metabolism destruction of rbe, amenia, effect of anemia on blood circulation |
| ٦ | | ١ | White blood cells | Functional characteristics of WBC, puc formation eosinophils, basophils |
| ٧ | ٣ | ١ | T & B lymphocytes antibodies, immunization an allergy | Process of T&b lymphocytes antibodies active and passive immunization allergy |
| ٨ | | ١ | Type of T cells, active and passive immunity | Types of T cells lymphokines aids immunologic tolerance active and passive immunity |
| ٩ | | ١ | Hemostasis, coagulation and anticoagulants | Mechanism of hemostasis properties of platelets, blood coagulation anticoagulants effect of plasmin |
| ١٠ | ٣ | ١ | Agglutinations Rh factors & blood tansfusion | agglutinogen, agglutinins, agglutination, blood typing ig factor transfusion and transfusion feaction |
| ١١ | | ١ | Review of anatomy of Repiratory tract organ | Respiratory system organs function of the repiratory tract |
| ١٢ | ٣ | ١ | Pulmonary function test pulmonary | Pulmonary functiontest intra plural tessure intra alveolar pressure pulmonary volume and capacities O ^٢ and CO ^٢ exchanges |
| ١٣ | ٣ | ١ | Volume and capacities respiratory centers | Pulmonary circulation neural mechanism respiratory center in the brain stem unity of respiratory venter action central and peripheral chemoreceptors |
| ١٤ | ٣ | ١ | Anatomophysiology of Gastrointestinal tract(GI) | GI oranges and their functions control of GI activities autonomic control of GI, GI reflexes GI hormones functional movement of the GI blood circulation of the GI |

| | | | | |
|----|---|---|--------------------------------------|--|
| 10 | 3 | 1 | Secretion | Secretion in the GIT salivary secretion gastric secretion pancreatic secretion small intestine secretion large intestine secretion detention of various food by hydrolysis |
| 16 | 3 | 1 | Absorption in gastrointestinal tract | Essential principles of GI absorption of carbohydrate protein & fat Different mechanism of absorption |

Textbooks & Reference books Recommended (last Edition)

Textbook medical physiology – Arthur C. Guyton: W. B. Saunders, ELEVENTH EDITION

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Review of medical Physiology W.F Ganong

Format Paperback, Publication date 10 Nov 2016, Publisher Tata McGraw-Hill Education India Imprint India Professional, Publication City/Country India, Edition Revised, Edition Statement 20th Revised edition, ISBN10 9339222284, ISBN13 9789339222281

Essentials of Medical Physiology sembungam

Format Paperback | 960 pages, Dimensions 216 x 279 x 20,72mm | 1,200g, Publication date 31 Jul 2016, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India, Language English, Edition Revised, Edition Statement 7th Revised edition, Illustrations note 12 Halftones, color; 324 Illustrations, unspecified, ISBN10 9380999117 ISBN13 9789380999116

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MEDICAL PHYSIOLOGY ۲

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

The broad goal of the teaching of graduate students in physiology is providing a comprehensive knowledge of the normal function of the organ systems of the body and their interactions to facilitate understanding of the physiological basis of health and changes in disease

Learning objective

A.Knowledge

At the end a medical student In physiology should be able to explain:

- Explain the normal functioning of all the organ systems of the body and their interaction;
- Narrate the comrtibution of each organ system to the maintenance of homeostasis;
- Elucidate the physiological aspects of normal growth and development;
- Describe the physiological response and adaptations to environmental stresses;
- List the physiological principles underlying pathogenesis and treatment of disease.

B.Skills

At the end of the course the student should be able to:

- Conduct experiments designed for study of physiological phenomena;
- Interpret experimental/ investigative data;

- Distinguish between normal and abnormal data derived as a result of tests which he/she has performed and observed in the laboratory

Skills

A-Human physiology

- Use and care of microscope and microscopic examination of blood
- PCV, ESR, osmotic fragility
- Hemoglobin estimation and blood indices
- RBC count
- WBC count
- Examination of peripheral blood smear
- Differential WBC count – normal, abnormal anemias
- ABO grouping RH typing
- Bleeding time clotting time
- Recording of BP effects of posture and exercise
- Recording of arterial only
- Respiratory movements demonstration
- General examination
- Examination of respiratory system
- Examination of CVS
- Examination sensory system
- Examination of motor system
- Examination reflexes
- Examination of cranial nerves

B-experimental physiology

- Muscle nerve preparation effects of different types of stimuli
- Simple muscle twitch
- Two successive stimuli repetitive stimuli and fatigue
- Genesis of tetanus and Starling's law of muscle demonstration
- Effects of variations of temperature on muscle contraction
- Velocity of nerve impulse (demonstration)
- Normal cardiogram of frog's heart and effect of heat and cold.
- Effect of temperature on frog's heart
- Refractory period of frog's heart
- Properties of cardiac muscle – all or none law, summation of
- Subminimal stimuli (demonstration)
- Effect of vagal stimulation on frog's heart
- Perfusion of frog's heart – action of ions, action of drugs

c- demonstrate simple muscle twitch and normal cardiogram

Others can be demonstrated with e- modules / recorded graph

- Demonstration (with E-modules / recorded graph / clinical postings)
- Heart perfusion (videos)
- Intestinal movements (videos)
- Electroencephalogram (EEG)
- Electromyogram (EMG)
- Audiometry
- Spirometry

| MEDICAL PHYSIOLOGY MODULE ٢ | | | | |
|------------------------------------|-----------|--|--|---|
| Discipline | | Basic Subjects | | |
| Department | | physiology | | |
| Course title | | Endocrine cardiovascular kidney & reproductive | | |
| Prerequisite | | Molecular biology Gross & Microscopic anatomy | | |
| Course code | | MED .٠٤ ١٠ | | |
| Academic year | | ٢ | | |
| Semester | | ٤ | Fall | |
| Number of credits | | ٤ | Knowledge | ٣ |
| | | | practical | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٢ | ١ | Introduction | Synthesis of hormones secretion control of hormonal secretion transport of hormones anterior and posterior pituitary secretions Growth hormones and its effect mechanism of action hyper an hypo secretion or growth hormones |
| ٢ | ٢ | ١ | The thyroid gland function of thyroid hormones the adrenocortical hormones | Thyroid hormones synthesis and secretion transport of thyroid hormones effect of thyroid hormones effect of thyroid hormones on the tissues |
| ٣ | ٢ | ١ | Glucocorticoids, abnormalities of adreicortical secretion insulin glucagon's and diabetes mellitus | Glucocorticoids secretion of effect on the tissue regulation of secretion and effect of pituitary gland hypothalamus on adrenal cortex insulin and its metabolic effect on protein lipids and carbohydrates insulin effect on glucose consumption in the brain control of insulin secretion glucagon and its effect |
| ٤ | ٢ | ١ | Parathyroid hormones and calcitonin | Parathyroid hormones and its effect calcium and its effect regulation of calcium level in the blood |
| ٥ | ٢ | ١ | Anatomophysiology of male sexual ragas structure of the sperm semen | Anatomophysiology of male sexual organs spermatogenesis function of the seminal vesicle function of the prostate gland structure of the sperm semen |
| ٦ | ٢ | ١ | The male sexual act testosterone mechanism of its effect | Male sexual act male fertility neuronal stimulus for performance of the male sexual act testosterone and other name sex hormones function of the testosterone mechanism of action of the testosterone |
| ٧ | ٢ | ١ | Anatomophysiology of the female sexual organ follicular growth hormonal control of sexual function | Anatomophysiology of the female sexual organ female hormonal system monthly ovarian cycle follicular growth corpus suteum suteal phase of the ovarian cycle hormonal control of sexual function |

| | | | | |
|----|---|---|--|---|
| 8 | 3 | 1 | Physiology of the pregnancy parturition lactation | Physiology of the pregnancy function of the placenta hormonal factors in pregnancy parturition mechanism of parturition labor pains lactation development of the breast milk composition |
| 9 | 3 | 1 | Anatomophysiology of the heart and vessel function of different parts of the heart | Brief anatomophysiology of the heart and vessel physiology of cardiac muscle cardiac contraction and relaxation mechanism action potential in cardiac muscle function of different parts of the heart nodal tissue pericardium papillary muscles and chorda tendinea |
| 10 | 3 | 1 | Homodynamic of the heart heart sounds cardiac automatism | Homodynamic events of the heart during the cardiac cycle pressure in the atrium ventricular pressure during the cardiac cycle ventricular volume and regulation of the heart pump heart sounds cardiac automatism |
| 11 | 3 | 1 | Methods of recording and interpretation of ECG physiologic change of the ECG | Electrocardiogram normal waves and normal interval leads of the ECG methods of recording and interpretation of the ECG cardiac axis determination physiologic change of the ECG |
| 12 | 3 | 1 | Overview of the circulation blood pressure local circulations lymphatic system | Overview of the circulation blood volume in different part of circulation arterial pressure blood pressure and vessel motilities capillary circulation vein circulating pulmonary and coronary circulations lymphatic system |
| 13 | 3 | 1 | Physiology of the urinary system function of the kidney | Physiology of the urinary system Nephron function of the kidney glomerular filtrate and its difference with plasma factors affect glomerular filtration |
| 14 | 3 | 1 | Reabsorption in the tubules tubular load Tm and threshold for Tm plasma Clearance | Reabsorption in the tubules ability of reabsorption of different parts of the tubules mechanism of reabsorption of different materials in the tubules, tubular load tubular transport maximum Tm and threshold for Tm plasma clearance |
| 15 | 3 | 1 | Body fluid and osmolality role of the kidneys in control of body fluids excretion by the kidney control of hydrogen level | Body fluids role of the kidneys in control of body fluids and osmolality excretion by the kidney excretion of potassium control of phosphate level control of magnesium level control of hydrogen level |
| 16 | 3 | 1 | Control of acid base by the kidney physiology of the other part of the urinary tract maceration | Excretion of hydrogen buffer system of the fibular fluid control of acid base by the kidney physiology of the other part of the urinary tract maceration |

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illustrations (1100 in full color) ISBN10 0323097122, ISBN13 9780323097122, Bestsellers rank 91,23

Ganong's Review of Medical Physiology TWENTY □ FOURTH EDITION

Format Paperback | 768 pages, Dimensions 216 x 277 x 23mm | 1,037g, Publication date 01 Jun 2012,
Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Medical, Publication City/Country New York,
United States, Language English, Edition Statement 24th edition Illustrations note col. III, ISBN10 0071780033,
ISBN13 9780071780032, Bestsellers rank 36,08

MEDICAL PHYSIOLOGY ۲

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- Recording of BP effects of posture and exercise
- Recording of arterial only
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- Examination of CVS
- Examination sensory system
- Examination of motor system
- Examination reflexes
- Examination of cranial nerves

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- Demonstration (with E-modules / recorded graph / clinical postings)
- Heart perfusion (videos)
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- Electromyogram (EMG)
- Audiometry
- Spirometry

Course Contents

| MEDICAL PHYSIOLOGY MODULE ٣ | | | | |
|------------------------------------|-----------|--|--|--|
| Discipline | | Basic Subjects | | |
| Department | | physiology | | |
| Course title | | Central nervous system, special sense organs | | |
| Prerequisite | | Molecular biology, Gross & Microscopic anatomy | | |
| Course code | | MED ٠٥ ١٥ | | |
| Academic year | | ٣ | | |
| Semester | | ٥ | Spring | |
| Number of credits | | ٤ | Knowledge | ٣ |
| | | | practical | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٣ | ١ | Physiology of the eye optic of the eye error of refraction ophthalmoscope | Brief anatomic histological structure of the eye and brief function of different structure of the eye physical principle of optics and optic of the eye diopter convex and convex lenses effect of closing the objects in the picture characteristic of the picture in the retina |
| ٢ | ٣ | ١ | Receptor and neural function of the retina | Error of refraction myopia hypermetropia astigmatism cataract negative and positive lenses ophthalmoscope receptor and neural function of the retina layer of the retina rods and cone mechanism of stimulation of the roads and cones color vision |
| ٣ | ٣ | ١ | Visual pathways and visual cortex perimeter eye movement and their control | Visual pathways optic nerve chiasmi optic, optic tract, optic radiation and visual cortex perimeter visual field normal blind spot eye movement and their control pursuits movements strabismus nystagmus |
| ٤ | ٣ | ١ | Physiology of the ear external middle and internal ear | Physiology of the ear tympanic membrane auricle and auditory canal middle ear middle ear acicular system Eustachian tube and its function internal ear cochlea auditory pathway and auditory CNS |
| ٥ | ٣ | ١ | Vestibular system physiology | Utricle saccule semicircular canals receptor of the vestibular system vestibular pathway and centers in CNS |
| ٦ | ٣ | ١ | Physiology of the taste and smell sense | Physiology of the taste and smell organs receptors pathways and cortex |
| ٧ | ٣ | ١ | Cell of the nervous system glia cell, the synapse & Neurotransmitters | Cells of the nervous system characteristic glia cell types of glia astrocytes ligodendrocytes Schwann cells ependymal cells the synapse mechanism of transmission of signals neurotransmitters myelin |

| | | | | |
|----|---|---|--|---|
| ٨ | ٣ | ١ | Nervous system classifications meninges | Nervous system classification CNS brain spinal cord PNS somatic Nervous system autonomic nervous system gray matter white matter meninges duramater arachnoid piamater CNS parts prosencephalone |
| ٩ | ٣ | ١ | Cerebrum lobes cortex & corpus callusum Hippocampus amygdala & basal ganglia thalamus & hypothalamus reticular formation midbrain pons & medulla | Function of the diencephalon thalamus & hypothalamus function of the reticular formation of the brain stem function of the midbrain function of the pons & medulla |
| ١٠ | ٣ | ١ | Function of the cranial nerves cerebellum spinal cord | Function of the cranial nerve function of the cerebellum the spinal cord internal structure of spinal cord function of the pons & medulla |
| ١١ | ٣ | ١ | Cerebrospinal fluid ventricles of the brain & brain metabolism | Function of CSF quantity pressur formation of CSF flow & absorption of CSF Ventricles of the Brain & their connections regulation of CSF pressure by the arachnoid villi lymphatic function of perivascular space measurement of CSF |
| ١٢ | ٣ | ١ | The autonomic the autonomic nervous system | The autonomic nervous system |
| ١٣ | ٣ | ١ | Somatic senses | Somatic senses machannoreceptive touch pressure vibration position & awareness of movements visceral sensation deep sensation sensory receptors detection of sensory information modalities labeled line principle adaptation of the receptors classification of the nerve fibers strengthen of stimulation receptive field type of recognition transmission and processing of information Mechanorseptive fibers |
| | | | | Somatosensory pathways, Dorsal column, medial laminscal pathway, somatosensory cortex, association of the brain, layers of the somatosensory cortex and their function, effect of removing the omatosensory. Association area, two – point discrimination, position senses (proprioceptive senses), position senses receptors, processing of position sense information in the dorsal, culonm- medical lemniscal pathway, anterolateral pathway |
| | | | | Pain & headache, thepe o pian and their wualities, pain receptors and their stimulation, dual pathway for pain transmission, Neospinothalamio tract, paleospinothalamio tract, adaptation of pain receptors: pain suppression ('analgesia') system, in the brain and spinal cord,, inhibition of pain by tactile sencory singals, referred pain, headache, thermal sensation |
| ١٤ | ٣ | ١ | Motor & integrative physiology | Motor function of the spinal cord the cord reflexes cortical and brain stem control of motor function motor cortex and corticopinal tract |
| ١٥ | ٣ | ١ | Cerebellum and basal ganglia to overall motor control intellectual function of the brain learning and memory | Cerebellum and its motor function basal ganglia their motor faction integration of the many parts of the total motor control system intellectual function of the brain learning and memory function of the specific cortical area thoughts consciousness and memory |

| | | | | |
|----|---|---|---|--|
| 16 | 3 | 1 | The limbic system and hypothalamus states of brain activities sleep brain | Functional anatomy of the limbic system activating driving system of the brain hypothalamus a major control headquarters for the limbic system states of brain Activities sleep brain, brain waves |
|----|---|---|---|--|

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CLINICAL PATHOLOGY

Attendance policy

- Regular student attendance at all.
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- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
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- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

The board goals of teaching graduates pathology are to impart the knowledge; skills and attitudes in the student to understand the etiopathogenesis, morphology and pathological concepts related to various common diseases

Learning objectives

At the end of course the student would be able to:

- Understand the concepts of cell injury and changes produced thereby in different tissues and organs and the body's capacity for healing;
- Understand the normal homeostatic mechanism, the derangements of these mechanisms and the effect on human system.
- Understand the etiopathogenesis, the pathological effects and the clinic- pathological correlation of common infectious and non-infectious diseases;
- Understand the concept of neoplasia with reference to the etiology, gross and microscopic featrues, diagnosis and prognosis in different tissues and organs of the body;
- Correlate normal and altered morphology (gross and microscopic) of different organ systems in different diseases to the extent needed for understanding of disease processes and their clinical significance;
- Have knowledge of common immunological disorders and their resultant effects on the human body;
- Have an understanding of the common hematological disorders and the investigation necessary to diagnose them and determine their prognosis;
- Perform and interpret in a proper manner the basic clinic-pathological procedures;
- Know the principles of collection, handling and dispatch of clinical samples from patients in a proper manner.

(C) Skills

- Identify and interpret the gross and /or microscopic features of common disorders as given above
- Perform with accuracy and reliability basic hematological procedures such as hemoglobin estimation, total and differential WBC count and peripheral blood smear staining, examination and report.
- Calculate the indices and interpret the relevant significance
- Perform the basic laboratory hematological tests like bleeding time and clotting time
- Perform a complete examination of the urine and detect any abnormalities
- Grouping and cross matching of blood
- Collect and dispatch clinical samples from patients in a proper manner
- Interpret abnormal biochemical laboratory values of common diseases

Teaching and learning methodology

I- Knowledge

Department stresses on teaching basic fundamental of the disease process and the applied aspects relevant to the clinical subjects in didactic lectures.

A-General Pathology

Taught with the help of didactic lectures on specific topics, followed by skills pertaining to that topic. Besides microscopic examination, fresh specimens obtained at autopsy or surgical operations are shown

B – Systemic pathology

The following tools are employed

- Didactic lectures: discussing a particular topic at length in an one hour lecture Biomedical science seminars: are conducted by a combined team of pathologist and a clinician who discuss the pathophysiology and clinical aspects of the particular disease entity;
- Case studies: the significant and common diseases are discussed in the form of a representative clinical case in which the clinical features, the course of the disease in those particular patient and relevant laboratory investigations are discussed by clinical faculty in an interactive manner in small groups;
- This is followed by demonstration of the gross and microscopic features of the disease in that case by the pathologist. This is followed by clinic- pathologic correlation.

II- Skills

- Deals with demonstration of gross, and / or microscopic features of the disease entities;
- Clinical case demonstration patients of a particular disease are demonstrated to the students by clinical faculty in the ward, discussing the clinical features in the patient which provides them a real –life experience of studying a diseases as it presents in a patient;
- By a combination of above modalities /tools, student learns applied aspects of the disease process.

| GENERAL PATHOLOGY (MODEULE ١) | | | | |
|--------------------------------------|-----------|--|---|---|
| Discipline | | Basic Subjects | | |
| Department | | Pathology | | |
| Course title | | General | | |
| Prerequisite | | Molecular biology gross & microscopic anatomy and physiology | | |
| Course code | | MED ٠٠ ٢١ | | |
| Academic year | | ٣ | | |
| Semester | | ٥ | | |
| Number of credits | | Knowledge | | ٣ |
| | | Practical | | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٣ | ١ | Cell injury cell death and adaptation | Overview of cellular responses to stress and noxious stimuli cellular adaptation to stress hypertrophy hyperplasia atrophy and metaplasia |
| | | | Overview of cell injury and cell death | Causes of cell injury and morphology of cell and tissue injury |
| | | | Mechanisms of cell injury | Depletion of ATP mitochondria damage influx of calcium accumulation of oxygen derived free radicals defects in membrane permeability damage to DNA and proteins ischemia reperfusion injury and chemical toxic injury |
| ٢ | ٣ | ١ | Apoptosis | Causes of apoptosis mechanisms of apoptosis example of apoptosis |
| | | | Autophagy and intracellular accumulation | Fatty change cholesterol protein glycogen pigments |
| | | | Pathologic calcification and cellular aging | Dystrophic and metastatic calcification cellular aging |
| ٣ | ٣ | ١ | Inflammation and repair acute inflammation | Overview of inflammation and tissue repair stimuli for acute inflammation recognition of microbes necrotic cells and foreign substances and vascular change |
| | | | Acute inflammation | Cellular events leukocytes recruitment and activation leukocyte induced tissue injury defend in leukocyte function outcomes of acute inflammation |
| ٤ | ٣ | ١ | Chemical mediator of inflammation | Cell derived mediators plasma protein derived mediators anti-inflammatory mechanisms |
| | | | Chronic inflammation | Chronic inflammatory cells and mediators granulomatous inflammation |
| | | | System effects of inflammation | Ever elevated of plasma level of acute phase protein leukocytosis other manifestation of the acute phase response and sepsis |
| ٥ | ٣ | ١ | Overview f tissue repair | Cell and tissue regeneration scar formation factors that influence tissue repair |
| | | | Selected clinical example of tissue repair and fibrosis | Healing of skin wound healing by first intonation healing by second intention wound strength |
| | | | Hemodynamic disorders | Hyperemia and congestion edema hemorrhage |

| | | | | |
|----|---|---|---|---|
| ٦ | ٣ | ١ | Hemostasis and thrombosis | Normal hemostasis thrombosis disseminated intravascular coagulation |
| | | | Embolism and infarction | Pulmonary thromboembolic systemic thromboembolic infarction |
| | | | Shock | Pathogenesis of septic shock stage of shock |
| ٧ | ٣ | ١ | Diseases of the immune system | Innate and adaptive immunity cells and tissues of the immune system overview of normal immune responses |
| | | | Hypersensitivity reactions | Causes of hypersensitivity reactions types of hypersensitivity reactions |
| | | | Hypersensitivity reactions | Immune complex diseases type ٣ hypersensitivity |
| ٨ | ٣ | ١ | Autoimmune disease | Immune tolerance mechanism of autoimmunity |
| | | | Systemic immune disease and rejection of transplants | Systemic lupus erythematosus rheumatoid arthritis Sjogren syndrome |
| | | | Immune deficiency disease | Primary congenital immune deficiencies |
| ٩ | ٣ | ١ | Immune deficiency diseases | Secondary acquired immune deficiencies acquired immunodeficiency syndrome |
| | | | Amyloidosis | Pathogenesis classification morphology and clinical course of amyloidosis |
| | | | Neoplasia | Nomenclature characteristics of benign and malignant neoplasms epidemiology |
| ١٠ | ٣ | ١ | Carcinogenesis the molecular basis of cancer | Genetic lesions in cancer carcinogenesis a multistep process hallmarks of cancer |
| | | | Etiology of cancer carcinogenic agents | Chemical carcinogens radiation carcinogenesis viral and microbial oncogenesis |
| | | | Host defense against tumors tumor immunity | Tumors antigens antitumor effector mechanisms |
| ١١ | ٣ | ١ | Clinical aspects of neoplasia | Effects of tumor in host grading and staging of cancer laboratory diagnosis of cancer |
| | | | Genetic diseases | Nature of genetic abnormalities contributing to human disease |
| | | | Mendelian disorders diseases caused by single gene defects | Transmission patterns of single gene disorders diseases caused by mutations in genes encoding structural receptor and enzyme proteins and that reheat froth |
| ١٢ | ٣ | ١ | Complex mutagenic disorders cytogenetic disorders | Numerical abnormalities structural abnormalities cytogenetic disorders involving autosomes |
| | | | Cytogenetic disorders | Cytogenetic disorders involving sex chromosomes |
| | | | Single gene disorders with atypical patterns of inheritance | Diseases caused by triple repeat mutations diseases caused by mutations by mutation in mitochondrial genes diseases associated with alteration of imprinted regions of the genome |
| ١٣ | ٣ | ١ | Molecular diagnosis of monogenic and complex disorders | Molecular diagnosis of copy abnormalities direct detection of DNA mutation by polymerase chain reaction PCR analysis |
| | | | Environmental and nutritional diseases | Health effects of climate change toxicity of chemical and physical agents environmental pollution |
| | | | Environmental and nutritional diseases | Effects of tobacco effects of alcohol |
| ١٤ | ٣ | ١ | Injury by therapeutic drugs and drugs of abuse | Injury by therapeutic drug adverse drug reactions in injury by nontherapeutic toxic agents drug abuse |
| | | | Injury by physical agents | Mechanical trauma thermal injury electrical injury produced by ionizing radiation |
| | | | Nutritional diseases | Malnutrition protein energy malnutrition anorexia nervosa and bulimia |

| | | | | |
|----|---|---|--|--|
| 15 | 3 | 1 | Obesity diet and systemic diseases diet and cancer | Leptin adipose tissue clinical consequences of obesity |
| | | | General pathology of infectious diseases | General principle of microbial pathogenesis categories of infectious agents |
| | | | General pathology of infectious diseases | Special technique for identifying infectious agents new and emerging infectious diseases agents of bioterrorism |
| 16 | 3 | 1 | Spectrum of inflammatory responses to infection | Routes of entry of microbes spread and dissemination of microbes within the body release from the body and transmission of microbes |
| | | | How microorganisms cause disease | Mechanisms of viral injury mechanisms of bacterial injury immune evasion by microbes |
| | | | Spectrum of inflammatory responses to infection | Suppurative mononuclear granulomatous cytopathic cytoproliferative cytopathic-cytoproliferative, necrosis, and chronic inflammation/scarring |

Textbooks & Reference Books Recommended (last Edition)

Robbins and Cotran pathologic Basis of Diseases, Leonard S. Lilly MD Raphael Rubin, Format Hardback | 1394 pages, Dimensions 222 x 281 x 22,40mm | 30,399,31g, Publication date 01 Aug 2010, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 10th Revised edition, Illustrations note Approx. 1600 illustrations (1600 in full color) ISBN10 . 032303113X, ISBN13 9780323031139, Bestsellers rank 94,012

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Robbins basic pathology, Vinay Kumar 1600 John F. Kennedy Blvd.

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Clinical Photographic Dissector of the Human Body

Format Spiral bound | 480 pages Dimensions 216 x 276 x 22,87mm | 1,360,78g Publication date 23 Oct 2018 Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States Language English, Edition Revised, Edition Statement 2nd Revised edition Illustrations note Approx. 2700 illustrations (2700 in full color) ISBN10 . 0323044177 ISBN13 9780323044177, Bestsellers rank 791,010

CLINICAL PATHOLOGY MODULE ۲

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

The board goals of teaching graduate's pathology are to impart the knowledge; skills and attitudes in the student to understand the etiopathogenesis, morphology and pathological concepts related to various common diseases

Learning objectives

At the end of course the student would be able to:

- Understand the concepts of cell injury and changes produced thereby in different tissues and organs and the body's capacity for healing;
- Understand the normal homeostatic mechanism, the derangements of these mechanisms and the effect on human system.
- Understand the etiopathogenesis, the pathological effects and the clinic- pathological correlation of common infectious and non-infectious diseases;
- Understand the concept of neoplasia with reference to the etiology, gross and microscopic featrues, diagnosis and prognosis in different tissues and organs of the body;
- Correlate normal and altered morphology (gross and microscopic) of different organ systems in different diseases to the extent needed for understanding of disease processes and their clinical significance;
- Have knowledge of common immunological disorders and their resultant effects on the human body;
- Have an understanding of the common hematological disorders and the investigation necessary to diagnose them and determine their prognosis;
- Perform and interpret in a proper manner the basic clinic-pathological procedures;

- Know the principles of collection, handling and dispatch of clinical samples from patients in a proper manner.

(C) Skills

- identify and interpret the gross and /or microscopic features of common disorders as given above
- Perform with accuracy and reliability basic hematological procedures such as hemoglobin estimation, total and differential WBC count and peripheral blood smear staining, examination and report.
- Calculate the indices and interpret the relevant significance
- Perform the basic laboratory hematological tests like bleeding time and clotting time
- Perform a complete examination of the urine and detect any abnormalities
- Grouping and cross matching of blood
- Collect and dispatch clinical samples from patients in a proper manner
- Interpret abnormal biochemical laboratory values of common diseases

Teaching and learning methodology

γ- Knowledge

Department stresses on teaching basic fundamental of the disease process and the applied aspects relevant to the clinical subjects in didactic lectures.

A-General Pathology

Taught with the help of didactic lectures on specific topics, followed by skills pertaining to that topic. Besides microscopic examination, fresh specimens obtained at autopsy or surgical operations are shown

B – Systemic pathology

The following tools are employed

- Didactic lectures: discussing a particular topic at length in an one hour lecture Biomedical science seminars: are conducted by a combined team of pathologist and a clinician who discuss the pathophysiology and clinical aspects of the particular disease entity;
- Case studies: the significant and common diseases are discussed in the form of a representative clinical case in which the clinical features, the course of the disease in those particular patient and relevant laboratory investigations are discussed by clinical faculty in an interactive manner in small groups;
- This is followed by demonstration of the gross and microscopic features of the disease in that case by the pathologist. This is followed by clinic- pathologic correlation.

II- Skills

- Deals with demonstration of gross, and / or microscopic features of the disease entities;
- Clinical case demonstration of a particular disease are demonstrated to the students by clinical faculty in the ward, discussing the clinical features in the patient which provides them a real –life experience of studying a diseases as it presents in a patient;
- By a combination of above modalities /tools, student learns applied aspects of the disease process.

Course contents

| PATHOLOGY MODEL ٧ | | | | |
|--------------------------|-----------|--------------------------------|--|--|
| Discipline | | Basic Subjects | | |
| Department | | Pathology | | |
| Course title | | Systemic | | |
| Prerequisite | | General pathology module ١ & ٢ | | |
| Course code | | MED ٠٦٢١ | | |
| Academic year | | ٣ | | |
| Semester | | ٦ | Fall | |
| Number of credits | | ٣ | Knowledge | ٢ |
| | | | Practical | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٢ | ١ | Blood vessels, structure and function of blood vessels congenital anomalies, blood pressure regulation and hypertensive vascular disease | Vascular organization, endothelial cells vascular smooth muscle cells, epidemiology of hypertension, pathogenesis, morphology |
| | | | Vascular wall response to injury arteriosclerosis | Atherosclerosis, Monckeberg medial sclerosis arteriosclerosis |
| ٢ | ٢ | ١ | Aneurysms and dissection | Abdominal aortic aneurysm, thoracic aortic aneurysm, aortic dissection |
| | | | Vasculitis and disorders of blood vessel hyperreactivity | Noninfectious vasculitis, infectious vasculitis Raynaud phenomenon, myocardial vessel vasospasm |
| ٣ | ٢ | ١ | Veins and lymphatic disorders tumors of blood vessel | Varicose veins, thrombophlebitis and phlebotrombosis, superior and inferior vena cava syndrome, and lymphangitis and lymphedema, benign and malignant tumors |
| | | | Heart overview of heart disease heart failure | Left side heart failure, right side heart failure |
| ٤ | ٢ | ١ | Congenital heart disease | Left-to-right shunts, right-to-left shunts obstruction lesions |
| | | | Ischemic heart disease | Angina pectoris, myocardial infarction, chronic ischemic heart disease, and sudden cardiac death |
| ٥ | ٢ | ١ | Hypertensive heart disease valvular heart disease | Systemic (left-side) hypertensive heart disease Pulmonary hypertensive heart disease (cor pulmonale) Degenerative valve disease Rheumatic valvular disease, infective endocarditis |
| | | | Cardiomyopathy myocarditis pericardial disease cardiac tumors | Dilated cardiomyopathy, hypertrophic cardiomyopathy, restrictive cardiomyopathy pericardial effusions, metastatic neoplasma, primary neoplasma |
| ٦ | ٢ | ١ | Hematopoietic and lymphoid systems red cells disorders | Anemia of blood loss, hemolytic anemias |
| | | | Red cells disorders | Anemia of diminished erythropoiesis |
| ٧ | ٢ | ١ | White cell disorders | Non-neoplastic disorders of white cells |
| | | | Bleeding disorders | Disseminated intravascular coagulation Thrombocytopenia, coagulation disorders |
| ٨ | ٢ | ١ | Disorders that affect the spleen and thymus | Splenomegaly, disorders of the thymus |
| | | | Lung | Atelectasis, acute respiratory distress syndrome, obstructive versus restrictive pulmonary diseases |

| | | | | |
|----|---|---|---|---|
| 9 | 2 | 1 | Obstructive lung airway diseases | Emphysema, chronic bronchitis, asthma and bronchiectasis |
| | | | Chronic interstitial restrictive infiltrative lung diseases | Fibrosis diseases, granulomatous diseases pulmonary eosinophilia, smoking-related interstitial diseases |
| 10 | 2 | 1 | Pulmonary diseases of vascular origin | Pulmonary embolism, hemorrhage and infarction pulmonary hypertension, diffuse alveolar hemorrhage syndrome |
| | | | Pulmonary infections | Community acquired acute pneumonias community acquired atypical pneumonias Hospital acquired pneumonias, aspiration pneumonia and lung abscess, chronic pneumonia, fungal infections |
| 11 | 2 | 1 | Long tumors pleural lesions | Carcinomas and carcinoid tumors, pleural effusion and pleuritis, pneumothorax, hemothorax and chylothorax |
| | | | Lesions of the upper respiratory tract | Acute infections, nasopharyngeal carcinoma Laryngeal tumors |
| 12 | 2 | 1 | Oral cavity and gastrointestinal tract | Oral inflammatory lesions, proliferative and neoplastic lesions, diseases of salivary glands |
| | | | Esophagus | Obstructive and vascular diseases Esophagitis, esophageal tumors |
| 13 | 2 | 1 | Stomach | Inflammatory disease of the stomach, neoplastic disease of the stomach |
| | | | Small and large intestines appendix | Intestinal obstruction, vascular disorders of bowel diarrheal disease, inflammatory intestinal disease colonic polyps and neoplastic disease acute appendicitis, tumors of the appendix |
| 14 | 2 | 1 | Liver gallbladder and biliary tract | Clinical syndromes fatty liver and cholestasis hepatic encephalopathy |
| | | | Cirrhosis | Portal hypertension ascites portosystemic shunt splenomegaly hepatorenal syndrome and hepatopulmonary syndrome |
| 15 | 2 | 1 | Acute and chronic hepatitis | Viral hepatitis, autoimmune hepatitis Drug/toxin-mediated injury mimicking hepatitis |
| | | | Tumors and hepatic nodules | Benign tumors, hepatocellular carcinomas |
| 16 | 2 | 1 | Gallbladder and extrahepatic biliary tract disorders | Gallbladder diseases, disorders of the extrahepatic bile ducts |
| | | | Pancreas | Congenital anomalies, pancreatitis, pancreatic neoplasms |

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 Language English, Edition Revised, Edition Statement 2nd Revised edition Illustrations note Approx. 2700
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PATHOLOGY MODULE ۳

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- Know the principles of collection, handling and dispatch of clinical samples from patients in a proper manner.

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Teaching and learning methodology

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- By a combination of above modalities /tools, student learns applied aspects of the disease process.

| PATHOLOGY MODULE ٢ | | | | |
|---------------------------|-----------|----------------------|---|--|
| Discipline | | Basic Subjects | | |
| Department | | Pathology | | |
| Course title | | Pathology module ١-٢ | | |
| Prerequisite | | General pathology | | |
| Course code | | MED ٠٧ ٢ ١ | | |
| Academic year | | ٤ | | |
| Semester | | ٧ | | |
| Number of credits | | ٣ | | |
| | | Knowledge | | ٢ |
| | | Practical | | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٢ | ١ | Kidney and its collecting system glomerular diseases | Clinical manifestation of Renal Disease, Mechanisms of glomerular injury and disease The nephritic syndrome |
| | | | Glomerular diseases | The nephritic syndrome |
| ٢ | ٢ | ١ | Diseases affecting tubules and interstitium | Tubulointerstitial nephritis acute tubular injury |
| | | | Diseases involving blood vessels chronic kidney disease cystic diseases of the kidney | Arteriosclerosis malignant hypertension and thrombotic microangiopathies simple cysts autosomal dominant adult polycystic kidney disease and autosomal recessive childhood polycystic kidney diseases |
| ٣ | ٢ | ١ | Urinary outflow obstruction tumors of the kidney | Renal Stone, and hydronephrosis, oncocytoma, renal cell carcinoma, clear cell carcinoma, papillary renal cell carcinoma, chromophobe, renal cell carcinomas and Wilms tumor. |
| | | | Male genital system and lower urinary tract penis scrotum testis and epididymis | Malformation, inflammatory lesions, and neoplasms of the penis, cryptorchidism and testicular atrophy, inflammatory lesions, vascular disturbances, and testicular neoplasms |
| ٤ | ٢ | ١ | Prostate | Prostatitis, benign prostatic hyperplasia and carcinoma of the prostate |
| | | | Ureter, bladder and urethra | Ureteropelvic junction obstruction and retroperitoneal fibrosis, non-neoplastic and neoplastic conditions of the urinary bladder |
| ٥ | ٢ | ١ | Sexually transmitted diseases | Syphilis, gonorrhea, nongonococcal urethritis and cervicitis, Lymphogranuloma venereum, chancroid (soft chancre), granuloma inguinale, trichomoniasis, genital herpes simplex and human papillomavirus infection |
| | | | Female genital system and breast vulva & vagina | Vulvitis, non-neoplastic epithelial disorders, and tumors of the vulva, vaginitis and malignant neoplasms of the vagina |
| ٦ | ٢ | ١ | Cervix | Cervicitis and Neoplasms of the Cervix |
| | | | Body of uterus | Endometritis, Adenomyosis, Endometriosis, Abnormal Uterine Bleeding and Proliferative lesions of the endometrium and myometrium. |
| ٧ | ٢ | ١ | Fallopian tubes Ovaries | Follicle and luteal cysts, polycystic ovarian disease tumors of the ovary |
| | | | Diseases of pregnancy | Ectopic pregnancy, gestational trophoblastic disease preeclampsia/eclampsia |

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|----|---|---|---|--|
| 8 | 2 | 1 | Breast | Fibrosystic change, inflammatory processes |
| | | | Tumors of the breast | Fibroadenoma, phyllodes tumor, intraductal papilloma, and carcinoma, lesions of the male breast |
| 9 | 2 | 1 | Endocrine system Pituitary | Hyperpituitarism and pituitary Adenomas, Hypopituitarism, Posterior Pituitary Syndrome. |
| | | | Thyroid gland | Hyperthyroidism, Hypothyroidism, Thyroiditis, graves disease, diffuse and multinodular goiter, and neoplasms of the thyroid |
| 10 | 2 | 1 | Parathyroid glands | Hyperparathyroidism, Hypoparathyroidism. |
| | | | Endocrine pancreas | Diabetes, mellitus, pancreatic neuroendocrine tumors |
| 11 | 2 | 1 | Adrenal cortex | Adrenocortical hyperfunction (hyperradrenalism), adrenal insufficiency, and adrenocortical neoplasms |
| | | | Adrenal medulla multiple endocrine neoplasia syndrome | Tumors of the adrenal medulla, multiple endocrine neoplasia type 1, multiple endocrine neoplasia type 2 |
| 12 | 2 | 1 | Bones joints and soft tissue tumors bones | Congenital disorders of bone and cartilage acquired disease of bone, osteomyelitis, bone tumors |
| | | | Joints | Arthritis, joint tumors and tumor-like lesions |
| 13 | 2 | 1 | Soft tissue tumors | Tumors of adipose tissue, fibrous tumors and tumor-like lesions, fibrohistiocytic tumors, skeletal muscle tumors, smooth muscle tumors, synovial sarcoma |
| | | | Peripheral nerves and muscles | Disorders of peripheral nerves, disorders of neuromuscular junction, disorders of skeletal muscle |
| 14 | 2 | 1 | Peripheral nerve sheath tumors | Schwannomas and neurofibromatosis type 2 Neurofibroma, malignant peripheral nerve sheath tumors, neurofibromatosis type 1, traumatic neuroma |
| | | | Central nervous system | Patterns of injury in the nervous system, edema, Herniation, and hydrocephalus Cerebrovascular diseases, congenital malformations and prenatal brain injury |
| 15 | 2 | 1 | Neurodegenerative diseases | Alzheimer disease, parkinson disease |
| | | | Tumors of CNS | Neuronal tumors, embryonal neoplasms, other parenchymal tumors, meningiomas and metastatic tumors. |
| 16 | 2 | 1 | Skin acute and chronic inflammatory dermatosis | Urticaria acute eczematous dermatitis psoriasis and infectious dermatosis |
| | | | Blistering (bullous) disorders skin tumors | Pemphigus bullous pemphigoid and dermatitis herpetiformis benign and malignant tumors |

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 Language English, Edition Revised, Edition Statement 10th Revised edition Illustrations note Approx. 1000
 illustrations (1000 in full color), ISBN10 0323021177 ISBN13 9780323021170, Bestsellers rank 4,904

MEDICAL BIOCHEMISTRY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to 5% with reasonable excuse.
- More than 5% of absence is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from 10 points
- Students factory score is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scoring policy

- How to evaluate and how to divide the scores in accordance with article 19 of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) 20%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam 20%
- Final semester exam 60%
- Total 100%

Course description

The medical biochemistry course introduces the fundamentals of biochemistry as applied to medicine. We explore the basic amino acid building blocks and how differences in structures are manifested into a variety of functional states, explores nucleic acids, macromolecular machines and their regulation on a molecular level, intrinsic nature of metabolism, fundamentals of carbohydrate and amino acid metabolism including a variety of diseases states arising from genetic and environmental factors, lipid metabolism.

Learning objectives

A- Knowledge:

At the end of the course, the student should be able to demonstrate his knowledge and understanding on the:

- Basic and clinical aspects of enzymology and regulation of enzymatic activity;
- Digestion and assimilation of nutrients and consequences of malnutrition;
- Integration of the various aspects of metabolism, and their regulatory pathways;
- Biochemical basis of inherited disorders and their associated sequel
- Mechanisms involved in maintenance of body fluid and pH homeostasis
- Biochemical basis of environmental health hazards; and biochemical basis of cancer and carcinogenesis, principles of metabolism, and detoxification,
- Principles of various conventional and specialized laboratory investigations and instrumentation, analysis and interpretation of a given data; the ability to suggest experiments to support theoretical concepts and clinical diagnosis

B- skills

At the end of the course, the student should be able to:

- Make use of conventional techniques /instruments to perform biochemical analysis relevant to clinical screening and diagnosis
- Demonstrate the skills of solving clinical problems and decision making.

Teaching – learning Methodology

- Didactic lectures: interactive classroom lectures to facilitate learning of terminology principles and concepts. Books and resources material are suggested to encourage self-directed learning.
- Tutorials: problem based small group discussions, questions –answer sessions, revision and reinforcement of difficult concepts in tutorial hours. The purpose is to inculcate skills of reasoning, meaningful approaches to learning and facilitate understanding of the subject.
- Laboratory exercises
 - To substantiate and clarify theoretical concepts with experiential evidence
 - To develop skills of performing basic biochemical tests important in clinical investigations
 - To develop familiarity with biochemical laboratory instrumentations techniques.

Practical

- Laboratory instrumentations
- Protein fractionation, denaturation, separation of proteins and amino acids.
- Color reactions of amino acids and proteins;
- Estimation of serum; glucose, total cholesterol and HDL cholesterol, uric acid, electrolytes and Urea;
- Cerebrospinal fluid analyses
- Gastric juice analyses
- Urine analyses
- Amniotic fluid analyses
- Enzymes: amylase, lactate dehydrogenase and alkaline phosphatase ;
- Liver function tests
- Immunodiffusion techniques, RIA and ELISA
- Case-oriented discussions (enzymes, metabolites, function tests).

| BIOCHEMISTRY MODULE 1 | | | | |
|------------------------------|-----------|----------------------|--|--|
| Discipline | | Basic Subjects | | |
| Department | | Biochemistry | | |
| Course title | | Medical Biochemistry | | |
| Prerequisite | | None | | |
| Course code | | MED 0318 | | |
| Academic year | | 2 | | |
| Semester | | 3 | Pring | |
| Number of credits | | 4 | Knowledge | 3 |
| | | | Practical | 1 |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| 1 | 1 | 1 | Biochemistry and medicine carbohydrates chemical properties of monosaccharides | Introduction relationship between biochemistry and medicine introduction, definition, classification sugar exhibit various forms of isomerism (D and l isomerism asymmetric carbon optical activity alpha and beta anomers pyranose and furanose ring structures epimer aldose-ketose isomerism) Chemical properties of monosaccharide :- Reaction with hydrazines to form osazones, oxidation to produce suger acids, reduction action of suger in alkaline solution, action of acids, action of bases, reduction fo suger to form suger alcohols, reaction fo aldoles with HCN |
| 2 | 1 | 1 | Cyclic sturctue of carbohydrates monosaccharides disaccharides | Cyclic structures of carbohydrates:- cyclic structures autorotation anomers and anomers carbon Monosaccharide disaccharides:-introduction of disaccharides maltose lactose and sucrose |
| 3 | 1 | 1 | Polysacchardies lipids | Poly saccharides :- introduction homo poly saccharides (starch glycogen inline cellulose dextrin) hetero poly saccharides (hyaluronic cid chondroitin sulfate heparin) and glycoprotein's Lipids:- introduction classification derived lipids fatty acid (definition types essential fatty acid melting point elcosamoids glycerol |
| 4 | 1 | 1 | Steroids and tterials simple lipids compound lipids amino acid and proteins | Steroids and sterols :- introduction cholesterol other sterols √- dehydrocholesterol, introduction, neutral fats or triglycerides waxes introduction 1- Phospholipids diphosphatidylglycerol, lecithin's cephalins phosphotidyl serine phosphotidyl inositol. lyso phosphatides plasmalogens sphingomyeline √- glycolipids (cerebrosides ,gangliosides) Amino acid and proteins :- introduction classification and structure and structure of amino acids essential amino acids physicochemical properties |

| | | | | |
|----|---|---|---|---|
| ٥ | ٣ | ١ | Properties of amino acids peptid bond peptides nucleoprotein | Properties of amino acids :- chemical properties due to carboxylic group (formation of ester formation of amide formation of amine by decarboxylation) due to amine group (salt formation with acids acylation methylation reaction with HNO ³ , reaction with CO ² , oxidative deamination peptide bond proteins: classification structure reactions of proteins (reaction with water denaturation reaction with ions) Nucleic acid :- (DNA, RNA) |
| ٦ | ٣ | ١ | Vitamins A, D and E, K | Vitamins:- (introduction , classification) fat soluble vitamins vitamin A:- (structure forms dietary sources daily requirement absorption , storage and transport function of vit.A) Vit.D and vit.E:- (structure , forms dietary sources, daily requirement absorption storage and transport functions of vit.D and vit.E) |
| ٧ | ٣ | ١ | Water soluble, vitamins C, B ¹ , B ² | structure forms dietary sources daily requirement absorption , storage and transport function of vit.K introduction) Vit. K structure. Metabolism sources .metabolic role. deficiency of some vitamins, daily requirement) |
| ٨ | ٣ | ١ | Vitamin B ⁶ , B ¹² , vit pp , vit H, vit b ¹² | structure, metabolism, sources, metabolic role deficiency of some vitamins, daily requirement) |
| ٩ | ٣ | ١ | Enzymes | Introduction, Mechanism of enzyme action. enzymes inhibition , regulation of enzymes activity Enzymes:- classification, role of metals in enzymes activity co enzymes, diagnostic value of enzyme levels |
| ١٠ | ٣ | ١ | The biochemistry of the gastrointestinal tract | The biochemistry of the gastrointestinal tract:- introduction, digestion and absorption in mouth, digestion and absorption of in stomach, bile and role of it indigestion The biochemistry of the gastrointestinal tract:- introduction, digestion and absorption in mouth, digestion and absorption of fats and cholesterol, digestion and absorption of protein. |
| ١١ | ٣ | ١ | Metabolism of water and non organic substances electrolytes minerals and trace elements | Metabolism of water and non organic substances (electrolytes, minerals and trace elements):- introduction, fluid compartments of the body, determination of body fluid compartments, gain and loss of body water, regulation of water balance, effects of a pure water deprivation, water excess or water intoxication Metabolism of water and non organic substances (electrolytes, minerals and trace elements):- metabolism of non organic substances introduction, the electrolytes of body fluids, sodium, potassium, magnesium, gloried. |

| | | | | |
|----|---|---|--|---|
| 12 | 3 | 1 | Metabolism of carbohydrates glycolysis gluconeogenesis | Metabolism of water and non organic substances (electrolytes, minerals and trace elements: - metabolism of minerals and trace elements introduction iron, manganese, calcium, phosphorus, zinc, molybdenum, chromium, selenium, iodine, sulfur, fluorine, nickel, copper, cobalt, aluminum (aluminum) and silicone. Metabolism of carbohydrates: - introduction Glycolysis:- introduction reaction, regulation. |
| 13 | 3 | 1 | Citric acid cycle | Enzymes and coenzymes of glycolysis reversion of glycolysis formation and fate of pyruvic acid, Citric acid cycle:- reactions, regulation, |
| 14 | 3 | 1 | Electron transport system and oxidative phosphorylation | Bioenergetics (Calculation of ATP moles which Produced in glycolysis and citric acid cycle from glucose efficiency, Electron transport system and oxidative phosphorylation:- mechanisms of the control of glucose combustion. |
| 15 | 3 | 1 | Hexose mono phosphate shunt pentose phosphate pathway metabolism of glycogen glycogenesis glycogenolysis | Hexose mono phosphate (HMP) shunt (pentose phosphate pathway):- introduction, regulation, metabolic significance. Metabolism of glycogen glycogenesis:- glycogenolysis: introduction reaction, regulation. |
| 16 | 3 | 1 | Metabolism of galactose Metabolism of Fructose | Metabolism of glycogen glycogenesis: regulation of glycogen metabolism, inherited disorders (glycogen storage diseases or GSDs) Metabolism of galactose: - introduction, metabolic pathway, biosynthesis of lactose metabolism of fructose:- introduction, metabolic pathway. |

Text books & References Books Recommended (last edition)

Medical biochemistry, John W. Baynes and Merek H. Dmniczak

Format Paperback | 1112 pages, Dimensions 222 x 281 x 30.4mm | 2,077,40g, Publication date 27 Feb 2018, Publisher Elsevier Health Sciences, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 9th Revised edition, Illustrations note Approx. 461 illustrations (461 in full color), ISBN10 070202990 ISBN13 978070202994, Bestsellers rank 60,861

Principles of biochemistry. Lehinger

Format Hardback | 1108 pages, Dimensions 102 x 102 x 102mm | 2,870g, Publication date 20 Feb 2013, Publisher W.H.Freeman & Co Ltd, Publication City/Country New York, United States Language English, Edition Statement 7th ed. 2013, Illustrations note w. numerous col. figs. ISBN10 1474109621, ISBN13 9781474109621, Bestsellers rank 34,172

Harper's Biochemistry R.K Murray.

Format Paperback | 1118 pages, Dimensions 221 x 272 x 28mm | 1,608g, Publication date 16 Mar 2012, Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Medical, Publication City/Country New York, United States, Language English, Edition Statement 9th edition Illustrations note 000 Illustrations, unspecified, ISBN10 007117076X, ISBN13 9780071170763 Bestsellers rank 474,28

Textbook of biochemistry with Clinical Correlation Ed.

Format Hardback | 1240 pages, Dimensions 221 x 286 x 02mm | 2,818g, Publication date 26 Jan 2010, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 9th Edition, ISBN10 0470281731, ISBN13 9780470281734 Bestsellers rank 130,324

Tietz Textbooks of Clinical Chemistry.

Format Hardback | 1088 pages, Dimensions 222 x 281 x 43,18mm | 2,426,72g, Publication date 01 Mar 2019, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 10th Revised edition, Illustrations note Approx. 640 illustrations (600 in full color) ISBN10 0323030443, ISBN13 9780323030446, Bestsellers rank 1,381,399

MEDICAL BIOCHEMISTRY ۲

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

The medical biochemistry course introduces the fundamentals of biochemistry as applied to medicine. We explore the basic amino acid building blocks and how differences in structures are manifested into a variety of functional states, explores nucleic acids, macromolecular machines and their regulation on a molecular level, intrinsic nature of metabolism, fundamentals of carbohydrate and amino acid metabolism including a variety of diseases states arising from genetic and environmental factors, lipid metabolism.

Learning objectives

A- Knowledge:

At the end of the course, the student should be able to demonstrate his knowledge and understanding on the:

- Basic and clinical aspects of enzymology and regulation of enzymatic activity;
- Digestion and assimilation of nutrients and consequences of malnutrition;
- Integration of the various aspects of metabolism, and their regulatory pathways;
- Biochemical basis of inherited disorders and their associated sequel
- Mechanisms involved in maintenance of body fluid and pH homeostasis
- Biochemical basis of environmental health hazards; and biochemical basis of cancer and carcinogenesis, principles of metabolism, and detoxification,
- Principles of various conventional and specialized laboratory investigations and instrumentation, analysis and interpretation of a given data; the ability to suggest experiments to support theoretical concepts and clinical diagnosis

B-skills

At the end of the course, the student should be able to:

- Make use of conventional techniques /instruments to perform biochemical analysis relevant to clinical screening and diagnosis
- Demonstrate the skills of solving clinical problems and decision making.

Teaching – learning Methodology

- Didactic lectures: interactive classroom lectures to facilitate learning of terminology principles and concepts. Books and resources material are suggested to encourage self-directed learning.
- Tutorials: problem based small group discussions, questions –answer sessions, revision and reinforcement of difficult concepts in tutorial hours. The purpose is to inculcate skills of reasoning, meaningful approaches to learning and facilitate understanding of the subject.
- Laboratory exercises
 - To substantiate and clarify theoretical concepts with experiential evidence
 - To develop skills of performing basic biochemical tests important in clinical investigations
 - To develop familiarity with biochemical laboratory instrumentations techniques.

Practical

- Laboratory instrumentations
- Protein fractionation, denaturation, separation of proteins and amino acids.
- Color reactions of amino acids and proteins;
- Estimation of serum; glucose, total cholesterol and HDL cholesterol, uric acid, electrolytes and Urea;
- Cerebrospinal fluid analyses
- Gastric juice analyses
- Urine analyses
- Amniotic fluid analyses
- Enzymes: amylase, lactate dehydrogenase and alkaline phosphatase ;
- Liver function tests
- Immunodiffusion techniques, RIA and ELISA
- Case-oriented discussions (enzymes, metabolites, function tests).

| BIOCHEMISTRY MODULE ۲ | | | | |
|------------------------------|-----------|----------------------|---|---|
| Discipline | | Basic Subjects | | |
| Department | | Biochemistry | | |
| Course title | | Medical Biochemistry | | |
| Prerequisite | | None | | |
| Course code | | MED . ۰۴ ۱۸ | | |
| Academic year | | ۴ | | |
| Semester | | ۴ | Fall | |
| Number of credits | | ۴ | Knowledge | ۳ |
| | | | practical | ۱ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ۱ & ۲ | ۲ | ۱ | Metabolism of lipids | introduction, activation of fatty acid, carnitine and its role in FFA, Metabolism, oxidation of fatty acids, formation and utilization of ketone bodies:-[beta oxidation (beta oxidation of saturated FFA, beta oxidation of Odd carbon FFA, beta oxidation of unsaturated FFA, As) ketosis of ketoacidosis, |
| | ۳ | ۱ | Calculation of energy of fatty acids combustion in the body biosynthesis of the fatty acid | Introduction, biosynthesis of saturated FFA, As, biosynthesis of unsaturated FFA, As. Biosynthesis of triglycerides, biosynthesis, phospholipids: - (triacylglycerols) biosynthesis of glycerophospholipid (lecithin, phosphatidyl serine, phosphatidyl ethanolamine. Cardiolipin, plasmalogens). |
| ۳ | ۳ | ۱ | Biosynthesis and catabolism of sphingolipids Prostaglandins Prostacyclins and thromboxanes. Leukotrienes (LTs) | Biosynthesis of sphingosine, biosynthesis and catabolism of (ceramide and sphingomyelin glucocerebroside galactocerebroside. Sulfatide ceramide lactoside, ceramide trihexoside and ganglioside) Prostaglandins prostacyclins and thromboxanes leukotrienes (LTs):- introduction, structure, metabolism and function) chemistry and function |
| ۴ | ۳ | ۱ | Control of fat metabolism, plasma lipoproteins and their metabolism, lipotropic | Role of liver in lipid metabolism. Plasma lipoproteins and their metabolism lipotropic factors, role of adipose tissue in fat metabolism, metabolism of free fatty acids, |
| ۵ & ۶ | ۳ | ۱ | Metabolism of cholesterol | Introduction biosynthesis regulation functions of cholesterol. Transport of cholesterol, Metabolism of cholesterol:- factors affecting, plasma cholesterol level and fate of cholesterol, |

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|----|---|---|--|---|
| | ۳ | ۱ | Metabolism of proteins and amino acids Urea formation I nkrebs'-henseleit (urea) cycle. | introduction, nitrogen balance, dissimilation of amino acids or N-catabolism of amino acids transamination, deamination (oxidative and non oxidative) Urea formation in Krebs henseleit (urea) cycle:- biosynthesis, regulation of urea synthesis, clinical significance of urea, inherited disorders associated with urea cycle |
| ۷ | ۳ | ۱ | Metabolism of amino acids | glycine, creatine and creatinine, alanine, valine, Lucien, Isoleucine, serine, methionine Metabolism of amino acids:- cysteine, glutamic acid, glutamine, aspartic acid, asparagin, arginine, lysine, |
| ۸ | ۳ | ۱ | Metabolism of pieces which have one carbon | ornithine, citrulline, histidine, tryptophan, praline hydroxyl praline phenylalanine tyrosine |
| ۹ | ۳ | ۱ | Metabolism of pyrimidines and purines | biosynthesis and catabolism of pyrimidines Metabolism of pyrimidines and purines:- biosynthesis and catabolism of purines, uric acid metabolism and clinical disorders of purines and pyrimidines metabolism |
| ۱۰ | ۳ | ۱ | Biosynthesis of DNA. Biosynthesis of NA | Biosynthesis of DNA. Biosynthesis of NA:- (Mrna, trna, rna) |
| ۱۱ | ۳ | ۱ | Synthesis of proteins and Mutation, | protein Synthesis steps: ۱. Protein synthesis initiation ۲. Translation elongation ۳. Termination of translation Four common categories of mutation: ۱. DNA base substation, insertion, and deletion ۲. Unequal crossing-over and related structural modification fo chromosomes ۳. Partial or complete gene inversion and duplication ۴. Irregular numbers of chromosomes |
| ۱۲ | ۳ | ۱ | The biochemistry of endocrine glands: General Mechanism of action of hormones: pituitary hormones: | general mechanism of action of hormones: - introduction classification, factors regulating hormone action, general properties of hormones Pituitary hormones:- introduction, hormones of the anterior pituitary [growth H (chemistry, regulation of growth H, secretion, clinical importance) |
| ۱۳ | ۳ | ۱ | Pituitary tropic hormones Hormones of middle lobe of pituitary (melanocyte stimulating hormones): Hormones of posterior pituitary lobe (Vasopressin, oxytocin) | (Regulation of secretion and functions) such as prolactin, gonadotropins, FSH and LH, thyrotrophic hormones (TSH) and adrenocorticotropic hormone (ACTH). Hormone of middle lobe of pituitary (melanocyte stimulating hormones:- functions, clinical importance, regulation of secretion hormones of posterior pituitary lobe (vasopressin, oxytocin):- functions and clinical importance, abnormalities of pituitary function |

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|----|---|---|---|--|
| ١٤ | ٣ | ١ | Thyroid glands hormones(thyroxin, tri-iodo thyronine): Parathyroid glands and their hormones: parathormone, calcitonin: | introduction metabolism, mechanism of action, actions regulation, abnormalities, introsuction Parathyroid glands and their hormones: - introduction parathormone, calcitonin: - (chemistry, biosynthesis, metabolism, mechanism of action, actions, regulation, abnormalities of parathyroid function). |
| ١٥ | ٣ | ١ | Pancreas and its Hormones Insulin Glucagons Adrenal glands and their hormones: Adrenal glands and their hormones: Glucorticoids: Mineralo-corticoids and cortical sex hormones (androgens and estrogens): | Introduction insulin glucagons: - (chemistry, biosynthesis, secretion, regulation transport and metabolism, mechanism of action, metabolic role and functions of insulin) descriptions like insulin) somatostatin (chemistry and functions). Adrenal glands and their hormones: - introduction Adrenal glands and their hormones :(biosynthesis, secretion and transport, mechanism of action, actions, regulation abnormalities) glucorticoids mineral- corticoids and cortical sex hormones (androgens and estrogens). Descriptions like glucocorticoids. |
| ١٦ | ٣ | ١ | Adrenal medullar hormones (epinephrine and nor epinephrine | introduction, metabolism of action , metabolic effects, abnormalities of clinical aspects> introduction, androgens (Male H.) female sex H. (Description like above hormones) chemistry and action descriptions like above hormones introduction,secretin and gastrin families. |

Text books & References Books Recommended (last edition

Medical biochemistry, John W. Baynes and Merek H. Dminiczak

Format Paperback | ٧١٢ pages, Dimensions ٢٢٢ x ٢٨١ x ٣٠,٤٨mm | ٢,٠٧٧,٤٥g, Publication date ٢٧ Feb ٢٠١٨, Publisher Elsevier Health Sciences, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement ٥th Revised edition, Illustrations note Approx. ٤٦١ illustrations (٤٦١ in full color), ISBN١٠ ٠٧٠٢٠٧٢٩٩٠ ISBN١٣ ٩٧٨٠٧٠٢٠٧٢٩٩٤, Bestsellers rank ٦٠٥,٨٦١

Principles of biochemistry. Lehinger

Format Hardback | ١١٥٨ pages, Dimensions ١,٠٢ x ١,٠٢ x ١,٠٢mm | ٢,٨٧٠g, Publication date ٢٠ Feb ٢٠١٣, Publisher W.H.Freeman & Co Ltd, Publication City/Country New York, United States Language English, Edition Statement ٦th ed. ٢٠١٣, Illustrations note w. numerous col. figs. ISBN١٠ ١٤٦٤١٠٩٦٢١, ISBN١٣ ٩٧٨١٤٦٤١٠٩٦٢١, Bestsellers rank ٣٤,١٧٢

Harper’s Biochemistry R.K Murray.

Format Paperback | ٨١٨ pages, Dimensions ٢٢١ x ٢٧٢ x ٢٨mm | ١,٦٠٨g, Publication date ١٦ Mar ٢٠١٢, Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Medical, Publication City/Country New York, United States, Language English, Edition Statement ٢٩th edition Illustrations note ٥٠٠ Illustrations, unspecified, ISBN١٠ ٠٠٧١٧٦٥٧٦X, ISBN١٣ ٩٧٨٠٠٧١٧٦٥٧٦٣ Bestsellers rank ٤٧٤,٠٢٨

Textbook of biochemistry with Clinical Correlation Ed.

Format Hardback | ١٢٤٠ pages, Dimensions ٢٢١ x ٢٨٦ x ٥٢mm | ٢,٨١٨g, Publication date ٢٦ Jan ٢٠١٠, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement ٧th Edition, ISBN١٠ ٠٤٧٠٢٨١٧٣١, ISBN١٣ ٩٧٨٠٤٧٠٢٨١٧٣٤ Bestsellers rank ١٣٥,٣٢٤

Tietz Textbooks of Clinical Chemistry.

Format Hardback | ١٠٨٨ pages, Dimensions ٢٢٢ x ٢٨١ x ٤٣,١٨mm | ٢,٤٢٦,٧٢g, Publication date ٠١ Mar ٢٠١٩, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ٨th Revised edition, Illustrations note Approx. ٦٤٠ illustrations (٦٠٠ in full color) ISBN١٠ ٠٣٢٣٥٣٠٤٤٣, ISBN١٣ ٩٧٨٠٣٢٣٥٣٠٤٤٦, Bestsellers rank ١,٣٨١,٣٩٩

CELULLAR & MOLECULAR IMMUNOLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to 70% with reasonable excuse.
- More than 70% of absence is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from 10 points
- Students factory score is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scoring policy

- How to evaluate and how to divide the scores in accordance with article 19 of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) 20%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam 20%
- Final semester exam 60%
- Total 100%

Course description and objectives

- The fundamentals of immunology course introduce the components of the immune system, their locations in the human body, and their interactions in different clinical contexts. Students learn how the immune system senses an attempts to eliminate pathogens, and how selected pathogens evade it to cause disease;
- First the gene and molecules that play key roles in the immune system – including antigens, antigen receptors, antibodies , complement, major histocompatibility complex loci, chemokine , and cytokines –are introduced, the interactions between innate and acquired are then discussed
- Finally, medically relevant forms of immune deregulation and intervention are explored, including vaccines , immunomodulators , hypersensetiities , immunodeficiency, autoimmunity, graft –versus –host , disease, transplantation immunology, and tumor immunology

Teaching – learning methodology

- Didactic lectures: interactive classroom lectures to facilitate learning of terminology principles and concepts. Books and resources material are suggested to encourage self-directed learning.
- Tutorials: problem based small group discussions, questions –answer sessions, revision and reinforcement of difficult concepts in tutorial hours. The purpose is to inculcate skills of reasoning, meaningful approaches to learning and facilitate understanding of the subject.

| CELLULAR & MOLECULAR IMMUNOLOGY | | | | |
|--|-----------|---------------------------------|---|---|
| Discipline | | Basic Subjects | | |
| Department | | Pathology | | |
| Course title | | Cellular & molecular immunology | | |
| Prerequisite | | Molecular cell biology | | |
| Course code | | MED ٠٤ ١٦ | | |
| Academic year | | ٢ | | |
| Semester | | ٤ | Fall | |
| Number of credits | | ٢ | Knowledge | ١ |
| | | | Practical | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ١ | ١ | Introduction and overview | Introduction innate and acquired immunity active passive and adoptive immunity |
| ٢ | ١ | ١ | Immunogens and antigens | Primary and secondary response antigenicity an antigen binding site major classes of antigen |
| ٣ | ١ | ١ | Antibody structure and function | Structure features and biologic properties of IgG, IgM, IgA, IgD and IgE |
| ٤ | ١ | ١ | Antigen antibody interaction and immune assay | Primary and secondary interaction between antibody and antigen immunoassays and immunofluorescence |
| ٥ | ١ | ١ | Biology and activation of T and B cells | Early phases of B cell differentiation T cell differentiation in the thymus activation of CD4 T cells function of CD4 T cell B cell activation and function |
| ٦ | ١ | ١ | Role of major histocompatibility in immune response | Tolerance induction of tolerance in mature T and B lymphocyte immunologically privileged sites |
| ٧ | ١ | ١ | Control mechanism in the immune response | Tolerance induction of tolerance in mature T and B lymphocyte immunologically privileged sites |
| ٨ | ١ | ١ | Cytokines | General properties of cytokines functional categories of cytokines role of cytokines and cytokines receptors in disease |
| ٩ | ١ | ١ | Complement | The activation pathway and their proteins biological activities of complement |
| ١٠ | ١ | ١ | Hypersensitivity reaction (type I) | General characteristics of type I hypersensitivity sensitization activation and effector phases |
| ١١ | ١ | ١ | Hypersensitivity reaction (type II and type III) | Type II cytotoxic reaction type III immune complex reactions |
| ١٢ | ١ | ١ | Hypersensitivity reaction (type IV) | General characteristics treatment of cell mediated immunity |
| ١٣ | ١ | ١ | Autoimmunity | Autoimmunity and disease criteria for autoimmune disease etiology of autoimmune disease examples of autoimmune disease |
| ١٤ | ١ | ١ | Immunodeficiency | Immunodeficiency syndrome primary Immunodeficiency syndromes secondary Immunodeficiency syndromes |

| | | | | |
|----|---|---|--|---|
| ١٥ | ١ | ١ | Tumor immunology | Tumors antigens limitation if the effectiveness of the immune response immunodiagnosis immunotherapy |
| ١٦ | ١ | ١ | Resistance and immunization to infectious diseases | Host defense against the various classes of microbial pathogens mechanisms by which pathogens evade the immune response principle and objective of immunization active and passive immunization |

Textbooks and References Recommended (last edition)

Medical immunology, Tristram.

Format Paperback, Publication date ٠١ Jul ٢٠٠٣, Publisher Manual Moderno, Publication City/Country United States, Language English, Spanish, ISBN١٠ ٩٦٨٤٢٦٩٩٧٨ ISBN١٣ ٩٧٨٩٦٨٤٢٦٩٩٧

Immunology for Medical Students Rodeerick Neirn Basic immunology, Abdul ,K. Abbas Format Paperback | ٢٤٠ pages, Dimensions ١٤٩,٨٦ x ٢٢٣,٥٢ x ١٥,٢٤mm | ٢٩٤,٨٣g, Publication date ٠١ Mar ٢٠٠١, Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Inc.,US Publication City/Country New York, United States, ISBN١٠ ٠٠٧١١٨٣٢٢١

Kuby Immunology

Format Paperback | ٩٤٤ pages, Dimensions ١٥٥ x ٢٣٥ x ٣٢mm | ١,٧٢٥g, Publication date ١٦ Aug ٢٠١٨, Publisher W.H.Freeman & Co Ltd, Publication City/Country New York, United States Language English, Edition Revised, Edition Statement ٨th ed. ٢٠١٨, Illustrations note ٩٤٤ p. ISBN١٠ ١٣١٩١١٤٧٠٩, ISBN١٣ ٩٧٨١٣١٩١١٤٧٠٩, Bestsellers rank ٢١,٧٩

Roitt's Essential Immunology

Format Paperback | ٥٧٦ pages, Dimensions ٢١٦ x ٢٧٣ x ٢٨mm | ١,٤٩٨g, Publication date ١٧ Jan ٢٠١٧, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement ١٣th Edition, ISBN١٠ ١١١٨٤١٥٧٧٩, ISBN١٣ ٩٧٨١١١٨٤١٥٧٧٩, Bestsellers rank ٧٢,٩٣٩

Basic Immunology : Functions and Disorders of the Immune System

Format Paperback | ٣٣٦ pages, Dimensions ١٩١ x ٢٣٥ x ١٥,٢٤mm | ٧٤٨,٤٣g, Publication date ١٧ Apr ٢٠١٩, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ٦th Revised edition, Illustrations note Approx. ١٨٥ illustrations (١٨٥ in full color) ISBN١٠ ٠٣٢٣٥٤٩٤٣٨, ISBN١٣ ٩٧٨٠٣٢٣٥٤٩٤٣٨, Bestsellers rank ٩٨,٣١٧

FORENSIC MEDICINE

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description:

The board goal of the teaching of graduate students in forensic medicine is to produce a physician who is well informed about medico-legal responsibilities in practice of medicine. He or she acquire knowledge of law in relation to medical practice, medical negligence and respect for codes of medical ethics.

Learning objectives

At the end of the course in forensic medicine, the MD student will be able to:

- Understand the basic concept of the subject and its importance
- Aware of inquest , legal and court procedures applicable to medico-legal and medical practice
- Able to perform medico-legal postmortem / autopsy findings and results of other relevant investigations for logical conclusions for logical conclusion and forming the opinion on cause, manner and time since death.
- Able to reserve and dispatch relevant various articles, trace evidences including viscera – in poisoning – cases in medico-legal cases/ autopsy examination and handing over the same to approach agencies
- Able to identify the medico-legal cases , carry out medical examination in such cases and prepare medico-legal report as per the law of the land;
- Aware of code of ethics, duties and rights of medical practitioners, duties towards patients and community, punishment on violation of code of ethics, various forms of medical negligence, duties toward his Professional colleagues;
- Able to diagnose and manage the cases of acute and chronic poisoning and can carry out medico-legal duties
- Aware of principles of analytical , environmental, occupational toxicology including toxicovigilance and predictive toxicology
- Aware of latest advances in Forensic Medicine & Toxicology and their medicolegal importance

| FORENSIC MEDICINE | | | | |
|--------------------------|-----------|------------------------------|---|---|
| Discipline | | Basic Subjects | | |
| Department | | Pathology | | |
| Course title | | FORENSIC MEDICINE | | |
| Prerequisite | | Basic Subjects and Pathology | | |
| Course code | | MED ١١ ٢٥ | | |
| Academic year | | ٢ | | |
| Semester | | Fall | | |
| Number of credits | | Knowledge | | ١ |
| | | Practical | | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٢ | ١ | Principles of forensic medicine | Definition goals relation to other sciences principle terms examination types & forms of forensic examination methods of forensic medicine Terminology, experts of forensic medicine, rights and responsibility of expert, report's form |
| ٢ | ٣ | ١ | Thanatology | Definition classification definition stages & types of death early modifications of the body coldness dryness algor liver mortise & autolysis |
| ٣ | ٣ | ١ | Thanatology | Lat modification of the body destructive processes of the body (putrefaction destructive processes of the body putrefaction destructive of the body by animals insects and plants) preservation processes of the body - Natural process)mummification,saponification & others) - Artificial processes (refrigerator, conservation, embalmment) |
| ٤ | ٣ | ١ | Medicolegal aspects of death investigation | Principles external examination of the body autopsy expletive examination repairing of body unknown bodies examination fragmented bodies examination skeleton bodies examination |
| ٥ | ٣ | ١ | Medicolegal aspects of the sudden death & new born deaths investigation | Definaiton risk factor for sudden death examination of sudden death body determination of (infancy on time delivery live delivery vitality missed delivery vitality of infants' delivery) examination of infancy deaths. |
| ٦ | ٣ | ١ | Personal identification | Definition history identification examination dental investigation dactiloscropy DNA investigantion |
| ٧ | ٣ | ١ | Criminal investigation site | Definition fornceic aspect of CIS role of forensic doctor in CIS |
| ٨ | ٣ | ١ | Forensic traumatology | Definition traumatism classification excoriation ecchymosis wonds fracture fiont dislocation joint anathrosis action in death causing injuries causes of death in mechanical injuries |
| ٩ | ٣ | ١ | Forensic traumatology | Fiream injuries definition classification fire factors mechanism of bullet effect (entrance hole, external canal, shooting distance, forms of death) |

| | | | | |
|----|---|---|--|--|
| 10 | 3 | 1 | Asphyxia | Definition classification of hypoxia stages of asphyxia external and internal sign of asphyxia hanging strangulation smothering compression of chest and abdomen airway obstruction, oral and nasal obstruction, drowning. |
| 11 | 3 | 1 | Medical trust evidence | Definition classification blood investigation blood dots investigation |
| 12 | 3 | 1 | Medical trust evidence | Semen fluid investigation, hair investigation |
| 13 | 3 | 1 | Medicolegal aspects of vital case investigation | Age determination simulation dissimulation puberty virginity |
| 14 | 3 | 1 | Medicolegal aspects of vital case investigation | Sexual deviations & harassment etiology definition and kind rape incest sadism masochism sadomasochism pedophilia sophism sodomy |
| 15 | 3 | 1 | Electrical trauma | Principle of electrical trauma classification lightning, medicolegal aspect |
| 16 | 3 | 1 | Thermal trauma | Definition classification post mortem burings medico legal aspect thermal injures and autopsy finding |

Textbooks and references books recommended (last edition)

Textbook of forensic medicine and toxicology Arthur pearson luff

Format Hardback | 392 pages, Dimensions 156 x 225 x 22mm | 721g, Publication date 09 Oct 2018,
Publisher Franklin Classics, Language English, Illustrations note Illustrations, black and white,
ISBN10 0341886330, ISBN13 9780341886333

Principle of forensic medicine toxicology rajesh bardle

Format Paperback | 648 pages, Dimensions 216 x 279mm | 1,410g, Publication date 01 Aug 2016, Publisher Jaypee
Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition
Statement 2nd Revised edition, Illustrations note 670 Halftones, color; 209 Illustrations, unspecified,
ISBN10 938610031X, ISBN13 9789386100318, Bestsellers rank 2,033,34

Textbook of forensic medicine Toxicology Rebert James

Format Paperback | 440 pages, Dimensions 106 x 175 x 23mm | 612g, Publication date 04 Feb 2018,
Publisher Sagwan Press, Language English, Illustrations note Illustrations, black and white, ISBN10 1376660891,
ISBN13 9781376660890

Casarett and doulls the Behavioral and social science of poisons.

Format Hardback | 1648 pages, Dimensions 223,02 x 279,4 x 63,0mm | 3,013g, Publication date 12 Dec 2018,
Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition
Statement 9th edition, Illustrations note 300 Illustrations, unspecified ISBN10 1209863743,
ISBN13 9781209863740, Bestsellers rank 72,202

Clarks Analytic forensic Medicine Adam Negrusz

Format Paperback | 606 pages, Dimensions 189 x 246 x 33mm | 1,111gm, Publication date 30 Jun 2013,
Publisher Pharmaceutical Press, Publication City/Country London, United Kingdom Language English, Edition
Statement 2nd Revised edition, Illustrations note Illus ISBN10 080711043, ISBN13 978080711041, Bestsellers
rank 011,170

CLINICAL & FORENSIC TOXICOLOGY

Attendance policy

- Regular student attendance at all.
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- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

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- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

A-clinical toxicology

At the end of course the students should be able to describe the types of poisons, clinical signs and symptoms, diagnosis , management and medicolegal aspects of:

- Corrosive poisons – sulphuric acid , phenol, oxalic acid , nitric acid , hydrochloric acid , organic acids and alkalis
- Irritant non metallic poisons – phosphorus , Halogens, organophosphorus , chlorinate hydrocarbons, miscellaneous preparation & mechanical irritants
- Agricultural poisons-arsenic organophosphorus , organochlorine, classification and description of common insecticides and pesticides used in Afghanistan
- Metallic poisons- arsenic, lead, iron, copper, zinc, thalium
- Animal poisons -snake bite , scorpion bite wasp , bee , cantharides & toxic fishes
- Somniferous poisons – opium & its derivative, synthetic preparations , pethidine & codeine
- Deliriant poisons – Dhatura , hemlock , cannabis , LSD, mescaline & cocaine
- Spinal and peripheral nerve poisons – strychnine curare & domestic poisons – kerosene eleansing agents, disinfectants, hosehold medicines
- Barbiture poisoning, drug abuse & common drug overdoses
- Vegetable poisons – abrus ,ricinus , croton , ergot , capsicum , camphor , argemone , lathyrus & calotropis
- Describe and examine Alcohol poisoning (ethyl & methyl alcohol) and drunkenness, its medicolegal aspects & benzodiazepine poisoning
- Cardiac poisons –HCN , aconite , tobacco , quinine , digitals and oleanders
- Asphyxiant poisons, carbon monoxide, carbon dioxide, hydrogen sulphide, phosgene and phosphine

Definition of food adulteration, names of common food poisonings – botulism, chemical Poisoning, poisonous mushrooms and epidemic drops.

B- Environmental toxicology

- Description of toxic pollution of environment, its medico-legal aspects & toxic hazards of occupation and industry
- Description and medico-legal aspects of poisoning in Workman's compensation Act.

C- Forensic toxicology

- Medicolegal aspects of poisons
- Medicolegal autopsy in cases of poisoning, preservation and dispatch of viscera for chemical analysis

Skills in forensic medicine and toxicology

- Preparation of a medico-legal report of an injured person due to mechanical violence
- Preservation and dispatch of the exhibits in a suspended case of poisoning
- Estimation age of a person for medico-legal and other purposes
- Conduct and prepare postmortem examination report in a case of suspected poisoning and to preserve & dispatch viscera for chemical analysis
- Conduct and prepare postmortem report in a case of death due to violence of any nature road accidents, fall from height , assault , factory accidents , electrocution , burns & accident due to any other causes, fire arm injury, asphyxia, natural death , & medical negligence
- At least 0 postmortem reports should have been written by the student (if cadaver is not available, practice by scenarios
- Demonstration , interpretation and medico – legal aspects from examination of hair (human & animal) fiber, semen ,& other biological fluids
- Demonstration and identification of a particular stain is a blood and identification of its species
- Identification ABO & RH blood groups of a person
- Examination and drawing opinion from examination of skeletal remains
- Identification and drawing medico-legal inference from various specimen of injuries e.g . contusion, abrasion, laceration, firearm, wounds, burns, head injury and fracture of bone
- Identification and descriptions of weapons of medico-legal importance commonly used e.g knife , axe, tire lever, razor, stick, and etc
- Description of the contents and structure of bullet & cartridges used & medico- legal interpretation drawn
- Estimation of age of fetus by postmortem examination
- Examination and preparation of report of an alleged accused in rape / unnatural sexual offence
- Examination and preparation of medico-legal report of a drunk person
- Demonstration of the common instrument used in analysis of poisons & DNA profile
- Identification & drawing of medico-legal inference from common poisons e.g dhatura, castor, cannabis , opium, copper, sulphate , pesticides, compounds, snakes, lead compounds & tobacco
- Examination & preparation of a medico-legal report of a person brought for medical examination in cases pertaining to police, judicial custody or referred by court of law and violation of human rights
- Identification and drawing of medico- legal inference from histopathological slides of myocardial infraction, pneumonitis, tuberculosis, brain infarct, liver cirrhosis, brain hemorrhage, bone fracture, pulmonary, edema, brain edema, soot particles & wound healing.

Methodology of teaching

- Lecutere
- Demonstration
- Tutorals

| CLINICAL AND FORENSIC TOXICOLOGY | | | | |
|---|-----------|----------------------------------|--|--|
| Discipline | | Professional | | |
| Department | | Forensic medicine | | |
| Course title | | Clinical and forensic toxicology | | |
| Prerequisite | | Forensic medicine | | |
| Course code | | MED ۱۱ ۴۲ | | |
| Academic year | | VI | | |
| Semester | | ۱۱ | Spring | |
| Number of credits | | ۲ | Knowledge | ۱ |
| | | | practical | ۱ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ۱ | ۱ | ۱ | General toxicology and type of poisons | History of toxicology definition of toxicology forensic toxicology clinical toxicology and poisons medico legal aspects of poisons classification of poison toxicokinetics and toxicodynamics |
| ۲ | ۱ | ۱ | | Diagnosis of poisoning in living and dead, general principles of management of poisoning, antidotes and its types, medico-legal autopsy in cases of poisoning. Preservation and dispatch of viscera for chemical analysis. |
| ۳ | ۱ | ۱ | Corrosive poisons | Non organic sulfuric acid phenol oxalic acid nitric acid hydrochloric acid organic acids and alkalies iodine, synonyms, physical appearance, types of poisoning, uses, usual fatal dose, mode of action, clinical signs and symptoms, diagnosis, management, autopsy significance and medico-legal aspects. |
| ۴ | ۱ | ۱ | Irritant non metallic poisons | Phosphorus halogens organophosphate chlorinated hydrocarbons miscellaneous preparation & mechanical irritants types of poisoning uses usual fatal dose mode of action clinical signs and symptoms diagnosis management autopsy significance and medico legal aspects |
| ۵ | ۱ | ۱ | Agricultural poisons | Classification and description of common insecticides and pesticides used in Afghanistan Organophosphate carbamates, organochlorine pyrethrins & pyrethroids strychnine naphthalene pyrethrins & pyrethroids strychnine naphthalene pesticide contamination of food types of poisoning uses usual fatal dose mode of action clinical signs and symptoms diagnosis management autopsy significance and medico legal aspects |

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|----|---|---|---|---|
| ٦ | ١ | ١ | Metallic poisons | Arsenic lead mercury iron copper zinc thallium metal fume various types of poisoning uses usual fatal dose mode of action clinical signs and symptoms diagnosis management autopsy significance and medico legal aspects |
| ٧ | ١ | ١ | Animal poisons | Bites and stings snake bite snake venom symptomatology of non venous snake bite symptomatology of venomous snake bite diagnosis of snake bite treatment of venomous snake bite antivenin therapy autopsy feature forensic significance scorpion sting wasp & bee clinical feature treatment |
| ٨ | ١ | ١ | Somniferous delirium and psychotropic barbiturate poisons | Somniferous poisons opium & its derivative synthetic preparations pethidine & codeine deliriant poisons datura cannabis LSD mescaline & cocaine |
| ٩ | ١ | ١ | Spinal & peripheral nerve | Strychnine curare & domestic poisons kerosene cleansing agents disinfectants household medicine types of poisoning uses usual fatal dose mode of action clinical signs and symptoms diagnosis management autopsy significance and medico legal aspects |
| ١٠ | ١ | ١ | Vegetable poisons | Ergot, camphor, Types of poisoning, Uses, Usual, Fatal Doses, mode of action, Clinical sign –s and Symptoms, diagnosis, management, autopsy significance, and medico legal aspects |
| ١١ | ١ | ١ | Inebriant poisons | Alcohol poisoning (ethyl & methyl alcohol) and drunkenness its medico legal aspects and benzodiazepine poisoning Ethanol Glycol, Physical appearance, Uses, Type of poisoning, Usual fatal Doses Mode of Action Clinical Diagnosis Treatment, Autopsy Features, Forensic Significance. |
| ١٢ | ١ | ١ | Cardiotoxic poisons | Nuxvomica, Thevetia Aconite, Nicotine, Quinine digitalis Family name, Appearance Mode of Action Clinical Feature Diagnosis Treatment Autopsy Feature Forensic Significance. |
| ١٣ | ١ | ١ | Asphyxiant poisons | Ammonia, Methyl Isocyanate Cyanide Carbon monoxide, carbon dioxide Hydrogen sulphide phosphogen phosphine. Types of poisoning Uses Usual Fatal Doses, Mode of action, Clinical signs and Symptoms diagnosis, Management autopsy feature forensic Significance. |
| ١٤ | ١ | ١ | Common food poisonings | Botulism, chemical poisoning poisonous mushrooms. Types of poisoning, Uses, Usual Fatal Doses mode of action, Clinical signs and Symptoms, Diagnosis, Management, autopsy Feature Forensic Significance. |
| ١٥ | ١ | ١ | Environment toxicology | Description of toxic pollution of environment, its medico legal aspects & Toxic hazards of occupations in industries. Descriptions and medico legal aspects of poisoning in workman's compensation act. |

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|----|---|---|-----------------------|--|
| ١٦ | ١ | ١ | Analytical toxicology | General principles of analytical toxicology and its application and management, prevention and control of poisoning, Basic principles of functioning of Gas/liquid Chromatography thin layer chromatography Spectrophotometer mass spectrometry Micro diffusion. |
|----|---|---|-----------------------|--|

TEXTBOOK & reference books recommended

Textbook of forensic medicine and toxicology Arthur pearson luff

Format Hardback | ٣٩٢ pages, Dimensions ١٥٦ x ٢٣٤ x ٢٢mm | ٧٢١g, Publication date ٠٩ Oct ٢٠١٨, Publisher Franklin Classics, Language English, Illustrations note Illustrations, black and white, ISBN١٠ ٠٣٤١٨٨٦٣٣٥, ISBN١٣ ٩٧٨٠٣٤١٨٨٦٣٣

Principle of forensic medicine toxicology rajesh bardle

Format Paperback | ٦٤٨ pages, Dimensions ٢١٦ x ٢٧٩mm | ١,٤١٠g, Publication date ٠١ Aug ٢٠١٦, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition Statement ٢nd Revised edition, Illustrations note ٦٧٥ Halftones, color; ٢٠٩ Illustrations, unspecified, ISBN١٠ ٩٣٨٦١٥٠٣١X, ISBN١٣ ٩٧٨٩٣٨٦١٥٠٣١٨, Bestsellers rank ٢,٥٣٣,٣٤

Textbook of forensic medicine Toxicology Rebert James

Format Paperback | ٤٤٠ pages, Dimensions ١٥٦ x ٢٣٤ x ٢٣mm | ٦١٢g, Publication date ٠٤ Feb ٢٠١٨, Publisher Sagwan Press, Language English, Illustrations note Illustrations, black and white, ISBN١٠ ١٣٧٦٦٦٥٨٩١, ISBN١٣ ٩٧٨١٣٧٦٦٦٥٨٩٥

Casarett and doulls the Behavioral and social science of poisons.

Format Hardback | ١٦٤٨ pages, Dimensions ٢٢٣,٥٢ x ٢٧٩,٤ x ٦٣,٥mm | ٣,٥١٣g, Publication date ١٢ Dec ٢٠١٨, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement ٩th edition, Illustrations note ٣٥٠ Illustrations, unspecified ISBN١٠ ١٢٥٩٨٦٣٧٤٣, ISBN١٣ ٩٧٨١٢٥٩٨٦٣٧٤٥, Bestsellers rank ٧٢,٢٥٢

Clarks Analytic forensic Medicine Adam Negrusz

Format Paperback | ٦٥٦ pages, Dimensions ١٨٩ x ٢٤٦ x ٣٣mm | ١,١١١gm, Publication date ٣٠ Jun ٢٠١٣, Publisher Pharmaceutical Press, Publication City/Country London, United Kingdom Language English, Edition ٧

MEDICAL ETHICS AND PROFESSIONAL ISM

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

Medical ethics is a systematic effort to work with in the ethos of medicine. Which has traditionally been service to a patient. There is now a shift form the traditional individual patient doctor relationship and medical care. With the advance in science and technology and the needs of patient, their families and the community, there is an increased concern with the health of society. There is shift to greater accountability to, the society. Doctors and health Professional s are confronted with many ethical problems. It is. Therefore necessary to be prepared to deal with these problems according to glorious Quran and prophet's (PUH) tradition. Special attention is given to the role of the physician and the opportunities and the challenges to the ethical practice of medicine in today's society. In keep with its goals to improve quality of education, MIHE recommends interdiction of medical ethics and Professional ism in the regular teaching of MD course

Learning objective

The learning objective of teaching medical ethics should be enable to students develops the ability to

- Identify underlying ethical issues and problems in medical practice
- Consider the alternative under the given circumstances
- Make decision based on Islamic moral concepts

Course contents

| MEDICAL ETHIC & PROFESSIONALISM | | | | |
|--|-----------|------------------------------------|---|--|
| Discipline | | Professional | | |
| Department | | forensic medicine | | |
| Course title | | Medical ethics and Professionalism | | |
| Prerequisite | | Behavior science | | |
| Course code | | MED ۰۶ ۱۷ | | |
| Academic year | | ۳ | | |
| Semester | | ۶ | Fall | |
| Number of credits | | ۱ | Knowledge | ۱ |
| | | | practical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ۱ | ۳ | ۱ | Introduction to medical ethics a brief history of medicine and its ethics | <ul style="list-style-type: none"> - Fundamentals of medical ethics - History of medicine in ancient of world and ethics value - History of medicine in ۱۰th ethical cod - History of medicine after AC ethics - History of medicine in Islamic period - History of medicine in Afghanistan |
| ۲ | ۳ | ۱ | Principles of medical ethics | <ul style="list-style-type: none"> • Definition of ethics • Values of ethics • Definition of medical ethics • Goal of medical ethics • Whose medical doctor • Medical doctor law • Medical doctor as forensic doctor • Medical doctor as eye witness • Medical doctor as culprit • Professionalism |
| ۳ | ۳ | ۱ | Physician ethics | <ul style="list-style-type: none"> • Introduction • Supporting Islamic evidence • In the prophet's tradition • Criteria of medical doctor in islam • Islamic rules in medical ethics • Treatments in islam <p>Introduction of great Islamic doctors</p> |
| ۴ | ۳ | ۱ | The physicians duties toward the patient and medical confidentially | <ul style="list-style-type: none"> • Principles • Supporting islamic evidence • In the prophet'd tradition • Fundamental of medical confidentiality • Details for medical confidentiality • Details for medical confidentiality • Islamic support • In the glorious of quran • In the prophets of tradition |

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|----|---|---|--|--|
| ٥ | ٣ | ١ | Physician duties toward society | <ul style="list-style-type: none"> • Fundamental of physician duties toward society • The codes of physicians duties toward society • Islamic support • In the glorious of quran • In the prophets of tradition • Utilition of health resources • Supporting Islamic legal evidence <p>In the rules of the Islamic furisprudence include the recourse</p> |
| ٦ | ٣ | ١ | Patient with AIDS or any other communicable disease | <ul style="list-style-type: none"> • The died of the medical expert toward such patient • The duties of a sick medical expert during Professional job • Supporting Islamic legal evidence <p>The purpose of Islamic low include</p> |
| ٧ | ٣ | ١ | Euthanasia and physician assisted death and abortion | <ul style="list-style-type: none"> • Induction • Supporting Islamic legal evidence • The purpose Islamic law include • Induction to classification of aberrant • Purpose of legal abortions • Retraction of abortion • Ethical challenge of abortion • Supporting Islamic legal evidence • The purpose Islamic law |
| ٨ | ٣ | ١ | Organ transplant | <ul style="list-style-type: none"> • Introduction • Medical aspect of organ transplantation • Ethical dialog in organ transplant • The purpose of organ transplant in Islamic law • Case of violence |
| ٩ | ٣ | ١ | Physicians rights | <ul style="list-style-type: none"> • Introduction • The code fo physician right • Medico legal and ethical aspects • Supporting Islamic legal evidence • In the glorioud quran and in the prophets tradition |
| ١٠ | ٣ | ١ | Physician duties toward hid/ her profession | <ul style="list-style-type: none"> • Fundamental • Medico legal and ethical aspects • Supporting Islamic legal evidence <ul style="list-style-type: none"> ○ In the glorious quran ○ In the prophers tradition ○ In the prothets of law |
| ١١ | ٣ | ١ | Advertisement and the media | <ul style="list-style-type: none"> • Introduction • The legal aspect and ethical code for media advertisement supporting Islamic legal evidence |
| ١٢ | ٣ | ١ | Physician duties toward establishment | <ul style="list-style-type: none"> • Introduction • Ethical aspect • Restriction • Supporting Islamic legal evidence <ul style="list-style-type: none"> ○ In the glorious quran in the prophets tradition |

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|----|---|---|--|--|
| ١٣ | ٣ | ١ | Medical mistakes and its incidence in medical profession | <ul style="list-style-type: none"> • Medica mistakes • Responsibility of physicians confess of their mistakes • Difficulties in conception of mistakes • Profession's incidents |
| ١٤ | ٣ | ١ | Deontology | <ul style="list-style-type: none"> • Principles of deontology • Deontology in surgery • Deontology in gynecology |
| ١٥ | ٣ | ١ | deontology | <ul style="list-style-type: none"> • Deontology in internal medicine • Deontology in pediatrics • Deontology in forensic medicine • Deontology in dentistry |
| ١٦ | ٣ | ١ | Malpractice and negligence | <ul style="list-style-type: none"> • Definition of malpractices • Inattentive • Improvidence • UnProfessional ism • Patent refusal from medical services • Abusive behavior • Patents abusive behavior • Illegal documentation • Over-investigating the patient • Prescription of drugs • Charging of fees • Gifts receiving |

Text books and reference books recommended (last editions)

Medical Ethics: A Very Short Introduction

Format Paperback | ١٦٨ pages, Dimensions ١١٣ x ١٧٦ x ٩mm | ١٣٢g, Publication date ٠١ Feb ٢٠١٩, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Edition Revised, Edition Statement ٢nd Revised edition, Illustrations note ١٨ black and white images, ISBN١٠ ٠١٩٨٨١٥٦٠٣, ISBN١٣ ٩٧٨٠١٩٨٨١٥٦٠٠, Bestsellers rank ٩٧,٨٥٨

Manual of Catholic Medical Ethics

Format Hardback | ٧٢٢ pages, Dimensions ١٤٠ x ٢١٦ x ٤٤mm | ١,٠٦١g, Publication date ٠١ Aug ٢٠١٤, Publisher Connor Court Publishing Pty Ltd, Language English, Illustrations note Illustrations, black and white, ISBN١٠ ١٩٢٥١٣٨١٦X, ISBN١٣ ٩٧٨١٩٢٥١٣٨١٦٠, Bestsellers rank ٣٩٥,٦٤

Medical Ethics and the Faith Factor A Handbook for Clergy and Health-Care Professionals

Format Paperback | ٤٨٣ pages, Dimensions ١٤٦ x ٢٢٢ x ٢٥mm | ٦٨٠g, Publication date ٠١ Nov ٢٠٠٩, Publisher William B Eerdmans Publishing Co, Publication City/Country Grand Rapids, United States, Language English, ISBN١٠ ٠٨٠٢٨٦٤٠٤X, ISBN١٣ ٩٧٨٠٨٠٢٨٦٤٠٤٨, Bestsellers rank ٨٧٤,٥٣

CLINICAL MICROBIOLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

The broad goals of the teaching of graduate students in microbiology are to provide an understanding of the natural history of infection diseases in order to deal with the etiology, pathogenesis, laboratory diagnosis, treatment and control of infections in the community

Learning objective

a. knowledge

At the end of the course, the student should be able to:

- state the infection micro organisms of the human body and describe the host parasite relationship:
- List pathogenic micro organisms and describe the pathogenesis of the diseases produced by them
- Indicate the modes of transmission of pathogenic and opportunistic organisms and their sources, including insect vectors responsible for transmission of infection
- describe the mechanisms of immunity to infection:
- acquire knowledge on antimicrobial sensitivity tests to select suitable antimicrobial agents for treatment of infection and scope pf immunotherapy and different vaccine available for prevention of communicable diseases
- Apply methods of disinfection and sterilization to control and prevent hospital and community acquired infections;
- Recommend laboratory investigation regarding bacteriological examination of food, water, milk and air.

b- Skills

- Plan and interpret laboratory investigations for the diagnosis of infectious diseases and to correlate the clinical manifestations with the help of laboratory procedures and use antimicrobial sensitivity tests to select suitable antimicrobial agents;
- Use the correct method of collection, storage and transport of clinical material for microbiology investigation.

Laboratory skills

١) Direct demonstration of bacteria by staining

- Gram staining
- Albert's staining
- Acid fast staining

٢) Enterobacteriaceae

- Common media and biochemical tests
- Culture characteristics of members of enterobacteriaceae

٣) Laboratory diagnosis of E.coli infection and shigellosis

- Stool examination for pus cells and RBCs
- Processing of stool specimen for bacterial culture
- Cultural characteristics tests for E.coli and its virulence factors
- Cultural characteristics of shigella and its identification

٤) Laboratory diagnosis of food poisoning

- Focus on laboratory diagnosis of salmonellosis
- Demonstration for clostridium perfringens and others

٥) Laboratory diagnosis of upper respiratory infections

- Focus on laboratory diagnosis of streptococcus infection
- Albert's stain

Media identification and toxin of corynebacterium

٦) Laboratory diagnosis of lower respiratory tract infections

- Focus in klebsiella and streptococcus pneumoniae
- Viral respiratory infection

٧) Laboratory diagnosis of UTI

- Collection storage and transport of urine
- Significant bacteria and quantitative
- E.coli/ klebsiella
- Focus on identification of proteus and pseudomonas cultural characteristics

Swarming, pigment production and tests like of and oxidase

٨) Laboratory diagnosis of wound infections

- Focus on staphylococcus

٩) Laboratory diagnosis of anaerobic infections

- Demonstration of collection of samples for anaerobic culture
- Demonstration of media and culture for clostridium smears showing sporing and non sporing GPB niglers reaction etc

١٠) Laboratory diagnosis of viral infections

- Collection and transport of samples
- Demonstration of egg inoculation techniques cell culture cytopathic effect plaque assay serological tests

١١) Sterilization and disinfection

- Visit to media and sterilization room

١٢) Laboratory diagnosis of cholera

- Collection and transport of specimen
- Culture media and characteristics

- Identification incl motility oxidase and other tests
- Biotyping and serotyping

١٣) Laboratory diagnosis of enteric fever

- Sample collection methods and transport
- Blood culture in detail
- Stool and urine culture for salmonella
- Identification tests and slide agglutination for salmonella

١٤) Laboratory diagnosis of meningitis

- Collection and transport of CSF
- Other useful specimens
- Direct smear examination
- Culture media growth characteristics and identification tests
- Chronic meningitis: pathogens
- Antigen detection

١٥) Laboratory diagnosis of STD

- Collection and transport of specimens
- Direct demonstration

MICROBIOLOGY MODULE 1

| | | | | |
|-------------------|-----------|-------------------|---|---|
| Discipline | | Basic Subjects | | |
| Department | | Microbiology | | |
| Course title | | Microbiology | | |
| Prerequisite | | Molecular biology | | |
| Course code | | MED . ٤١٩ | | |
| Academic year | | ٢ | | |
| Semester | | ٤ | Fall | |
| Number of credits | | ٢ | Knowledge | |
| | | | practical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٢ | ١ | Introduction to microbiology Morphology of micro organisms | Natural history of microbial disease. definition, basic types of microbes Morphology of micro organisms: difference between eukaryotes and prokaryotes, optic methods. |
| ٢ | ٢ | ١ | Morphology of micro organisms | structure of eukaryotic cells structure of prokaryotic cells Morphology of micro organisms:- simple stain and other stains spherob;ast and protoplast, L- form bacteria |
| ٣ | ٢ | ١ | Morphology of micro organisms | Endospore. Morphology of micro organisms: - classification of bacteria and five kingdom classification |
| ٤ | ٢ | ١ | Physiology of micro organisms | biochemical structure of microbial cell Physiology of micro organisms:- media and its preparation , growth of micro- organism |
| ٥ | ٢ | ١ | Physiology of micro organisms | culture, characters of bacteria Physiology of micro organisms: - respiration of microbes. |
| ٦ | ٢ | ١ | Physiology of micro organisms | Isolation of micro-organism in pure culture. Physiology of micro organisms: - microbes enzymes, anti biogram. <ul style="list-style-type: none"> Principles Various methods Demonstration of equipments and agents used in sterilization |
| ٧ | ٢ | ١ | Microbial flora | Role of resident flora normal flora of skin. Microbial flora: - moth and upper respiratory tract flora intestinal urethra vaginal and eye flora. |
| ٨ | ٢ | ١ | Infections | Microbes, toxins exotoxin and end endo toxins period of an infectious disease. Infection: - clinical form of infections distribution severity of infectious disease. <ul style="list-style-type: none"> Infections fo gastrointestinal tract Gastrointestinal infections (bacteria, parasites, viruses and fungi) |
| ٩ | ٢ | ١ | Immunology | Specific and non specific host defense mechanism. Immunology: - specific and non specific host defense mechanism. |
| ١٠ | ٢ | ١ | Immunology | genetic in immunity Immunology: - vaccination. Antigens. Antigen-antibody reactions in infectious diseases and diagnostic tests based of these |
| ١١ | ٢ | ١ | Immunology antibodies | antibodies Immunology:- cellular and hum oral immunity |

| | | | | |
|----|---|---|--|--|
| 12 | 2 | 1 | Immunology:- immune reduction and their significance roles | Immune reduction and their significance roles Immunology:- immune reactions and their significance roles |
| 13 | 2 | 1 | Allergy: - allergy, Ana phylaxis. | Allergy: - allergy, Ana phylaxis. Genetics :- hypergia DNA and RNA structures |
| 14 | 2 | 1 | Genetics :-plasmids and episome,phenotype and genotypic changes | Genetics: -plasmids and episome, phenotype and genotypic changes Genetics :-phenotype and genotypic changes |
| 15 | 2 | 1 | Anti microbial therapy: - laboratory usage of antibiotics. Antibiotic susceptibility test | Anti microbial therapy: - laboratory usage of antibiotics. Anti microbial therapy:- antibiotic susceptibility test. |
| 16 | 2 | 1 | Anti microbial therapy: - (pathogen intections of bodies):- determination of antibiotic measure in body fluid. | Anti microbial therapy: - (pathogen intections of bodies):- determination of antibiotic measure in body fluid. Anti microbial therapy:- (pathogen intections of bodies):- central nervous system infections lymph and blood infections gastro intestinal infections urinary tract intections skin and soft tissue intections , respiratory infections |

Text books & Reference books recommended last editins

Christopher D Doern clinical microbiology

Format Paperback | 222 pages, Dimensions 10.8 x 19.1 x 22.87mm | 3rd ed, Publication date 30 Apr 2018, Publisher American Society for Microbiology, Publication City/Country Washington DC, United States, Language English, Edition New edition, Edition Statement 3rd New edition ISBN10 168367007X, ISBN13 9781683670073, Bestsellers rank 163,49

Jons Spicer clinical microbiology and infectious diaseses

Format Paperback | 262 pages, Dimensions 21.0 x 29.7 x 10.24mm | 8th ed, Publication date 17 Dec 2007, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 2nd Revised edition, Illustrations note w. 279 figs.ISBN10 0443103038 ISBN13 9780443103032, Bestsellers rank 389,874

Javits Milnick meical microbiology

Format Paperback | 162 pages, Dimensions 21.6 x 27.7 x 2.8mm | 1,701g, Publication date 20 Nov 2016, Publisher McGraw-Hill Education - Europe, Imprint MCGRAW-HILL Professional Publication City/Country United States, Language English, Edition Statement 27th edition Illustrations note 130 Illustrations, unspecified, ISBN10 0071824987, ISBN13 9780071824989 Bestsellers rank 166,926

Sherris medical Microbiology

Format Paperback | 106 pages, Dimensions 21.6 x 27.7 x 2.8mm | 2,072g, Publication date 02 Jan 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 7th edition, Illustrations note 300 Illustrations, unspecified ISBN10 1209809800, ISBN13 9781209809809, Bestsellers rank 71,001

Richard Harvey iiiustrated review of microbiology

Format Paperback | 228 pages, Dimensions 21.3 x 27.6 x 22.87mm | 1,132g, Publication date 12 Oct 2012, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement Third, North American Edition ISBN10 1608217331, ISBN13 9781608217332, Bestsellers rank 737,968

Lymme S. Garcia clinical Microbiology provedures Handbook

Format Hardback | 2020 pages, Dimensions 21.6 x 27.9 x 20.12mm | 1,060g, Publication date 01 Aug 2010, Publisher American Society for Microbiology, Publication City/Country Washington DC, United States, Language English, Edition Statement 3rd Revised ed. ISBN10 1000810278, ISBN13 9781000810271, Bestsellers rank 1,379,709

Waren livinson review of medical microbiology

Format Hardback | 2020 pages, Dimensions 21.6 x 27.9 x 20.12mm | 1,060g, Publication date 01 Aug 2010, Publisher American Society for Microbiology, Publication City/Country Washington DC, United States, Language English, Edition Statement 3rd Revised ed. ISBN10 1000810278, ISBN13 9781000810271, Bestsellers rank 1,379,709

CLINICAL MICROBIOLOGY ۲

Attendance policy

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Factory rules

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Delay policy

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Scoring policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

The broad goals of the teaching of graduate students in microbiology are to provide an understanding of the natural history of infection diseases in order to deal with the etiology, pathogenesis, laboratory diagnosis, treatment and control of infections in the community

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- describe the mechanisms of immunity to infection:
- acquire knowledge on antimicrobial sensitivity tests to select suitable antimicrobial agents for treatment of infection and scope of immunotherapy and different vaccine available for prevention of communicable diseases
- Apply methods of disinfection and sterilization to control and prevent hospital and community acquired infections;
- Recommend laboratory investigation regarding bacteriological examination of food, water, milk and air.

b- Skills

- Plan and interpret laboratory investigations for the diagnosis of infectious diseases and to correlate the clinical manifestations with the help of laboratory procedures and use antimicrobial sensitivity tests to select suitable antimicrobial agents;
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- Gram staining
- Albert's staining
- Acid fast staining

2) Enterobacteriaceae

- Common media and biochemical tests
- Culture characteristics of members of enterobacteriaceae

3) Laboratory diagnosis of E.coli infection and shigellosis

- Stool examination for pus cells and RBCs
- Processing of stool specimen for bacterial culture
- Cultural characteristics tests for E.coli and its virulence factors
- Cultural characteristics of shigella and its identification

4) Laboratory diagnosis of food poisoning

- Focus on laboratory diagnosis of salmonellosis
- Demonstration for clostridium perfringens and others

5) Laboratory diagnosis of upper respiratory infections

- Focus on laboratory diagnosis of streptococcus infection
- Albert's stain

Media identification and toxin of corynebacterium

6) Laboratory diagnosis of lower respiratory tract infections

- Focus in klebsiella and streptococcus pneumoniae
- Viral respiratory infection

7) Laboratory diagnosis of UTI

- Collection storage and transport of urine
- Significant bacteria and quantitative
- E.coli/ klebsiella
- Focus on identification of proteus and pseudomonas cultural characteristics

Swarming, pigment production and tests like of and oxidase

8) Laboratory diagnosis of wound infections

- Focus on staphylococcus

9) Laboratory diagnosis of anaerobic infections

- Demonstration of collection of samples for anaerobic culture
- Demonstration of media and culture for clostridium smears showing sporing and non sporing GPB niglers reaction etc

10) Laboratory diagnosis of viral infections

- Collection and transport of samples
- Demonstration of egg inoculation techniques cell culture cytopathic effect plaque assay serological tests

11) Sterilization and disinfection

- Visit to media and sterilization room

12) Laboratory diagnosis of cholera

- Collection and transport of specimen
- Culture media and characteristics

- Identification incl motility oxidase and other tests
- Biotyping and serotyping

١٣) Laboratory diagnosis of enteric fever

- Sample collection methods and transport
- Blood culture in detail
- Stool and urine culture for salmonella
- Identification tests and slide agglutination for salmonella

١٤) Laboratory diagnosis of meningitis

- Collection and transport of CSF
- Other useful specimens
- Direct smear examination
- Culture media growth characteristics and identification tests
- Chronic meningitis: pathogens
- Antigen detection

١٥) Laboratory diagnosis of STD

- Collection and transport of specimens
- Direct demonstration

MICROBIOLOGY MODULE ٢

| | | | | |
|-------------------|-----------|---------------------------|---|---|
| Discipline | | Basic Subjects | | |
| Department | | Microbiology | | |
| Course title | | Microbiology ^٢ | | |
| Prerequisite | | Microbiology ^١ | | |
| Course code | | MED ٠٥ ١٩ | | |
| Academic year | | ٣ | | |
| Semester | | ٥ | spring | |
| Number of credits | | ٣ | Knowledge | |
| | | | practical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٢ | ١ | Gram positive cocci: - staphylococc: | Morphology, culture, growth characteristics, antigenic structures, toxins. Gram positive cocci: - staphylococc: pathogenesis, clinical finding, diagnostic Lab test, treatment prevention and control. |
| ٢ | ٢ | ١ | Gram positive cocci | Staphylococc: Morphology, culture, growth characteristics, antigenic structures, toxins. Gram positive cocci: - staphylococc: pathogenesis, clinical finding, diagnostic Lab test, treatment prevention, epidemiology, prevention and control. |
| ٣ | ٢ | ١ | Penumococci | Morphology, cultured, growth, characteristics, antigenic structures, txins, pathogenesis, clinical finding, diagnostic Lab test treatment, epidemiology, prevention and control. Neisseria :- (neisseria gonorrhoea neisseria meningitidis) morphology, culture, growth, characteristics, antigenic structures, txins, pathogenesis, clinical finding diagnostic lab test, treatment, epidemiology, prevention and control, |
| ٤ | ٢ | ١ | Gram negative enteric bacilli Salmonella, shigella Escherichia coli | (Salmonella, shigella) morphology, culture, growth, characteristics, antigenic structures, toxins Gram negative enteric bacilli :- (Escherichia coli) pathogenesis, clinical finding, diagnostic Lab test, treatment prevention, epidemiology, prevention and control |
| ٥ | ٢ | ١ | Gram negative enteric bacilli Salmonella, shigella | (Salmonella, shigella) Morphology, culture, growth characteristics, antigenic structures, toxins Gram negative enteric bacilli :- (Salmonella, shigella). pathogenesis, clinical finding, diagnostic Lab test, treatment prevention, epidemiology, prevention and control |
| ٦ | ٢ | ١ | Vibrios compylo bacter | (V Cholera, C, Jijuni) Morphology, culture, growth characteristics, antigenic structures, toxins pathogenesis Vibrios compylo bacter: - (V Cholera, C, Jijuni) pathogenesis, clinical finding, diagnostic Lab test, treatment prevention, epidemiology, prevention and control |

| | | | | |
|----|---|---|--|--|
| ٧ | ٢ | ١ | Helicobacter(H.pylori) Bacillus(B.Anthraces) | Morphology, culture, growth characteristics, antigenic structures, toxins pathogenesis Helicobacter(H.pylori) Bacillus(B.Anthraces) :- clinical finding, diagnostic Lab test, treatment prevention, epidemiology, prevention and control |
| ٨ | ٢ | ١ | Clostridium :- (Cl.tetani. cl. Pertringens.cl. gas gangrene) | Morphology, culture, growth characteristics, antigenic structures, toxins Clostridium :- (Cl.tetani. cl. Pertringens.cl. gas gangrene) :- pathogenesis, clinical finding, diagnostic Lab test, treatment prevention, epidemiology, prevention and control |
| ٩ | ٢ | ١ | Corynebacterium (C.Diphtheria) Hemophilus (H.Influenzae) bordetella (B.Perjtussis) Brucella (Brucella) | Corynebacterium (C.Diphtheria) Hemophilus (H.Influenzae) bordetella (B.Perjtussis) Brucella (Brucella):- Morphology, culture, growth characteristics, Antigenic structures, toxins pathogenesis, Corynebacterium (C.Diphtheria) Hemophilus (H.Influenzae) bordetella (B.Perjtussis) Brucella (Brucella):-clinical finding, diagnostic lab test, treatment epidemiology, prevention and control. |
| ١٠ | ٢ | ١ | Yersinia (Yersinia pestis) Francisella, pasteurella (pasteurella sturella) mycoplasma (mycoplasma) | Yersinia (Yersinia pestis) Francisella, pasteurilla (pasteurella sturella) mycoplasma (mycoplasma) :- Morphology, culture, growth characteristics, Antigenic structures, toxins pathogenesis, Yersinia (Yersinia pestis) Francisella, pasteurilla (pasteurella sturella) mycoplasma (mycoplasma):- clinical finding, diagnostic lab test, treatment epidemiology, prevention and control. |
| ١١ | ٢ | ١ | Mycobacterium, Spirochetes, rickettsial disease | Mycobacterium, Spirochetes, rickettsial disease :- Morphology, culture, growth characteristics, Antigenic structures, toxins Mycobacterium, Spirochetes, rickettsial disease: - clinical finding, diagnostic lab test, treatment epidemiology, prevention and control. |
| ١٢ | ٢ | ١ | Virology :- (Adenovirus, Para influenza and herpes virus) | Morphology, culture, growth characteristics, Antigenic structures, toxins pathogenesis, Virology :- (Adenovirus, Para influenza and herpes virus) :- clinical finding, diagnostic lab test, treatment epidemiology, prevention and control |
| ١٣ | ٢ | ١ | Virology :- (Mumps, measles, smallpox and rubella virus) | Morphology, culture, growth characteristics, Antigenic structures, toxins Virology :- (Mumps, measles, smallpox and rubella virus) :- clinical finding, diagnostic lab test, treatment epidemiology, prevention and control |
| ١٤ | ٢ | ١ | Virology :- (Hepatitis, polio myelitis, rabieas and retro virus (AIDS) | Morphology, culture, growth characteristics, Antigenic structures, toxins Virology :- (Hepatitis, polio myelitis, rabieas and retro virus (AIDS) :- clinical finding, diagnostic lab test, treatment epidemiology, prevention and control |
| ١٥ | ٢ | ١ | Mycology :- (surface mycosis, deep mycosis) | Morphology, culture, growth characteristics, Antigenic structures, toxins Mycology :- (surface mycosis, deep mycosis) :- clinical finding, diagnostic lab test, treatment epidemiology, prevention and control |
| ١٦ | ٢ | ١ | Mycology :- (Subcutaneous mycosis, deep mycosis) | Morphology, culture, growth characteristics, Antigenic structures, toxins Mycology :- (Subcutaneous mycosis, deep mycosis) :- clinical finding, diagnostic lab test, treatment epidemiology, prevention and control |

Text books & Reference books recommended last editins

Christopher D Doern clinical microbiology

Format Paperback | 424 pages, Dimensions 10.8 x 19.1 x 22.87mm | 3rd ed, Publication date 30 Apr 2018, Publisher American Society for Microbiology, Publication City/Country Washington DC, United States, Language English, Edition New edition, Edition Statement 3rd New edition ISBN10 168377007X, ISBN13 9781683770073, Bestsellers rank 663,49

Jons Spicer clinical microbiology and infectious diaseses

Format Paperback | 264 pages, Dimensions 21.0 x 29.7 x 10.2mm | 8th ed, Publication date 17 Dec 2007, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 2nd Revised edition, Illustrations note w. 479 figs. ISBN10 0443103038 ISBN13 9780443103032, Bestsellers rank 389,874

Javits Milnick meical microbiology

Format Paperback | 86 pages, Dimensions 21.6 x 27.7 x 2.4mm | 1st ed, Publication date 20 Nov 2016, Publisher McGraw-Hill Education - Europe, Imprint MCGRAW-HILL Professional Publication City/Country United States, Language English, Edition Statement 1st edition Illustrations note 130 Illustrations, unspecified, ISBN10 0071824987, ISBN13 9780071824989 Bestsellers rank 876,926

Sherris medical Microbiology

Format Paperback | 106 pages, Dimensions 21.6 x 27.7 x 3.4mm | 2nd ed, Publication date 04 Jan 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 2nd edition, Illustrations note 300 Illustrations, unspecified ISBN10 1209809800, ISBN13 9781209809809, Bestsellers rank 71,001

Richard Harvey iiiustrated review of microbiology

Format Paperback | 448 pages, Dimensions 21.3 x 27.6 x 22.87mm | 1st ed, Publication date 12 Oct 2012, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement Third, North American Edition ISBN10 1608317331, ISBN13 9781608317332, Bestsellers rank 736,968

Lymme S. Garcia clinical Microbiology provedures Handbook

Format Hardback | 204 pages, Dimensions 21.6 x 27.9 x 20.1,47mm | 8th ed, Publication date 01 Aug 2010, Publisher American Society for Microbiology, Publication City/Country Washington DC, United States, Language English, Edition Statement 3rd Revised ed. ISBN10 1000810278, ISBN13 9781000810271, Bestsellers rank 1,379,609

Waren livinson review of medical microbiology

Format Hardback | 204 pages, Dimensions 21.6 x 27.9 x 20.1,47mm | 8th ed, Publication date 01 Aug 2010, Publisher American Society for Microbiology, Publication City/Country Washington DC, United States, Language English, Edition Statement 3rd Revised ed. ISBN10 1000810278, ISBN13 9781000810271, Bestsellers rank 1,379,609

MEDICAL PARASITOLOGY

Attendance policy

- Regular student attendance at all.
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- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

- To provide students with knowledge concerning biological epidemiological and ecological aspects of parasites of parasites causing dideaded in human
- To enable students to understand the pathogenesis clinical presentations and complications of parasitic deeseas
- To enable students to reach diagnosis and know the general outline of treatment prevention and control of parasitic infections and provide students with adewuate knosledge about endemic parastes and national parasitic problem as well as reemerging parasitic infrcion

Learning objectives

a. Knowledge

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

- Describe the world distributionof important parasitic infections and the epidemiologic principles and the effect of social and demograshic patterns on parasitic desease and vulnerability
- Describe the common parasitic diseases andlife threateming
- Conditions caused by helminthes and protozoa as regaud etiology and life bible of parasitied of medical importance
- Describe the common diseases caused bu helminthes and protozoa regards pathogenesis clinical features differential diagnosis and complications
- Point out the methods of recovery of parasites and their culture methods as well as immunilical and molecular methods used for diagnosis of parasitic infectins
- Define the principles of management for common parasitic deseases andlife threatening conditions

Muslim Institute of Higher Education/Curriculum & Course Content for MD Degree

- Outline methods of disease prevention
- Describe the common diseases caused by arthropods of medical interest as regards etiology, pathogenesis, clinical features and methods of combat;
- Describe molecular biochemical and cellular mechanisms that occur in the body of humans infected with parasites

Laboratory skills:

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

- Perform skills relevant to the future practice as to identify different parasites in tissue sections and demonstrate their reactions in such tissues by naked eye
- Use the microscope to identify diagnostic stages of parasites in blood urine stool of tissue samples

Skills

١- Laboratory diagnosis of malaria leishmanis

٢- Stool examination for cysts

- Collection and transport of stool sample for parasites
- Direct examination saline and indene preparations
- Concentration of stool for parasites
- Identification of cysts

٣- Stool examination for intestinal nematodes and custodies

- Collection/ transport and concentration of sample
- Identification of ova of intestinal nematodes and custodies
- Identification of adult worms and laves

Teching & learning methodology

- Lecture
- Small group discussion
- Tutorials
- Skills classes

PARASITOLOGY

| Discipline | | Basic Subjects | | |
|-------------------|---------|------------------------|--|---|
| Department | | Microbiology | | |
| Course title | | Parasitology | | |
| Prerequisite | | Molecular cell biology | | |
| Course code | | MED • ε γ • | | |
| Academic year | | γ | | |
| Semester | | ε | | |
| Number of credits | | Fall | | |
| | | lecture | γ | |
| | | practical | γ | |
| Weeks | Hours | | Topics | Descriptions |
| | Lecture | Laboratory | | |
| 1 | 1 | 1 | Classification of Parasites and Hosts:- | Classification of Parasites and hosts, Type of immunity and other immunologic Reactions. <ul style="list-style-type: none"> • Association between paractios • Effects of parasites on th host • Basic concepts in medical parasitology |
| 2 | 1 | 1 | Nomenclature of parasites and abstract study of Parasitology:- | Nomenclature of Parasites and abstract study of Parasitology. <ul style="list-style-type: none"> • Introduction • Classification of protozoa |
| 3 | 1 | 1 | Entamebea Histaloitica:- | Entamebea Histaloitica: - History, Geographical distribution, Morphology, reproduction, Life cycle, Pathogenesis, Clinical Findings, intestinal and Extra intestinal Amoebiasis, Lab Diagnosis, Differential Diagnosis, Treatment, Prevention. <ul style="list-style-type: none"> • Other amebae inhabiting the alimenatary canal • Pathogenic free-living amebae |
| ε | 1 | 1 | Giardia Lamlia, Trichomonas Vaginalis | History, Geographical distribution, Morphology, Pathogenesis, and clinical Findings, Intestinal, Culture of Trichomonas, Lab Diagnosis, Treatment, Prevention. |
| ο | 1 | 1 | Leishmaniasis | History, Morphology, Culture, Life Cycle, Pathogenesis and Clinical Finding, Lab Diagnosis, Treatment, prevention. |
| 6 | 1 | 1 | Trypanosomiasis | History, Morphology, Culture, Life Cycle, Pathogenesis and Clinical Finding, Lab Diagnosis, Treatment, prevention. |
| 7 | 1 | 1 | Blantidium coli and isospora | Blantidium coli and isospora:-History, Morphology, Culture, Life Cycle, Pathogenesis and Clinical Finding, Lab Diagnosis, Treatment, prevention. |
| 8 | 1 | 1 | Malaria | Malaria:-History, Geographical distribution, Epidemiology, Life Cycle, Pathogenesis, Clinical finding, Malaria in Pregnancy, Malaria in Children, Complication of Malaria, Lab Diagnosis, Treatment, Prevention. |
| 9 | 1 | 1 | Cryprosporidium, toxoplasma gandhi | Cryprosporidium, toxoplasma gandhi history, Morphology, Culture, Life Cycle, Pathogenesis and Clinical Finding, Lab Diagnosis, Treatment, prevention. |
| 10 | 1 | 1 | Ascaris Lumbricularis:- | Ascaris Lumbricularis:- History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention |

| | | | | |
|----|---|---|--|---|
| 11 | 1 | 1 | Entrobios Vemiculars, Wuchereria Boncrofti | Entrobios Vemiculars, Wuchereria Boncrofti:- History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention |
| 12 | 1 | 1 | Ankylostoma Doudenalis, Nector Americans | Ankylostoma Doudenalis, Nector Americans:- History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention |
| 13 | 1 | 1 | Strongloidium Stercoralis | History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention |
| 14 | 1 | 1 | Trichnella Spirals, Trichuris Tricurua | Trichnella Spirals, Trichuris Tricurua:- History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention Tania Saginata, Tania Solium :- History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention |
| 15 | 1 | 1 | Hymenolipis Nana | Hymenolipis Nana:- History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention Echinococcus Granulosis:- History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention Diphylobothrium Lateum:- History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention |
| 16 | 1 | 1 | Fasciola hepatica Paragonomiasis Schistosomiasis | Fasciola hepatica:-History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention. Paragonomiasis:- History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention Schistosomiasis:- History, Morphology, Life Cycle, Clinical Finding, Lab Diagnosis, Treatment, prevention |

Textbooks & reference books recommended last editions

Harold W.braum.basic clinical parasitology

Format Paperback | 384 pages, Dimensions 191 x 230 x 12,7mm | 566,99g, Publication date 05 Nov 2012, Publisher Elsevier Health Sciences, Imprint W B Saunders Co Ltd, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 2nd Revised edition, Illustrations note Approx. 380 illustrations (380 in full color) ISBN10 1416064448, ISBN13 9781416064448, Bestsellers rank 097,742

CK Jaram panikar Textbook of medical

Format Paperback | 266 pages, Dimensions 216 x 279 x 10,16mm | 230g, Publication date 01 Dec 2013, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India, Language English, Edition Revised, Edition Statement 4th Revised edition, Illustrations note 00 Halftones, color; 182 Illustrations, unspecified, ISBN10 930903450 ISBN13 978930903450, Bestsellers rank 1,820,017

Parasitology Kishor R Pawar

Format Paperback | 136 pages, Dimensions 188,98 x 246,13 x 7,37mm | 204,01g, Publication date 16 Jun 2016, Publisher Nirali Prakashan, Educational Publishers, Publication City/Country India, Language English, ISBN10 9301647930, ISBN13 978930164793

CLINICAL PHARMACOLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to 70% with reasonable excuse.
- More than 70% of absence is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from 10 points
- Students factory score is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article 19 of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) 20%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam 20%
- Final semester exam 60%
- Total 100%

Course description

The broad goals of teaching pharmacology to graduates are to impart knowledge skills and attitudes to the students so that they can prescribe drugs safely effectively and maintain competency in Professional life to instill in them a rational and scientific basis of therapeutics

Skills

- Experimental exercise on pharmacy
 - General principles of pharmacy
 - Prescription writing exercises
 - Prescription and dispensing of powders, emulsions ointments, mixtures, liniments, suppositories and syrups
- Spotting exercise – Identify the commonly used items in pharmacology
- Exercises of drug interactions

Teaching and learning methodology

It shall taught by way of lectures. Each lecture session will be planned to deliver maximum relevant information to the students. In addition, seminars on some important topics will be planned in which the use of a given drug shall be discussed by a clinical expert in the field.

The pharmacology teaching shall be done with the goals of making the student understand the concept of rational use of drugs.

Skills

The given skills exercise shall be discussed and demonstrated before hand to the students. In addition, the students will learn prescription writing and discuss exercise of drug interactions and shall also be shown various spots. The spots shall include various chemicals, drugs and instruments used in pharmacology.

Learning Objective

a- Knowledge

At the end of course the students should be able to:

- Understand pharmacokinetics and pharmacodynamic principle involved in the use of drugs;
- Understand and identify the various factors that can affect the action of drugs
- Know the various routes of drug administration with advantages and disadvantages of these routes;
- Undertake dosage calculations as appropriate for the patient and be able to select the proper drug and for the “at risk population” i.e. patients with kidney or liver diseases, elderly, pregnant and lactating mothers and children
- Understand the importance of rational prescribing of drugs and the concept of essential drugs and rational use of drugs;
- Be able to identify and monitor adverse drug reactions (ADRs) and appreciate the importance of ADR reporting;
- Know the drugs used in systemic illnesses, infections and chemotherapy etc. with main mechanism(s) of action, pharmacokinetics, uses, side-effects and indication;
- Understand the principles and practice of pharmacy;
- Understand the methods in experimental pharmacology, principles of bioassay and be able to correlate drug effects with the action of drugs at the receptors.
- Have knowledge of common drugs and doses used for different ailments;
- Have an understanding of basic mechanism by which a drug acts;
- Should be able to select rationally from the available drugs;

b- Clinical skills:

At the end of the course student be able to

- Prescribe drugs for common ailments
- Identify adverse reaction and interactions of commonly used drugs:
- Interpret the data experiments designed for the study of effects of drugs and bioassays which are observed during the study
- Scan information on common pharmaceutical preparations and critically evaluate drug formulations
- Load the required dose of medicines accurately in hypodermic syringes inject medicines by the intradermal subcutaneous intramuscular and intravenous routes using aseptic technique;
- Set-up an intravenous drip and adjust the drip rate according to required dosage;
- Calculate the drug dosage using appropriate formulas for an individual patient;
- Administer the required dose of different drug formulations using appropriate devices and techniques (e.g., hypodermic syringes, inhalers, transdermal patches etc.)
- Advise and interpret the therapeutic monitoring reports of important drugs;
- Recognize and report adverse drug reactions to suitable authorities;
- Analyze critically, drug promotional literature for proprietary preparations in terms of:
 - Pharmacological actions of their ingredients
 - Claims of pharmaceutical companies
 - Economics of use
 - Rational or irrational nature of fixed dose drug formulations

c- Attitudes & communication skills :

At the end of the course the student shall be able to;

- Communicate with patients regarding proper use of drug
- Take adequate precaution during prescribing drug
- Understand the legal aspects of prescription
- Counsel patients for compliance

- Take adequate care to write prescription legibly
- Understand rationality of polypharmacy
- Update themselves regarding recent advances in pharmacology

Course content

| PHARMACOLOGY MODULE \ | | | | |
|-----------------------|-----------|---|--------------------------------------|--|
| Discipline | | Professional | | |
| Department | | Pharmacology | | |
| Course title | | Clinical pharmacology | | |
| Prerequisite | | Molecular cell biology, pathology, Biochemistry | | |
| Course code | | MED ٠٦ ٢٢ | | |
| Academic year | | ٣ | | |
| Semester | | ٦ | Fall | |
| Number of credits | | ٣ | Knowledge | ٢ |
| | | | Practical | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ٢ | ١ | Introduction of pharmacology | Definition of pharmacology Role of clinical Pharmacology in Medicine. Pharmacokinetic: Route of drug administration (interal parenteral, Topical, Other) |
| ٢ | ٢ | ١ | Introduction of Pharmacology | pharmacokinetic Drug absorption simple diffusion, Filtration, Active transport, Pinocytosis. Factors influencing drug Absorption, Protein Binding & clinical importance of Protein Binding. |
| ٣ | ٢ | ١ | Introduction of Pharmacology | pharmacokinetic - Elimination of Drugs from the Body, - Dose & Factors influencing Drug dosage. Pharmacodynamics - Drugs mide of action - Therapeutic index |
| ٤ | ٢ | ١ | Introduction of CNS Pharmacology | Pharmacodynamic (Drugs mode of action, Drugs response, Therapeutic index) Factors influencing Pharmacologic Effects, Drugs Adverse Reaction. |
| ٥ | ٢ | ١ | CNS Pharmacology sedative-hypnotics | - Summary introduction of CNS (anatomy, physiology & biochemistry) - Sedative-hypnotics - Introduction, classification - Benzodiazepin Derivatives (Diazepam, Chlordiazepoxide, Oxazepam, Barbiturates - Non-Barbiturates, Glutethimide, Meprobamate - Other Sedative-hypnotic, Hydroxyzine) - Sedative Hypnotic Drugs Addiction. |
| ٦ | ٢ | ١ | CNS Pharmacology Narcotic Analgesics | Narcotic nalgescics - Introduction & classification of narcotic drugs - Pharmacokinetic - Mode of action - Pharmacologic effects of opiates |

| | | | | |
|----|---|---|---|--|
| ٧ | ٢ | ١ | CNS Pharmacology Narcotic Analgesics | <p>Narcotic analgesics</p> <ul style="list-style-type: none"> - Morphine, Pethidine, Fentanyl, Pentazocine, Heroin, Codeine, Dextroprop oxyphene - Opiate antagonist: (Naloxone) - Opiate toxicity And Treatment <p>Content for presentation included:-clinical usage, importante Side effects, contraindications, cautions and drug interaction, Dose, Strength and Dosage Form.</p> |
| ٨ | ٢ | ١ | CNS Pharmacology Drugs Used in Psychological Disorders | <p>I-Neuroleptic Drugs: (Chlorpromazine, Fluphenazine, Haloperidol, Loxapine)</p> <ul style="list-style-type: none"> - Classification, Mode of action - Pharmacologic effects. <p>Content for Presentation included:- pharmacokinetics, Mode of action, clinical usage, Side effects, contraindications, cautions, Dose, Drug interaction, Strength & Dosage Form</p> |
| ٩ | ٢ | ١ | CNS Pharmacology Drugs Used in Psychological Disorders | <p>II-Antidepressant: Classification Pharmacokinetics Amitriptylline, Imipramine, Trimipramine, Phenelzine, Isocarboxazide)</p> <p>III-Anti mania: (Lithium Salt): pharmacokinetics, Mode of action, Clinical Usage, important Side Effects, Contraindication, Cautions and drug interaction, Dose,</p> |
| ١٠ | ٢ | ١ | Autonomic nervous system (ANS) Pharmacology | <p>Introduction of ANS</p> <ul style="list-style-type: none"> - Anatomophysiology, Receptors & Neurotransmitters <p>Cholinergic drugs</p> <ul style="list-style-type: none"> - Introduction & classification - Pharmacologic effects, acetylcholine, bethanechol, carbachol, pilocarpine, physostigmine, neostigmine, pyridostigmine, edorphonuim. <p>Pharmacokinetic, mode of action, Clinical Usage, important Side Effects, Contraindication, Cautions and drug interaction, dose, strength & dosage form</p> <p>Anticholineterase toxicity and treatment</p> |
| ١١ | ٢ | ١ | Autonomic system Pharmacology <ul style="list-style-type: none"> ○ anti Cholinergic Drugs ○ muscle relaxant | <p>Anti cholinergic drugs</p> <ul style="list-style-type: none"> - introduction - Classification - Pharmacologic effects (atropine, hyoscin) <p>Muscle relaxants</p> <ul style="list-style-type: none"> - Classification - Pharmacologic effects - Tubocurarine, pancuronium, vecuromium, gallamin, suxamethonium, baclofen, dantrollen <p>Content for presentation included:-Pharmacokinetics, Mode of action Clinical Usage, Side effects, Contraindications, Cautions, Dose, Drug interaction, Strength & dosage Form. Ant Cholinesterase Toxicity and Treatment.</p> |

| | | | | |
|----|---|---|---|--|
| ١٢ | ٢ | ١ | Autonomic nervous system Pharmacology adrenergic drugs | <p>Adrenergic drugs</p> <ul style="list-style-type: none"> - Introduction - Classification - Pharmacologic Effects <p>Adrenaline, nor-adrenaline, isoprenaline, dopamine, phenylephrine, salbutamol, ergometrine</p> <p>Content for presentation included:-Pharmacokinetics Mode of action, Clinical Usage, important Side effects, contraindications, Caution and drug interaction, dose</p> |
| ١٣ | ٢ | ١ | Autonomic nervous System Pharmacology Adrenergic Drugs | <p>Anti adrenergic drugs</p> <ul style="list-style-type: none"> - Introduction - Classification - Pharmacologic Effects - Methyldopa trimethaphan, prezocine. - Propranolol, atenolol, metoprolol <p>Content for Presentation Included:- Pharmacokinetics, Mode of action Clinical Usage, Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength & Dosage Form.</p> |
| ١٤ | ٢ | ١ | Drugs used in obstetrics/non steroidal anti-inflammatory Drugs (NSAIDs) | <ul style="list-style-type: none"> - Tocolytics (salbutamol) - Oxytocic (ergometrine, oxytocine) <p>Non steroidal anti-inflammatory drugs (NSAIDs)</p> <ul style="list-style-type: none"> - introduction, Classification of NSAIDs - mode of action <p>presentation included:-Pharmacokinetics, Mode of Action, Clinical Usage, Side effects, contraindication, cautions, Dose, Drug interaction, Strength & Dosage Form.</p> |
| ١٥ | ٢ | ١ | Non steroidal anti-inflammatory Drugs (NSAIDs)/ drugs used in gout and migraine | <p>Oxytocic drugs: Ergot Derivatives (Ergometrine) Oxytocin, Tocolytics, Salbutamol, Ritodrine</p> <p>Non Steroidal Anti-inflammatory drugs(NSAIDs):- introduction, Classification, Mode of Action.</p> |
| ١٦ | ٢ | ١ | Histamine & anti histaminic drugs | <p>Histamine & anti histamine drugs</p> <ul style="list-style-type: none"> o Introduction o Mode of action of histamine <p>Anti Histaminics:</p> <ul style="list-style-type: none"> o Hlorphenamin (chlorpheniramine), diphenhydramine, promethazine, cyprohepradine, dimengydranate, cinnarazine, loratadine, cetirizin o Classification & pharmacologic effects <p>Content for presentation included:-Pharmacokinetics, Mode of action, Clinical Usage, Side Effects, Contraindication, Cautions, dose, Drug interaction, Strength & Dosage Form</p> |

Text books and Reference Recommended (last Editions)

Basic and Clinical Pharmacology, Bertman G Katzung. Thirteen Edition

Format Paperback | ١٣٢٨ pages, Publication date ٠٤ Dec ٢٠٢٠, Publisher McGraw-Hill Education / Medical, Language English, Edition Statement ١٠th ed. Illustrations note Illustrations, unspecified, ISBN١٠ ١٢٦٠٤٥٢٣١X, ISBN١٣ ٩٧٨١٢٦٠٤٥٢٣١٠, Bestsellers rank ٧٢,٧٩

Pharmacology, Lippincott. Sixth Edition

Format Paperback | ٥٧٦ pages, Dimensions ٢١٣ x ٢٧٦ x ٢٠,٣٢mm | ١,٣٦١g, Publication date ١٠ Oct ٢٠١٨, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Annotated, Edition Statement Seventh, North American Edition, ISBN١٠ ١٤٩٦٣٨٤١٣X, ISBN١٣ ٩٧٨١٤٩٦٣٨٤١٣٣, Bestsellers rank ١,٩٦٢,٤٩

Drugs Benefits and Risks, International Text Books of Pharmacology, CJV and Boxtel.

Format Hardback | ٨٤٨ pages, Dimensions ١٩٦,٨٥ x ٢٦٠,٣٥ x ٥٠,٨mm | ١,٩٠٥,٠٩g, Publication date ٣١ Jul ٢٠٠٨, Publisher IOS Press, Imprint IOS Press,US, Publication City/Country Amsterdam, United States, Language English, Edition ٢ Revised, Edition Statement ٢nd Revised edition, ISBN١٠ ١٥٨٦٠٣٨٨٠X, ISBN١٣ ٩٧٨١٥٨٦٠٣٨٨٠٩

Goodman, Gillman Pharmacological Basis of Therapeutics.

Format Hardback | 1440 pages, Dimensions 221 x 282 x 56mm | 3,140g, Publication date 01 Jan 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 13th edition, Illustrations note 600 Illustrations, unspecified ISBN10 1209084739, ISBN13 9781209084739, Bestsellers rank 206,70

Principles of pharmacology, pathophysiologic basis of drugs therapy, David E. Golan.

Format Paperback | 1024 pages, Dimensions 213 x 276 x 30,06mm | 2,132g, Publication date 01 Apr 2016, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement Fourth, North American Edition, Illustrations note 480, ISBN10 1401191006, ISBN13 9781401191006 Bestsellers rank 1,230,480

Clinical Pharmacology and Therapeutics, Roger Walker.

Format Paperback | 998 pages, Dimensions 219 x 276 x 38,1mm | 2,494,76g, Publication date 13 Dec 2011, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE Publication City/Country London, United Kingdom, Language English, Edition Revised ,Edition Statement 0th Revised edition, ISBN10 0702042930, ISBN13 9780702042930, Bestsellers rank 99,803

Rang and Dale's pharmacology.

Format Paperback | 808 pages, Dimensions 219 x 276 x 31,70mm | 2,104,06g, Publication date 01 Feb 2019, Publisher Elsevier Health Sciences, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 9th Revised edition, Illustrations note Approx. 370 illustrations (370 in full color), ISBN10 0702074489 ISBN13 9780702074486, Bestsellers rank 2,093

Modern pharmacology with clinical applications, Chales R. Craig.

Format Paperback | 832 pages, Dimensions 216 x 279 x 23,37mm | 1,479g, Publication date 01 Jul 2003, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement 1th edition, ISBN10 0781737621 ISBN13 9780781737623

Netter's Illustrated clinical pharmacology.

Format Paperback | 440 pages, Dimensions 216 x 276 x 12,7mm | 1,270,06g, Publication date 24 Oct 2013, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Statement 2nd ed. Illustrations note Approx. 370 illustrations (370 in full color), ISBN10 0323220916 ISBN13 9780323220910, Bestsellers rank 874,979

CLINICAL PHARMACOLOGY ۲

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

The broad goals of teaching pharmacology to graduates are to impart knowledge skills and attitudes to the students so that they can prescribe dugs sadly effective and maintain competency in Professional life to instill in them a rational and scientific basis of therapeutics

Skills

- Experimental exercise on pharmacy
 - General principles of pharmacy
 - Prescription writing exercises
 - Prescription and dispensing of powders, emulsions ointments, mixtures, liniments, suppositories and syrups
- Spotting exercise – Identify the commonly used items in pharmacology
- Exercises of drug interactions

Teaching and learning methodology

It shall taught by way of lectures. Each lecture session will be planned to deliver maximum relevant information to the students. In addition, seminars on some important topics will be planned in which the use of a given drug shall be discussed by a clinical expert in the field.

The pharmacology teaching shall be done whth the goals of making the student undersrand the concept of rational use of drugs.

Skills

The given skills exercise shall be discussed and demonstrated before hand to the students. In addition, the students will learn prescription writing and discuss exercise of drug interactions and shall also be shown various spots. The spots shall include various chemicals, drugs and instruments used in pharmacology.

Learning Objective

a- Knowledge

At the end of course the students should be able to:

- Understand pharmacokinetics and pharmacodynamic principle involved in the use of drugs;
- Understand and identify the various factors that can affect the action of drugs
- Know the various of drug administration with advantages and disadvantages of these routes;
- Undertake dosage calculations as appropriate for the patient and be able to select the proper drug and for the “at risk population” i.e. patients with kidney or liver diseases, elderly, pregnant and lactating mothers and children
- Understand the importance of rational prescribing of drugs and the concept of essential drugs and rational use of drugs;
- Th be able to identify and monitor adverse drug reactions (ADRs) and appreciate the importance of ADR reporting;
- Know the drugs used in systemic illnesses, infections and chemotherapy etc. with main mechanism(s) of action, pharmacokinetics, uses, side-effects and indication;
- Understand the principles and practice of pharmacy;
- Understand the methods in experimental pharmacology, principles of bioassay and be able to correlate drug effects with the action of drugs at the receptors.
- Have knowledge of common drugs and doses used for different ailments;
- Have an understanding of basic mechanism by which a drug acts;
- Should be able to select rationally from the available drugs;

b- Clinical skills:

At the end of the course student be able to

- Prescribe drugs for common ailments
- Identify adverse reaction and interactions of commonly used drugs:
- Interpret the data experiments designed for the study of effects of drugs and bioassays which are observed during the study
- Scan information on common pharmaceutical preparations and critically evaluate drug formulations
- Load the required dose of medicines accurately in hypodermic syringes inject medicines by the intradermal subcutaneous intramuscular and intravenous routes using aseptic technique;
- Set-up an intravenous drip and adjust the drip rate according to required dosage;
- Calculate the drug dosage using appropriate formulas for an individual patient;
- Administer the required dose of different drug formulations using appropriate devices and techniques (e.g., hypodermic syringes, inhalers, transdermal patches etc.)
- Advise and interpret the therapeutic monitoring reports of important drugs;
- Recognize and report adverse drug reactions to suitable authorities;
- Analyze critically, drug promotional literature for proprietary preparations in terms of:
 - Pharmacological actions of their ingredients
 - Claims of pharmaceutical companies
 - Economics of use
 - Rational or irrational nature of fixed dose drug formulations

c- Attitudes & communication skills :

At the end of the course the student shall be able to;

- Communicate with patients regarding proper use of drug
- Take adequate precaution during prescribing drug
- Understand the legal aspects of prescription
- Counsel patients for compliance

- Take adequate care to write prescription legibly
- Understand rationality of polypharmacy
- Update themselves regarding recent advances in pharmacology

Course content

| CLINICAL PHARMACOLOGY MODULE ۷ | | | | |
|---------------------------------------|-----------|-----------------------|-------------------------------|--|
| Discipline | | Professional | | |
| Department | | Pharmacology | | |
| Course title | | Clinical pharmacology | | |
| Prerequisite | | Pharmacology | | |
| Course code | | MED ۰۷ ۲۲ | | |
| Academic year | | ε | | |
| Semester | | ۷ | spring | |
| Number of credits | | ۳ | Knowledge | ۲ |
| | | | practical | ۱ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ۱ | ۲ | ۱ | Digestive system pharmacology | <ul style="list-style-type: none"> <input type="checkbox"/> Anti emetics: Chloropromazine, trifluperazine, domperidone, meto clopramide <input type="checkbox"/> Drugs used in peptic ulcer disease <ul style="list-style-type: none"> - H₂ Receptor blockers (cimetidine, ranitidine, famotidine, nizatidine) - Proton pump inhibitors (omeparazole) - Antimuscarinics: pirenzepine - Prostaglandin analodue (misoprostol) Content for Presentation included:-Pharmacokinetics, Mode of action, Clinical Usage, important Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and dosage Form. |
| ۲ | ۲ | ۱ | Digestive system pharmacology | <ul style="list-style-type: none"> <input type="checkbox"/> Antacids: aluminum Hydroxide, magnesium hydroxid, sodium bicarbonate, cacium carbonate <input type="checkbox"/> Stomach mucose membrane protectants (sucralfate) <input type="checkbox"/> H. pylori treatment <input type="checkbox"/> Laxative: classification Ispaghula husk, bisacodyl, senna, liquid paraffine, magnesium salt <ul style="list-style-type: none"> <input type="checkbox"/> Drugs used in diarrhea (symptomatic) Oral rehydration salt (ORS), diphenoxylate, loperamide Content for Presentation included:-Pharmacokinetics, Mode of action, Clinical Usage, important Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and dosage Form. |

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|---|---|---|------------------------------------|---|
| ۳ | ۲ | ۱ | Respiratory system Pharmacology | <ul style="list-style-type: none"> □ Bronchodilators <ul style="list-style-type: none"> - Adrenergic - Xanthine Derivatives - Anticholinergics - Cromolyn Sodium - Steroids □ Drugs Used in Cough: Codeine, Dextromethorphan, Pholcodein □ Mucoytics (Acetylcestein, Carbocysstein). □ Expectorants <p>Content for Presentation included: - Pharmacokinetics, Mode of action, Clinical Usage, Side Effects, contraindication, Cautions, Dose, Drug interaction, Strength and Dosage Form.</p> |
| ۴ | ۲ | ۱ | Diuretics | <ul style="list-style-type: none"> □ Introduction □ Definition and Classification (Acetazolamide, Furosemide, Ethacrynic Acid, Chlorothiazide, Hydrochlorothiazide, Chlorthalidone, Spironolactone, Triamterene, Mannitol). <p>Content for Presentation included:-Pharmacokinetics, Mode of action, Clinical usage, Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form</p> |
| ۵ | ۲ | ۱ | Cardiovascular System Pharmacology | <ul style="list-style-type: none"> □ Cardio tonics: <ul style="list-style-type: none"> - Introduction - Digoxine, Digitoxine □ Anti Arrhythmic Drugs: <ul style="list-style-type: none"> - Introduction and Classification - Quinidine, Procaiamide, Lidocaine, phenytoin, - Propranolol, Metoprolol, Atenolol, Esmolol - Bretylium, Amiodarone, - Verapamil, Diltiazem, Nifedipine - Digoxine. <p>Content for Presentation included:-Pharmacokinetics, Mode of action, Clinical usage, Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form</p> |
| ۶ | ۲ | ۱ | Cardiovascular System Pharmacology | <ul style="list-style-type: none"> □ Drugs used in angina pectoris <ul style="list-style-type: none"> - Introduction & classification - Nitrites glyceryl tinitrate, isosorbid dinitrate - C a channel blocker: nifedepin, diltiazem - Betablickers: propranolol, metoprolol, atenolol □ Drugs used in hypertension <ul style="list-style-type: none"> - Introduction & classification - Methyldopa, prazosine, propranolol, atenolol, amlodopa, nifedepin, enalapril, captopril, losartan, hydralazine, sodium nitroprosside <p>Content for Presentation included:-Pharmacokinetics, Mode of action, Clinical usage, Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form</p> |

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|----|---|---|--|---|
| ٧ | ٢ | ١ | Blood Pharmacology(Drugs Used in Blood Disorder) | <ul style="list-style-type: none"> <input type="checkbox"/> Drugs Used in Anemia <ul style="list-style-type: none"> - Ferrous Sulphate, Iron Dextran, Iron Toxicity, Hydroxycobalamin - Folic Acid <input type="checkbox"/> Drugs used in coagulation disorder <ul style="list-style-type: none"> - Introduction & classification - Heparin, warfarin, aspirin <p>Content for Presentation included:-Pharmacokinetics, Mode of action, Clinical usage, Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form</p> |
| ٨ | ٢ | ١ | Blood Pharmacology(Drugs Used in Blood Disorder) | <p>Drugs Used in coagulation Disorder Thrombolytics: streptokinase and others. Drugs used in bleeding disorders: protamine sulfate, phytomenadion Drugs used in dyslipidemia: statins, nicotinic acid, fibrates, anion-exchange resins, Content for Presentation included:-Pharmacokinetics, Mode of action, Clinical usage, Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form</p> |
| ٩ | ٢ | ١ | Blood Products and Plasma Substitutes Pharmacology | <p>Introduction(Dextran ٧٠, Polygeline, Albumine-Human, ORS, Glucose, Sodium Chloride, Ringer Lactate, Bicarbonate) Content for Presentation included:-Pharmacokinetics, Mode of action, Clinical usage, Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form</p> |
| ١٠ | ٢ | ١ | Hormone Pharmacology | <p>Introduction, classification, ACTH, oxytocine, vasopressine, Levothyroxine, propylthioracil, potassium Iodide. Content for Presentation included:-Pharmacokinetics, Mode of action, Clinical usage, Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form</p> |
| ١١ | ٢ | ١ | Hormone Pharmacology | <ul style="list-style-type: none"> <input type="checkbox"/> Insulin & oral anti-diabetic agents Introduction, insulin oral antidiabetic drugs: Sulfonylureas (Glibenclamide), biguanides (metformine), thiazolidinediones (rosiglitazone) glucosidase inhibitors (acarbose), meglitinides (repaglinide). <input type="checkbox"/> Content for Presentation included: Pharmacokinetics, Mode of action, Clinical usage, important Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form |
| ١٢ | ٢ | ١ | Hormone Pharmacology | <ul style="list-style-type: none"> <input type="checkbox"/> Corticosteroids & mineralocorticoids: Introduction corticosteroids, mode of action Oharmacologic Effects, prednisolone, dexamethasone, Hydrocortisone, tri ancinolone, betamethasone <input type="checkbox"/> Content for Presentation included: Pharmacokinetics, Mode of action, Clinical usage, important Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form |

| | | | | |
|----|---|---|-----------------------|---|
| ١٣ | ٢ | ١ | Hormones pharmacology | <ul style="list-style-type: none"> ☐ Steroid hormones: <ul style="list-style-type: none"> - Introduction - Estrogens and Antiestrogens - Progesterons - Endrogens - Steroid anabolic <p>Content for Presentation included:- Pharmacokinetics, Mode of action, Clinical usage, Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form</p> |
| ١٤ | ٢ | ١ | General anesthetics | <ul style="list-style-type: none"> ☐ General anesthetics: definition, classification Mode of Action, stange of anesthesia. ☐ General anesthetics: ketamine, thiopental, propofol ☐ Premedication <p>Content for Presentation included:-Pharmacokinetics, Mode of action, Clinical usage, Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form.</p> |
| ١٥ | ٢ | ١ | Local anesthetics | <ul style="list-style-type: none"> ☐ Local anesthetics: definition, classification, pharmacokinetic, mode of action< pharmacological effects, mode of administration, lidocaine, bupivacaine, procaine, tetracaine, Clinical usage, Side Effects, Contraindications, Cautions, Dose, Drug interaction, Strength and Dosage Form |
| ١٦ | ٢ | ١ | Vitamins & Minerals | Vitamin D, Vitamin A: introduction & classification pharmacokinetic mode of action clinical usage important side effects contraindications cautions drug interaction dose strength & dosage form |

Text books and Reference Recomonded (last Editions)

Basic and Clinical Pharmacology, Bertman G Katzung. Thirteen Edition

Format Paperback | ١٣٢٨ pages, Publication date ٠٤ Dec ٢٠٢٠, Publisher McGraw-Hill Education / Medical, Language English, Edition Statement ١٠th ed. Illustrations note Illustrations, unspecified, ISBN١٠ ١٢٦.٤٥٢٣١X, ISBN١٣ ٩٧٨١٢٦.٤٥٢٣١٠, Bestsellers rank ٧٢,٧٩

Pharmacology, Lippincott. Sixth Edition

Format Paperback | ٥٧٦ pages, Dimensions ٢١٣ x ٢٧٦ x ٢٠,٣٢mm | ١,٣٦١g, Publication date ١٠ Oct ٢٠١٨, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Annotated, Edition Statement Seventh, North American Edition, ISBN١٠ ١٤٩٦٣٨٤١٣X, ISBN١٣ ٩٧٨١٤٩٦٣٨٤١٣٣, Bestsellers rank ١,٩٦٢,٤٩

Drugs Benefits and Risks, International Text Books of Pharmacology, CJV and Boxtel.

Format Hardback | ٨٤٨ pages, Dimensions ١٩٦,٨٥ x ٢٦٠,٣٥ x ٥٠,٨mm | ١,٩٠٥,٠٩g, Publication date ٣١ Jul ٢٠٠٨, Publisher IOS Press, Imprint IOS Press,US, Publication City/Country Amsterdam, United States, Language English, Edition ٢ Revised, Edition Statement ٢nd Revised edition, ISBN١٠ ١٥٨٦.٣٨٨٠X, ISBN١٣ ٩٧٨١٥٨٦.٣٨٨.٩

Goodman, Gillman Pharmacological Basis of Therapeutics.

Format Hardback | ١٤٤٠ pages, Dimensions ٢٢١ x ٢٨٢ x ٥٦mm | ٣,١٤٥g, Publication date ٠١ Jan ٢٠١٨, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement ١٣th edition, Illustrations note ٦٠٠ Illustrations, unspecified ISBN١٠ ١٢٥٩٥٨٤٧٣٩, ISBN١٣ ٩٧٨١٢٥٩٥٨٤٧٣٢, Bestsellers rank ٢٥٦,٦٠

Principles of pharmacology, pathophysiology basis of drugs therapy, David E. Golan.

Format Paperback | ١٠٢٤ pages, Dimensions ٢١٣ x ٢٧٦ x ٣٥,٥٦mm | ٢,١٣٢g, Publication date ٠١ Apr ٢٠١٦, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement Fourth, North American Edition, Illustrations note ٤٨٠, ISBN١٠ ١٤٥١١٩١٠٠٦, ISBN١٣ ٩٧٨١٤٥١١٩١٠٠٤ Bestsellers rank ١,٢٣٠,٤٨٥

Clinical Pharmacology and Therapeutics, Roger Walker.

Format Paperback | 998 pages, Dimensions 219 x 276 x 38,1mm | 2,44,76g, Publication date 13 Dec 2011, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 9th Revised edition, ISBN10 070242930, ISBN13 978070242930, Bestsellers rank 99,803

Rang and Dale's pharmacology.

Format Paperback | 808 pages, Dimensions 219 x 276 x 31,70mm | 2,10,06g, Publication date 01 Feb 2019, Publisher Elsevier Health Sciences, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 9th Revised edition, Illustrations note Approx. 370 illustrations (370 in full color), ISBN10 0702074489 ISBN13 9780702074486, Bestsellers rank 2,093

Modern pharmacology with clinical applications, Chales R. Craig.

Format Paperback | 832 pages, Dimensions 216 x 279 x 23,37mm | 1,479g, Publication date 01 Jul 2003, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement 1th edition, ISBN10 0781737621 ISBN13 9780781737623

Netter's Illustrated clinical pharmacology.

Format Paperback | 440 pages, Dimensions 216 x 276 x 12,7mm | 1,270,06g, Publication date 24 Oct 2013, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Statement 2nd ed. Illustrations note Approx. 370 illustrations (370 in full color), ISBN10 0323220916 ISBN13 9780323220910, Bestsellers rank 874,979

CLINICAL PHARMACOLOGY ۳

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۳۰% with reasonable excuse.
- More than ۳۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۳۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۳۰%
- Final semester exam ۳۰%
- Total ۱۰۰%

Course description

The broad goals of teaching pharmacology to graduates are to impart knowledge skills and attitudes to the students so that they can prescribe dugs sadly effective and maintain competency in Professional life to instill in them a rational and scientific basis of therapeutics

Skills

- Experimental exercise on pharmacy
 - General principles of pharmacy
 - Prescription writing exercises
 - Prescription and dispensing of powders, emulsions ointments, mixtures, liniments, suppositories and syrups
- Spotting exercise – Identify the commonly used items in pharmacology
- Exercises of drug interactions

Teaching and learning methodology

It shall taught by way of lectures. Each lecture session will be planned to deliver maximum relevant information to the students. In addition, seminars on some important topics will be planned in which the use of a given drug shall be discussed by a clinical expert in the field.

The pharmacology teaching shall be done whth the goals of making the student undersrand the concept of rational use of drugs.

Skills

The given skills exercise shall be discussed and demonstrated before hand to the students. In addition, the students will learn prescription writing and discuss exercise of drug interactions and shall also be shown various spots. The spots shall include various chemicals, drugs and instruments used in pharmacology.

Learning Objective

a- Knowledge

At the end of course the students should be able to:

- Understand pharmacokinetics and pharmacodynamic principle involved in the use of drugs;
- Understand and identify the various factors that can affect the action of drugs
- Know the various of drug administration with advantages and disadvantages of these routes;
- Undertake dosage calculations as appropriate for the patient and be able to select the proper drug and for the “at risk population” i.e. patients with kidney or liver diseases, elderly, pregnant and lactating mothers and children
- Understand the importance of rational prescribing of drugs and the concept of essential drugs and rational use of drugs;
- Be able to identify and monitor adverse drug reactions (ADRs) and appreciate the importance of ADR reporting;
- Know the drugs used in systemic illnesses, infections and chemotherapy etc. with main mechanism(s) of action, pharmacokinetics, uses, side-effects and indication;
- Understand the principles and practice of pharmacy;
- Understand the methods in experimental pharmacology, principles of bioassay and be able to correlate drug effects with the action of drugs at the receptors.
- Have knowledge of common drugs and doses used for different ailments;
- Have an understanding of basic mechanism by which a drug acts;
- Should be able to select rationally from the available drugs;

b- Clinical skills:

At the end of the course student be able to

- Prescribe drugs for common ailments
- Identify adverse reaction and interactions of commonly used drugs:
- Interpret the data experiments designed for the study of effects of drugs and bioassays which are observed during the study
- Scan information on common pharmaceutical preparations and critically evaluate drug formulations
- Load the required dose of medicines accurately in hypodermic syringes inject medicines by the intradermal subcutaneous intramuscular and intravenous routes using aseptic technique;
- Set-up an intravenous drip and adjust the drip rate according to required dosage;
- Calculate the drug dosage using appropriate formulas for an individual patient;
- Administer the required dose of different drug formulations using appropriate devices and techniques (e.g., hypodermic syringes, inhalers, transdermal patches etc.)
- Advise and interpret the therapeutic monitoring reports of important drugs;
- Recognize and report adverse drug reactions to suitable authorities;
- Analyze critically, drug promotional literature for proprietary preparations in terms of:
 - Pharmacological actions of their ingredients
 - Claims of pharmaceutical companies
 - Economics of use
 - Rational or irrational nature of fixed dose drug formulations

c- Attitudes & communication skills :

At the end of the course the student shall be able to;

- Communicate with patients regarding proper use of drug
- Take adequate precaution during prescribing drug
- Understand the legal aspects of prescription
- Counsel patients for compliance

- Take adequate care to write prescription legibly
- Understand rationality of polypharmacy
- Update themselves regarding recent advances in pharmacology Course contents

Course content

| PHARMACOLOGY MODEL ٢ | | | | |
|----------------------|-----------|---|--|--|
| Discipline | | Professional | | |
| Department | | Medical phamecology | | |
| Course title | | Antibiotiecs ratonal use of drugs & prescription wiring | | |
| Prerequisite | | Pharmacology module ١ & ٢ | | |
| Course code | | MED ٠٨ ٢٢ | | |
| Academic year | | ٤ | | |
| Semester | | ٨ | fall | |
| Number of credits | | ١ | Knowledge | ١ |
| | | | pracical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ١ | | Anti-infective and anti-microbial drugs | <input type="checkbox"/> Introduction <input type="checkbox"/> Classification <input type="checkbox"/> Factors that influence the successful infectious chemotherapy <input type="checkbox"/> Resistance to antimicrobial <input type="checkbox"/> Selection of proper anti biotics |
| ٢ | ١ | | Anti-infective and anti-microbial drugs | <input type="checkbox"/> Dose of the anti-microbial <input type="checkbox"/> Combination of anti-biotic <input type="checkbox"/> Chembimation of anti-biotic <input type="checkbox"/> Chemoprophylaxis <input type="checkbox"/> Irrational use of anti biotics <input type="checkbox"/> Sulphonamides |
| ٣ | ١ | | Anti-infective and anti-microbial drugs | <input type="checkbox"/> Beta lactam anti biotic Content for presentation included: pharmacokinetic mode of action clinical usage side effects important contraindication cautions & drug interaction dose strength & dosage form |
| ٤ | ١ | | Anti-infective and anti-microbial drugs | <input type="checkbox"/> Cephalosporines <input type="checkbox"/> Aminoasglycosides <input type="checkbox"/> macrolides pharmacokinetic mode of action clinical usage side effects important contraindication cautions & drug interaction dose strength & dosage form |
| ٥ | ١ | | Anti-infective and anti-microbial drugs | <input type="checkbox"/> Chloramphenicol <input type="checkbox"/> Aminoglycosides <input type="checkbox"/> Quinolones pharmacokinetic mode of action clinical usage side effects important contraindication cautions & drug interaction dose strength & dosage form |
| ٦ | ١ | | Other anti infective drugs used for anaerobic infections | <input type="checkbox"/> Licosamides <input type="checkbox"/> Glycopeptide <input type="checkbox"/> Polypeptides <input type="checkbox"/> Bacitracin <input type="checkbox"/> Sodium fusidate <input type="checkbox"/> Fosfomycin |

| | | | |
|----|---|--|--|
| ٧ | ١ | Licosamides Glycopeptide Polypeptides Bacitracin Sodium fusidate Fosfomycin | Introduction Amphotericin B ketoconazole clotrimazole fluconazole miconazole griseofulvic nystatine salicylic acid+benzoic acid sodium thiosulfate, content for presentation included: pharmacokinetic mode of action clinical usage important side effects contraindications cautions & drug Interaction summary introduction of anti TB drugs. INH rifampicin, pyrazinamide, streptomycin, ethambutol, thiacetazone, ethionamide, Para-amino salicylic acid, melamine antimonite & sodium stibogluconate, pentamidine Dodson, ethionamide clofazimine, Rifampicin Note: anti TB, anti leishmanial & antileprosy drugs are special national health programs & presenting in infectious disease in detail, therefore to prevent duplication in pharmacology there is a brief presentation. |
| ٨ | ١ | Anti protozoa drugs anti amebic anti anthelmintic protozoa drugs leishmanial | Antiemetic: introduction metronidazole tinidazole emetine dioxide furcane tetracycline paromomycin diiodohydroxyquinone anthelmintic introduction levamisole mebendazole niclosamide piperazine praziquantel albendazole content for presentation included pharmacokinetic mode of action clinical usage important side effects contraindications cautions & drug interaction |
| ٩ | ١ | Anti protozoal drugs | Antimalarial Introduction <input type="checkbox"/> Chloroquine quinine primaquine sulfadoxine pyrimethamine artesunate & their derivatives |
| ١٠ | ١ | Antiseptic & disinfectants | Antiseptics & disinfectants Pharmacokinetic mode of action clinical usage important side effects contraindications caution & drug interactions dose strength & dosage form |
| ١١ | ١ | Rational use of drugs | <input type="checkbox"/> Introduction <input type="checkbox"/> What is rational use of drug <input type="checkbox"/> Examples of irrational drug use <input type="checkbox"/> Concept of essential drugs |
| ١٢ | ١ | Adverse impact of irrational drugs use & underlying factors of irrational drug use strategies to improve drug use | Adverse impact of irrational drugs use <input type="checkbox"/> Impact of quality of drug therapy & medical care <input type="checkbox"/> Impact of cost <input type="checkbox"/> Psychosocial impact Factors underlying of irrational use of drugs <input type="checkbox"/> Health system <input type="checkbox"/> Prescriber <input type="checkbox"/> Dispenser <input type="checkbox"/> Patient & community |
| ١٣ | ١ | The process of rational treatment | <input type="checkbox"/> Define the patient problem <input type="checkbox"/> Specify the therapeutic objective <input type="checkbox"/> Verify the suitability of p-drugs & example of selecting a p-drugs for a specific disease e.g. amebiasis etc.) <input type="checkbox"/> Q: are the active substance and dosage form suitable for this patient? <input type="checkbox"/> Q: is the standard dosage schedule suitable for this patient? <input type="checkbox"/> Q: is the standard duration of treatment suitable for this patient? |
| ١٤ | ١ | The process of rational treatment | <input type="checkbox"/> Prescription writing <input type="checkbox"/> give information instruction and warnings monitor (and stop?) the treatment |

| | | | | |
|----|---|--|---|---|
| 10 | 1 | | Sample of prescription | <input type="checkbox"/> Discussion on few assumed prescription <input type="checkbox"/> How to keep up-to-date about drugs <ul style="list-style-type: none"> - Make an inventory of available information - Choose between source of information - Efficient reading (hard copies and web based valid information sourced) <input type="checkbox"/> Essentials of pharmacology in daily practice <ul style="list-style-type: none"> - Introduction - Pharmacodynamics - pharmacokinetics - Drug treatment |
| 16 | 1 | | Keeping up to date essentials of pharmacology in daily practice | |

Text books and Reference Recommended (last Editions)

Basic and Clinical Pharmacology, Bertman G Katzung. Thirteenth Edition

Format Paperback | 1328 pages, Publication date 08 Dec 2010, Publisher McGraw-Hill Education / Medical, Language English, Edition Statement 13th ed. Illustrations note Illustrations, unspecified, ISBN10 007142311X, ISBN13 9781126402310, Bestsellers rank 72,79

Pharmacology, Lippincott. Sixth Edition

Format Paperback | 976 pages, Dimensions 213 x 276 x 20,37mm | 1,371g, Publication date 10 Oct 2018, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Annotated, Edition Statement Seventh, North American Edition, ISBN10 149638413X, ISBN13 9781496384133, Bestsellers rank 1,972,49

Drugs Benefits and Risks, International Text Books of Pharmacology, CJV and Boxtel.

Format Hardback | 448 pages, Dimensions 196,80 x 260,30 x 00,8mm | 1,900,09g, Publication date 31 Jul 2008, Publisher IOS Press, Imprint IOS Press,US, Publication City/Country Amsterdam, United States, Language English, Edition 2 Revised, Edition Statement 2nd Revised edition, ISBN10 10863880X, ISBN13 9781086388094

Goodman, Gillman Pharmacological Basis of Therapeutics.

Format Hardback | 1440 pages, Dimensions 221 x 282 x 06mm | 3,140g, Publication date 01 Jan 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 13th edition, Illustrations note 600 Illustrations, unspecified ISBN10 1209084739, ISBN13 9781209084732, Bestsellers rank 206,60

Principles of pharmacology, pathophysiologic basis of drugs therapy, David E. Golan.

Format Paperback | 124 pages, Dimensions 213 x 276 x 30,07mm | 2,132g, Publication date 01 Apr 2016, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement Fourth, North American Edition, Illustrations note 480, ISBN10 1401191006, ISBN13 9781401191004 Bestsellers rank 1,230,480

Clinical Pharmacology and Therapeutics, Roger Walker.

Format Paperback | 998 pages, Dimensions 219 x 276 x 38,1mm | 2,494,76g, Publication date 13 Dec 2011, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 2th Revised edition, ISBN10 070242930, ISBN13 9780702429300, Bestsellers rank 99,803

Rang and Dale's pharmacology.

Format Paperback | 808 pages, Dimensions 219 x 276 x 31,70mm | 2,104,06g, Publication date 01 Feb 2019, Publisher Elsevier Health Sciences, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 9th Revised edition, Illustrations note Approx. 370 illustrations (370 in full color), ISBN10 070244489 ISBN13 9780702444897, Bestsellers rank 2,093

Modern pharmacology with clinical applications, Chales R. Craig.

Format Paperback | 822 pages, Dimensions 216 x 279 x 23,37mm | 1,479g, Publication date 01 Jul 2003, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement 6th edition, ISBN10 0781737621 ISBN13 9780781737623

Netter's Illustrated clinical pharmacology.

Format Paperback | 440 pages, Dimensions 216 x 276 x 12,7mm | 1,270,06g, Publication date 24 Oct 2013, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Statement 2nd ed. Illustrations note Approx. 370 illustrations (370 in full color), ISBN10 0323220916 ISBN13 9780323220910, Bestsellers rank 874,979

CLINICAL ANESTHESIOLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

- The purpose of anesthesia training for medical students is not to make anesthesiologists out of all medical students, but to give students knowledge fo basic concepts used in anesthesia and to teach them skills of airway management and vascular access that may be useful to them in other areas of medical practice.
- The physician should have a good knowledge ofqhat the anesthetic will do to the patient, even though the physician does not administerit him of herself
- The student, therefore, should observe and study the physiological changes which take place in the anesthetized patient. When these changes ate of sufficient magnitude, they become complications of toxic effects. The student should learn what these are, how they are caused, and how they may present and be treated.
- Exphasis should be laid on good preoperative preparation. Students should learn basic techniques of maintaining a clear airway and giving assisted of artificial ventilation.
- They should also mearn how to position the patents head, how to hold the chin and how to insert an airway. Medical students should learn enough about an anesthetic machine.
- In addition to these technical accomplishments, the student may have the opportunity to administer either general of spinal anesthesia under the direct and constant supervision of a member of the staff

Learning Objectives

a. Knowledge

The students, at the end of their posting should be able to:

- Introduce principles of acute medicine as it is practiced in managing the anesthetized patient in the prerating room and in managing the patient in the recovery unit.
- Discuss and demonstrate principles of applied physiology and applied pharmacology;
- Simulation of human-patient simulator (HPS) is ideal to teach many aspects of applied physiology and pharmacology;
- Review principles of resuscitation (cardiopulmonary);

- Teach care of the unconscious patient, including airway and ventilation management;
- Teach management of blood, fluid, electrolyte balance, and metabolic disturbances in the surgical patient, with specific emphasis of those derangements which are encountered in the anesthetized patient;
- Review management of acute and chronic pain problems;
- Introduce concepts of drug interactions, especially as they apply to patients receiving anesthesia;
- Demonstrate the evaluation of patients relative to surgical and anesthetic risk;
- Teach appropriate preoperative preparation of patients subjected to surgery and anesthesia;
- Introduce the various techniques of anesthesiology;
- Pharmacology of muscle relaxant, application and monitoring;
- Pharmacology: basic/applied of local anesthetics: various types of blocks advantages/problems with each. Descriptions for some main blocks. Local infiltration, brachial plexus, caudal etc.

b. Skills (logbook)

- Maintenance of clear airway;
- Bag Mask ventilation;
- Starting a venous access
- Cardiopulmonary resuscitation-CPR (Basic and advanced);
- Giving a simple infiltration block, some nerve block;
- Performing a lumbar puncture-LP;
- I/V cannulation;
- Oropharyngeal/Nasopharyngeal airway insertion;
- Bag Mask Ventilation first on Manikin;
- Mask ventilation in unconscious patient;
- LMA (Laryngeal Mask Airway) insertion demonstration;
- CPR on manikin

Teaching-Learning Methodology

Teaching and learning in anesthesiology should be guided through a series of posting in which the emphasis is laid on skills hands – on experience

Human patient simulator (HPS) is used for better skill development and to reduce the danger to the patients during the learning curve of student. To allow repeat practice according to ability of the student to reach the level of competence needed

Logbook for skills

- I/V cannulation- 10 times
- Oropharyngeal/nasopharyngeal airway insertion- 10 times
- Bag Mask Ventilation first on Manikin- 10 times
- Mask Ventilation in unconscious patient – 10 times
- Attaching pulse oximeter. BP cuff and ECG
- Applying electrodes and setting up a monitor- 10 times
- Lumbar puncture – 10 times
- Infiltration block- 10 times
- Demonstration of epidural/nerve block – 10 times each
- LMA (Laryngeal Mask Airway) insertion demonstration – 10 times
- Intubation demo - 10 times
- CPR (Cardio pulmonary resuscitation) on manikin - 10 times

| ANESTHESIOLOGY | | | | |
|-----------------------|-----------|--------------------------------|--|--|
| Discipline | | Professional | | |
| Department | | Anesthesiology and reanimation | | |
| Course title | | Anesthesia | | |
| Prerequisite | | Basic Subjectss | | |
| Course code | | MED . ٩ ٣٣ | | |
| Academic year | | ٤ | | |
| Semester | | ٩ | Spring | |
| Number of credits | | ٢ | Knowledge | ١ |
| | | | practical | ١ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ١ | ١ | History of anesthesia | Pain and anesthesia, the early history of anesthesiology |
| ٢ | ١ | ١ | Preoperative evaluation and preparation of the patient | Evaluation of the patient Classification of the patient physical status Premedication |
| ٣ | ١ | ١ | Intrubation | Laryngoscopy, indication fo intubation Difficult intubation, complication if intubation |
| ٤ | ١ | ١ | Techniques fo induction of anesthesia | General anesthesia, loco--regional anesthesia Acupunctural anesthesia, phases and signs of general anesthesia |
| ٥ | ١ | ١ | General anesthesia | Ether, nitrous Oxid, halothan, methoxyfluran, enfluran, isofluran, dysfluran, sevofloran, thiopental, ketamine, propofol |
| ٦ | ١ | ١ | Complication of anesthesia | Peri-operative complication, post-operative complication |
| ٧ | ١ | ١ | Neuromuscular blockers (muscle relaxants) | Succinylcholine, D-Tubucurarine, gallamine, pancuronium, non-depolarizing muscle relaxants antagonists |
| ٨ | ١ | ١ | Loco-regional anesthesia | Local anesthesia prototype, topical, in filtration, nerve block, regional of field block, systemic toxicity |
| ٩ | ١ | ١ | Spinal and epidural anesthesia | Definition, anatomy of spinal cord, techniques of spinal and epidural anesthesia, complication fo spinal and apidural anesthesia |
| ١٠ | ١ | ١ | Neuroleptic anesthesia | Definition, relaxigen, post-narcosis phase |
| ١١ | ١ | ١ | Intravenous fluid therapy & blood transfusion | Description and indication fo various solutions (glycosides, normal saline, ringer lactate, sodium bicarbonate, amino acid, MgSo _٤ blood plasma Substitute solutions, fat emulsions), evaluation and decision on blood transfusion, types of transfusion |
| ١٢ | ١ | ١ | ICU monitoring and post-operative care | Vital signs monitoring, respiratory Gas analysis, Affected system, patient discharge criteria form a recovery ward |
| ١٣ | ١ | ١ | Pain management | Negative effects of pain, types of pain, goals of pain treatment |
| ١٤ | ١ | ١ | Cardiopulmonary resuscitation (CPR) | Definition, etiology, clinic, drugs and defibrillation treatment |
| ١٥ | ١ | ١ | Acute respiratory failure | Definition, etiology, resuscitation of acute respiratory failure |

| | | | | |
|----|---|---|--------------|--|
| 16 | 1 | 1 | Tracheostomy | Type of tracheostomy, techniques of tracheostomy |
|----|---|---|--------------|--|

Textbooks and reference books recommended (last edition)

Fundamental of anesthesia, Hugh C Hemmings

Format Hardback | 994 pages, Dimensions 222 x 281 x 40.75mm | 2,017,44g, Publication date 21 Dec 2018, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 2nd Revised edition, Illustrations note Approx. 220 illustrations (220 in full color) ISBN10 0323481108, ISBN13 9780323481106, Bestsellers rank 14,64

Clinical anesthesiology, G, Edward Morgan

Format Paperback | 1120 pages, Dimensions 180 x 236 x 39mm | 1,094g, Publication date 01 Oct 2000, Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Medical, Publication City/Country New York, United States, Language English, Edition Statement 4th edition Illustrations note col. Illustrations, ISBN10 0071423083, ISBN13 9780071423088, Bestsellers rank 220,068

Anesthesiology, David E. Longnecker

Format Hardback | 1696 pages, Dimensions 218,44 x 276,86 x 60,96mm | 3,444g, Publication date 28 Aug 2017, Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Inc.,US Publication City/Country New York, United States, Language English, Edition Statement 3rd edition, Illustrations note 400 Illustrations, unspecified, ISBN10 0071848819, ISBN13 9780071848817, Bestsellers rank 990,044

Miller's anesthesiology

Format Hardback, Dimensions 102,4 x 231,14 x 17,78mm | 507,92gm, Publication date 03 Mar 2010, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Statement 3rd edition, ISBN10 0323306494 ISBN13 9780323306497, Bestsellers rank 2,090,071

BASICS OF PUBLIC HEALTH

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning Objectives

- At the end of Course the students would be able to:**
- Underastand the basic concepts of Public Health.
- Underastand the Medicine Progress in Different Periodes of Humand History.
- Understand Health, Germ Theory of Diseases.
- Describe and Evaluate Health Determinaters.
- Describe WHO's Recommended Health indicaors.
- Understand Primary Health care and Family medicine

| BASICS OF PUBLIC HEALTH | | | | |
|--------------------------------|-----------|---|---|--|
| Discipline | | Professional | | |
| Department | | Health management and administration department | | |
| Course title | | Basics of public health | | |
| Prerequisite | | None | | |
| Course code | | MED ۰۰ ۲۳ | | |
| Academic year | | ۳ | | |
| Semester | | ۰ | | |
| Number of credits | | ۲ | | |
| | | Knowledge | | ۱ |
| | | Practical | | ۱ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ۱ | ۱ | ۱ | History of medicine | Brief introduction of medicine Definition, History, components, PHC in Afghanistan, Priority and needs |
| ۲ | ۱ | ۱ | Germ theory of disease | Definition of medicine Environment, communicable diseases from Environment, communicable diseases from water, water role in communicable diseases |
| ۳ | ۱ | ۱ | Health and health determinants | Definition of health communicable diseases caused by garbage displacement and control, control of sources, classification of environmental health: Air, Water and waste. |
| ۴ | ۱ | ۱ | Introduction of public health | Introduction of public health Perilous wastes, food, Noise, insects and chewing, Light, close environments |
| ۵ | ۱ | ۱ | Essentials of public health | Minitring health status collection and Residence, Environment Dangers, Water: clean water, water pollution, water pollution of sources. |
| ۶ | ۱ | ۱ | Concepts of health and disease | Concepts of health water refinement, purification of water, water chemical purification, improving the provision of water. |
| ۷ | ۱ | ۱ | Concepts of quality of life and standards of life | Intridunion of quality of life what is wastes, Fly, Chewing, water pollution, Dust pollution. |
| ۸ | ۱ | ۱ | Health & development | Concepts of development health and development Type of solid wastes, Dangerous of sweepings, collection and caring sweepings of city, methods of rebuff sweepings. |
| ۹ | ۱ | ۱ | Health indicators | Introduction of health To use of wastes, Air pollution, Trans air pollution. |
| ۱۰ | ۱ | ۱ | Health services philosophies | Health care Introduction of health Noise, trans noise to man, Hearing conservation programs. |
| ۱۱ | ۱ | ۱ | Concepts of disease | Hospital of diseases, importance infections of hospital, Method transfer of micro-organism to hospital. Definition of desease illness and sickness |

| | | | | |
|----|---|---|---------------------------|---|
| ١٢ | ١ | ١ | Concepts of causation | Concepts of causation Medical care personal, Thumb pollex |
| ١٣ | ١ | ١ | Risk factors | Overtures, Antiseptic material. What is risk factor? |
| ١٤ | ١ | ١ | Primary health care (PHC) | Definition. Types of primary health care almata Declaration Principles of PHC hygiene, trans and pollution of food: General method of prevention to second pollutions, General method |
| ١٥ | ١ | ١ | | |
| ١٦ | ١ | ١ | Family medicine | Introduction of family medicine important bacterial and viruses in health food, important point of oxidations food. |

Textbooks & Reference books recommended (last edition)

Marry Jane Schneider , introduction to public health

Format Paperback | ٥٩٥ pages, Dimensions ١٨٠ x ٢٢٦ x ٢٣mm | ٩٨٠g, Publication date ٠١ Apr ٢٠١٢,
Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English,
Edition Statement ٣rd Revised ed. ISBN١٠ ١٤٤٩٦٨٤٧٧٧ ISBN١٣ ٩٧٨١٤٤٩٦٨٤٧٧٨, Bestsellers rank ١,١٤٩,١١٥

Frank,A Saloun and RueyHsieh. Health Economics

Format Hardback | ٨٤٠ pages, Dimensions ٢٠٣ x ٢٢٩ x ٣٥mm | ١,٥٠١,٣٩g, Publication date ٢٧ Jan ٢٠١٧,
Publisher MIT Press Ltd, Imprint MIT Press, Publication City/Country Cambridge, United States, Language English,
Edition New edition, Edition Statement second edition Illustrations note ٨٩ figures, ٤٢ tables; ١٣١ Illustrations,
unspecified, ISBN١٠ ٠٢٦٢٠٣٥١١١ ISBN١٣ ٩٧٨٠٢٦٢٠٣٥١١٨, Bestsellers rank ٢,٥٩١,٨٢٧

Sari , Edelstein , Nutrition in public health

Format Paperback | ٤٨٨ pages, Dimensions ٢٠٣,٢ x ٢٥١,٤٦ x ٢٧,٩٤mm | ٩٦٤g, Publication date ٢٣ Feb ٢٠١٧,
Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English,
Edition Revised, Edition Statement ٤th Revised edition, ISBN١٠ ١٣٢٤١٠٤٦٩٩, ISBN١٣ ٩٧٨١٣٢٤١٠٤٦٩١, Bestsellers
rank ٢,٢٣٦,١٢٤

Cherileyn , Tellman occupational Health and Hygien

Format Paperback | ٤٩٦ pages, Dimensions ١٧٦ x ٢٤٥ x ٢٧,٩٤mm | ٨٩٠g, Publication date ٠١ Jun ٢٠٠٧,
Publisher Francoism, Imprint Allen & Unwin Publication City/Country Australia Language English,
ISBN١٠ ١٧٤١٧٥٠٥٨X, ISBN١٣ ٩٧٨١٧٤١٧٥٠٥٨٤, Bestsellers rank ٤٤٨,٨١

BEHAVIORAL SCIENCE & HEALTH EDUCATION

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
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- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning Objectives

At the end of the course the student should be able to:

- Undersand the concept of behavioral sciences and health education/promotion;
- Understand human behavior and its application in patient care;
- Use principles of ethics in common clinical situations and dilemmas;
- Underdtand the concept of motivation, its impact of human behavior and illness related behavior;
- Identify different social and anthropological factors operating upon health and disease states;
- Understand different types of emotions and their impact of health of the individual;
- Define learning; comprehend different types of learning and conditioning. State methods of effective learning and demonstrate application of learning in treatment;
- Understand different cognitive processes, comprehend memory process, describe short term memory and differentiate with long term memory;
- Use principles of ethics in common clinical setting;
- Deal with the common psychological reaction seen in doctor-patient relationship;
- Comprehend concept of thinking and its application to health care;
- Understand health education and contents of health education;
- Discuss the principles and process of communication for health education

Contents:

| BEHAVIORAL SCIENCE & HEALTH EDUCATION | | | | |
|--|-----------|---------------------------------------|---|---|
| Discipline | | Professional | | |
| Department | | Behavioral science | | |
| Course title | | Behavioral science & health education | | |
| Prerequisite | | None | | |
| Course code | | MED ٠٦٢٤ | | |
| Academic year | | ٣ | | |
| Semester | | ٦ | fall | |
| Number of credits | | ١ | Knowledge | ١ |
| | | | Practical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ١ | ١ | Introduction to behavioral sciences | Traditional vs holistic medicine Definition of chronic disease, Non communicable diseases risk factors, Problems in prevention of chronic communicable diseases. |
| ٢ | ١ | ١ | Introduction ti behavioral sciences | Crisis intervention classification, clinical finding, diagnosis, Differential Diagnosis, Complication, Treatment and treatment of complication. |
| ٣ | ١ | ١ | Medical ethics Professional ism and doctor patient relationship | Relevance of ethics , Etiology, Clinical finding, Diagnosis, Complication, Treatment, Prognosis. |
| ٤ | ١ | ١ | Use of principle of psychology in medical practice | Learning metacognition memory perception |
| ٥ | ١ | ١ | Use of principle of psychology in medical practice | Thinking emotions motivation |
| ٦ | ١ | ١ | Use of principle of psychology in medical practice | Intelligence personality development personality types |
| ٧ | ١ | ١ | Sociology and anthropology in health and disease | Culture beliefs complications, VEBAC) Forces and Vacuum (Definition, indication, procedure, complications) |
| ٨ | ١ | ١ | Psychosocial aspects of health and disease | Psychosocial aspect Definition, Etiology, clinical finding, complication, prevention, management. external breech extraction. |
| ٩ | ١ | ١ | Psychosocial aspects of health and disease | Psychosocial issues cesarean section, forceps & Vacuum) C/S-(Definition, indication, procedure |
| ١٠ | ١ | ١ | Psychosocial aspects of health and disease | Psychosocial aspect Etiology, clinical finding, complication, prevention, management Management, external breech extraction |
| ١١ | ١ | ١ | Health education prmission | Definition of key terms pathogenesis, clinical finding, Amniocetesis, indication for RhoGAM, intrauterine transfusion Delivery plane |

| | | | | |
|----|---|---|------------------------------------|--|
| ١٢ | ١ | ١ | Health education and behavior | Changing concept preeclampsia and Eclampsia): Definition, Pathogenesis, Sign & symptoms, Management, Complication, Prevention, and Treatment. |
| ١٣ | ١ | ١ | Principles of health education | Credibility interest isoimmunization, pathogenesis, clinical finding, Amniocentesis, indication for RhoGAM, intrauterine transfusion Delivery |
| ١٤ | ١ | ١ | Principles of health education | Individual aids general concepts, etiology, effect, diagnosis, management. |
| ١٥ | ١ | ١ | Communication for health education | The communication prosos Anemia in pregnancy UTI in pregnancy Renal disease in pregnancy |
| ١٦ | ١ | ١ | Communication for health education | Barriers of communication health communication function of health communication |

Textbooks & Reference books recommended (last edition)

O,J Sahler Jack Carr , the behavioral science and health care

Format Paperback | ٥٧٨ pages, Dimensions ١٧٧ x ٢٥٤ x ٣٨,١mm | ١,٢٥١,٩١g, Publication date ٠٨ Nov ٢٠١٧,
Publisher Hogrefe Publishing, Publication City/Country Toronto, Canada Language English, Edition Revised, Edition
Statement ٤th Revised edition, ISBN١٠ ٠٨٨٩٣٧٤٨٦٤ ISBN١٣ ٩٧٨٠٨٨٩٣٧٤٨٦٧

Barbara fadem , behavioral science

Format Paperback | ٣٨٤ pages, Dimensions ١٧٨ x ٢٥٤ x ١٧mm | ٧٢٦g, Publication date ٠١ May ٢٠٢٠,
Publisher Wolters Kluwer Health, Publication City/Country United States, Language English, Edition
Statement Eighth, International Edition, ISBN١٠ ١٩٧٥١٥٢٣٩٥ ISBN١٣ ٩٧٨١٩٧٥١٥٢٣٩٠

David Howell behavioral science

Format Hardback | ٦٤٩ pages, Dimensions ٢١٠ x ٢٦٢ x ٣٠mm | ١,٣٨٣g, Publication date ٢٢ Feb ٢٠١٦,
Publisher Cengage Learning, Inc, Imprint CENGAGE Learning Custom Publishing Publication City/Country Mason,
OH, United States, Language English, Edition Statement ٩th edition, ISBN١٠ ١٣٠٦٥٢٩٧٥,
ISBN١٣ ٩٧٨١٣٠٦٥٢٩٧٢, Bestsellers rank ٤٤٨,٥٣٤

PUBLIC HEALTH NUTRITION

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
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- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
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- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Objectives

At the end of the course the student should be able to:

- Understand development of nutrition in public health;
- Describe the main food components (carbohydrate, proteins, fats, vitamins and minerals) and their dietary sources;
- Express human nutritional requirements;
- Understand the development of food based dietary guidelines;
- Describe the deficiency disorders (both macro & micro-nutritional status);
- Explain healthy dfiet and nutrition education & promotion;
- Describe the various methods of measuring the nutritional status;
- Define the importance of food and nutrition policy;
- Describe the nutritional programs in Afghanistan;
- Understand the evaluation of nutrition stasus;
- Identify food safety;

Skills

- Nutritional status assessment in community (for exercise) presentation
- Food adulteration

| PUBLIC HEALTH NUTRITION | | | | |
|--------------------------------|-----------|-------------------------|--|--|
| Discipline | | Professional | | |
| Department | | Behavioral science | | |
| Course title | | Public health nutrition | | |
| Prerequisite | | None | | |
| Course code | | MED · ٦ ٢٣ | | |
| Academic year | | ٣ | | |
| Semester | | ٦ | fall | |
| Number of credits | | ١ | Knowledge | ١ |
| | | | Practical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ١ | ١ | The nutrition science basis to public health nutrition | The origins of modern metabolism, Fats (fatty acids, sources, functions, hydrogenation, fat and diseases), carbohydrate dietary fiber, |
| ٢ | ١ | ١ | Main food component | Macronutrient Protein essential amino acids, function, sources, metabolism, Fats (fatty acids, sources, functions, hydrogenation, fat and diseases), carbohydrate dietary fiber, |
| ٣ | ١ | ١ | Vitamins | Vitamin A, Vitamin D, Vitamin E, Vitamin K |
| ٤ | ١ | ١ | Nutrition science in ti twenty firs century | Molecular nutrition: Thiamine, Riboflavin, Niacin, Vitamin B٦, Pantothenic acid, Folate, Vitamin B١٢, Vitamin C |
| ٥ | ١ | ١ | Development of food based dietary guidelines | Food selection guides Iodine, Fluorin, Zinc, Cupper, Cobalt, Chromium, Selenium, Molybdenum |
| ٦ | ١ | ١ | Mothers and infants | Brest feeding Iodine, Fluorin, Zinc, Cupper, Cobalt, Chromium, Selenium, Molybdenum |
| ٧ | ١ | ١ | Infants | Breast feeding HIV and Basic concept, Energy, energy measurement, Energy requirement, Protein requirement, Assessment of protein, protein quality, |
| ٨ | ١ | ١ | Children and adolescents | Basic model of planned Assessment of nutritional status of protein, requirement of protein intake, Requirement of protein in vulnerable groups, Amino acid requirement, fats, carbohydrate, Balance diet, Dietary goals. |
| ٩ | ١ | ١ | Classifying the food environment | Evidence for environment Low birth weight, Protein energy malnutrition, Xerophthalmia, Nutritional anemia, Iodine deficiency. |
| ١٠ | ١ | ١ | Older / adults | Physiological bais Low birth weight, Protein energy malnutrition, Xerophthalmia, Nutritional anemia, Iodine deficiency. |

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|----|---|---|--------------------------------|---|
| 11 | 1 | 1 | Obesity prevention | The obesity problem Assessment methods, clinical examination, Anthropometry, Biochemical and laboratory assessments, functional indicators, assessment of dietary intake, Vital statistics, assessment of ecological factors, weight proportion, Body mass index. |
| 12 | 1 | 1 | Promotion and communication | What is a healthy diet? Nutrition in pregnancy, Dietary balance in pregnant women, food regime in pregnant women, pregnant women weight. |
| 13 | 1 | 1 | Policy and politics | Why is public health nutrition: Nutrition methods that pregnant women should be avoided, nutrition in lactation, Energy, protein, Vitamins, Minerals. |
| 14 | 1 | 1 | Food value | Food necessity Nutritional aspect of mother milk, immunological aspect of mother milk, Benefit of mother milk, Condition |
| 15 | 1 | 1 | Evaluation of nutrition status | Clinical examination anthropometry biochemistry and lab examination functional evaluation |
| 16 | 1 | 1 | Food safety | Food safety food chain danger zone summary |

Textbooks & Reference books recommended (last edition)

Roger Detels, Oxford textbook of public health

Format Paperback | 1128 pages, Dimensions 221 x 276 x 07mm | 3,76g, Publication date 1 Dec 2017, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Revised, Edition Statement 7th Revised edition, ISBN10 019881013X ISBN13 9780198810131, Bestsellers rank 1,665,767

Nutrition in Public Health 4th Edition, Kindle Editio

Format Hardback. Print Length .593 pages Publication Date, February 9, 2017, File Size 11.34 KB, Publisher Jones & Bartlett Learning; 4th Edition (February 9, 2017) Language English

Caring for Our Children: National Health and Safety Performance Standards Kindle Editio

Format Hardback Print Length, 16.4 page, File Size 77.4 KB, Publication Date : February 19, 2019 ASIN B0YNZWM5N6, Language Englis

L Fleming Fallon. Essentials of Public Health management

Format Paperback | 444 pages, Dimensions 100,19 x 230,12 x 23,11mm | 624g, Publication date 16 Aug 2013, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Revised, Edition Statement 2nd Revised edition, ISBN10 1449688837, ISBN13 9781449688837, Bestsellers rank 1,420,266

Stephen B. Hulley Steven R, Coming, Warren S. Browner

Format Undefined | 381 pages, Publication date 27 Apr 2010, Publisher LIPPINCOTT WILLIAMS & WILKINS, Publication City/Country United States, ISBN10 1479870330, ISBN13 9781479870330

Designing clinical research Basavarajaiah D. M.

Format Hardback | 313 pages, Dimensions 178 x 205mm, Publication date 04 Dec 2020 Publisher Springer Verlag, Singapore, Publication City/Country Singapore, Singapore Language English, Edition Statement 1st ed. 2020, Illustrations note 22 Illustrations, black and white; X, 313 p. 22 illus. ISBN10 9811082092, ISBN13 9789811082097

David L, Goetsch. Occupational Safety and Health

Format Paperback | 716 pages, Dimensions 216 x 279 x 27mm | 1,466g, Publication date 27 Aug 2014, Publisher Pearson Education Limited, Publication City/Country Harlow, United Kingdom, Language English, Edition Statement 8th edition, ISBN10 1292061990 ISBN13 9781292061993, Bestsellers rank 2,260,089

Daniel , Wayne Biostatistics , a foundation for analysis in the health sciences

Format Paperback | 720 pages, Dimensions 200 x 251 x 20mm | 1,224g, Publication date 13 Nov 2018, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 11th Edition, ISBN10 1119282373, ISBN13 9781119282372

James F, Jekel , Epidemiology , biostatistics and preventive medicine

Format Paperback Dimensions 216 x 276mm, Publication date 18 May 2007, Publisher Saunders, Language English, Edition Statement 3rd ed. ISBN10 1400700070 ISBN13 9781400700078

BK Mahajan, methodes in biostatistics

Format Paperback | 488 pages, Dimensions 140 x 216mm, Publication date 28 Feb 2018 Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Edition Revised, Edition Statement 3th Revised edition, ISBN10 9302703103 ISBN13 9789302703104

ENVIRONMENTAL & OCCUPATIONAL HEALTH

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to 70% with reasonable excuse.
- More than 70% of absence is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from 10 points
- Students factory score is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scoring policy

- How to evaluate and how to divide the scores in accordance with article 19 of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) 20%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam 20%
- Final semester exam 60%
- Total 100%

Objectives

At the end of the course the student should be able to:

- Describe the physical environment inside the home, at the workplace and in the community and its impact on health and diseases;
- Describe the family environment;
- Suggest appropriate methods for improving the internal/external environment;
- Define safe water. Describe the sources of water (tap, hand pump, well);
- State the criteria (national and WHO) for safe water;
- Describe appropriate methods for making water safe at the domiciliary level;
- Describe sources of waste and methods of waste control at individual and community levels.
- Define air pollution, causes of air pollution and describe appropriate measures of control;
- Describe the effects of noise and radiation on health;
- Describe the common vectors of diseases and methods of vector control;
- Describe the various insecticides that are used for vector control;
- Describe insecticide resistance;
- Occupational health in health workers, medical measures, engineering measures, legislation;
- Monitoring the workplace, control of occupational exposures, toxic chemicals, physical factors, biological agents;
- Occupational health in health worker; organization, diagnosis and prevention of diseases in health workers, identification of occupational health problem in special group.
- Identification of occupational health problem in special group.

Course Contents

| ENVIRONMENTAL & OCCUPATIONAL HEALTH | | | | |
|--|-----------|------------|--|---|
| Discipline | | | Professional | |
| Department | | | Environmental health | |
| Course title | | | Environmental and occupational health | |
| Prerequisite | | | None | |
| Course code | | | MED . ۹ ۲۳ | |
| Academic year | | | ε | |
| Semester | | ۷ | Spring | |
| Number of credits | | ۱ | Knowledge | ۱ |
| | | | Practical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ۱ | ۱ | ۱ | Environmental health | Definition, History, components, PHC in Afghanistan, Priority and needs |
| ۲ | ۱ | ۱ | Personal environment | Children, young, people and elderly |
| ۳ | ۱ | ۱ | Air | Type of solid wastes, Dangerous of sweepings, collection and caring sweepings of city, methods of rebuff sweepings. |
| ε | ۱ | ۱ | Food | Food borne illness General method of prevention to second pollutions, General method preservation of food, food borne diseases. |
| ۵ | ۱ | ۱ | Water | General information , communicable diseases caused by garbage displacement and control, control of sources, classification of environmental health: Air, Water and waste. |
| ۶ | ۱ | ۱ | Waste | Liquid waste solid waste |
| ۷ | ۱ | ۱ | Noise | general collection and Residence, Environment Dangers, Water: clean water, water pollution, water pollution of sources |
| ۸ | ۱ | ۱ | Radiation | Generall information what is wastes, Fly, Chewing, water pollution, Dust pollution. |
| ۹ | ۱ | ۱ | Rodents and insects | Rodet releted To use of wastes, Air pollution, Trans air pollution. |
| ۱۰ | ۱ | ۱ | Occupational health | Diseases due to physical Hospital of diseases, importance infections of hospital, Method transfer of micro-organism to hospital. |
| ۱۱ | ۱ | ۱ | Type and sources of occupational exposures | Physical chemical Noise, trans noise to man, Hearing conservation programs organism to hospital. |
| ۱۲ | ۱ | ۱ | Occupation diseases | Diseases due to Medical care personal, Thumb pollex. |
| ۱۳ | ۱ | ۱ | Occupiolnal health in health wikers | Medical measurse Overtures, Antiseptic material. |
| ۱ε | ۱ | ۱ | Monitoring the work place | Control of occupational Food hygiene, trans and pollution of food. |

| | | | | |
|----|---|---|--|--|
| 10 | 1 | 1 | Occupational health in health worker | Organization diagnosis and prevention of diseases in health worker |
| 16 | 1 | 1 | Identification of occupational health problem in special group | Identification of occupation health problem in special group |

Textbooks & Reference books recommended (last edition)

Roger Detels, Oxford textbook of public health

Format Paperback | 1128 pages, Dimensions 221 x 276 x 07mm | 3,76g, Publication date 1 Dec 2017, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Revised, Edition Statement 7th Revised edition, ISBN10 019881013X ISBN13 9780198810131, Bestsellers rank 1,664,767

Ann Aschengrau, Essentials of Epidemiology in public health Format Hardback | 528 pages, Dimensions 177,8 x 226,06 x 33,02mm | 737g, Publication date 12 Sep 2018, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Revised, Edition Statement 4th Revised edition, ISBN10 1324132300m, ISBN13 9781324132302, Bestsellers rank 760,263

L Fleming Fallon. Essentials of Public Health management

Format Paperback | 444 pages, Dimensions 100,19 x 230,12 x 23,11mm | 624g, Publication date 16 Aug 2013, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Revised, Edition Statement 2nd Revised edition, ISBN10 1449688837, ISBN13 9781449688837, Bestsellers rank 1,420,266

Stephen B. Hulley Steven R, Coming, Warren S. Browner

Format Undefined | 381 pages, Publication date 27 Apr 2010, Publisher LIPPINCOTT WILLIAMS & WILKINS, Publication City/Country United States, ISBN10 1469870330, ISBN13 9781469870333

Designing clinical research Basavarajaiah D. M.

Format Hardback | 312 pages, Dimensions 178 x 204mm, Publication date 04 Dec 2020 Publisher Springer Verlag, Singapore, Publication City/Country Singapore, Singapore Language English, Edition Statement 1st ed. 2020, Illustrations note 22 Illustrations, black and white; X, 313 p. 22 illus. ISBN10 9811082092, ISBN13 9789811082097

David L, Goetsch. Occupational Safety and Health

Format Paperback | 716 pages, Dimensions 211 x 279 x 27mm | 1,466g, Publication date 27 Aug 2014, Publisher Pearson Education Limited, Publication City/Country Harlow, United Kingdom, Language English, Edition Statement 8th edition, ISBN10 1292061990 ISBN13 9781292061993, Bestsellers rank 2,270,089

Daniel , Wayne Biostatistics , a foundation for analysis in the health sciences

Format Paperback | 720 pages, Dimensions 200 x 251 x 20mm | 1,224g, Publication date 13 Nov 2018, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 11th Edition, ISBN10 1119282373, ISBN13 9781119282372

James F, Jekel , Epidemiology , biostatistics and preventive medicine

Format Paperback Dimensions 216 x 276mm, Publication date 18 May 2007, Publisher Saunders, Language English, Edition Statement 7rd ed. ISBN10 1400700070 ISBN13 9781400700078

BK Mahajan, methodes in biostatistics

Format Paperback | 488 pages, Dimensions 140 x 216mm, Publication date 28 Feb 2018 Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Edition Revised, Edition Statement 9th Revised edition, ISBN10 9302703103 ISBN13 9789302703104

EPIDEMIOLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Objectives

At the end of the course the student should be able to:

- Understand the basic concepts and application of epicemiology;
- Describe epidemiological measures of health and diseases;
- Describe the epicemiological measures of health and diseases: association and impact;
- Differentiate between different type of studies i.e. cross-sectional, ecological cohort, case-control, and intervention studies;
- Interpret the results of epidemiological studies;
- Understand the prevention strategies;
- Know epidemiological surveillence and routine date;
- Describe screening and diagnostic tests

Course Contents:

| EPIDEMIOLOGY | | | | |
|---------------------|-----------|------------------------------|--|---|
| Discipline | | Professional | | |
| Department | | Epidemiology | | |
| Course title | | Introduction to epidemiology | | |
| Prerequisite | | None | | |
| Course code | | MED ٠٨ ٢٣ | | |
| Academic year | | ٤ | | |
| Semester | | ٨ | | |
| Number of credits | | ١ | | |
| | | Knowledge | | ١ |
| | | practical | | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ١ | ١ | Basic concepts and application of epidemiology | Studying epidemiology distribution and determinants of health status or even the epidemiological approach what who were when why models of causation of diseases |
| ٢ | ١ | ١ | Basic concepts and application of epidemiology | Natural history of diseases applications of epidemiology in public health community health assessment and priority setting evaluating health interventions and programs preventing diseases and promoting health improving diagnosis treatment and prognosis of clinical diseases |
| ٣ | ١ | ١ | Epidemiological measures of health and diseases frequency | Definition of a case and measure of diseases frequency prevalence incidence risk or cumulative incidence odd and incidence rate |
| ٤ | ١ | ١ | Epidemiological measures of health and diseases frequency | Use of frequency measures and crude and specific rates standardized rates direct standardization an in direct standardization |
| ٥ | ١ | ١ | Epidemiological measures of health and diseases association and impact | Measures of exposure effect and impact relative measures risk ratio rate ratio odds ratio absolute measures attributable risk population attributable risk and population attributable fraction |
| ٦ | ١ | ١ | Epidemiological measures of health and diseases association and impact | Selection of appropriate measure for different study design cross sectional ecological cohort study case control and intervention study |
| ٧ | ١ | | Cross-sectional studies | What is a cross-sectional study? Descriptive and analytical studies, study design, sampling, data collection |
| ٨ | ١ | | Cross-sectional studies | Analysis, and strengths and weaknesses |
| ٩ | ١ | | Ecological studies | What is an ecological study? Why study groups? Multi-group and time-trend studies, analysis and interpretation |
| ١٠ | ١ | | Cohort studies | What is a cohort? Types of cohort study? Study design: selection fo the study population, exposures, follow-up and outcomes, analysis strengths and weaknesses |
| ١١ | ١ | | Case-control studies | Study design, hypothesis, selection of cases, selection fo controls, and measuring exposures, Analysis and interpretation, bias, confounding and strengths and weaknesses |

| | | | | |
|----|---|--|--|--|
| ١٢ | ١ | | Intervention studies | types fo intervention study, study, study design, selection of population, allocation fo treatment regiments, efficacy and effectivenesss, other types of study design |
| ١٣ | ١ | | Intervention studies | Measuring outcome, analysis, interpretation, ethical issues, and strengths and weaknesses |
| ١٤ | ١ | | Interpretation of the results of epidemiological studies | Biases: selection bias, information bias, differential misclassification, non-differential misclassification and avoiding information bias; and confounding and control of confounding role of chance determining a cause-effecnt relationship: temporal dose-response, strength of association. |
| ١٥ | ١ | | Prevention strategies | Prevention medicine, approaches to prevention, primary prevention, secondary prevention, tertiary prevention, and high risk strategies versus population strategies, epidemiological surveillance and routine data, public health surveillance, communicable diseases. |
| ١٦ | ١ | | Screening and diagnostic tests | Definition and purpose of screening, mass or targeted screening, reliability and validity of screening test, predictive value, ethics in screening and criteria for screening, evaluating screening program: relative burden of diseases, feasibility, effectiveness, biases, cost and study design for evaluating screening |

Textbooks & Reference books recommended (last edition

Ann Aschengrau, Essentials of Epidemiology in public health Format Hardback | ٥٢٨ pages, Dimensions ١٧٧,٨ x ٢٢٦,٠٦ x ٣٣,٠٢mm | ٧٢٧g, Publication date ١٢ Sep ٢٠١٨, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Revised, Edition Statement ٤th Revised edition, ISBN١٠ ١٣٢٤١٣٢٣٥٠m, ISBN١٣ ٩٧٨١٣٢٤١٣٢٣٥٢, Bestsellers rank ٧٦٥,٢٦٣

Essential Epidemiology : An Introduction for Students and Health Professional

Format Paperback | ٤٥٠ pages, Dimensions ١٩٠ x ٢٤٦ x ٢٢mm | ٩٩٠g, Publication date ١٨ Jan ٢٠١٨, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, Edition Revised, Edition Statement ٣rd Revised edition, Illustrations note ٦٦ Tables, black and white; ٣٣ Halftones, black and white; ٥٥ Line drawings, black and white ISBN١٠ ١١٠٧٥٢٩١٥٨, Bestsellers rank ٣٣,١١٢

Gordis Epidemiology

Format Paperback | ٤٣٣ pages, Dimensions ١٩١ x ٢٣٥ x ٢٠,٣٢mm | ٨٨٤,٥١g, Publication date ٢٣ Sep ٢٠٢٠, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ٦th Revised edition Illustrations note Approx. ٤٢٦ illustrations (٣٢٠ in full color) ISBN١٠ ٠٣٢٣٥٥٢٢٩٣ ISBN١٣ ٩٧٨٠٣٢٣٥٥٢٢٩٥, Bestsellers rank ١٠٧,٦١٧

Essential Epidemiology

Format Mixed media product | ٥٠٤ pages, Dimensions ١٩٠ x ٢٥٥ x ٢٠mm | ٩٨٠g, Publication date ٢٥ Jun ٢٠٢٠, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, Edition Revised, Edition Statement ٤th Revised edition, Illustrations note Worked examples or Exercises; ٦١ Tables, color; ٦١ Tables, black and white; ١٧١ Line drawings, color, ISBN١٠ ١١٠٨٧٦٦٨٠٣,

James F, Jekel , Epidemiology , biostatistics and preventive medicine

Format Paperback Dimensions ٢١٦ x ٢٧٦mm, Publication date ١٨ May ٢٠٠٧, Publisher Saunders, Language English, Edition Statement ٣rd ed.ISBN١٠ ١٤٥٥٧٥٥٥٧٥ ISBN١٣ ٩٧٨١٤٥٥٧٥٥٥٧٨

BIOSTATISTICS

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to 5% with reasonable excuse.
- More than 5% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from 10 points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article 19 of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) 20%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam 20%
- Final semester exam 60%
- Total 100%

Learning objectives

At the end of the course the student should be able to:

- Describe the process of measurement;
- Describe the type of studies
- Calculate and present frequency distribution
- Familiarize with summary statistics central location and measure of dispersion
- Describe the probability concepts;
- Familiarize with binomial probity distribution
- Describe normal probabilities destitution
- Introduction to statistical inference
- Basics of hypotheses testing
- Basic of confidence intervals

| BASIC BIOSTATISTICS | | | | |
|----------------------------|-----------|---------------------|---------------------------------------|---|
| Discipline | | Professional | | |
| Department | | Biostatistics | | |
| Course title | | Basic biostatistics | | |
| Prerequisite | | Epidemiology | | |
| Course code | | MED ١١ ٢٣ | | |
| Academic year | | ٥ | | |
| Semester | | ١١ | Spring | |
| Number of credits | | ١ | Knowledge | ١ |
| | | | Practical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Laboratory | | |
| ١ | ١ | ١ | Measurement | What is biostatistics? Organizing data type of measurements data quality and exercise |
| ٢ | ١ | ١ | Type of studies: surveys | Simple random samples table of random digits other types of probability samples |
| ٣ | ١ | ١ | Type of studies: comparative studies | The basics explanatory variables and response variable confounding factors and treatments random assignment of treatment blinding and ethics |
| ٤ | ١ | ١ | Frequency distribution: stem plots | Shape location spread additional illustrations of stem plots splitting stem values how many stem values back to back tem plots frequency tables class interval frequency table additional frequency charts |
| ٥ | ١ | ١ | Summary statistics central location | Mean mode median and their comparison range quartiles ° point summary and interquartile range and box plot variance and standard deviation SD facts about SD and selecting summary statistics |
| ٦ | ١ | ١ | Probability concepts | What is probability? Types of random variables discrete random carries continuous random variable more rules and properties of probability |
| ٧ | ١ | ١ | Binomial probability distribution | Binomial random variables calculating binomial probabilities cumulative probabilities, probability calculators expected value and variance of binomial distribution to help make judgment |
| ٨ | ١ | ١ | Normal probabilities distribution | Normal distribution: a heuristic example characteristics of normal distributions √ rule and determining normal probabilities standarzning values the standard normal table probabilities for ranges of random variables |
| ٩ | ١ | ١ | Normal probabilities distribution | Finding values that correspond to normal probabilities terminology and notation and assessing departures from normality |
| ١٠ | ١ | ١ | Introduction to statistical inference | Concept sampling variability parameters and statistics sampling behavior of mean the effect of increasing the sample size and sampling behavior of count and proportion the normal approximation to the binomial |
| ١١ | ١ | ١ | Basics of hypotheses testing | The null and alternative hypotheses test statistics p value significance level one sample z test and power and sample size |

| | | | | |
|----|---|---|---|---|
| 12 | 1 | 1 | Basic of confidence intervals | Introduction to estimation confidence level for when σ is unknown sample size requirements and relationship between hypothesis testing and confidence interval |
| 13 | 1 | 1 | Inference about mean | Estimated standard error students distribution one sample test confidence interval for mean paired sample condition for inference sample size and power |
| 14 | 1 | 1 | Comparing independent mean | Paired and independent samples exploratory and descriptive statistics inference about mean difference equal variance t procedure conditions for inference sample size and power |
| 15 | 1 | 1 | Comparing several mean one way analysis for variance | Descriptive statistics the problem of multiple comparison analysis of variance ANOVA post hoc comparison |
| 16 | 1 | 1 | Comparing several means one way analysis for variance | The equal variance assumption introduction to nonparametric tests |

Textbooks & Reference books recommended (last edition)

L Fleming Fallon. Essentials of Public Health management

Format Paperback | 444 pages, Dimensions 100,19 x 230,12 x 23,11mm | 624g, Publication date 16 Aug 2013, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Revised, Edition Statement 2nd Revised edition, ISBN10 1459688837, ISBN13 9781459688837, Bestsellers rank 1,420,266

Stephen B. Hulley Steven R, Coming, Warren S. Browner

Format Undefined | 313 pages, Publication date 27 Apr 2010, Publisher LIPPINCOTT WILLIAMS & WILKINS, Publication City/Country United States, ISBN10 1479870330, ISBN13 9781479870330

Designing clinical research Basavarajaiah D. M.

Format Hardback | 313 pages, Dimensions 178 x 204mm, Publication date 04 Dec 2020 Publisher Springer Verlag, Singapore, Publication City/Country Singapore, Singapore Language English, Edition Statement 1st ed. 2020, Illustrations note 22 Illustrations, black and white; X, 313 p. 22 illus. ISBN10 9811082092, ISBN13 9789811082092

David L, Goetsch. Occupational Safety and Health

Format Paperback | 716 pages, Dimensions 216 x 279 x 27mm | 1,476g, Publication date 27 Aug 2014, Publisher Pearson Education Limited, Publication City/Country Harlow, United Kingdom, Language English, Edition Statement 4th edition, ISBN10 1292061990 ISBN13 9781292061993, Bestsellers rank 2,260,089

Daniel , Wayne Biostatistics , a foundation for analysis in the health sciences

Format Paperback | 720 pages, Dimensions 200 x 201 x 20mm | 1,224g, Publication date 13 Nov 2018, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 11th Edition, ISBN10 1119282373, ISBN13 9781119282372

James F, Jekel , Epidemiology , biostatistics and preventive medicine

Format Paperback Dimensions 216 x 276mm, Publication date 18 May 2007, Publisher Saunders, Language English, Edition Statement 7rd ed. ISBN10 1400700070 ISBN13 9781400700078

HEALTH MANAGEMENT

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Learning objectives

The management and leadership module is designed to provide students with the tools to analyze and practice management and leadership as it relates to health and social care.

At the end of the course, the student would be able to:

- Understand the concept of management and leadership
- Understand the role, skills and qualities of managers and describe three fundamental rules for managing others
- Describe and evaluate the developments in leadership and management thinking; review and critically analyze management and leadership theories and how they can be applied in practice
- Identify factors that determine organizational culture (s) and their impact on effective management and leadership

| HEALTH MANAGEMENT | | | | |
|--------------------------|-----------|---|---------------------------------|--|
| Discipline | | Professional | | |
| Department | | Health Management and Administration Department | | |
| Course title | | Health Management | | |
| Prerequisite | | None | | |
| Course code | | MED ١٠ ٢٣ | | |
| Academic year | | V | | |
| Semester | | ١ | Fall | |
| Number of credits | | ١ | Knowledge | ١ |
| | | | practical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Clerkship | | |
| ١ | ١ | ١ | The basics of Management | The basics of good management complicated easy management and simple hard management concepts fundament need of management nature of management need of mangers for organizations |
| ٢ | ١ | ١ | Managerial skills and qualities | Conceptual ,skill , Human skill, managerial competencies , technical skill , roles and qualities |
| ٣ | ١ | ١ | Management Functions | Principles of management function of management ,leading ,organizing , coordinating controlling |
| ٤ | ١ | ١ | Management Functions | Coordinating controlling key differences between leaders and managers |
| ٥ | ١ | ١ | Organization | Definition of organization , types of organization, function of an organization , external a and internal factors affects on organization , organizational behavior , organizational structure , and organizational chart |
| ٦ | ١ | ١ | Team building | Definition of team definition of group, differences among team and group , team development steps, forming , storming ,Norming , performing skills required in building team. |
| ٧ | ١ | ١ | Human resource management | Activities of human resource management, human resource planning , job analysis , human resource cycle, human resource management in health sector, human resource development in health car |
| ٨ | ١ | ١ | Recruitment process | key stages in the recruitment and selection process job description , person, specification, advertisement , further particular , short listing interview , References final decision . Discrimination , favoritism , Nepotism, and corruption |
| ٩ | ١ | ١ | Performance Management | Theoretical roots of performance management , performance management system appraisal interview appraisal and cateer development |
| ١٠ | ١ | ١ | Evaluation | Need for measuring and evaluating performance , types of evaluating performance ,, productivity , capacity , capacity utilization , benchmarking |
| ١١ | ١ | ١ | Quality Management | Concepts of quality features the importance of quality , quality chain , total quality management, stags of quality management . |
| ١٢ | ١ | ١ | Change Management | Needs for implementing change in organization, factors causing change , Fundamental changes change fundamental changes implementing change |

| | | | | |
|----|---|---|--|---|
| 13 | 1 | 1 | Team Management | Concepts of time management self management ,Development time management skills, strategies on using time priority setting |
| 14 | 1 | 1 | Supervision Monitoring and Evaluation | Definition of supervision monitoring and evaluation , difference between supervision monitoring and evaluation skills , required for effective supervision , monitoring and evaluation why do monitoring and evaluation |
| 15 | 1 | 1 | Health Management information system {HMIS } | Introduction of HMIS importance of HMIS ,expectation of country health information system , sources of information about the country health information system |
| 16 | 1 | 1 | Funding health care System | Key functions involved in funding health care system , community financing loans grants Donation out of pocket payments, private health insurance purchasing and revenue collection |

Textbooks & Reference books recommended (last edition)

Essentials of Management and Leadership in Public Health (Essential Public Health) Publication
 Format Paperback Date : May 20, 2010 File Size : 2.77 KB, Word Wise, Print Length : 194 pages, Publisher Jones & Bartlett Learning; 1st Edition (May 20, 2010). Publication Date : May 20, 2010.

L Fleming Fallon. Essentials of Public Health management

Format Paperback | 444 pages, Dimensions 100,19 x 230,12 x 23,11mm | 72g, Publication date 16 Aug 2013, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Revised, Edition Statement 2nd Revised edition, ISBN10 1449688837, ISBN13 9781449688837, Bestsellers rank 1,420,266

Stephen B. Hulley Steven R, Coming, Warren S. Browner

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Designing clinical research Basavarajaiah D. M.

Format Hardback | 313 pages, Dimensions 178 x 204mm, Publication date 04 Dec 2020 Publisher Springer Verlag, Singapore, Publication City/Country Singapore, Singapore Language English, Edition Statement 1st ed. 2020, Illustrations note 22 Illustrations, black and white; X, 313 p. 22 illus.ISBN10 9811082092, ISBN13 9789811082092

Daniel , Wayne Biostatistics , a foundation for analysis in the health sciences

Format Paperback | 720 pages, Dimensions 200 x 201 x 20mm | 1,22g, Publication date 13 Nov 2018, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 11th Edition, ISBN10 1119282373, ISBN13 9781119282373

James F, Jekel , Epidemiology , biostatistics and preventive medicine

Format Paperback Dimensions 216 x 276mm, Publication date 18 May 2007, Publisher Saunders, Language English, Edition Statement 7rd ed.ISBN10 1400700070 ISBN13 9781400700070

HEALTH POLICY AND HEALTH ECONOMICS

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives

At the end of the course, the student would be able to:

- Understand concept health policy
- Understand basics concepts of health economies
- Describe the political systems, factors influencing policy
- Understand the steps policy formulating
- Understand Afghanistan health policy, BPHS and EPHS
- Understand different theories about economy, health economy
- Identify demand and supply on health care financing
- Describe and evaluate the health insurance and health financing
- Identify challenges to health financing, different options for health financing, health sector reform and options for financing

| HEALT POLICY & HEALTH ECONOMICS | | | | |
|--|-----------|---|--|--|
| Discipline | | Professional | | |
| Department | | Health Management and Administration Department | | |
| Course title | | Health policy and health Economics | | |
| Prerequisite | | None | | |
| Course code | | MED ۱۱ ۲۳ | | |
| Academic year | | VI | | |
| Semester | | ۱۱ | Spring | |
| Number of credits | | ۱ | Knowledge | ۱ |
| | | | Practical | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Clerkship | | |
| ۱ | ۱ | | Introduction of policy | Definition of policy importance of policy ,policy from different views the importance of international healthy policy analysis |
| ۲ | ۱ | | Policy and politics | How does politics affect participation in health policy the state ,s role in health ? |
| ۳ | ۱ | | Political system and health policy | Defining the political system, participation in the public policy making forms of participation , liberal democratic system Egalitarian authoritarian system traditional in egalitarian system |
| ۴ | ۱ | | Exogenous factors affects policy | Introduction of external factors which affect policy and decision making situational factors and Environmental factors structural factors and cultural factors |
| ۵ | ۱ | | Introduction of system | Definition of system level of system importance of the systemic thinking |
| ۶ | ۱ | | Afghanistan health system | Introduction of country health system top health priorities of Afghanistan health policy and strategy |
| ۷ | ۱ | | Basic package of health services | Introduction of basic package of health services importance of BPHS component of BPHS level of services of BPHS health post sub center basic health center comprehensive health center |
| ۸ | ۱ | | Essential package of hospital services | Introduction of essential package of hospital services components of EPHS level of services district hospital provincial hospital regional hospital |
| ۹ | ۱ | | Introduction of health economics | Introduction different economic theories concept of health economics utility resources |
| ۱۰ | ۱ | | Introduction of health economics | Production commodity market welfare price cost fixed variable cost and opportunity cost |
| ۱۱ | ۱ | | Health financing | Health financing function collection of revenue pooling risk allocation of recurs and purchasing health services public privet partnership |
| ۱۲ | ۱ | | Health insurance | National health services system social health insurance community based health insurance private health insurance |
| ۱۳ | ۱ | | Challenges of health insurance | Domestic resources mobilization induction user fees promoting pooling of risk increment of efficiency and equity in public expenditure |
| ۱۴ | ۱ | | Financing and health sector reform | Introduction of health sector reform financing strategy socio economic development fiscal capacity implement ability optical accountability |
| ۱۵ | ۱ | | Judgment of types and options of financing | Introduction of equity in provision of health services risk pooling economical affects financing option general revenue |

| | | | |
|----|---|---------------|---|
| 16 | 1 | Social health | Introduction of social health insurance equity risk pooling economic effects implementation ability |
|----|---|---------------|---|

Textbooks & Reference books recommended (last edition)

Marry Jane Schneider , introduction to public health

Format Paperback | 900 pages, Dimensions 18 x 226 x 23mm | 980g, Publication date 01 Apr 2012, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Statement 7rd Revised ed. ISBN10 1449684777 ISBN13 9781449684778, Bestsellers rank 1,149,110

Frank, A Saloun and Ruey Hsieh. Health Economics

Format Hardback | 440 pages, Dimensions 203 x 229 x 30mm | 1,001,39g, Publication date 27 Jan 2017, Publisher MIT Press Ltd, Imprint MIT Press, Publication City/Country Cambridge, United States, Language English, Edition New edition, Edition Statement second edition Illustrations note 89 figures, 42 tables; 131 Illustrations, unspecified, ISBN10 0262030111 ISBN13 9780262030118, Bestsellers rank 2,091,827

Sari , Edelstein , Nutrition in public health

Format Paperback | 488 pages, Dimensions 202 x 201,46 x 27,94mm | 964g, Publication date 23 Feb 2017, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Revised, Edition Statement 4th Revised edition, ISBN10 1324104699, ISBN13 9781324104691, Bestsellers rank 2,237,124

Cherileyn , Tellman occupational Health and Hygien

Format Paperback | 496 pages, Dimensions 176 x 240 x 27,94mm | 890g, Publication date 01 Jun 2007, Publisher Francoism, Imprint Allen & Unwin Publication City/Country Australia Language English, ISBN10 174170088X, ISBN13 9781741700884, Bestsellers rank 448,81

David L, Goetsch. Occupational Safety and Health

Format Paperback | 716 pages, Dimensions 216 x 279 x 27mm | 1,466g, Publication date 27 Aug 2014, Publisher Pearson Education Limited, Publication City/Country Harlow, United Kingdom, Language English, Edition Statement 4th edition, ISBN10 1292061990 ISBN13 9781292061993, Bestsellers rank 2,260,089

Daniel , Wayne Biostatistics , a foundation for analysis in the health sciences

Format Paperback | 720 pages, Dimensions 200 x 201 x 20mm | 1,224g, Publication date 13 Nov 2018, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 11th Edition, ISBN10 1119282373, ISBN13 9781119282372

James F, Jekel , Epidemiology , biostatistics and preventive medicine

Format Paperback Dimensions 216 x 276mm, Publication date 18 May 2007, Publisher Saunders, Language English, Edition Statement 7rd ed. ISBN10 1400700070 ISBN13 9781400700078

BK Mahajan, methodes in biostatistics

Format Paperback | 488 pages, Dimensions 140 x 216mm, Publication date 28 Feb 2018 Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Edition Revised, Edition Statement 9th Revised edition, ISBN10 9302703102 ISBN13 9789302703104

DERMATOLOGY AND VENEREAL DISEASES

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

Skin diseases are quite prevalent I the community and a large number of patients attending to any hospital OPD come with the complaints related to skin diseases. Most skin diseases can be easily diagnosed and managed with adequate amounts of training at the MD level. This syllabus is designed as a comprehensive course for graduates in dermatology and venereal diseases. The goal of the course is to teach students: to diagnose and manage. Common skin and venereal diseases

Learning objectives

a- Knowledge

At the end of the training a candidate should be able to:

- Diagnose and manage common skin diseases, sexually transmitted diseases and leprosy;
- To diagnose and manage common medical emergencies related to skin diseases, leprosy and sexually transmitted diseases
- To familiarize them with the common laboratory diagnostic skills which help in the confirmation of diagnosis.
- To train them for preventive measures at individual and community levels against communicable skin diseases including sexually transmitted diseases and leprosy
- To develop a compassionate attitude towards the patients and their attendants

Skills

- History taking in dermatology, sexually Transmitted Diseases (STD) and leprosy
- Clinical examination and description of cutaneous findings in a systematic way in dermatology, sexually transmitted diseases and leprosy
- To have a broad idea and approach to manage common skin diseases, sexually transmitted diseases and leprosy

- Systematic examination in relation to dermatologic diseases
- To develop skills to do day-to-day common laboratory tests and their interpretation which help in the diagnosis

Skills by (demonstration)

- Skin diseases like acne vulgaris, scabies, pyoderma, pediculosis, fungal infection of skin, alopecia, sexually transmitted diseases, auto immune diseases, bullous disorders, papulosquamous diseases etc. are demonstrated and discussed during the practical period

Course content

| DERMATOLOGY & VENEREAL DISESES | | | | |
|---|-----------|---------------------------------|--|---|
| Discipline | | Professional and skill | | |
| Department | | dermatology | | |
| Course title | | Dermatology & venereal diseases | | |
| Prerequisite | | Basic Subjects | | |
| Course code | | MED . 9 3 4 | | |
| Academic year | | V | | |
| Semester | | 9 | Spring | |
| Number of credits | | 4 | Knowledge | 2 |
| | | | Practical | 2 |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Clerkship | | |
| 1 | 2 | 2 | Anatomy of the skin physiology of the skin sign and symptoms of the diseases | Structure of epidermis dermis and hypodermis vessels nerves and corpuscles sweats and sebaceous glands hairs and nails protective function heat regulation function secretion and exception gaseous exchange through skin sense organ metabolic function storage function and absorption bujection symptoms offensive signs and secondary |
| 2 | 2 | 2 | Histopathology terms essentials of local treatment | Histopathology of the skin diseases solution lotion ointment cream past and powder methods of topical application obbelusive bandage intra lesion injection |
| 3 | 2 | 2 | Eczema and dermatitis | Etiologic classification of eczema histopathology clinical study sebroohic dermatitis |
| | | | Photo dermatitis contact dermatitis diagnosis and treatment | Contact dermatitis photo dermatitis diagnosis and differential diagnosis treatment general measures specific treatment |
| 4 | 2 | 2 | Allergy and urticarial | Antigen and antibody allergic reaction shock anaphylactic non allergic reactions definition and etiology of rutecarisa clinical study diagnosis and treatment |
| | | | Pyoderma | Etiology superficial infection impetigo interior and paronychia cellulitis erysipelas folliculitis mycosis barbate furuncle carbuncle hidradentitis supportive |
| 5 | 2 | 2 | Scabies and pediculosis | Scabies epidemiology immunology clinic, clinical forms. Treatment pediulosis pediculosis capitals corpora's and pubis |
| 6 | 2 | 2 | Pityriasis rosea | Lichen planes etiology histopathology clinical study diagnosis deferential diagnosis clinical forms and treatment pityriasis rose definition etiology clinical study course differentia diathesis and treatment psoriasis and treatment psoriasis etiology pathology histopathology clinical study clinical forms diagnosis deferential diagnosis and treatment |

Muslim Institute of Higher Education/Curriculum & Course Content for MD Degree

| | | | | |
|----|---|---|---|--|
| ٧ | ٢ | ٢ | Dermatophytosis tinea unguium tinea versicolor and candidiasis | Classification tinea capitis tinea facie tinea barbae tinea corporis tinea cruris tinea axillaries tinea magnum and tinea pedis onychomycosis pityriasis vesicular candidiasis oral candidiasis candida paronychia diagnosis of fungus |
| ٨ | ٢ | ٢ | Bullous diseases bullous pemphigoid erythema multiformis during | Induction pemphigus vulgaris pemphigus veterans pemphigus fallacious pemphigus erythematous differential diagnosis and treatment pemphigoid etiology pathogenesis clinical study, clinical forms and treatment during etiology clinical study histology diagnosis and treatment |
| ٩ | ٢ | ٢ | TB of the skin | Classification of TB cutis tuberculosis chancr lupus vulgaris etiology clinic course and treatment TB cutis verrucae clinic forms diagnosis and treatment |
| | | | Cutaneous leishmania | Etiology and epidemiology of leishmania clinic and diagnostic criteria clinical forms course and treatment |
| ١٠ | ٢ | ٢ | Anomalies pigmentation | Melanoderma Chloasma Ephelides Lukoderma Etiology pathogenesis epidemiology clinical study clinical forms differential diagnosis and treatment |
| | ١ | | Viral skin infection warts and molluscum contagiosum | Viral infection definition and classification of skin viral disease herpes simplex etiology clinic and treatment herpes zoster etiology clinical forms and treatment warts etiology pathogenesis clinical forms diagnosis and treatment molluscum contagiosum etiology pathogenesis clinical study clinical study clinical forms diagnosis and treatment |
| ١١ | ٢ | ٢ | Viral skin infection warts and Mollusca contagiosa | Viral infection definition and classification of skin viral disease herpes simplex etiology clinic and treatment herpes zoster etiology clinical forms and treatment warts etiology pathogenesis clinical forms diagnosis and treatment molluscum contagiosum etiology pathogenesis clinical study clinical study clinical forms diagnosis and treatment |
| | | | Tumors of the skin malignant melanoma | Classification BCC clinic, clinical forms diagnosis treatment SCC definition etiology clinical study course diagnosis and treatment MM etiology clinical forms histopathology diagnosis course and treatment paget's disease mammary pagets and extra mammary pagets |
| ١٢ | ٢ | ٢ | Tumors of the skin malignant melanoma | Classification BCC clinic, clinical forms diagnosis treatment SCC definition etiology clinical study course diagnosis and treatment MM etiology clinical forms histopathology diagnosis course and treatment paget's disease mammary pagets and extra mammary pagets |
| | | | Leprosy | Classification clinical forms tuberculoid borderline lumpy nodular deformities reaction diagnosis differential diagnosis and treatment |
| ١٣ | ١ | ٢ | Rosacea. Discoid Lupus Erythematous | Rosacea (etiology, clinical study, differential diagnosis and treatment). DLE, etiology and pathogenesis, clinical features, clinical forms, treatment |
| | ١ | | Acne vulgaris | Acne vulgaris (etiology, pathogenesis, clinical study, clinical forms, differential diagnosis and treatment). |
| ١٤ | ١ | ٢ | Diseases of the hair | Diseases of the hair (classification, alopecia, hypertrichosis) |
| | ١ | | Diseases of the nail | Diseases of the nail (etiology, cutaneous nail disorders, special terms of nail dystrophy). |
| ١٥ | ٢ | ٢ | STD and syphilis | Classification of STD, syphilis (history, primary syphilis, secondary syphilis). Latent and tertiary syphilis (syphilis in HIV disease, differential diagnosis, serology of syphilis and management of syphilis). |
| ١٦ | ٢ | ٢ | Chancroid and Lymphogranuloma venereum, Gonorrhoea | Chancroid (etiology, clinical study, clinical forms, diagnosis and treatment). Lymphogranuloma venereum (etiology, pathogenesis, epidemiology, symptoms, diagnosis and treatment). Gonorrhoea: definition, acute gonorrhoea (in men and women), chronic gonorrhoea (in men and women), complications of gonorrhoea, treatment of gonorrhoea. |

Textbooks & references books recommended (last edition)

Fitazpaatrics , dermatology in general medicine Calus Wolf

Format Hardback, Dimensions ٢٢٣,٥٢ x ٢٧٩,٤ x ١٤٤,٧٨mm | ٩,٨٨٩g, Publication date ١٩ Mar ٢٠١٩, Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Inc.,US, Publication City/Country New York, United States, Language English, Edition Statement ٩th edition Illustrations note Illustrations, unspecified, ISBN ١٠ ٠٠٧١٨٣٧٧٩٥, ISBN ١٣ ٩٧٨٠٠٧١٨٣٧٧٩٨ Bestsellers rank ١٠٠,٥٩٧

Clinical dermatology . Thomas P, Habif

Format Hardback | 1062 pages, Dimensions 222 x 281 x 40,72mm | 3,170,10g, Publication date 30 Jun 2010, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 7th Revised edition, Illustrations note Approx. 1100 illustrations (1100 in full color) ISBN10 0323261833, ISBN13 9780323261838, Bestsellers rank 198,222

Andrews diseases of the skin, William D. James

Format Hardback | 992 pages, Dimensions 222 x 281 x 40,72mm | 2,920,67g, Publication date 17 Apr 2019, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 13th Revised edition, Illustrations note Approx. 1220 illustrations (1220 in full color) ISBN10 0323087032, ISBN13 9780323087036, Bestsellers rank 980,2

Harpers textbook of pediatrics dermatology, Alan Ervine

Format Hardback | 2816 pages, Dimensions 220 x 310 x 160mm | 7,930g, Publication date 27 Dec 2011, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell (an imprint of John Wiley & Sons Ltd), Publication City/Country Chichester, United Kingdom, Language English, Edition Statement 3rd Edition, Illustrations note 0 SW-Abb., 1400 Farbabb., 100 Tabellen ISBN10 1405176904, ISBN13 9781405176908, Bestsellers rank 2,204,04

Dermatology , jean L, bologna

Format Paperback | 368 pages, Dimensions 200 x 290mm | 1,200g, Publication date 08 Mar 2018, Publisher Elsevier España, S.L.U. Publication City/Country Spain, Language Spanish, Edition New edition, ISBN10 8491130012, ISBN13 9788491130017, Bestsellers rank 3,421,001

Principles of Dermatology, James, J Marks , Jeffery J, Miller

Format Paperback | 336 pages, Dimensions 216 x 276 x 10,24mm | 793,79g, Publication date 19 Feb 2018, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 7th Revised edition, Illustrations note Approx. 030 illustrations (030 in full color) ISBN10 0323430406, ISBN13 9780323430401, Bestsellers rank 874,66

INTERNAL MEDICINE

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

• Course description

The goals of this course are to provide training in the discipline of internal medicine, to provide exposure to pathophysiology , diagnostic methods , and treatment methods used in this field. It focuses on diagnostic decision making, case presentation skills, history and physical skills, therapeutic decision making, communication skills , and Professional ism

Learning objectives

A – knowledge

At the end of training each student must be able to:

- Understand the various manifestation of diseases
- Understand the basic principles of history taking and clinical examination
- Elicit a detailed history, perform a thorough physical examination including mental status
- Examination of unconscious patient
- Correlate the clinical symptoms and physical signs to make a provisional anatomical, physiological , etiopathological diagnosis along with the functional disability and suggest relevant investigation
- Interpret reasonably the relevant investigation
- Professional ly present ad discuss the principles involved in the management of the patient, initiate first line management and outline short-term and long term management;

- Manage acute medical emergencies like acute myocardial infraction, acute pulmonary edema , acute anaphylactic and hypovolemic shock , status asthmaticus, tension pneumothorax ,hemoptysis , gastro-intestinal bleeding , and diabetic coma.

b- Clinical skills

- Students should be able to elicit the patient’s chief complaint, history of present illness, past medical history, social , family, occupational histories and complete a review of systems
- Perform a physical examination in a logical , organized and through manner
- Demonstrate the ability to construct an assessment and plan for an individual patient , organized by problem, discussing the likely diagnosis and plan for treatment
- Demonstrate the ability to record the history and physical in a legible and logical manner
- Demonstrate the ability to write daily progress notes on the ward and appropriate outpatient progress notes
- Formulate a differential diagnosis based on the findings from the history and physical examination
- Use the differential diagnosis to help guide diagnostic test ordering and its sequences
- Participate in selecting the diagnostic studies with the greatest likelihood of useful result
- Recognize the tests are limited and the impact of false positives / negatives on information
- Describe the range of normal variation in the result of a complete blood count, blood smear, electrolyte panel, general chemistry panel, electrocardiogram, chest X-ray, urinalysis, pulmonary function tests, and body fluid cell counts
- Develop the skills of reading electrocardiograms, and basic X-ray
- Describe the results of the above tests in terms of the related pathophysiology X-ray films , blood smears .et
- Understand test sensitivity, test specificity
- Understand the importance of personally reviewing X-ray films, blood smears, etc to assess the accuracy and importance of the results
- Describe factors that frequently alter the effects of mediations, including drug interactions and compliance of the result
- Formulate an initial therapeutic plan
- Counsel patients about how to take their medications and what to expect when they take their medications, including beneficial outcomes and potential adverse effects
- Counsel patients on behavior changes (i.e, wt, loss, tobacco, etc)
- Monitor response to therapy
- Understand the indications, performances, and associated complications of common internal medicine procedures
- Acquire the skills to perform minor procedure under supervision like – IV cannulation, insertion of nasogastric tube, urinary bladder cauterization, use of peak flow meter, doing an ECG etc.

| INTERNAL MEDICINE (Module 1) | | | | | |
|-------------------------------------|-----------|-----------|---|--|--|
| Discipline | | | Professional | | |
| Department | | | Cardiopulmonary medicine | | |
| Course title | | | Physical diagnosis | | |
| Prerequisite | | | Basic biomedical science | | |
| Course code | | | MED 1026 | | |
| Academic year | | | 3 | | |
| Semester | | | Spring | | |
| Number of credits | | | 4 | | |
| | | | Knowledge | | 2 |
| | | | practical | | 2 |
| Weeks | Hours | | Topics | | Descriptions |
| | Knowledge | Clerkship | | | |
| 1 | 2 | 2 | Semiology of respiratory system | | Symptoms cough sputum hemoptysis chest pain dyspnea wheezing cyanosis and clubbing |
| 2 | 2 | 2 | Physical examination of respiratory disease | | Inspection of the chest form of the chest symmetry of the chest expansion of chest types of reparation chest palpation palpation of trachea long apices and vocal fremitus chest percussion |
| 3 | 2 | 2 | Chest auscultation | | Chest auscultation breath sound vesicular breathing sound added sound rhonchi crepitation pleural rub physical finding in pneumonic consolidation acute attack of bronchial asthma pneumothorax pulmonary emphysema and pulmonary cavitation's |
| 4 | 2 | 2 | Laboratory Exam of the Respiratory system | | Sputum examination, Blood Exam Urine Exam ECG pleural aspiration(Thoracocentesis) Chest X Ray Broncography, Broncoscopy Pleural biopsy lung biopsy pulmonary function test. |
| 5 | 2 | 2 | Semiology of cardiovascular system | | Symptoms: Dyspnea Orthopnea PND Chest pain palpitation Edema Hemoptysis coughs cyanosis Hoarseness Syncope. |
| 6 | 2 | 2 | Physical Examination of Cardiovascular system | | Inspection: (Generalized inspection of neck vessels point of maximal impulse pericardial pulsation & chest mal formation) Palpation of (PMI Thrill, Heave other pericardial pulsation. Percussion. |
| 7 | 2 | 2 | Auscultation | | Cardiac Auscultation First heart sound, second heart sound splitting of heart sounds & Third heart sound, Fourth heart sound Gallop rhythm Opening Snap Ejection click, Pericardial Rub |
| 8 | 2 | 2 | Cardiac murmurs & pulse examination | | Cardiac murmurs & function murmurs: Systolic, diastolic and Continuous murmurs pulse (rate, Volume, rhythm, Corrigan pulse, Alternance, dirotic pulse bisference pulse paradoxical pulse) & Blood pressure. |
| | 1 | 1 | Electrocardiogram | | Clinical Value of ECG,ECG leads, wave Intervals Segments ECG Interpretation(Rhythm, Rate & Axis). |

| | | | | |
|----|---|---|---|--|
| 9 | 1 | 1 | Arrhythmias | (sinus tachycardia, sinus bradycardia, sinus arrhythmia, atrial extra systole, premature ventricular beat. PSVT, atrial flutter, atrial fibrillation. |
| 10 | 2 | 2 | Arrhythmias Ischemia, drug and Electrolyte change in ECG | A V- block and Bundle block, Atrial and Ventricular hypertrophy (left- right) Ischemia and information, ECG change in drug effect, pulmonary infarction and electrolytes. |
| 11 | 2 | 2 | Semiology of gastrointestinal system | Symptom: Dysphagia, odynophagia, aphagia, indigestion, Abdominal pain, Aerophagia, Flatulence, Gaseousness, Heart burn, (pyrosis), Anorexia, Nausea and Vomiting, regurgitation, Weight gain and loss, Constipation, Diarrhea, Hematemesis, Melena, Hematochezia, halitosis and Cacoageusia. |
| 12 | 2 | 2 | Physical examination of Gastrointestinal system | Inspection, Auscultation and Abdominal palpation: Complaints of patient with liver disease and biliary tract disorders, physical examination of patient with liver disease and biliary tract disorders, palpation of the spleen, Liver and Gall bladder. |
| 13 | 1 | 2 | Abdominal percussion and jaundice | Percussion, jaundice, upper GI endoscopy, colonoscopy and Barium contrast study |
| | 1 | | symptoms in patients with blood disorder | General symptoms: fever, weight loss, weakness specific symptoms in nervous system, eyes, ears, mouth, CVS, GI and Genitourinary system. |
| 14 | 2 | 2 | Signs in patients with blood disorder | Physical examination of: skin, eyes, oral cavity, Lymph nodes, chest, spleen, liver, nervous system, routine blood examination of HB, HCT, WBC and Tests for thrombotic disorders. |
| 15 | 2 | 2 | Signs and symptom of the urinary tract | Pain of (urethral, bladder, prostatic, testicular and renal), Dysuria, Hematuria, pyuria, Nocturia, Frequency, Ischuria, Lithuria, pneumaturia, Oliguria, Anuria, Enuresis, urinary incontinence, cloudy urine and polyuria, Laboratory examination, casts, proteinuria, kidney function tests, chemical analysis of blood and renal biopsy. |
| 16 | 2 | 2 | Semiology of Endocrine and complain of patient with joint disorders | Delayed growth, Excessive growth, skin pigmentations, Hirsutisim, gynecomastia precocious puberty, sexual information, Major symptoms and sign of Addison disease, Hyper and Hypothyroidism, cumptoms and sign in patient with joint disorders, joint (pain, stiffness and locking) and History taking. |

Recommended textbooks and reference books (last edition)

Harrisons' principles of internal medicine . J. Larry Jameson ,

Format Hardback | 4048 pages, Dimensions 226 x 280 x 19mm | 5,988g, Publication date 11 Dec 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 20th edition, ISBN10 1209744030, ISBN13 9781209744030, Bestsellers rank 71,722

Cecil textbooks of internal medicine Lee Goldman

Format Hardback | 2944 pages, Dimensions 210 x 280mm, Publication date 23 Dec 2019 Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Edition Revised, Edition Statement 26th Revised edition, Illustrations note Approx. 1840 illustrations (1460 in full color), ISBN10 0323760338, ISBN13 9780323760337m Bestsellers rank 812,17

Greenspan's Basic and Clinical Endocrinology, Tenth Edition

Format Paperback | 944 pages, Dimensions 216 x 274 x 30mm | 1,842g, Publication date 22 Nov 2017, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 10th edition, Illustrations note 70 Illustrations, unspecified ISBN10 1209089280, ISBN13 9781209089287, Bestsellers rank 230,207

Firestein & Kelley's Textbook of Rheumatology, 2-Volume Set

Format Hardback | 2400 pages, Dimensions 216 x 276 x 127mm | 71,998,26g, Publication date 01 Sep 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 11th Revised edition Illustrations note Approx. 800 illustrations (100 in full color) ISBN10 0323739208 ISBN13 9780323739200, Bestsellers rank 627,080

Harrison's Cardiovascular Medicine 3/E

Format Paperback | 768 pages, Dimensions 213 x 269 x 31mm | 1,406g, Publication date 21 Nov 2016, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 90 Illustrations, unspecified ISBN10 120983074X, ISBN13 9781209830742, Bestsellers rank 1,189,869

Harrison's Gastroenterology and Hepatology

Format Paperback | 784 pages, Dimensions 213 x 269 x 31mm | 1,361g, Publication date 07 Dec 2016, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 90 Illustrations, unspecified ISBN10 1209830847, ISBN13 9781209830841 Bestsellers rank 970,472

Oxford textbook of internal medicine , David A, Warrel ,Timothy M . Cox

Format Paperback | 928 pages, Dimensions 220 x 270 x 32mm | 1,996g, Publication date 12 Dec 2012, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Statement 9th Updated ed. ISBN10 0199602139 ISBN13 9780199602136, Bestsellers rank 1,497,001

Bates Guide to Medical Examination and history taking , Lynn S. Beckley

Format Paperback | 784 pages, Dimensions 213 x 269 x 31mm | 1,361g, Publication date 07 Dec 2016, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 90 Illustrations, unspecified ISBN10 1209830847, ISBN13 9781209830841, Bestsellers rank 970,472

INTERNAL MEDICINE ۲

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

• Course description

The goals of this course are to provide training in the discipline of internal medicine, to provide exposure to pathophysiology, diagnostic methods, and treatment methods used in this field. It focuses on diagnostic decision making, case presentation skills, history and physical skills, therapeutic decision making, communication skills , and Professional ism

Learning objectives

A – knowledge

At the end of training each student must be able to:

- Understand the various manifestation of diseases
- Understand the basic principles of history taking and clinical examination
- Elicit a detailed history, perform a thorough physical examination including mental status
- Examination of unconscious patient
- Correlate the clinical symptoms and physical signs to make a provisional anatomical, physiological , etiopathological diagnosis along with the functional disability and suggest relevant investigation
- Interpret reasonably the relevant investigation
- Professional ly present ad discuss the principles involved in the management of the patient, initiate first line management and outline short-term and long term management;

- Manage acute medical emergencies like acute myocardial infarction, acute pulmonary edema , acute anaphylactic and hypovolemic shock , status asthmaticus, tension pneumothorax ,hemoptysis , gastro-intestinal bleeding , and diabetic coma.

b- clinical skills

- Students should be able to elicit the patient's chief complaint, history of present illness, past medical history, social , family, occupational histories and complete a review of systems
- Perform a physical examination in a logical , organized and through manner
- Demonstrate the ability to construct an assessment and plan for an individual patient , organized by problem, discussing the likely diagnosis and plan for treatment
- Demonstrate the ability to record the history and physical in a legible and logical manner
- Demonstrate the ability to write daily progress notes on the ward and appropriate outpatient progress notes
- Formulate a differential diagnosis based on the findings from the history and physical examination
- Use the differential diagnosis to help guide diagnostic test ordering and its sequences
- Participate in selecting the diagnostic studies with the greatest likelihood of useful result
- Recognize the tests are limited and the impact of false positives / negatives on information
- Describe the range of normal variation in the result of a complete blood count, blood smear , electrolyte panel , general chemistry panel , electrocardiogram , chest X-ray , urinalysis , pulmonary function tests , and body fluid cell counts
- Develop the skills of reading electrocardiograms, and basic X-ray
- Describe the results of the above tests in terms of the related pathophysiology X-ray films , blood smears .et
- Understand test sensitivity , test specificity
- Understand the importance of personally reviewing X-ray films, blood smears , etc to assess the accuracy and importance of the results
- Describe factors that frequently alter the effects of medications , including drug interactions and compliance of the result
- Formulate an initial therapeutic plan
- Counsel patients about how to take their medications and what to expect when they take their medications, including beneficial outcomes and potential adverse effects
- Counsel patients on behavior changes (i.e , wt , loss, tobacco, etc)
- Monitor response to therapy
- Understand the indications , performances, and associated complications of common internal medicine procedures
- Acquire the skills to perform minor procedure under supervision like – IV cannulation , insertion of nasogastric tube, urinary bladder cauterization , use of peak flow meter, doing an ECG etc.

Course Contents:

| INTERNAL MEDICINE (Module ٧) | | | | |
|-------------------------------------|-----------|---|--|--|
| Discipline | | Professional | | |
| Department | | Cardiopulmonary medicine | | |
| Course title | | Respiratory diseases and Rheumatic Valvular Heart Disease | | |
| Prerequisite | | Internal medicine module ٧ | | |
| Course code | | MED ٠٦ ٢٦ | | |
| Academic year | | ٣ | | |
| Semester | | ٦ | fall | |
| Number of credits | | ٤ | Knowledge | ٢ |
| | | | practical | ٢ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Clearship | | |
| ١ | ٢ | | Diseases of the Respiratory System | Acute tracheobronchitis: Definition, etiology, pathology, symptoms and signs, Treatment. |
| ٢ | ٢ | | Chronic obstructive Pulmonary disease COPD Chronic Bronchitis | Definition, pathology, predisposing factors, clinical manifestation, Laboratory investigation, X-ray, diagnosis, DDx, complications, treatment, prognosis. |
| ٣ | ٢ | | Bronchial Asthma | Definition, etiology, pathology, clinical findings, Lab exam, chest X-ray, Diagnosis and deferential diagnosis, complication, course and prognosis, treatment, Status Asthmaticus: Definition and treatment. |
| ٤ | ٢ | | Pneumonia | Definition, incidence, Pathology, clinical manifestation, lab exam, complication, diagnosis and deferential diagnosis, Treatment, prognosis and prophylaxis. |
| ٥ | ٢ | | Hospital acquired pneumonia | Definition, Etiology, Pathogenesis, pathological changes, Clinical findings, diagnosis and DDx , prophylaxis, treatment. |
| ٦ | ٢ | | Lung abcess | Definition, Etiology, clinical finding, Diagnosis, Differential diagnosis, treatment and prognosis pathological changes, clinical manifestation, lab exam, radiographic changes, complication, diagnosis and DDx, Treatment and Prognosis. |
| ٧ | ٢ | | Atelectasis | Definition, Etiology, Pathogenesis, pathological changes, Clinical findings, diagnosis and DDx , prophylaxis, treatment. |

| | | | | |
|----|---|---|--|---|
| ٨ | ٢ | ١ | Pleural Diseases Etiology, clinical picture and treatment. | Etiology, clinical picture and treatment. Etiology, Pathogenesis, clinical manifestation, Lab exam, Diagnosis and treatment. |
| ٩ | ٢ | | Acute respiratory Distress syndrome: | Definition, Etiology, Clinical finding, Diagnosis and treatment. |
| ١٠ | ٢ | | Rheumatic fever | Definition, Pathogenesis Etiology and Epidemiology, pathological changes, clinical manifestations (Minor and Major criteria) Diagnosis of Acute Rheumatic Fever and DDx, Curative, treatment, prophylactic treatment and prognosis, |
| ١١ | ٢ | | Mitral Stenosis | Definition, Etiology, Pathological changes, clinical Manifestation, ECG, chest X-ray, Echocardiography |
| ١٢ | ٢ | | Diagnosis of Mitral Insufficiency | Definition, Etiology, Abnormal physiology, clinical manifestation, ECG, chest X-ray Echocardiogram, heart catheterization DDx, complications, Curative treatment and prophylactic treatment. |
| ١٣ | ٢ | | Aortic Regurgitation | Definition, Etiology, pathological Changes, Clinical manifestation, ECG, Echocardiography, Radiography, Cardiac catheterization. |
| ١٤ | ٢ | | Aortic stenosis | Etiology, Pathophysiology, clinical Manifestation, chest X-ray, ECG, Echocardiography, cardiac catheterization, Diagnosis and DDx, complication, treatment and prognosis. |
| ١٥ | ٢ | | Pulmonary Valve Disease (Pulmonary stenosis & Insufficiency) Combination of Valvular Diseases (Mitral insufficiency and Aortic insufficiency | Etiology, Pathological changes, Diagnosis DDx, Treatment.): Etiology, pathology, clinical findings, Hemodynamic changes, Treatment. |
| ١٦ | ٢ | | Infective Endocarditis | Sub acute infective Endocarditis (SIE): Definition, Etiology, predisposing factors, pathology, clinical manifestations, Lab exam, Blood culture and Echocardiography. |

Recommended textbooks and reference books (last edition)

Harrisons' principles of internal medicine . J. Larry Jameson ,

Format Hardback | ٤٠٤٨ pages, Dimensions ٢٢٦ x ٢٨٥ x ١٠٩mm | ٥,٩٨٨g, Publication date ١١ Dec ٢٠١٨, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement ٢٠th edition, ISBN ١٠ ١٢٥٩٦٤٤٠٣٠, ISBN ١٣ ٩٧٨١٢٥٩٦٤٤٠٣٠, Bestsellers rank ٧١,٧٢٢

Cecil textbooks of internal medicine Lee Goldman

Format Hardback | ٢٩٤٤ pages, Dimensions ٢١٠ x ٢٨٠mm, Publication date ٢٣ Dec ٢٠١٩ Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Edition Revised, Edition Statement ٢٦th Revised edition, Illustrations note Approx. ١٨٤٠ illustrations (١٤٦٠ in full color), ISBN ١٠ ٠٣٢٣٦٤٠٣٣٨, ISBN ١٣ ٩٧٨٠٣٢٣٦٤٠٣٣٦m Bestsellers rank ٨١٢,١٧

Oxford textbook of internal medicine , David A, Warrel , Timothy M . Cox

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Oxford Handbook of Clinical Medicine

Format Paperback | 1832 pages, Dimensions 100 x 180 x 01mm | 708g, Publication date 31 Mar 2019, Publisher Prism, Publication City/Country Oxford, United Kingdom, Language English ISBN10 019883490X, ISBN13 9780198834908, Bestsellers rank 34,067

Greenspan's Basic and Clinical Endocrinology, Tenth Edition

Format Paperback | 944 pages, Dimensions 216 x 274 x 30mm | 1,842g, Publication date 22 Nov 2017, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 10th edition, Illustrations note 70 Illustrations, unspecified ISBN10 1209089280, ISBN13 9781209089287, Bestsellers rank 230,207

Firestein & Kelley's Textbook of Rheumatology, 4-Volume Set

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Format Paperback | 788 pages, Dimensions 213 x 269 x 31mm | 1,371g, Publication date 07 Dec 2016, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 7th edition, Illustrations note 90 Illustrations, unspecified ISBN10 1209830847, ISBN13 9781209830841 Bestsellers rank 970,477

INTERNAL MEDICINE ۳

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- Mid semester exam ۳۰%
- Final semester exam ۳۰%
- Total ۱۰۰%

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- Counsel patients on behavior changes (i.e , wt , loss, tobacco, etc)
- Monitor response to therapy
- Understand the indications , performances, and associated complications of common internal medicine procedures
- Acquire the skills to perform minor procedure under supervision like – IV cannulation , insertion of nasogastric tube, urinary bladder cauterization , use of peak flow meter, doing an ECG etc.

Course Contents:

| INTERNAL MEDICINE (Module ۳) | | | | |
|------------------------------|-----------|----------------------------|--|---|
| Discipline | | Professional | | |
| Department | | Cardiovascular medicine | | |
| Course title | | Cardiovascular Diseases | | |
| Prerequisite | | Internal medicine module ۱ | | |
| Course code | | MED ۰۷ ۲۶ | | |
| Academic year | | ۳ | | |
| Semester | | ۷ | spring | |
| Number of credits | | ۴ | Knowledge | ۲ |
| | | | practical | ۲ |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Clearship | | |
| ۱ | ۲ | ۲ | Atherosclerosis Ischemic Heart Disease (IHD) | Etiology and Pathophysiology, Coronary atherosclerosis, Effects of ischemia, Asymptomatic versus, symptomatic IHD. History, Physical ex. Laboratory, Treatment, Risk factor, Drugs, Revascularization, Prognosis. |
| ۲ | ۲ | ۲ | Ischemic Heart Disease (IHD) Silent ischemia Unstable angina pectoris | Clinic, Laboratory, Diagnosis, Treatment, Revascularization, Treatment, Sudden cardiac death |
| ۳ | ۲ | ۲ | Acute myocardial infraction | pathophysiology, clinical presentation, laboratory finding: prehospital, hospital phase management, pharmacotherapy |
| ۴ | ۲ | ۲ | Complication and their treatment Hypertensive vascular disease | ventricular dysfunction, hemodynamic, treatmet. Cardiogenic shock, pathophysiology, power ailure, treatment |
| ۵ | ۲ | ۲ | Essential hypertension | Genetic consideration, Effect of hypertension, History, Physical ex, Laboratory. |
| ۶ | ۲ | ۲ | Congenital heart disease in the adult: | Etiology, prevention, pathophysiology. Specific defects, |
| ۷ | ۲ | ۲ | Disorder of rhythm | sinus node disfuncion, AV-node disfunction, Brady arrhythmia, Tachyarrhythmia, Premature beats. |
| ۸ | ۲ | ۲ | Sinus tachycardia, | Paroxysmal supra ventricular Tachycardia, Atrial flutter, Atrial fibrillation, preexiration syndrome. |
| ۹ | ۲ | ۲ | Heart Failure | Etiology, Precipitating causes High output versus low output, Acute versus chronic, Right versus left side. |
| ۱۰ | ۲ | ۲ | Forward | versus backward, Systolic versus diastolic heart failure. |

| | | | | |
|----|---|---|------------------------------|---|
| ١١ | ٢ | ٢ | The cardiomyopathies | congestive (dilated) cardiomyopathy. HIV myocarditis, chagasmycarditis, Giantmyocarditis, Lyme Myocarditis. |
| ١٢ | ٢ | ٢ | Myocarditis | HIV myocarditis, chagasmycarditis, Giantmyocarditis, Lyme Myocarditis |
| ١٣ | ٢ | ٢ | Pericardial disease | Normal function of the pericardium, acute pericarditis |
| ١٤ | ٢ | ٢ | Congestive | versus congestive state, clinic diagnosis |
| ١٥ | ٢ | ٢ | Hypertrophy cardiomyopathy | Hemodynamic, clinical feature, Treatment. |
| ١٦ | ٢ | ٢ | Chronic pericardial effusion | chronic constrictive pericarditis, Post cardiac injury syndrome |

Recommended textbooks and reference books (last edition)

Oxford Handbook of Clinical Medicine

Format Paperback | ١٤٣٢ pages, Dimensions ١٠٠ x ١٨٠ x ٥١mm | ٧٠٨g, Publication date ٣١ Mar ٢٠١٩.
 Publisher Prism, Publication City/Country Oxford, United Kingdom, Language English ISBN١٠٠١٩٨٨٣٤٩٠X,
 ISBN١٣٩٧٨٠١٩٨٨٣٤٩٠٨, Bestsellers rank ٣٤,٥٦٦

Harrisons' principles of internal medicine . J. Larry Jameson ,

Format Hardback | ٤٠٤٨ pages, Dimensions ٢٢٦ x ٢٨٥ x ١٠٩mm | ٥,٩٨٨g, Publication date ١١ Dec ٢٠١٨,
 Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition
 Statement ٢٠th edition, ISBN١٠١٢٥٩٦٤٤٠٣٠, ISBN١٣٩٧٨١٢٥٩٦٤٤٠٣٠, Bestsellers rank ٧١,٧٢٢

Cecil textbooks of internal medicine Lee Goldman

Format Hardback | ٢٩٤٤ pages, Dimensions ٢١٠ x ٢٨٠mm, Publication date ٢٣ Dec ٢٠١٩ Publisher Elsevier - Health
 Sciences Division, Publication City/Country Philadelphia, United States, Edition Revised, Edition Statement ٢٦th
 Revised edition, Illustrations note Approx. ١٨٤٠ illustrations (١٤٦٠ in full color), ISBN١٠٠٣٢٣٦٤٠٣٣٨,
 ISBN١٣٩٧٨٠٣٢٣٦٤٠٣٣٦m Bestsellers rank ٨١٢,١٧

Oxford textbook of internal medicine , David A, Warrel ,Timothy M . Cox

Format Paperback | ٩٢٨ pages, Dimensions ٢٢٠ x ٢٧٥ x ٣٢mm | ١,٩٩٦g, Publication date ١٢ Dec ٢٠١٢,
 Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition
 Statement ٥th Updated ed. ISBN١٠٠١٩٩٦٥٢١٣٩ ISBN١٣٩٧٨٠١٩٩٦٥٢١٣٦, Bestsellers rank ١,٤٩٧,٠٥١

Bates Guide to Medical Examination and history taking , Lynn S. Beckley

Format Paperback | ٧٨٤ pages, Dimensions ٢١٣ x ٢٦٩ x ٣١mm | ١,٣٦١g, Publication date ٠٧ Dec ٢٠١٦,
 Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition
 Statement ٣rd edition, Illustrations note ٩٥ Illustrations, unspecified ISBN١٠١٢٥٩٨٣٥٨٤٧,
 ISBN١٣٩٧٨١٢٥٩٨٣٥٨٤٧, Bestsellers rank ٩٧٠,٤٧

Seidel's Guide to Physical Examination : An InterProfessional Approach

Format Hardback | ٧٢٠ pages, Dimensions ٢٢٢ x ٢٨١ x ٣٣,٠٢mm | ٢,١٧٧,٢٤g, Publication date ٠١ Mar ٢٠١٨,
 Publisher Elsevier - Health Sciences Division, Imprint Mosby, Publication City/Country St Louis, United States,
 Language English, Edition Revised, Edition Statement ٩th Revised edition Illustrations note Approx. ١٢٣٠
 illustrations (١٢٣٠ in full color) ISBN١٠٠٣٢٣٤٨١٩٥٧ ISBN١٣٩٧٨٠٣٢٣٤٨١٩٥٣, Bestsellers rank ٦١٢,٢٢٦

INTERNAL MEDICINE ٤

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- Total ١٠٠%

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Course Contents:

| INTERNAL MEDICINE (Module ٤) | | | | |
|-------------------------------------|---------|---|------------------------------------|---|
| Discipline | | Professional | | |
| Department | | Cardiovascular medicine (include GI System diseases and nephrology) | | |
| Course title | | Gastroenterology, liver diseases & nephrology | | |
| Prerequisite | | Internal medicine (model ١) | | |
| Course code | | MED ٠٨ ٢٦ | | |
| Academic year | | IV | | |
| Semester | | ٨ | Fall | |
| Number of Credits | | ٤ | Lecture | ٢ |
| | | | Clerkship | ٢ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ٢ | ١ | Gastro esophageal reflux disease | Gastroesophageal Reflux disease: Pathophysiology, clinical feature, Diagnosis, Treatment. |
| | | ١ | Inflammatory diseases of esophagus | Pathophysiology, clinical feature, diagnosis, Treatment. Oropharyngeal paralysis, Diffuse esophageal spasm, inflammatory disease, |
| ٢ | ٢ | ٢ | Gastritis & Gastropathy | Gastritis, NSAIDs gastritis, H-Pylori gastritis |
| ٣ | ٢ | ٢ | peptic ulcer Disease | Gastric physiology, gastric anatomy, secretion, gastroduodenal mucosal defense, pathophysiology |
| ٤ | ٢ | ١ | Peptic ulcer disease | Management, Treatment, Antacid, H2-receptor antagonist, PPI, Sacralfate, Prostaglandin analogues, H-Pylori regime. Zollinger Ellison Syndrome, Evaluation, Treatment. |
| | | | GI bleeding | Surgical Therapy GDU, Specific procedure, Surgical related complication. |
| ٥ | ٢ | ١ | Inflammatory bowel disease IBD | IBD in elderly, cancerin IBD, Quality of life in IBD |
| ٦ | ٢ | ١ | Malabsorbtion syndrome | Nutrients and absorption, introduction, Lipids, Carbohydrates, Proteins, approach to the patient to with specific disorders. Definations: Etiology, Clinics, Diagnosis, Examination, Coplications and Treatment. |
| ٧ | ٢ | | Jaundice | Etiology, Pathogenesis, clinical feature, Types, Diagnosis, Treatment, Prognosis |
| ٨ | ١ | ١ | Irritable bowel syndrome | Irritable bowel syndrome(IBS) clinical feature, Approach to the patient, Treatment. |

| | | | | |
|----|---|---|---|---|
| | ١ | ١ | Chronic hepatitis | Chronic Hepatitis: Definition, classification, chronic persisting, chronic Lobular, Chronic Active Hepatitis, |
| ٩ | ١ | ١ | Hepatocellular carcinoma: | Etiology, Pathogenesis, clinical feature, Diagnosis, Treatment, Prognosis |
| | ١ | ١ | Liver cirrhosis | Alcoholic, Postnecrotic, primary billiary, secondary Billiary cirrhosis, Child Tarcotte pugh classification. |
| ١٠ | ٢ | | | |
| ١١ | ١ | ١ | Disease of gallbladder (Acalculous Cholecystitis) | Defination, Etiology, Pathogenesis, Clinics, Diagnosis, Treatment and Prognosis. |
| | ١ | ١ | pancreatitis | Acute and chronic form. Diagnosis, Treatment and Complications. |
| ١٢ | ٢ | ١ | Urinary tract infection | Acute pyelonephritis, acute prostatitis, acute cystitis, |
| ١٣ | ١ | ١ | Glomerular diseases (acute nephritic syndrome) | General feature, complication, Etiology, Differential diagnosis |
| | ١ | ١ | Nephritic syndrome | General feature, complication, Etiology, Differential diagnosis |
| ١٤ | ٢ | ٢ | Acute renal failure | Etiology, pathophysiology, clinical feature, Differential diagnosis, |
| ١٥ | ٢ | ٢ | Chronic kidney disease chronic renal failure | Mechanism of chromic renal failure, clinical and laboratory CRF. |
| ١٦ | ٢ | ٢ | Water and electrolyte disturbances | Na, Water, Hypovolemia, Hyponatremia, Hypernatremia, Hyperkalemi, Hypokalemia: General feature, complication, Etiology, Differential diagnosis. |

Recommended textbooks and reference books (last edition)

Bates Guide to Medical Examination and history taking , Lynn S. Beckley

Format Paperback | ٧٨٤ pages, Dimensions ٢١٣ x ٢٦٩ x ٢١mm | ١,٣٦١g, Publication date ٠٧ Dec ٢٠١٦, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement ٣rd edition, Illustrations note ٩٠ Illustrations, unspecified ISBN١٠ ١٢٠٩٨٣٠٨٤٧, ISBN١٣ ٩٧٨١٢٠٩٨٣٠٨٤١, Bestsellers rank ٩٧٠,٤٧

Oxford Handbook of Clinical Medicine

Format Paperback | ١٤٣٢ pages, Dimensions ١٠٠ x ١٨٠ x ٥١mm | ٧٠٨g, Publication date ٣١ Mar ٢٠١٩, Publisher Prism, Publication City/Country Oxford, United Kingdom, Language English ISBN١٠ ٠١٩٨٨٣٤٩٠X, ISBN١٣ ٩٧٨٠١٩٨٨٣٤٩٠٨, Bestsellers rank ٣٤,٥٦٦

Harrisons' principles of internal medicine . J. Larry Jameson ,

Format Hardback | ٤٠٤٨ pages, Dimensions ٢٢٦ x ٢٨٥ x ١٠٩mm | ٥,٩٨٨g, Publication date ١١ Dec ٢٠١٨, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement ٢٠th edition, ISBN١٠ ١٢٠٩٦٤٤٠٣٠, ISBN١٣ ٩٧٨١٢٠٩٦٤٤٠٣٠, Bestsellers rank ٧١,٧٢٢

Cecil textbooks of internal medicine Lee Goldman

Format Hardback | ٢٩٤٤ pages, Dimensions ٢١٠ x ٢٨٠mm, Publication date ٢٣ Dec ٢٠١٩ Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Edition Revised, Edition Statement ٢٦th Revised edition, Illustrations note Approx. ١٨٤٠ illustrations (١٤٦٠ in full color), ISBN١٠ ٠٣٢٣٦٤٠٣٣٨, ISBN١٣ ٩٧٨٠٣٢٣٦٤٠٣٣٦m Bestsellers rank ٨١٢,١٧

Oxford textbook of internal medicine , David A, Warrel ,Timothy M . Cox

Format Paperback | ٩٢٨ pages, Dimensions ٢٢٠ x ٢٧٥ x ٢٢mm | ١,٩٩٦g, Publication date ١٢ Dec ٢٠١٢, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Statement ٥th Updated ed. ISBN١٠ ٠١٩٩٦٥٢١٣٩ ISBN١٣ ٩٧٨٠١٩٩٦٥٢١٣٦, Bestsellers rank ١,٤٩٧,٠٥١

Greenspan's Basic and Clinical Endocrinology, Tenth Edition

Format Paperback | ٩٤٤ pages, Dimensions ٢١٦ x ٢٧٤ x ٢٠mm | ١,٨٤٢g, Publication date ٢٢ Nov ٢٠١٧, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement ١٠th edition, Illustrations note ٧٠ Illustrations, unspecified ISBN١٠ ١٢٠٩٠٨٩٢٨٥, ISBN١٣ ٩٧٨١٢٠٩٠٨٩٢٨٧, Bestsellers rank ٢٣٥,٢٠٧

Firestein & Kelley's Textbook of Rheumatology, 2-Volume Set

Format Hardback | 2400 pages, Dimensions 216 x 276 x 127mm | 71,99g, Publication date 01 Sep 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 11th Revised edition Illustrations note Approx. 800 illustrations (100 in full color) ISBN10 0323739208 ISBN13 9780323739200, Bestsellers rank 727,080

Harrison's Cardiovascular Medicine 3/E

Format Paperback | 768 pages, Dimensions 213 x 269 x 31mm | 1,806g, Publication date 21 Nov 2016, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 90 Illustrations, unspecified ISBN10 120983074X, ISBN13 9781209830742, Bestsellers rank 1,189,869

Harrison's Gastroenterology and Hepatology

Format Paperback | 788 pages, Dimensions 213 x 269 x 31mm | 1,361g, Publication date 07 Dec 2016, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 90 Illustrations, unspecified ISBN10 1209830847, ISBN13 9781209830841 Bestsellers rank 970,472

INTERNAL MEDICINE ◦

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٧٥% with reasonable excuse.
- More than ٧٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

• Course description

- The goals of this course are to provide training in the discipline of internal medicine, to provide exposure to pathophysiology , diagnostic methods , and treatment methods used in this field. It focuses on diagnostic decision making, case presentation skills, history and physical skills, therapeutic decision making, communication skills , and Professional ism

Learning objectives

A – knowledge

At the end of training each student must be able to:

- Understand the various manifestation of diseases
- Understand the basic principles of history taking and clinical examination
- Elicit a detailed history, perform a thorough physical examination including mental status
- Examination of unconscious patient
- Correlate the clinical symptoms and physical signs to make a provisional anatomical, physiological , etiopathological diagnosis along with the functional disability and suggest relevant investigation
- Interpret reasonably the relevant investigation
- Professional ly present ad discuss the principles involved in the management of the patient, initiate first line management and outline short-term and long term management;

- Manage acute medical emergencies like acute myocardial infarction, acute pulmonary edema , acute anaphylactic and hypovolemic shock , status asthmaticus, tension pneumothorax ,hemoptysis , gastro-intestinal bleeding , and diabetic coma.

b- clinical skills

- Students should be able to elicit the patient's chief complaint, history of present illness, past medical history, social , family, occupational histories and complete a review of systems
- Perform a physical examination in a logical , organized and thorough manner
- Demonstrate the ability to construct an assessment and plan for an individual patient , organized by problem, discussing the likely diagnosis and plan for treatment
- Demonstrate the ability to record the history and physical in a legible and logical manner
- Demonstrate the ability to write daily progress notes on the ward and appropriate outpatient progress notes
- Formulate a differential diagnosis based on the findings from the history and physical examination
- Use the differential diagnosis to help guide diagnostic test ordering and its sequences
- Participate in selecting the diagnostic studies with the greatest likelihood of useful result
- Recognize the tests are limited and the impact of false positives / negatives on information
- Describe the range of normal variation in the result of a complete blood count, blood smear , electrolyte panel , general chemistry panel , electrocardiogram , chest X-ray , urinalysis , pulmonary function tests , and body fluid cell counts
- Develop the skills of reading electrocardiograms, and basic X-ray
- Describe the results of the above tests in terms of the related pathophysiology X-ray films , blood smears .et
- Understand test sensitivity , test specificity
- Understand the importance of personally reviewing X-ray films, blood smears , etc to assess the accuracy and importance of the results
- Describe factors that frequently alter the effects of medications, including drug interactions and compliance of the result
- Formulate an initial therapeutic plan
- Counsel patients about how to take their medications and what to expect when they take their medications, including beneficial outcomes and potential adverse effects
- Counsel patients on behavior changes (i.e , wt , loss, tobacco, etc)
- Monitor response to therapy
- Understand the indications , performances, and associated complications of common internal medicine procedures
- Acquire the skills to perform minor procedure under supervision like – IV cannulation, insertion of nasogastric tube, urinary bladder cauterization , use of peak flow meter, doing an ECG etc.

| INTERNAL MEDICINE (Module ٥) | | | | |
|-------------------------------------|---------|--|-------------------------------------|--|
| Discipline | | Professional | | |
| Department | | Endocrinology & hematology | | |
| Course title | | Endocrine disorders & Rheumatic diseases | | |
| Prerequisite | | Internal medicine (model ١) | | |
| Course code | | MED ٠٩٢٦ | | |
| Academic year | | V | | |
| Semester | | ٩ | Spring | |
| Number of Credits | | ٤ | Lecture | ٢ |
| | | | Clerkship | ٢ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ١ | ١ | Approach to endocrine patients | General consideration, Special Features of Endocrine diseases, evaluation of Patients. (Hx, Physical exam, lab tests management) |
| | ١ | ١ | Diabetes mellitus | Introductions, Classification, Epidemiology, Diagnosis, Pathogenesis, Genetic Considerations, pathophysiology and Types. |
| ٢ | ٢ | ٢ | Diabetes mellitus | Clinical Features, lab Ex, Acute Complications (DKA, NKHS) and chronic Complications. |
| ٣ | | | Hypoglycemia | Mechanism, Diagnosis, Symptoms, Types, Urgent treatment and Insulinemia. |
| | ٢ | ٢ | Thyrotoxicosis | Definition etiology clinical feature diagnosis, lab, DDX, Prevalence, pathogenesis, Clinical Feature. treatment |
| ٤ | ٢ | Hypothyroidism (myxedema) | | Definition etiology & pathogenesis, clinical feature DDX, complication, and treatment |
| ٥ | ١ | ١ | Addison's disease, Cushing syndrome | Definition etiology clinical feature lab DDX treatment |
| | ١ | ١ | Pheochromocytoma | Definition, clinical feature, adverse drug reaction, diagnosis, DDX, treatment |
| ٦ | ١ | ١ | Acromegaly | Definition, clinical feature, adverse drug reaction, diagnosis, DDX, treatment |
| | ١ | ١ | Diabetes insipidus | Definition, clinical feature, adverse drug reaction, diagnosis, DDX, treatment |
| ٧ | ١ | ١ | Hyperparathyroidism | Definition etiology & pathogenesis, clinical feature DDX, complication, and treatment |

| | | | | |
|----|---|---|---|--|
| | ١ | ١ | Disorder of the anterior pituitary and hypothalamus (hypothalamus and anterior pituitary insufficiency) | Introductions, Hypothalamic and ant. Pituitary insufficiency, Presentation, Diagnosis, lab Ex and Treatment. |
| ٨ | ١ | ١ | Gonadotropin deficiency | Introductions, anatomy and Development, nonfunctions and its Production in pituitary adenoma, Presentation, Diagnosis, lab Ex and Treatment. |
| | ١ | ١ | Obesity | Introduction, Def. and measurments, Prevalance, Physiologic Regulationa of Energy Balance, Etiology |
| ٩ | ١ | ١ | Approach to articular and musculoskeletal disorders | Artiicular Vs non articular, inflammatory Vs non inflammatory disorders. Clinical Hx, rheumatological evaluation of the elderly, lab Ex. Treatment options. |
| | ١ | ١ | Rheumatoid arthritis | Definition, pathogenesis, clinical feature, lab EX ,course , Genetic Predispositions. &prognosis ,DDX, treatment |
| ١٠ | ١ | ١ | Gout | Definition, pathogenesis, clinical feature, lab EX ,course , Genetic Predispositions, Radiographic Evidences, &prognosis ,DDX, treatment |
| | ١ | ١ | Degenerative joint disease (Osteoarthritis) | Definition, pathogenesis, clinical feature, lab EX , Risk Factors, course , & prognosis ,DDX, treatment |
| ١٢ | ١ | ٢ | System lupus Erythematosus | Definition, pathogenesis, clinical feature, lab EX ,course , prevelance & prognosis ,DDX, treatment |
| | ١ | ١ | Polymyositis dermatomyositis | Definition, pathogenesis, clinical feature, lab EX ,course , associated clinical Findings, &prognosis ,DDX, treatment |
| ١٣ | ١ | ١ | Spondyloarthritis | Definition, ankylosing Spondylitis, pathogenesis, clinical feature, lab EX ,course &prognosis ,DDX, treatment |
| | ١ | ١ | Reactive arthritis | Definition pathogenesis, clinical feature, lab EX ,course &prognosis ,DDX, treatment |
| ١٤ | ١ | ١ | Systemic sclerosis (pain syndromes | Definition pathogenesis, clinical feature, Related Disorders, lab EX ,course &prognosis ,DDX, treatment |
| | ١ | ١ | Pain syndromes | Cervico branchial Pain Syndrome, Chronic Musculoskeletal Strains, Low back Pain, Fibromyalgia, |
| ١٥ | ١ | ١ | Sarcoidosis | Definition pathogenesis, clinical feature, Related Disorders, lab EX ,course &prognosis ,DDX, treatment |
| | ١ | ١ | Metabolic bone disease & osteoporosis | Definition, epidemiology, pathogenesis, pathophysiology (Bone remodeling, Calcium Nutrition, Estrogen status, Vit D, Physical activity) clinical feature, Related Disorders, lab EX ,course &prognosis ,DDX, treatment |
| | ١ | ١ | osteomalacia | Osteomalacia Definition etiology, clinical feature, treatment |

Recommended textbooks and reference books (last edition)

Oxford textbook of internal medicine , David A, Warrel ,Timothy M . Cox

Format Paperback | 928 pages, Dimensions 22 x 27 x 22mm | 1,996g, Publication date 12 Dec 2012, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Statement 9th Updated ed. ISBN10 . 0199602139 ISBN13 978.0199602136, Bestsellers rank 1,897,001

Bates Guide to Medical Examination and history taking , Lynn S. Beckley

Format Paperback | 788 pages, Dimensions 213 x 269 x 21mm | 1,371g, Publication date 07 Dec 2016, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 7rd edition, Illustrations note 90 Illustrations, unspecified ISBN10 . 1209830847, ISBN13 9781209830841, Bestsellers rank 970,47

Harrisons' principles of internal medicine . J. Larry Jameson ,

Format Hardback | 848 pages, Dimensions 226 x 280 x 1.9mm | 5,988g, Publication date 11 Dec 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 20th edition, ISBN10 . 1209644030, ISBN13 9781209644030, Bestsellers rank 71,722

Cecil textbooks of internal medicine Lee Goldman

Format Hardback | 2948 pages, Dimensions 21 x 28.0mm, Publication date 23 Dec 2019 Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Edition Revised, Edition Statement 26th Revised edition, Illustrations note Approx. 1880 illustrations (1860 in full color), ISBN10 . 0323740338, ISBN13 9780323740337m Bestsellers rank 812,17

Oxford Handbook of Clinical Medicine

Format Paperback | 1832 pages, Dimensions 10 x 18 x 01mm | 7.0kg, Publication date 31 Mar 2019. Publisher Prism, Publication City/Country Oxford, United Kingdom, Language English ISBN10 . 019883490X, ISBN13 9780198834908, Bestsellers rank 34,066

Greenspan's Basic and Clinical Endocrinology, Tenth Edition

Format Paperback | 948 pages, Dimensions 216 x 274 x 3.0mm | 1,842g, Publication date 22 Nov 2017, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 10th edition, Illustrations note 70 Illustrations, unspecified ISBN10 . 1209089280, ISBN13 9781209089287, Bestsellers rank 230,207

Firestein & Kelley's Textbook of Rheumatology, 2-Volume Set

Format Hardback | 2400 pages, Dimensions 216 x 276 x 127mm | 71,998,26g, Publication date 01 Sep 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 11th Revised edition Illustrations note Approx. 800 illustrations (800 in full color) ISBN10 . 0323739208 ISBN13 9780323739200, Bestsellers rank 627,080

Harrison's Cardiovascular Medicine 7/E

Format Paperback | 768 pages, Dimensions 213 x 269 x 21mm | 1,806g, Publication date 21 Nov 2016, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 7rd edition, Illustrations note 90 Illustrations, unspecified ISBN10 . 120983074X, ISBN13 9781209830742, Bestsellers rank 1,189,869

Harrison's Gastroenterology and Hepatology

Format Paperback | 788 pages, Dimensions 213 x 269 x 21mm | 1,371g, Publication date 07 Dec 2016, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 7rd edition, Illustrations note 90 Illustrations, unspecified ISBN10 . 1209830847, ISBN13 9781209830841 Bestsellers rank 970,472

INTERNAL MEDICINE ٦

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٧٥% with reasonable excuse.
- More than ٧٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

• Course description

The goals of this course are to provide training in the discipline of internal medicine, to provide exposure to pathophysiology, diagnostic methods, and treatment methods used in this field. It focuses on diagnostic decision making, case presentation skills, history and physical skills, therapeutic decision making, communication skills, and Professionalism

Learning objectives

A – knowledge

At the end of training each student must be able to:

- Understand the various manifestation of diseases
- Understand the basic principles of history taking and clinical examination
- Elicit a detailed history, perform a thorough physical examination including mental status
- Examination of unconscious patient
- Correlate the clinical symptoms and physical signs to make a provisional anatomical, physiological , etiopathological diagnosis along with the functional disability and suggest relevant investigation
- Interpret reasonably the relevant investigation
- Professionaly present and discuss the principles involved in the management of the patient, initiate first line management and outline short-term and long term management;

- Manage acute medical emergencies like acute myocardial infarction, acute pulmonary edema, acute anaphylactic and hypovolemic shock, status asthmaticus, tension pneumothorax, hemoptysis, gastrointestinal bleeding, and diabetic coma.

b- Clinical skills

- Students should be able to elicit the patient's chief complaint, history of present illness, past medical history, social, family, occupational histories and complete a review of systems
- Perform a physical examination in a logical, organized and thorough manner
- Demonstrate the ability to construct an assessment and plan for an individual patient, organized by problem, discussing the likely diagnosis and plan for treatment
- Demonstrate the ability to record the history and physical in a legible and logical manner
- Demonstrate the ability to write daily progress notes on the ward and appropriate outpatient progress notes
- Formulate a differential diagnosis based on the findings from the history and physical examination
- Use the differential diagnosis to help guide diagnostic test ordering and its sequences
- Participate in selecting the diagnostic studies with the greatest likelihood of useful result
- Recognize the tests are limited and the impact of false positives / negatives on information
- Describe the range of normal variation in the result of a complete blood count, blood smear, electrolyte panel, general chemistry panel, electrocardiogram, chest X-ray, urinalysis, pulmonary function tests, and body fluid cell counts
- Develop the skills of reading electrocardiograms, and basic X-ray
- Describe the results of the above tests in terms of the related pathophysiology X-ray films, blood smears, etc.
- Understand test sensitivity, test specificity
- Understand the importance of personally reviewing X-ray films, blood smears, etc to assess the accuracy and importance of the results
- Describe factors that frequently alter the effects of medications, including drug interactions and compliance of the result
- Formulate an initial therapeutic plan
- Counsel patients about how to take their medications and what to expect when they take their medications, including beneficial outcomes and potential adverse effects
- Counsel patients on behavior changes (i.e., weight loss, tobacco, etc.)
- Monitor response to therapy
- Understand the indications, performances, and associated complications of common internal medicine procedures
- Acquire the skills to perform minor procedure under supervision like – IV cannulation, insertion of nasogastric tube, urinary bladder cauterization, use of peak flow meter, doing an ECG etc.

Course Contents:

| INTERNAL MEDICINE (Module ٦) | | | | |
|-------------------------------------|---------|-----------------------------|---|---|
| Discipline | | Professional | | |
| Department | | Endocrinology & hematology | | |
| Course title | | Hematology | | |
| Prerequisite | | Internal medicine (model ١) | | |
| Course code | | MED ٠١٠ ٢٦ | | |
| Academic year | | V | | |
| Semester | | ١٠ | Fall | |
| Number of Credits | | ٤ | Lecture | ٢ |
| | | | Clerkship | ٢ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ١ | ١ | Approach to the anemic patient | Hx, general Symptoms, Specific Symptoms, Physical Examinations. (Goal is to prevent the illness) |
| | ١ | ١ | Anemia | Anemia: definition, signs and symptoms, approach to the patient with anemia, laboratory investigations, classification of the anemia |
| ٢ | ١ | ١ | Iron deficiency anemia | :definition, etiology, clinical feature, laboratory investigation |
| | ١ | ١ | | Diagnosis, differential diagnosis treatment |
| ٣ | ١ | ١ | Megaloblastic anemia | cobalamin: definition, clinical feature, etiology & pathogenesis, diagnosis, differential diagnosis, |
| | ١ | ١ | | Folic acid : etiology & pathogenesis, DDX, lab, treatment |
| ٤ | ١ | ١ | Hemolytic anemia | Hemolytic anemia: definition, classification, laboratory Investigation |
| | ١ | ١ | Autoimmune hemolytic anemia and cold agglutinin | pathogenesis, etiology, clinical findings, diagnosis, laboratory investigation, treatment, prognosis, Cold agglutinin disease: clinical feature, lab, investigation, treatment |
| ٥ | ١ | ١ | Aplastic anemia | Definition, epidemiology, etiology, pathogenesis, clinical Presentation. |
| | ١ | ١ | | |
| ٦ | ١ | ١ | Polycythemia | definition, etiology Ploicytemia vera: etiology, clinical feature, laborator investigation, diagnosis & differential diagnosis, treatment, prognosis |
| | ١ | ١ | Myelodysplastic syndrome | Incidence ,etiology, classification, clinical feature, laboratory investignation, prognosis, treatment |

| | | | | |
|----|---|---|--|---|
| ٧ | ١ | ١ | Acute lymphoblastic leukemia | Definition,etiology,classification,clinical features,laboratory investigation,treatment |
| | ١ | ١ | | |
| ٨ | ١ | ١ | Acute myeloid leukemia | Definition,etiology,clinical feature,lab,diagnosis,treatment |
| | ١ | ١ | | |
| ٩ | ١ | ١ | Chronic myeloid leukemia | Definition,etiology,clinical feature,lab,diagnosis,treatment |
| | ١ | ١ | | |
| ١٠ | ١ | ١ | Lymphocytic leukemia (CLL) | Definition, etiology, clinical feature, lab, diagnosis and treatment of Chronic lymphocytic leukemia (CLL) |
| | ١ | ١ | | |
| ١١ | ١ | ١ | Hodgkin disease | Hodgkin disease: etiology ,epidemiology, clinical features, pathological, classification, diagnosis, DDX, treatment |
| | ١ | ١ | Non Hodgkin lymphoma | etiology ,epidemiology, clinical features, pathological, classification, diagnosis, DDX, treatment |
| ١٢ | ١ | ١ | Multiple myeloma | etiology ,epidemiology, clinical features, pathological, classification, diagnosis, DDX, treatment |
| | ١ | ١ | Myelofibrosis | etiology ,epidemiology, clinical features, pathological, classification, diagnosis, DDX, treatment |
| ١٣ | ١ | ١ | Disseminated intravascular coagulation (DIC) | etiology ,epidemiology, clinical features, pathological, classification, diagnosis, treatment |
| | ١ | ١ | | |
| ١٤ | ١ | ١ | Hemophilia A, Hemophilia B | etiology ,epidemiology, clinical features, pathological, classification, diagnosis, DDX, treatment |
| | ١ | ١ | Immune thrombocytopenic purpura, Vonwillebrand disease | etiology ,epidemiology, clinical features, pathological, classification, diagnosis, DDX, treatment |
| ١٥ | ١ | ١ | Thrombotic microangiopathy | General Consideration, Clinical Findings and Treatment. |
| | ١ | ١ | Thrombocytosis and essential thrombocytosis | etiology ,epidemiology, clinical features, pathological, classification, diagnosis, DDX, treatment |
| ١٦ | ١ | ١ | Blood transfusion | erythrocyte,antigen and antibodies ,definition,clinical use of erythrocyte and whole blood, Indication of transfusion therapy erythrocyte preparation Packed red blood cell,leucocyte reduced red cell,washed red blood cell frozen red blood cell,indication for the granulocyte,transfusion,clinical use of platelets ,indication For platelets, transfusion, complication of the blood transfusion, clinical use of plasma and plasma factors. |

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|--|--|--|------------------------------------|--|
| | | | Primary immunodeficiency disorders | general considerations ,joint signs of the immune system deficiency,difference, Between T and B cell,humoral immunology,cellular,immunology,classification AIDS: hematological abnormalities,anemia,in HIV infection Thrombocytopenia,in HIV infection ,systemic Orgnabnormalities, treatment, prophylaxis. |
|--|--|--|------------------------------------|--|

Recommended textbooks and reference books (last edition)

Cecil textbooks of internal medicine Lee Goldman

Format Paperback | 944 pages, Dimensions 216 x 272 x 30mm | 1.82g, Publication date 22 Nov 2017, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 10th edition, Illustrations note 70 Illustrations, unspecified ISBN10 1209089280, ISBN13 9781209089287, Bestsellers rank 230,207

Firestein & Kelley's Textbook of Rheumatology, 2-Volume Set

Format Hardback | 2400 pages, Dimensions 216 x 276 x 127mm | 71,99g, Publication date 01 Sep 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 11th Revised edition Illustrations note Approx. 800 illustrations (100 in full color) ISBN10 0323739208 ISBN13 9780323739200, Bestsellers rank 727,080

Harrison's Cardiovascular Medicine 3/E

Format Paperback | 768 pages, Dimensions 213 x 269 x 31mm | 1.46g, Publication date 21 Nov 2016, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 90 Illustrations, unspecified ISBN10 120983072X, ISBN13 9781209830724, Bestsellers rank 1,189,869

Harrison's Gastroenterology and Hepatology

Format Paperback | 788 pages, Dimensions 213 x 269 x 31mm | 1.36g, Publication date 07 Dec 2016, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 90 Illustrations, unspecified ISBN10 1209830827, ISBN13 9781209830821 Bestsellers rank 970,472

Harrisons' principles of internal medicine . J. Larry Jameson ,

Format Hardback | 448 pages, Dimensions 226 x 280 x 109mm | 0.98g, Publication date 11 Dec 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 20th edition, ISBN10 1209744030, ISBN13 9781209744030, Bestsellers rank 71,722

Greenspan's Basic and Clinical Endocrinology, Tenth Edition

Format Hardback | 2944 pages, Dimensions 210 x 280mm, Publication date 23 Dec 2019 Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Edition Revised, Edition Statement 10th Revised edition, Illustrations note Approx. 1840 illustrations (1460 in full color), ISBN10 0323760328, ISBN13 9780323760326 Bestsellers rank 812,17

Oxford textbook of internal medicine , David A, Warrel ,Timothy M . Cox

Format Paperback | 928 pages, Dimensions 220 x 270 x 32mm | 1.99g, Publication date 12 Dec 2012, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Statement 9th Updated ed. ISBN10 0199602139 ISBN13 9780199602136, Bestsellers rank 1,497,001

CLINICAL INFECTIOUS DISEASES

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives

At the end of the infectious diseases course student must be able to:

- Understanding of host defense mechanism and immune responses in relation to infectious diseases
- Understanding of the etiology , pathogenesis , diagnosis and therapy of patients with the infectious diseases
- Interpret and draw appropriate conclusions from laboratory results
- Analyze and distinguish therapeutic treatment for microbial infections and distinguish when a vaccine , antibiotic or other therapy is likely to be the most appropriate response
- Specify the role of ecology and evolution in the spread of infectious diseases , comparing the role of transmission , population size and susceptibility , and virulence in endemic diseases , epidemic disease , emerging diseases , and bioterrorism
- Develop the ability to work both independently and with others in teams and study groups
- Develop and information base for making personal health decision in regard to infectious diseases

b- Clinical skills

- use critical thinkings (problem solving)
- use learning resources including mentors effectively
- order and interpret appropriate laboratory and diagnostic studies
- integrate history , physical examination and laboratory results
- can select appropriate management at the right time
- work effectively with others on the healthcare team

Course Contents:

| INFECTIOUS DISEASES | | | | | |
|----------------------------|---------|------------------------------------|---|--|---|
| Discipline | | Professional | | | |
| Department | | Infectious diseases & tuberculosis | | | |
| Course title | | Infection diseases | | | |
| Prerequisite | | Basic Subjects | | | |
| Course code | | MED ٠٨ ٢٩ | | | |
| Academic year | | V | | | |
| Semester | | ٩ Spring | | | |
| Number of Credits | | ٤ | | Lecture | ٢ |
| | | | | Clerkship | ٢ |
| weeks | Hours | | Topics | Description | |
| | Lecture | Clerkship | | | |
| ١ | ٢ | ٢ | General information about infectious diseases | | |
| | | | Shigellosis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. | |
| ٢ | ٢ | ٢ | Enteric fever | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. | |
| | | | Acute infectious diarrhea and food poisoning | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. | |
| ٢ | ٢ | ٢ | Cholera | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. | |
| | | | Amebiasis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. | |
| ٤ | ٢ | ٢ | Acute viral hepatitis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. | |
| ٥ | ٢ | ٢ | Acute viral hepatitis | | |

| | | | | |
|----|---|---|----------------------------|--|
| | | | Influenza | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ٦ | ٢ | ٢ | Diphtheria | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| | | | Infectious mononucleosis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ٧ | ٢ | ٢ | Acute bacterial meningitis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| | | | Tuberculosis meningitis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ٨ | ٢ | ٢ | Malaria | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ٩ | ٢ | ٢ | Malaria | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications (Splenomegaly, Nephropathy, Bukkit's Lymphoma and EBV), Types, Erythrocytes Changes, Host Responces, Severe Falciform malaria, treatment and Preventions. |
| | | | Brucellosis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ١٠ | ٢ | ٢ | Anthrax | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| | | | Rabies | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |

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|----|---|---|--|--|
| ١١ | | | Tetanus | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| | | | Dengue fever relapsing fever yellow fever and leptospirosis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ١٢ | ٢ | ٢ | Visceral leishmaniasis (kala azar) | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| | | | Toxoplasmosis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ١٣ | ٢ | ٢ | Ancylostomiasis | Definition, life Cycle, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| | | | Ascariasis | Definition, life Cycle, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ١٤ | ٢ | ٢ | Enterotibiasis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| | | | Trichuriasis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ١٥ | ٢ | ٢ | Echinococcosis | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| | | | Taenia saginata | Definition, Life Cycle, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ١٦ | ٢ | ٢ | Human immunodeficiency virus infection and the human acquired immunodeficiency syndrome (HIV AIDS) | Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |

Textbooks and references books recommended (last edition)

Essential of clinical infectious diseases, William F, Wright.

Format Paperback | 400 pages, Dimensions 102 x 229 x 24,89mm | 607,71g, Publication date 09 Apr 2018, Publisher Springer Publishing Co Inc, Publication City/Country New York, United States, Language English, Edition Revised, Edition Statement 2nd Revised edition ISBN10 0826127274, ISBN13 9780826127273

Harrison`s infectious diseases, Denniel L . Kasper

Format Paperback | 1228 pages, Dimensions 213 x 274 x 47mm | 2,291g, Publication date 19 Nov 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 100 Illustrations, unspecified ISBN10 1209830979, ISBN13 9781209830971, Bestsellers rank 71,070

Infectious diseases a clinical approach , Allen Yung , Denis Spelman

Format Hardback | 632 pages, Publication date 01 Dec 2010, Publisher IP Communications Pty Ltd, Publication City/Country East Hawthorn, Australia, Edition Statement 3rd edition ISBN10 0980408692, ISBN13 9780980408692

Clinical infectious diseases Rickbard K, Root

Format Paperback | 1040 pages, Dimensions 216 x 277 x 38mm | 2,326g, Publication date 26 Oct 2000, Publisher Oxford University Press Inc, Publication City/Country New York, United States, Language English, Edition Statement Revised ed. Illustrations note 4 pp colour photographs and numerous figures, ISBN10 0190143493, ISBN13 9780190143492

Emergency management of infectious diseases , Rackel L , Chinn

Format Hardback | 640 pages, Dimensions 223 x 283 x 31mm | 2,120g, Publication date 27 Sep 2018, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, Edition Revised, Edition Statement 2nd Revised edition Illustrations note 421 Tables, color; 116 Halftones, color; 34 Halftones, black and white; 9 Line drawings, color; 4 Line drawings, black and white, ISBN10 1107103108, ISBN13 9781107103108

Clinical tuberculosis P.D.O Davies

Format Hardback | 477 pages, Dimensions 216 x 279 x 27,94mm | 1,293g, Publication date 30 Apr 2014, Publisher Taylor & Francis Ltd, Imprint ROUTLEDGE, Publication City/Country London, United Kingdom,

TUBERCULOSIS

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۳۰% with reasonable excuse.
- More than ۳۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

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Scoring policy

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- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives

At the end of course the students should be able to:

- Discuss about tuberculosis TB elimination in Afghanistan
- Identify TB diseases trends in Afghanistan
- List the racial and ethnic groups that are disproportionately affected by TB diseases in Afghanistan
- Discuss about management of pulmonary TB with DOT approach
- Discuss about multidrug resistant pulmonary TB and its management
- Discuss about specific cases like pregnant with pulmonary TB
- Discuss about prevention of pulmonary TB and vaccination , identify ways in which tuberculosis TB in spread
 - Describe the pathogenesis of TB
 - Identify condition that increase the risk of TB infection progressing to TB disease
 - Define drug resistance TB
 - Describe the TB classification system
 - Describe why high-risk groups should be tested for M. tuberculosis infection
- Identify appropriate testing methods for M tuberculosis infection
- Identify special considerations when using tuberculin skin test TSTs
- Discuss general recommendations for the use of interferon – Gamma Release Assays (IGAs)
- Describe the five components of TB medical evaluation
- Identify the major components of TB diagnostic microbiology
- List at least five symptoms of pulmonary TB diseases

- Explain the purpose and significance of acid – fast bacilli (AFB)
- Explain the purpose and significance of the culture
- Explain the purpose and significance of genotyping
- List the high-risk groups who should be given priority for latent tuberculosis infection (LTBI)
- Describe LTBI treatment regimens
- Describe LTBI treatment regimens for specific situations
- Identify components of patient monitoring at baseline and during treatment of LTBI
- Describe tuberculosis TB disease treatment adherence strategies
- Identify anti – TB drugs
- Describe treatment regimens for TB diseases
- Describe patient monitoring
- List common adverse drug reactions to TB medications

Course Contents

| TUBERCULOSIS | | | | |
|---------------------|---------|---------------------------|--|---|
| Discipline | | Professional | | |
| Department | | Tuberculosis | | |
| Course title | | Pulmonary tuberculosis | | |
| Prerequisite | | Internal medicine model ١ | | |
| Course code | | MED ٠٩ ٤٣ | | |
| Academic year | | V | | |
| Semester | | ٩ | Spring | |
| Number of Credits | | ٢ | Lecture | ١ |
| | | | Clerkship | ١ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ١ | ١ | Introduction (brief history of tuberculosis) etiology and pathogenesis | brief history of tuberculosis in Afghanistan and world, Advances in its Treatments, etiology and pathogenesis |
| ٢ | ١ | ١ | TB diagnosis and its classification | History, Physical Examination, Test for M. TB Chest radiograph. Classification of TB |
| ٣ | ١ | ١ | Immunity & allergy in TB and tuberculin test | Types of immune Response, Mechanism of immune response, cells and factors involved in the Process. Methods of Tuberculin Tests. |
| ٤ | ١ | ١ | Primary clinical forms of TB | Primary intoxication, Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ٥ | ١ | ١ | Secondary clinical forms of TB acute disseminated pulmonary TB military TB | Essential of DDX between Primary and Secondary forms of TB. Millitary TB, Definition,, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations,, Complications, treatment and Preventions. |

| | | | | |
|----|---|---|--|---|
| ٦ | ١ | ١ | Subacute disseminated pulmonary TB and chronic disseminated pulmonary TB | Definition, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, Focal TB, Chronic Disseminated Pulmonary TB, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ٧ | ١ | ١ | Infiltrative TB | Definition,, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ٨ | ١ | ١ | Cavernous TB and favor cavernous TB | Definition, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ٩ | ١ | ١ | Cirrhotic TB and pulmonary Tubercular | Definition, , Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ١٠ | ١ | ١ | Dry & exudative pleurisy and peripheral lymphadenitis TB | Dry TB Pleurisy, Definition, Etiology, Epidemiology, Pathogenesis and Pathology, Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. Peripheral Lymph Adenitis: Definition, , Pathogenesis and routes of Spread, , Clinical Manifestation, lab investigations, Diff. Diagnosis, Complications, treatment and Preventions. |
| ١١ | ١ | ١ | Complication of TB | Curpulmonale: Definition, Pathogenesis, Clinical Manifestation, lab investigations, Diff. Diagnosis, , treatment. Hemoptysis: Definition, Pathogenesis, Clinical Manifestation, lab investigations, Diff. Diagnosis, , treatment. Spontaneous Pneumothorax: Definition, Pathogenesis, Clinical Manifestation, lab investigations, Diff. Diagnosis, , treatment. |
| ١٢ | ١ | ١ | Treatment of TB and DOTS program | Principals of treatment for Tb patients, Objectives, Specific or antibacterial Treatment, non specific treatment and DOTs method For Treatment of TB. |
| ١٣ | ١ | ١ | Pharmacologic characteristic of anti TB drugs and MDR & XDR | Nmae, Dosage, Form, side effects and other informations of drugs used in the Treatment of TB. |
| ١٤ | ١ | ١ | Prevention of TB | BCG vaccination, its Preperation, use, Contra-indication. Chemoprophylaxis and it's Types. |
| ١٥ | ١ | ١ | Epidemiology on TB | Epidemological parameters of TB, national compaign in the country, Heath Policies about TB ant their development. |
| ١٦ | ١ | ١ | TB control program | Administrative Control. Envernomenta Control, Respiratory- Protecting Control. |

Textbooks and reference recommended (last edition)

Format Hardback | 477 pages, Dimensions 216 x 279 x 27,94mm | 1,293g, Publication date 30 Apr 2014, Publisher Taylor & Francis Ltd, Imprint ROUTLEDGE, Publication City/Country London, United Kingdom, Language English, Edition New edition, Edition Statement 9th New edition, Illustrations note VitaSource sticker on IFC; 44 Tables, black and white; 102 Illustrations, black and white, ISBN10 1444104346, ISBN13 9781444104344 Bestsellers rank 2,287,862

Pulmonary Tuberculosis Edward , Osgood

Format Paperback | 202 pages, Dimensions 156 x 234 x 13mm | 308g, Publication date 08 Feb 2018, Publisher Sagwan Press, Language English, Illustrations note Illustrations, black and white, ISBN10 1377127910, ISBN13 9781377127911

Tuberculosis

Format Hardback | 600 pages, Dimensions 183 x 209 x 33mm | 1,724g, Publication date 30 Nov 2014, Publisher Cold Spring Harbor Laboratory Press,U.S. Publication City/Country New York, United States, Language English, ISBN10 1621820734, ISBN13 9781621820734, Bestsellers rank 2,368,822

Infection Control in Clinical Practice Updated Edition

Format Paperback | 448 pages, Dimensions 191 x 230 x 20,4mm | 1,043,26g, Publication date 08 Mar 2019, Publisher Elsevier Health Sciences, Publication City/Country London, United Kingdom Language English, Edition Revised, Edition Statement 7th Revised edition, Illustrations note Approx. 118 illustrations (28 in full color) ISBN10 0702076961, ISBN13 9780702076961 Bestsellers rank 31,492

OBSTETRICS & GYNECOLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

The board goals of teaching of the graduate student in obstetrivs and gynecology are ; to empower the student with the necessary knowledge in anatomy, physiology and normal pregnancy and delivery and related problems and to diagnose and treat the common gynecological diseases

Learning objectives

a- Knowledge

At the end of course student should be able to:

- To diagnose and manage normal pregnancy , labor , puerperium and the problems related to these conditions
- To list the common causes leading to maternal and perinatal morbidity and mortality
- Identify the use and side effects of drugs during pregnancy and to be aware of indiscriminate use of drugs obstetrics and gynecological practice
- To be aware of the common indications , techniques and complications of usually performed operations like cesarean section , hysterectomy etc
- Aware of the principles of contraception and the various techniques employed in family sterilization
- To be familiar with the various National programs in relation to maternal and child health

b. Skills

- Student should be trained about proper history taking, clinical examination;
- Advising relevant necessary investigations and their interpretation and management;
- Posting in OPD, eards, operation theaters, labor room and family planning clinical
- Students should observe common OPD procedures

- Observe normal deliveries , forceps and ventouse assisted deliveries , cesarean section, ligation , minilap procedures like abdominal , vaginal hysterectomy
- Examine a pregnant woman an diagnose abnormalities referrals if necessary
- Conduct a normal labor and to provide postnatal care
- Perform resuscitation of newborn babies
- Perform a pelvic examination and to diagnose common gynecological diseases
- Examine a vaginal smear for trichomonas and fungus and to take a Pap smear
- To offer appropriate contraceptive advice to a couple , and to assist in insertion of IUCD
- Interpret common investigation results (biochemical , histopathological , ultrasound

B- skills

a. Obstetrics

- History taking and examination of a pregnant woman , watching progress of labor and conduct of a normal delivery
- Management of third state of labor , prevention and treatment of postpartum hemorrhage
- Witness cesarean section , breech delivery , forceps and cacuum delivery
- Essential care of newborn
- Non stress testing of fetus; biophysical scoring of fetus

b. Gynecology

- How to take history and examination of female pelvic organs
- Making of pop smear , wet smear preparation on vaginal discharge
- Minor gynecologic procedures ; cervical biopsy , endometrial biopsy , dilatation and curettage (D&D)
- Medial termination of pregnancy; in first and second trimesters
- Insertion and removal of intrauterine contraceptive device

c. Operative skills

- Conduct of normal delivery
- Making and repair of episiotomy
- Insertion and removal of intrauterine device
- Taking of pop smear

| OBSTETRICS | | | | |
|-------------------|---------|-------------------------|---|--|
| Discipline | | Professional | | |
| Department | | Obstetrics & gynecology | | |
| Course title | | Obstetrics | | |
| Prerequisite | | Basic of surgery | | |
| Course code | | MED ٠٧ ٣١ | | |
| Academic year | | IV | | |
| Semester | | ٧ | Spring | |
| Number of Credits | | ٤ | Lecture | ٢ |
| | | | Clerkship | ٢ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ٢ | ٢ | Diagnosis of pregnancy | Presumptive Manifestation of Pregnancy, probable Manifestation of pregnancy, Positive manifestation of Pregnancy. |
| | | | Physiology of normal pregnancy | Dating of pregnancy, Placental Circulation, Physiology of the uterus in Pregnancy, Placental Hormones- Fetal Adrenal gland- and estrogen production and Pregnancy. |
| ٢ | ١ | ١ | Maternal adaption to pregnancy | Reproductive System, abdominal Wall and Skin Changes, cardiovascular, Hematologic, Respiratory, GI tract, Urogenital and Hormonal Changes During pregnancy. |
| | | | Prenatal care and management of common symptoms in pregnancy | General concept, initial antenatal evaluation, initial assessment of gestational age & EED, subsequent antenatal evaluation, ante partum management plans and patient evaluation |
| ٣ | ١ | ٢ | Antepartum assessment | Fetal assessment: assessment for fetal growth, assessment of fetal well-being, assessment of fetal maturity. |
| | | | Parental diagnosis investigation to be carried out in pregnancy | Fetuses at high risk for Genetic or Congenital Disorders. |
| ٤ | ١ | ٢ | Labor and delivery | change before then onset of labor, evaluation of labor 1.first stage: Management of first stage, initial examination of the first labor, Preparation of the patient for labor, Further examination and procedures. |
| | | | Intrapartum assessment | Electronic Fetal Monitoring, other intrapartum techniques, Fetal Distress, Internal Uterine Pressure monitoring, pattern of uterine activity. |
| ٥ | ١ | ٢ | Newborn care | Initiation of Air Breathing, Methods used for evaluations of newborn condition, APGAR Score and Routine care of newborn. |

| | | | | |
|----|---|---|--|---|
| | ١ | | Puerperium and its complications | physiology, Finding of some complication after labor |
| ٦ | ١ | ٢ | Obstetric ultrasound | U\S in OB normal and abnormal Fetal anatomy. Doppler and M Mode Echcardiography. |
| | ١ | | Gestational trophoblastic diseases | Mole hydatidiform: Definition and classification, clinical finding, diagnosis, Differential Diagnosis, Complication, Treatment and treatment of complication. |
| ٧ | ١ | ٢ | Ectopic pregnancy | : Definition, Etiology, Clinical finding, Diagnosis, Complication, Treatment, Prognosis. |
| | ١ | | Abortions | Abortion-definition Types(spontaneous and induced abortion) Types of spontaneous abortion Types of induced abortion |
| ٨ | ١ | ٢ | Obstetrical hemorrhage antepartum and postpartum hemorrhage | Third trimester vaginal bleeding: (Placenta previa): Definition, Etiology, types, clinical finding, diagnosis, differential diagnosis, complication, Treatment, Prognosis. |
| | ١ | | Breech presentation and delivery | Mal presentation Breech: Definition, Etiology, Management, external breech extraction. |
| ٩ | ١ | ٢ | Dystocia (abnormal labor) | Abnormalities of the Expulsive Forces, Petopelvic Forces, Fetopelvic disproportions, and maternal- fetal effects of Dystocia. |
| | ١ | | Operative delivery cesarean section vaginal assist delivery forceps and vacuum | cesarean section, Peripartum hysterectomy, Forceps and vacuum Delivery. |
| ١٠ | ١ | ٢ | Preterm labor PTL and premature rupture of membrane PROM | Deffinition, causes and management. |
| | ١ | | Post Term pregnancy | Definition, Etiology, complications, management. |
| ١١ | ١ | ٢ | Multiple pregnancy | : General concept, Diagnosis, Differential diagnosis, , , Assessment of mother and children during high risk pregnancy. |
| | ١ | | Hypertensive disorders | Hypertension during pregnancy: (preeclmpsia and Eclamplia): Definition, Pathogenesis, Sign & symptoms, Management, Complication, Prevention, and Treatment. |
| ١٢ | ١ | ٢ | Diabetes in pregnancy | Rh-isoimmunization, pathogenesis, clinical finding, Amniocetesis, indication for RhoGAM, intrauterine transfusion Delivery plane. |
| | ١ | | Hematological disorders | |
| ١٣ | ١ | ٢ | Rhesus negative in pregnancy | Normal Fetal Growth, Fetal Growth Restriction, macrosomia, Fetal Death: Definition of fetal mortality, causes of Fetal mortality. Stillbirth, Fetal of Stilbirth and it's devaluations. |
| | ١ | | Fetal growth disorders and fetal death | |
| ١٤ | ١ | ٢ | Infection diseases in pregnancy | Viral, Bacteria, Peotozoal and mycotic infections during Pregnancy. |

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|----|---|---|--|---|
| | 1 | | Induction of labor | General concepts, indication and contra indication. Pharmacological and Mechanical Techniques. |
| 10 | 1 | 2 | Abnormalities of the placenta umbilical cord and membranes | Placental abnormalities, membrane abnormalities, Umbilical cord abnormalities and pathological examination. |
| | 1 | | Analgesia and anesthesia in obstetric | General Principals, analgesia and anaesthesia during Pregnancy. |
| 16 | 2 | 1 | Teragenic drugs and other medication | Teratology, mechanisms of Teratology, consultation for tetratogenic exposure. Known teratogens. Drugs commonly used in Pregnancy. |
| | 1 | 1 | Obstetrics critical care | OB shock, septic shock, amniotic Fluid Embolism, Pulmonary thromboembolism, DIC, ARDS, CPR during Pregnancy. |

Textbooks and reference books recommended (last edition)

Williams obstetrics , cunninham

Format Hardback | 1344 pages, Dimensions 221 x 282 x 0.4mm | 3,876g, Publication date 03 Jun 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 10th edition, Illustrations note 000 Illustrations, unspecified ISBN10 1209644324, ISBN13 9781209644320, Bestsellers rank 72,790

Williams gynecology , john O Schorge

Format Hardback | 1216 pages, Dimensions 229 x 282 x 0.4mm | 3,612g, Publication date 27 May 2008, Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Medical, Publication City/Country New York, United States, Language English, Illustrations note 800 Illustrations, unspecified, ISBN10 0071472076, ISBN13 9780071472079, Bestsellers rank 1,273,603

Berek and novak's gynecology , jonathan S, Berek

Format Hardback | 1206 pages, Dimensions 213 x 276 x 0.4mm | 3,266g, Publication date 26 Apr 2019, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Annotated, Edition Statement Sixteenth, North American Edition, ISBN10 1496380339, ISBN13 9781496380339, Bestsellers rank 473,068

Clinical gynecologic endocrinology and infertility ,leon speroff and Marc A . Fritz

Format Hardback | 1488 pages, Dimensions 213 x 276 x 0.4mm | 3,016g, Publication date 16 Feb 2011, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement 4th edition, Illustrations note w. 460 figs. ISBN10 0781779680, ISBN13 9780781779680, Bestsellers rank 161,203

Dewhort's textbook of obstetrics and gynecology D. Keith Edmonds

Format Paperback | 736 pages, Dimensions 219 x 270 x 0.4mm | 2,098g, Publication date 10 Sep 2007, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell (an imprint of John Wiley & Sons Ltd), Publication City/Country Chicester, United Kingdom, Language English Edition Revised, Edition Statement 7th Revised edition, ISBN10 1405106678 ISBN13 9781405106677

Clinical Gynecology

Format Hardback | 1126 pages, Dimensions 230 x 282 x 0.4mm | 3,260g, Publication date 26 May 2010, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, Edition Revised, Edition Statement 2nd Revised edition, Illustrations note 100 Halftones, unspecified; 312 Halftones, color; 20 Line drawings, unspecified; 200 Line drawings, color, ISBN10 1107040396, ISBN13 9781107040397, Bestsellers rank 1,716,994

Clinical Obstetrics and Gynecology A Problem-Based Apprao

Format Paperback | 480 pages, Dimensions 180 x 242 x 0.4mm | 1,428g, Publication date 20 Oct 2000, Publisher John Wiley and Sons Ltd, Imprint Blackwell Science Ltd, Publication City/Country Oxford, United Kingdom, Language English, ISBN10 0732043039, ISBN13 9780732043039

OPHTHALMOLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

The broad goals of the teaching of students in ophthalmology are to provide such knowledge and skills to the students that shall enable him/her to practice as a primary eye care physician and also to function effectively as a community health leader to assist in the implementation of national programs for the prevention of blindness and rehabilitation of the visually impaired

Learning objectives

a. Knowledge

Ate the end of the course , the students will have knowledge of:

- Symptomatology in ocular disorders and their pathogenesis
- Ocular involvement in systematic diseases
- Disorders of the lid
- Disorders of the lacrimal apparatus
- Conjunctivities
- Ophthalmia neonatorm
- Trachoma and other chronic conjunctivitis
- Keratitis and corneal ulcers
- Scleritis and episcleritis
- Refractive errors and method of correction
- Presbiopia
- Accommodation convergence
- Cataract (congenial cataract . senile cataract , metabolic and complicated cataract

- Glaucoma (primary closed angle glaucoma , congenial glaucoma , primary open angle glaucoma , secondary glaucoma
- Uveitis , (anterior uveitis , posterior uveitis)
- Blindness prevalence , prevention and rehabilitation
- Retinopathesis (hypertensive , toxemia , and pregnancy ,diabetic retinopat
- Retinal detachment , types , symptoms and predisposing factors
- Endocrine ophthalmology
- Retinal vascular disorders
- Retinoblastoma and other ocular neoplasmas
- Binocular visions amblyopia and concomitant squint
- Nutritional disorders
- Incomitant strabism (paralytic strabism)
- Visual acuity , pupillary path ways and cranial nerve palsies
- Optic nerve lesions
- Ocular emergencies (traumatic)
- Ocular emergencies (non- traumatic)
- Minor ophthalmic surgery
- National program for control of blindness
- Comprehensive eye care in rural set-up
- Ethics in ophthalmology
- Trachoma
- Entropion / ectropion
- Pterygium
- Nasal lacrimal duct block / dacryocystitis
- Conjunctivities /allergic /acute
- Corneal ulcer
- Keratitis
- Iridocyclitis
- Angle closure glaucoma
- Scleritis / episcleritis
- Dark room
- Refractive errors
- Cataract / senile
- Complicated
- Post-operative
- Complications
- Intraocular lenses
- Xerophthalmia
- Corneal opacities
- Ocular injuries (perforating / concessional injuries)
- Amaurosis fugax
- Indirect ophthalmoscopy
- Orthoptics (study and treatment of defective binocular vision)
- Surgical instruments
- Magnitude of blindness in Afghanistan and its main causes
- Principles of management of major ophthalmic emergencies
- Effect of local and systemic diseases on the patient's vision and the necessary action required to minimize the sequelae of such diseases
- Adverse drug reaction with special references to ophthalmic manifestation

National program for prevention of blindness and its implementation at various levels

- eye care education for prevention of eye problems

- role of primary health center –PHC
- organization of primary health care and the functioning of the ophthalmic assistant
- integration of the national program for control of blindness with the national health program

b- skills

At the end of the course , the student will be able to:

- elicit a history pertinent to general health and ocular status
- perform diagnostic procedures such as visual acuity testing , examination of the eye tonometry , staining for corneal pathology , confirmation perimetry (visual field determination) and subjective refraction including correction , for presbyopia and aphakia (absence of lens) direct ophthalmoscopy , conjunctival smear examination and cover test
- diagnose and treat common problems affecting the eye
- interpret ophthalmic signs in relation to common systemic disorders
- perform therapeutic procedures such as subconjunctival injection , corneal / conjunctival foreign body removal , carbolic cautery for corneal ulcers, nasolacrimal duct syringing and traserorrhaphy
- provide first aid in major ophthalmic emergencies
- organize community surveys for visual health
- organize primary eye care services through primary health centers
- use effective means of communications with the public and individuals to motivate the for surgery for cataract , glaucoma etc

OPHTHALMOLOGY

| Discipline | | Professional | | |
|-------------------|---------|------------------|---|--|
| Department | | Ophthalmology | | |
| Course title | | Eye diseases | | |
| Prerequisite | | Basic of surgery | | |
| Course code | | MED ١١ ٤٠ | | |
| Academic year | | VI | | |
| Semester | | ١١ | Spring | |
| Number of Credits | | ٤ | Lecture | ٢ |
| | | | Clerkship | ٢ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ٢ | ٢ | Optical system of the eye | - General approach to Anatomico-physiology of the Eye, Eye optical system, Vision, Growth and Development of the Eye. - Refractive errors, Hyperopia, Myopia and Astigmatism |
| ٢ | ٢ | ٢ | Optical system of the eye and diseases of the eyelids | -Anesometropia, anisekonia, presbyopia and convergence. -anatomico-physiology of eyelids, congenital anomalies of the eye, Acquired diseases of the eye. |
| ٣ | ٢ | ٢ | Disorder of eyelids | Skin disease, Neuro-muscular diseases, marginal diseases of the eyes gland diseases of the eyes, Tumors of the eyelids. |
| ٤ | ٢ | ٢ | Disorders of conjunctiva | Anatomico-physiology of conj., congenital anomalies of conjunctival inflammations of non-infectious conjunctives. Bacterial, neonatal, viral chlamydia (Trachoma and inclusion conjunctivitis). |
| ٥ | ٢ | ٢ | Disorders of conjunctiva and disorders lacrimal apparatus | Allergic, auto, immune, tumors and degenerations and trauma. Lacrimation, dry eye, acute and acute, chronic |
| ٦ | ٢ | ٢ | Disorders lacrimal apparatus and disorder of extra ocular muscles | |

| | | | | |
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| ٧ | ٢ | ٢ | Disorders of extra ocular muscles and disorders of orbita vessels and nerns | <ul style="list-style-type: none"> - Differential diagnosis of types of squint, motive, and sensory change in squint, squint patient examination, treatment of squint - Anatomico-physiology of orbit, diseases of traumas of Anatomico physiology of vessels and nerves. |
| ٨ | ٢ | ٢ | Disorders of vessls nerves and disorder of cornea | <ul style="list-style-type: none"> - Disorders of blood vessels and nerves of the eye. - Anatomico-physiology of cornea, congenital <p>Anomalies of corneal inflammations, classifications of keratitis (super facial keratitis, and noninfectious keratitis</p> |
| ٩ | ٢ | ٢ | Disorders of cornea | <ul style="list-style-type: none"> - Bacterial, chlamydial, viral, fungi, filamenrty keratitis, keratomalacia and vernal keratitis. - Peripheral keratitis (marginal, rosacea, mooner), interstacial, keratitis, disciform, keratitis, exposure keratitis, cornel degenerations, tumors of, injuries of, and principles of keratomlasty. |
| ١٠ | ٢ | ٢ | Disorders of sclera and disorders of uvea | <ul style="list-style-type: none"> - Anatomico physiology of sclera, congenital anomalies of the sclera and scleritis, Anatomico-pysiology of uveal tract, congenital anomalies of uveal tract, classification, clinical aspect of uveitis, tumor of uvea. |
| ١١ | ٢ | ٢ | Disorder of retina | <ul style="list-style-type: none"> - Anatomophysiology of retina, retinal artery occlusion, retinal vein occlusion, eales diseases, retinitis pegmentosa. |
| ١٢ | ٢ | ٢ | Disorder of retina | <ul style="list-style-type: none"> - Diabetic retinopathy, hypertensive retinopathy - Retinopathy of blood disorders, retinopathy of prematurity, retinopathy of Gravidarum. |
| ١٣ | ٢ | ٢ | Disorder of retina and glaucoma | <ul style="list-style-type: none"> - Toxic retinopathy, senile macular degeneration, retinal detachment, and tumors of the retina. - Related anatomico physiology of glaucoma and congenial glaucoma. |
| ١٤ | ٢ | ٢ | Glaucoma and disorder of lens | <ul style="list-style-type: none"> - Primary and secondary glaucoma (open angle and closed angle). Anatomico physiology of lens, congenital anomalies of the lens, course and stage of cataract, clinical aspect related to age. |

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|----|---|---|--|--|
| 15 | 2 | 2 | Disorder of lens disorders of vitreous and disorders of visual pathway | <p>First period: complication and treatment of cataract, anatomophysiology of vitreous, congenital anomalies of Vitreous, acquired changes and vitreitis.</p> <p>Second period; Anatomophysiology of (optic nerve, chiasma opticum) tract, radiation optic and visual cortex congenital anomalies of optic nerve.</p> |
| 16 | 2 | 2 | Disorder of visual pathway | <p>First period: papilledema and papillitis, retrobulber neuritis, optic atrophy.</p> <p>Second period: tumors of the optic nerve and disorders of chiasma opticum , Disorders of the optic tract and optic radiation, Nystagmus and Migraine ophthalmic.</p> |

textbooks and reference books recommended (last edition)

Ophthalmology, Myron Yanoff

Format Paperback | 328 pages, Dimensions 109 x 241 x 10,24mm | 521,63g, Publication date 31 Jan 2019, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India, Language English, Edition Revised, Edition Statement 3rd Revised edition Illustrations note 192 Halftones, unspecified; 10 Illustrations, unspecified, ISBN10 9302706102 ISBN13 9789302706100, Bestsellers rank 3,014,270

Textbook of ophthalmology, HV, Nema

Format Paperback | 466 pages, Dimensions 171 x 241 x 20,4mm | 500g, Publication date 31 Aug 2018, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India, Language English, Illustrations note 34 Tables, unspecified; 268 Halftones, unspecified; 31 Illustrations, unspecified, ISBN10 9302704010, ISBN13 9789302704019

Principles and practice in ophthalmology , Alberts Jacobiaks

Format Hardback, Dimensions 178 x 204mm, Publication date 28 Feb 2021, Publisher Springer Nature Switzerland AG, Publication City/Country Cham, Switzerland, Language English Edition Revised, Edition Statement 4th ed. 2020, Illustrations note Approx. 1000 p. ISBN10 3030420886, ISBN13 9783030420883

Illustrated Tutorial in clinical ophthalmology. Jack , J, Kanski

Format Hardback | 928 pages, Dimensions 216 x 276 x 44,40mm | 2,902,99g, Publication date 09 Jun 2010, Publisher Elsevier Health Sciences, Imprint W B Saunders Co Ltd, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 4th Revised edition, Illustrations note Approx. 2700 illustrations (2400 in full color) ISBN10 070200727, ISBN13 9780702007200, Bestsellers rank 83,30

A textbook Atlas of ophthalmology , G, Lang

Format Paperback | 607 pages, Dimensions 138 x 193 x 29mm | 590g, Publication date 17 Jan 2007, Publisher Thyme, Publication City/Country New York, United States, Language English Edition Statement 2nd Revised ed. ISBN10 1088900001, ISBN13 9781088900000, Bestsellers rank 1,349,492

ORTHOPEDICS

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

An MD student should know about the commonly encountered conditions in orthopedics pertaining to their diagnostic features. Basic pathophysiological aspect and the general and basic management strategies. It is expected to learn basic skills such as application of splints, skin an skeletal traction, as well as plasters slab and casts (including special casts, hip spica, shoulder spica , cylinder cast , and patellar tendon bearing casts)

Students should know the maneuvers for reduction of common fractures and dislocations such as Colle's fracture , supracondylar fracture of humerus , dislocation of shoulder , elbow and hip

Learning objectives

١. Clinical decision making ability and management expertise

Diagnose conditions from history taking, clinical evaluation and investigations should be able to distinguish the traumatic fro infective and neoplastic disorders

٢. Trust areas:

- Pediatric orthopedics: the student should be exposed to common congenital and developmental disorders such as club-foot , developmental dysplasia of hip , bone infections , and also should acquire adequate knowledge about the principles of management of theses disorders
- Orthopedic oncology: the graduate is expected to be familiar with the common tumors encountered in orthopedic practice. The student should be able to diagnose common bone tumors and should know principles of treatment

- Management of trauma: trauma in this country is one of the main causes of morbidity and mortality. The student is expected to be fully conversant with trauma in its entirety including basic life-saving skills , control of hemorrhage , splintage of musculoskeletal injuries and care of the injured spine
- Sports medicine: the student should know about common orthopedic pathologies encountered in sports persons and their diagnostic and preventive aspects
- Physical medicine and rehabilitation: the student is expected to be familiar with common orthotic and prosthetic devices and their applications

B- Clinical skills

The graduate learns:

- Application of splints and fractions
- Application of plaster , slabs , and casts
- Manipulative reduction of common fractures and dislocations
- Infiltration of tender peri- articular lesions
- Aseptic techniques of joint fluid aspiration

Course Contents:

| ORTHOPEDICS | | | | |
|--------------------|---------|------------------------------|--------------------------------------|---|
| Discipline | | Professional | | |
| Department | | Orthopedics and traumatology | | |
| Course title | | Orthopedics | | |
| Prerequisite | | Basic of surgery | | |
| Course code | | MED ١١ ٢٨ | | |
| Academic year | | VI | | |
| Semester | | ١١ | Spring | |
| Number of Credits | | ٤ | Lecture | ٢ |
| | | | Clerkship | ٢ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ٢ | ٢ | Concept of orthopedics | History of Orthopedics and traumatology, Physical Examination, tractions and Plaster. |
| ٢ | ٢ | ٢ | Fracture healing | Methods of Fracture healing and staging. |
| ٣ | ٢ | ٢ | Bone and joint infection | Acute and Chronic osteomyelitis, pathology, Clinical Finding, DDX, Treatment, Complication, Septic arthritis. |
| ٤ | ٢ | ٢ | Bone and joint TB and osteoarthritis | Definition, Pathology, Clinic Finding, Diagnosis. |

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| 5 | 2 | 2 | Upper limbs fractures | Fractures of Calvicula and Scapula and Fracture of Their structures. Fractures of Humorous, Ulna and radius and their structures. Montaggia Fracture Galezia Fracture Fractures of Carpals and meta carpals. |
| 6 | 2 | 2 | | |
| 7 | 2 | 2 | Vertebral trauma | Classification and mechanism of Fractures. Injuries of Spines and their Treatments. |
| 8 | 2 | 2 | Pelvic fractures & acetabulum | Classification and mechanism of Fractures. Clinical Findings and treatment. |
| 9 | 2 | 2 | Hip joint & femur & tibia and fibula knee joint & ankle joint & foot trauma | Hip Dislocations Fracture of Neck of Femur Fracture of shaft of Femur Supra condylar Fracture. |
| 10 | 2 | 2 | | Patellar Fracture Fructure of Shaft of Tibia and Fibula Foot trauma Fracture of Talus and Calcaneus |
| 11 | 2 | 2 | Internal derangement of the knee ankle and foot | Anatomy of Knee Joint, injury of anterior and Posterior Cruciata ligaments Meniscal injury. |
| 12 | 2 | 2 | Deformities of foot | Club Foot, Flat Foot, Hallux Vulgas, Hallux rigidis. Claw Toes, Pes Cavus |
| 13 | 2 | 2 | Poliomyelitis | Definitions, Clinic and stage of Disease, management and treatment. |
| 14 | 2 | 2 | Amputation | Indication, Classification, Techniques and Principals Complications. |
| 15 | 2 | 2 | Bone tumors | Classification, Clinical Finding, DX, Osteoma, Osteoblastoma. |
| 16 | 2 | 2 | | Chondroma, Aneurismal Bone Cyst, Hemangioma Fibroma, Giant cell Tumor, Osteosarcoma Eving tumor Multiple myeloma |

Textbooks and reference books recommended (last edition)

Textbook of orthopedics , John Ebnezar

Format Paperback | 800 pages, Dimensions 216 x 279 x 30,06mm | 1,100g, Publication date 28 Feb 2017, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India. Language English, Edition Revised, Edition Statement 9th Revised edition, Illustrations note 116 Tables, unspecified; 600 Halftones, unspecified; 607 Illustrations, unspecified ISBN 10 938606682, ISBN 13 978938606689

Textbook of orthopedics and trauma . Klukarni , GS

Format Hardback | 3692 pages, Dimensions 216 x 279 x 37mm | 2,424g, Publication date 28 Feb 2010, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India, Edition Revised, Edition

Statement 3rd Revised edition, Illustrations note 3700 Halftones, color; 1600 Illustrations, unspecified, ISBN10 9380891057, ISBN13 9789380891052

A manual of orthopedics terminology , Fred , RT , Nelson

Format Paperback | 528 pages, Dimensions 191 x 230 x 17,7mm | 748,43g, Publication date 26 Sep 2014, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 4th Revised edition, ISBN10 0323221080, ISBN13 9780323221080, Bestsellers rank 1,606,608

Practical orthopedics , Lonnie , Mercier

Format Mixed media product | 560 pages, Dimensions 216 x 276 x 19,0mm | 1,279,13g Publication date 16 May 2008, Publisher Elsevier - Health Sciences Division, Imprint Mosby Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 7th Revised edition, Illustrations note Approx. 300 illustrations, ISBN10 032336118X ISBN13 9780323361184

Color Atlas of clinical orthopedics . Szendrone , Miklos , Franklin

Format Paperback | 480 pages, Dimensions 210 x 279 x 20,10mm | 1,202g, Publication date 19 Nov 2010, Publisher Springer-Verlag Berlin and Heidelberg GmbH & Co. KG, Imprint Springer-Verlag Berlin and Heidelberg GmbH & Co. K, Publication City/Country Berlin, Germany Language English, Edition Statement Softcover reprint of hardcover 1st ed. 2009, Illustrations note XII, 480 p, ISBN10 364209919X, ISBN13 9783642099199

OTORHINOLARYNGOLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
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- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

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- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

The broad goals of teaching graduate students otorhinolaryngology is to ensure that they acquire adequate knowledge ,skills and attitude for optimum treatment (including emergencies) rehabilitation of common otorhinolaryngology disorders and assessment of the need for referral to specialized care.

Learning objectives

a. Knowledge

At the end of course, student shall be able to:

- Examine and diagnosis common ear , nose , and throat problems
- Suggest common investigative procedures and their interpretation to diagnose and manage the patient
- Treat the common ear , nose , throat and neck problems at primary care center , while treating the patient
- He should know the rational use of commonly used drugs with their adverse effects.
- Train to perform various minor surgical procedures like ear syringing nasal packing and biopsy procedures
- Assist common surgical procedures such as tonsillectomy. mastoidectomy ,septoplasty , tracheostomy , and endoscopic removal of foreign bodies

B- skills

At the end course m students should be able to:

- Proper ear , nose and throat examination
- Discussion on common ENT conditions like ; deviated nasal septum, nasal polyps , cancer of larynx

- Oriented to commonly used ENT instruments and X-rays in ENT practice
- Exposed to commonly done OPD procedures like nasal packing, ear packing, cautery. etc

Exposed to selective operative procedures like, tracheostomy, and tonsillectomy. Septoplasty. Nasal polypectom

Course Contents:

| OTORHINOLARIYNGOLOGY | | | | |
|-----------------------------|---------|-----------|--|--|
| Discipline | | | Professional | |
| Department | | | Otorhinolaryngology | |
| Course title | | | Otorhinolaryngology | |
| Prerequisite | | | Basic of surgery | |
| Course code | | | MED ١٠ ٣٨ | |
| Academic year | | | V | |
| Semester | | ١٠ | Fall | |
| Number of Credits | | ٤ | Lecture | ٢ |
| | | | Clerkship | ٢ |
| weeks | Hours | | | Description |
| | Lecture | Clerkship | | |
| ١ | ٢ | ٢ | Brief review of anatomy of the ear | Auricle, external acoustic meatus. Anatomy of ear: Middle and inner ear. |
| ٢ | ٢ | ٢ | Brief review of physiology of the ear and deafness | Mechanism of Hearing and sound transmission, Clinical methods of ear. Symptomatology of aural diseases (otalgia, Otorrhagia,) Deafness: Types and their Definitions. |
| ٣ | ٢ | ٢ | Disease of the ear | Diseases of Externa Ear and external acoustic meatus. |
| ٤ | ٢ | ٢ | Disease of the ear | Diseases of Tympanic membrane, acute suppurative otitis media, acute necritizing otitis media, Serous otitis media |
| ٥ | ٢ | ٢ | Disease of the ear | Chronic Supporative otitis media and it's intracranial complications. Minier's disease and otosclerosis. |
| ٦ | ٢ | ٢ | Disease of the ear | Benign and malignant Tumors of Externa Ear. |
| ٧ | ٢ | ٢ | Brief review of anatomy and physiology of the nose | External nose, nasal cavity, all para nasal sinuses, clinical methods of nose. |

| | | | | |
|----|---|---|--|--|
| ٨ | ٢ | ٢ | Epistaxis and fracture of the nose | Definition, classification, causes, treatment, Fracture of nose, types and clinical features. |
| ٩ | ٢ | ٢ | Rhinitis | Definition, classification, causes, malignant granuloma, allergic Rhinitis, Definition, classification, causes, treatment. |
| ١٠ | ٢ | ٢ | Sinusitis | Sinusitis and it's complications Tumors and Cyst of nose and Para nasal Sinuses. |
| ١١ | ٢ | ٢ | Anatomy & physiology of pharynx | Nasopharynx, Oropharynx, clinical methods and nasophrangitis. |
| ١٢ | ٢ | ٢ | Tumors of nasopharynx | Benign and malignant Tumors of nasopharynx. |
| ١٣ | ٢ | ٢ | Diseases of the pharynx | Chronic Pharyngitis: Chronic Catarrhal Pharangitis, Chronic Atrophic Pharyngitis. Anatomy of Tonsils, Tonsilitis and it's types. Indication for tonsillectomy. |
| ١٤ | ٢ | ٢ | Deep neck space infection and oropharynx | Deep Neck Space infections, Benign and malignant tumors of Oropharynx. |
| ١٥ | ٢ | ٢ | Brief review of anatomy of the Pharynx | Muscles and cavity of the larynx, Blood Supply of the larynx, innervation and lymphatic driange of the larynx. |
| ١٦ | ٢ | ٢ | Stridor and tumors of the larynx | Stridor (Types and causes) acute laryngitis, acute epiglutitis, Chronic Laryngitis. Benign and malignant tumor of the larynx. Anatomy of the Trachia Tracheostomy and it's indication, procdtdure and complications. |

Textbooks and reference books recommended (last edition)

Test Prep Text Book of ENT

Format Paperback | ١٦٢ pages, Dimensions ٢١٦ x ٢٧٩ x ٩mm | ٣٩٠g, Publication date ٠٤ Mar ٢٠٢٠, Publisher Test Prep Books, Language English, Illustrations note Illustrations, unspecified ISBN١٠ ١٦٢٨٤٥٧٥٨٩, ISBN١٣ ٩٧٨١٦٢٨٤٥٧٥٨٩

Rogan Corbridge , By (author) Nicholas Steventon

Format Paperback | ٤٩٦ pages, Dimensions ١٠٦ x ١٨٤ x ١٩mm | ٢٦٨g, Publication date ٢٤ Feb ٢٠٢٠, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Revised, Edition Statement ٣rd Revised edition, ISBN١٠ ٠١٩٨٧٢٥٣١٠ ISBN١٣ ٩٧٨٠١٩٨٧٢٥٣١٢, Bestsellers rank ٩٧,٨٢٤

Diseases of the Ear, Nose and Throat: The Ear y John Ballantyne , Edited by John Groves

Format Hardback, Dimensions ١٧٠ x ٢٥٠mm, Publication date ٠١ Jul ٢٠٠١, Publication City/Country United Kingdom, Edition Revised, Edition Statement ٣rd Revised edition, Illustrations note Ill, ISBN١٠ ٠٤٠٧١٤٩٨٥٦, ISBN١٣ ٩٧٨٠٤٠٧١٤٩٨٥٦

PEDIATRICS

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

The broad goals of the teaching of undergraduate students in Pediatrics are to acquire knowledge and appropriate skills for optimally dealing with major health problems of children and to ensure their optimal growth and development.

learning objectives

a, Knowledge

At the end of the course, the student shall be able to:

- Describe the normal growth and development during fetal life, neonatal period, childhood and adolescence and outline deviations thereof;
- Describe the common pediatrics disorder and emergencies in terms of epidemiology, etiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation;
- State age related requirements of calories, nutrients, fluids, drugs etc. in health and disease;
- Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, poisonings, accidents and child abuse;
- Outline national programmes relating to child health including immunization programmes;

Skills

At the end of the course, the student shall be able to:

- Take a detailed pediatrics history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigations and plan and Institute therapy;
- Take anthropometric measurements, resuscitate newborn infants with bag and mask at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under current national programmes, start an intravenous line and provide naso-gastric feeding, observe venesection and intra-osseous infusion if possible.

- Conduct diagnostic procedures such as lumbar puncture, bone marrow aspiration, pleural tap and ascitic tap; observe liver and kidney biopsy.
- Distinguish between normal newborn babies and those requiring special care and Institute early care to all new born babies including care of pre-term and low birth weight babies, provide correct guidance and counselling in breast-feeding.
- Provide ambulatory care to all sick children, identify indications for specialized/inpatient care and ensure timely referral of those who require hospitalization.

B. skills

a. Inpatient training

- Taking a detailed pediatric history;
- Conducting physical examination of children;
- Understanding normal growth and development;
- Performing anthropometry and its interpretation;
- Developmental assessment of a child;
- Assessment of calorie/protein intake and advice regarding feeding practice;
- Immunization schedule and administration;
- Evaluation and management of common opd conditions;
- Medical conduct during patient examination.

b. Clinical OPD cases

- Approach to a child with acute fever (evaluation and management of common febrile conditions including viral fever, enteric fever, malaria, UTI);
- Approach to a child with chronic fever (evaluation and management of pulmonary tuberculosis);
- Common viral exanthemas including measles and chicken pox;
- Common skin conditions including pyoderma, scabies;
- Common GI conditions including acute gastroenteritis, persistent diarrhea and infective hepatitis;
- Common respiratory conditions including viral URI, bacterial pharyngitis, laryngeal stridor and croup, acute lower respiratory tract infection (LRTI) and asthma.
- Common CNS conditions including febrile seizures, epilepsy, developmental delay
- Evaluation of normal infants for growth and development and advice regarding nutrition and immunization.

c. Subjects for tutorials

- History taking I (present, past and family);
- History taking II (antenatal, development, immunization, feeding);
- General physical examination and interpretation of abnormal development;
- Assessment of nutritional intake and nutritional advice;
- Demonstration of BCG, OPV, DPT and measles vaccination, Mantoux testing.

d. Ward rounds

Each student will be allotted 4 beds of the first day of the posting. The students are expected to maintain a diary for all the cases admitted of those 4 beds. The student should be acquainted with the diagnosis and day to day progress of the child. The rounds will be taken daily on a rotation basis.

Clinical case discussions

1. Neonatology

- Neonatal history;
- Examination of newborn
- Care of normal newborn at birth and lying in ward;
- Breast feeding
- Management of common neonatal problems.

2. Pediatrics

Clinical case discussion with emphasis of history taking, physical examination, nutrition and developmental assessment, differential diagnosis, investigations and management.

List of Instruments

- Tuberculin syringe
- Intravenous cannula
- Ryle's tube
- Lumbar puncture needle
- Bone marrow aspiration needle

- Liver biopsy needle
- Ambu bag and mask
- Endotracheal tube
- Laryngoscopes
- Emergency drugs/ vaccine

List of Procedures

١. Injections (IM, IV, S/C, I/D)
٢. Blood sampling, IV cannula insertion
٣. Naso-gastric tube insertion
٤. Lumbar puncture
٥. Pleural/ Ascitic tap
٦. Bone marrow aspiration
٧. Liver/ Kidney biopsy
٨. Peritoneal dialysis

Course Contents:

| NEONATOLOGY | | | | |
|---------------------|---------|---------------------------|---|--|
| Discipline | | Professional | | |
| Department | | Neonatology | | |
| Course title | | Neonatal diseases | | |
| Prerequisite | | Basic biomedical sciences | | |
| Course code | | MED ٠٩ ٣٦ | | |
| Academic year | | V | | |
| Semester | | ٩ | Spring | |
| ١ Number of Credits | | ٢ | Lecture | ١ |
| | | | Clerkship | ١ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ١ | ١ | General consideration | Definitions and Neonatal Reflexes |
| ٢ | ١ | ١ | Routine care of the newborn resuscitation and transportation of sick neonat | Equipment of resuscitation, initial steps, resuscitation with room air, Bag and mask Ventilation, endotracheal intubation, external cardiac massage and medication, hypothermia, hyperthermia. |
| ٣ | ١ | ١ | Perinatal asphyxia birth asphyxia | Definition, risk factors, pathophysiology, diagnosis and management |
| ٤ | ١ | ١ | Common problems of the newborn | Definitions, clinic treatment, Asses and classification of diarrhea |
| ٥ | ١ | ١ | Fluid and nutrition of the newborn baby | Physiologic requirement of fluid and electrolyte, feeding and asses and classify feeding problem. |
| ٦ | ١ | ١ | Jaundice and hyperbilirubinemia | General considerations, physiologic jaundice. |

| | | | | |
|----|---|---|---|---|
| ٧ | ١ | ١ | Pathologic jaundice | Causes, hemolytic disease of the new born, jaundice associated with breast feeding. |
| ٨ | ١ | ١ | Kernicterus | Definition, causes, clinic, diagnosis and treatment (phototherapy, exchange transfusion). |
| ٩ | ١ | ١ | Neonatal sepsis septicemia pneumonia meningitis UTI | Definition, causes, clinic, diagnosis and treatment asses and classify possible serious bacterial infection. |
| ١٠ | ١ | ١ | Birth injury | Intraventricular hemorrhage, caput succidanum, cephal hematoma, spine and spinal cord injury, brachial palsy, facial palsy. |
| ١١ | ١ | ١ | Prematurity | Causes, clinic, physiological handicap, general problems, risk factors, assessment of gestational age, management. |
| ١٢ | ١ | ١ | Metabolic disorder hypoglycemia and hypocalcaemia | Causes, clinical features, diagnosis and management. |
| ١٣ | ١ | ١ | Respiratory distress syndrome HMD | Definition, general consideration, classification and prognosis, treatment. |
| ١٤ | ١ | ١ | Neonatal seizures | Types of seizures, causes, diagnosis, complication and prognosis, treatment. |
| ١٥ | ١ | ١ | Perinatal infections TORCH | Clinical features, diagnosis, management and prevention. |
| ١٦ | ١ | ١ | Bleeding disorder and anemia | Causes, clinic, diagnosis and treatment. |

Textbooks for Pediatrics

Pediatric Internal Diseases or) Mary Anne Jackson

Format Hardback, Dimensions ١٥٢,٤ x ٢٢٦,٠٦ x ١٧,٧٨mm | ٥٨٩,٦٧g, Publication date ٢٨ Sep ٢٠١٥, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, ISBN١٠. ٠٣٢٣٣٩٥٦٧٨, ISBN١٣ ٩٧٨.٠٣٢٣٣٩٥٦٧.

Walker's Pediatric Gastrointestinal Disease

Format Hardback | ٢٣٦٨ pages, Dimensions ١٥٢ x ٢٢٩ x ١٤٤,٧٨mm | ٧,٦٨٨,٣٩g, Publication date ٢٠ Apr ٢٠١٨, Publisher PMPH-USA Limited, Publication City/Country Shelton, United States, Language English, Edition Revised, Edition Statement ٦th Revised edition Illustrations note ٧٥٠ figures, ٤٠٠ tables, ISBN١٠ ١٦.٧٩٥١٨١٩, ISBN١٣ ٩٧٨١٦.٧٩٥١٨١٠, Bestsellers rank ٣٧٢,٢٢٣

Diagnosis and Management of Pediatric Diseases r Consolato Sergi

Format Paperback | ١٤٦ pages, Dimensions ١٧٠ x ٢٤٤ x ١٠mm | ٣٢٢g, Publication date ١٠ Dec ٢٠١٩, Publisher MDPI AG, Language English, ISBN١٠ ٣.٣٩٢١٩٦٦٩, ISBN١٣ ٩٧٨٣.٣٩٢١٩٦٦٧

Ghai Essential Pediatrics V.k.Pual

Format Hardback | ٨١٤ pages, Publication date ٣٠ Jun ٢٠١٩, Publisher CBS Publishers & Distributors, Publication City/Country New Delhi, India, Language English, Edition Revised Edition Statement ٩th Revised edition, Illustrations note Images, ISBN١٠ ٩٣٨٧٩٦٤١٠٨ ISBN١٣ ٩٧٨٩٣٨٧٩٦٤١٠٥

CURRENT Medical Diagnosis and Treatment ٢٠٢٠ Maxine Papadakis

Format Paperback | ١٩٣٦ pages, Dimensions ١٨٢,٨٨ x ٢٥١,٤٦ x ٦٣,٥mm | ٢,٦٣٥g, Publication date ٠١ Oct ٢٠١٩, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement ٥٩th edition, Illustrations note ٢٢٠ Illustrations, unspecified ISBN١٠ ١٢٦.٤٥٥٢٨٩, ISBN١٣ ٩٧٨١٢٦.٤٥٥٢٨١,

Bestsellers rank ٧٢,٣٦٤

Nelson Textbook of Pediatrics, ٧-Volume Set

Format Hardback | ٣٨٨٠ pages, Dimensions ٢٢٢ x ٢٨١ x ١١٦,٨٤mm | ٧,٤١٦,٢٤g, Publication date ٠١ May ٢٠١٩,
Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English,
Edition Revised, Edition Statement ٧٠th Revised edition, Illustrations note Approx. ١٨٠٠ illustrations (١٨٠٠ in full color)
ISBN١٠ ١٤٥٥٧٧٥٦٦٥, ISBN١٣ ٩٧٨١٤٥٥٧٧٥٦٦٨, Bestsellers rank ٧١,١١٥

Textbook of Clinical Pediatrics

Format Hardback | ٤١٥٩ pages, Dimensions ١٩٣ x ٢٦٠ x ١٨٠,٣٤mm | ١٠,٨٦٣,٥٤g, Publication date ٢٩ Oct ٢٠١١,
Publisher Springer-Verlag Berlin and Heidelberg GmbH & Co. KG Imprint Springer-Verlag Berlin and Heidelberg
GmbH & Co. K, Publication City/Country Berlin, Germany, Language English, Edition Revised, Edition Statement ٧nd
ed. ٢٠١٢, Illustrations note ٨١٢ Tables, black and white; ٩٩٠ Illustrations, black and white; LXXIV, ٤١٥٩ p. ٩٩٠ illus. In
٦ volumes, not available separately. ISBN١٠ ٣٦٤٢٠٢٢٠١٤, ISBN١٣ ٩٧٨٣٦٤٢٠٢٢٠١٢

PEDIATRICS ۱

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

The broad goals of the teaching of undergraduate students in Pediatrics are to acquire knowledge and appropriate skills for optimally dealing with major health problems of children and to ensure their optimal growth and development.

learning objectives

a, Knowledge

At the end of the course, the student shall be able to:

- Describe the normal growth and development during fetal life, neonatal period, childhood and adolescence and outline deviations thereof;
- Describe the common pediatrics disorder and emergencies in terms of epidemiology, etiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation;
- State age related requirements of calories, nutrients, fluids, drugs etc. in health and disease;
- Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, poisonings, accidents and child abuse;
- Outline national programmes relating to child health including immunization programmes;

Skills

At the end of the course, the student shall be able to:

- Take a detailed pediatrics history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigations and plan and Institute therapy;
- Take anthropometric measurements, resuscitate newborn infants with bag and mask at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under current national programmes, start an intravenous line and provide naso-gastric feeding, observe venesection and intra-osseous infusion if possible.

- Conduct diagnostic procedures such as lumbar puncture, bone marrow aspiration, pleural tap and ascitic tap; observe liver and kidney biopsy.
- Distinguish between normal newborn babies and those requiring special care and Institute early care to all new born babies including care of pre-term and low birth weight babies, provide correct guidance and counselling in breast-feeding.
- Provide ambulatory care to all sick children, identify indications for specialized/inpatient care and ensure timely referral of those who require hospitalization.

B. skills

e. Inpatient training

- Taking a detailed pediatric history;
- Conducting physical examination of children;
- Understanding normal growth and development;
- Performing anthropometry and its interpretation;
- Developmental assessment of a child;
- Assessment of calorie/protein intake and advice regarding feeding practice;
- Immunization schedule and administration;
- Evaluation and management of common opd conditions;
- Medical conduct during patient examination.

f. Clinical OPD cases

- Approach to a child with acute fever (evaluation and management of common febrile conditions including viral fever, enteric fever, malaria, UTI);
- Approach to a child with chronic fever (evaluation and management of pulmonary tuberculosis);
- Common viral exanthemas including measles and chicken pox;
- Common skin conditions including pyoderma, scabies;
- Common GI conditions including acute gastroenteritis, persistent diarrhea and infective hepatitis;
- Common respiratory conditions including viral URI, bacterial pharyngitis, laryngeal stridor and croup, acute lower respiratory tract infection (LRTI) and asthma.
- Common CNS conditions including febrile seizures, epilepsy, developmental delay
- Evaluation of normal infants for growth and development and advice regarding nutrition and immunization.

g. Subjects for tutorials

- History taking I (present, past and family);
- History taking II (antenatal, development, immunization, feeding);
- General physical examination and interpretation of abnormal development;
- Assessment of nutritional intake and nutritional advice;
- Demonstration of BCG, OPV, DPT and measles vaccination, Mantoux testing.

h. Ward rounds

Each student will be allotted 4 beds of the first day of the posting. The students are expected to maintain a diary for all the cases admitted of those 4 beds. The student should be acquainted with the diagnosis and day to day progress of the child. The rounds will be taken daily on a rotation basis.

Clinical case discussions

۳. Neonatology

- Neonatal history;
- Examination of newborn
- Care of normal newborn at birth and lying in ward;
- Breast feeding
- Management of common neonatal problems.

۴. Pediatrics

Clinical case discussion with emphasis of history taking, physical examination, nutrition and developmental assessment, differential diagnosis, investigations and management.

List of Instruments

- Tuberculin syringe
- Intravenous cannula
- Ryle's tube
- Lumbar puncture needle
- Bone marrow aspiration needle

- Liver biopsy needle
- Ambu bag and mask
- Endotracheal tube
- Laryngoscopes
- Emergency drugs/ vaccine

List of Procedures

١. Injections (IM, IV, S/C, I/D)
٢. Blood sampling, IV cannula insertion
٣. Naso-gastric tube insertion
٤. Lumbar puncture
٥. Pleural/ Ascitic tap
٦. Bone marrow aspiration
٧. Liver/ Kidney biopsy
٨. Peritoneal dialysis

Course Contents:

| PEDIARICS MODULE ١ | | | | |
|---------------------------|---------|--|--|---|
| Discipline | | Professional | | |
| Department | | Pediatrics | | |
| Course title | | Essential of pediatrics gastrointestinal and endocrine disorders | | |
| Prerequisite | | Professional s | | |
| Course code | | MED .٩ ٣٥ | | |
| Academic year | | V | | |
| Semester | | ٩ | Spring | |
| ١ Number of Credits | | ٢ | Lecture | ١ |
| | | | Clerkship | ١ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ١ | ١ | Growth and development | Definition, weight, head and arm circumference, dentition, fine motor, gross motor assessment. |
| ٢ | ١ | ١ | Rights of children and child abuse | Definition, child survival, child protection. |
| ٣ | ١ | ١ | Behavioral disorders | Definition and types (PICA, enuresis, anorexia, breath holding spells), diagnosis treatment. |
| ٤ | ١ | ١ | Nutrition feeding breast feeding weaning | Definition, principle of feeding, steps of good feeding, calorie requirement, (energy subtracts , protein, carbohydrate, fat, minerals and vitamins,) breast feeding, artificial feding, time of weaning, weaning foods. IMCI |

| | | | | |
|----|---|---|---|---|
| ٥ | ١ | ١ | Malnutrition under nutrition | Definition, type, complications, clinic, Laboratory, diagnosis and management. IMCI |
| ٦ | ١ | ١ | Vitamin A & D deficiency | Definition. Pathophysiology, clinic presentation, diagnosis, Laboratory finding, complication treatment IMCI. |
| ٧ | ١ | ١ | Water and electrolyte disturbances fluid therapy acidosis alkalosis | Fluid composition, regulation of water, sodium and potassium, fluid therapy in deferent clinical situations. |
| ٨ | ١ | ١ | Approach to abdominal pain infantile colic | Approach, causes, acute abdominal pain, chronic and recurrent abdominal pain, management/causes, evaluation, and management. |
| ٩ | ١ | ١ | Diarrhea | Definition, Acute watery diarrhea and chronic diarrhea, causes, path physiology, diagnosis, management (assessment of the child with IMCI). |
| ١٠ | ١ | ١ | Dehydration | Definition, assessment of severity, treatment plan A, B, C nutrition management (IMCI) |
| ١١ | ١ | ١ | Juvenile rheumatoid arthritis | Definition, Etiopathogenesis, clinical feature, Lab. Exam. Diagnosis, treatment. |
| ١٢ | ١ | ١ | Hypothyroidism | Definition, etiopathogenesis, clinical feature, Lab. Exam, diagnosis, treatment. |
| ١٣ | ١ | ١ | Diabetes mellitus | Definition, classification, clinical feature, Lab. Exam, diagnosis, treatment, complication, prognosis. |
| ١٤ | ١ | ١ | Approach to seizure febrile convulsion and epilepsy | Causes, clinic, role of investigation, management/type of febrile convulsion, treatment, prophylaxis. |
| ١٥ | ١ | ١ | Down syndrome cerebral palsy | Definition, clinical feature, diagnosis, treatment. |
| ١٦ | ١ | ١ | Approach to child with coma | Definition, causes, stages of coma, GCS in children, diagnosis, and treatment. |

Textbooks for Pediatrics

Pediatric Internal Diseases or) Mary Anne Jackson

Format Hardback, Dimensions ١٥٢,٤ x ٢٢٦,٠٦ x ١٧,٧٨mm | ٥٨٩,٦٧g, Publication date ٢٨ Sep ٢٠١٥, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, ISBN١٠٠٣٢٣٣٩٥٦٧٨, ISBN١٣٩٧٨٠٣٢٣٣٩٥٦٧٠

Walker's Pediatric Gastrointestinal Disease

Format Hardback | ٢٣٦٨ pages, Dimensions ١٥٢ x ٢٢٩ x ١٤٤,٧٨mm | ٧,٦٨٨,٣٩g, Publication date ٢٠ Apr ٢٠١٨, Publisher PMPH-USA Limited, Publication City/Country Shelton, United States, Language English, Edition Revised, Edition Statement ٧th Revised edition Illustrations note ٧٥٠ figures, ٤٠٠ tables, ISBN١٠١٦٠٧٩٥١٨١٩, ISBN١٣٩٧٨١٦٠٧٩٥١٨١٠, Bestsellers rank ٣٧٢,٢٢٣

Diagnosis and Management of Pediatric Diseases r Consolato Sergi

Format Paperback | 146 pages, Dimensions 170 x 244 x 10 mm | 322g, Publication date 10 Dec 2019,
Publisher MDPI AG, Language English, ISBN10 3039219669, ISBN13 9783039219667

Ghai Essential Pediatrics V.k.Pual

Format Hardback | 114 pages, Publication date 30 Jun 2019, Publisher CBS Publishers & Distributors, Publication
City/Country New Delhi, India, Language English, Edition Revised Edition Statement 9th Revised edition,
Illustrations note Images, ISBN10 9387964108 ISBN13 9789387964100

CURRENT Medical Diagnosis and Treatment 2020 Maxine Papadakis

Format Paperback | 1936 pages, Dimensions 182,88 x 251,46 x 73,0 mm | 2,630g, Publication date 01 Oct 2019,
Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition
Statement 09th edition, Illustrations note 220 Illustrations, unspecified ISBN10 1260400289,
ISBN13 9781260400281, Bestsellers rank 72,374

Nelson Textbook of Pediatrics, 2-Volume Set

Format Hardback | 3880 pages, Dimensions 222 x 281 x 116,84 mm | 7,416,24g, Publication date 01 May 2019,
Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States,
Language English, Edition Revised, Edition Statement 20th Revised edition, Illustrations note Approx.

PEDIATRICS 2

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

The broad goals of the teaching of undergraduate students in Pediatrics are to acquire knowledge and appropriate skills for optimally dealing with major health problems of children and to ensure their optimal growth and development.

learning objectives

a, Knowledge

At the end of the course, the student shall be able to:

- Describe the normal growth and development during fetal life, neonatal period, childhood and adolescence and outline deviations thereof;
- Describe the common pediatrics disorder and emergencies in terms of epidemiology, etiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation;
- State age related requirements of calories, nutrients, fluids, drugs etc. in health and disease;
- Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, poisonings, accidents and child abuse;
- Outline national programmes relating to child health including immunization programmes;

Skills

At the end of the course, the student shall be able to:

- Take a detailed pediatrics history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigations and plan and Institute therapy;
- Take anthropometric measurements, resuscitate newborn infants with bag and mask at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under current national programmes, start an intravenous line and provide naso-gastric feeding, observe venesection and intra-osseous infusion if possible.

- Conduct diagnostic procedures such as lumbar puncture, bone marrow aspiration, pleural tap and ascitic tap; observe liver and kidney biopsy.
- Distinguish between normal newborn babies and those requiring special care and Institute early care to all new born babies including care of pre-term and low birth weight babies, provide correct guidance and counselling in breast-feeding.
- Provide ambulatory care to all sick children, identify indications for specialized/inpatient care and ensure timely referral of those who require hospitalization.

B. skills

i. Inpatient training

- Taking a detailed pediatric history;
- Conducting physical examination of children;
- Understanding normal growth and development;
- Performing anthropometry and its interpretation;
- Developmental assessment of a child;
- Assessment of calorie/protein intake and advice regarding feeding practice;
- Immunization schedule and administration;
- Evaluation and management of common opd conditions;
- Medical conduct during patient examination.

j. Clinical OPD cases

- Approach to a child with acute fever (evaluation and management of common febrile conditions including viral fever, enteric fever, malaria, UTI);
- Approach to a child with chronic fever (evaluation and management of pulmonary tuberculosis);
- Common viral exanthemas including measles and chicken pox;
- Common skin conditions including pyoderma, scabies;
- Common GI conditions including acute gastroenteritis, persistent diarrhea and infective hepatitis;
- Common respiratory conditions including viral URI, bacterial pharyngitis, laryngeal stridor and croup, acute lower respiratory tract infection (LRTI) and asthma.
- Common CNS conditions including febrile seizures, epilepsy, developmental delay
- Evaluation of normal infants for growth and development and advice regarding nutrition and immunization.

k. Subjects for tutorials

- History taking I (present, past and family);
- History taking II (antenatal, development, immunization, feeding);
- General physical examination and interpretation of abnormal development;
- Assessment of nutritional intake and nutritional advice;
- Demonstration of BCG, OPV, DPT and measles vaccination, Mantoux testing.

l. Ward rounds

Each student will be allotted 4 beds of the first day of the posting. The students are expected to maintain a diary for all the cases admitted of those 4 beds. The student should be acquainted with the diagnosis and day to day progress of the child. The rounds will be taken daily on a rotation basis.

Clinical case discussions

o. Neonatology

- Neonatal history;
- Examination of newborn
- Care of normal newborn at birth and lying in ward;
- Breast feeding
- Management of common neonatal problems.

p. Pediatrics

Clinical case discussion with emphasis of history taking, physical examination, nutrition and developmental assessment, differential diagnosis, investigations and management.

List of Instruments

- Tuberculin syringe
- Intravenous cannula
- Ryle's tube
- Lumbar puncture needle
- Bone marrow aspiration needle

- Liver biopsy needle
- Ambu bag and mask
- Endotracheal tube
- Laryngoscopes
- Emergency drugs/ vaccine

List of Procedures

١. Injections (IM, IV, S/C, I/D)
٢. Blood sampling, IV cannula insertion
٣. Naso-gastric tube insertion
٤. Lumbar puncture
٥. Pleural/ Ascitic tap
٦. Bone marrow aspiration
٧. Liver/ Kidney biopsy
٨. Peritoneal dialysis

Course Contents:

| PEDIATRICS (Module ٢) | | | | |
|------------------------------|---------|---------------------------|------------------------------|---|
| Discipline | | Professional | | |
| Department | | Pediatrics | | |
| Course title | | Infectious diseases | | |
| Prerequisite | | Basic Biomedical Sciences | | |
| Course code | | MED ١٠٣٥ | | |
| Academic year | | V | | |
| Semester | | ١٠ | Fall | |
| Number of Credits | | ٢ | Lecture | ١ |
| | | | Clerkship | ١ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ١ | ١ | Fever and immunization | Definition of fever, Etiopathogenesis, Lab. Exam, diagnosis, treatment, complication, Definition of vaccines, types of vaccines, national Immunization table. |
| ٢ | ١ | ١ | Measles & Rubela | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, treatment, complication, prevention and prognosis. |
| ٣ | ١ | ١ | Childhood tuberculosis & TBM | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, treatment, complication, prevention and prognosis. |
| ٤ | ١ | ١ | Mumps | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, treatment, complication, prevention and prognosis. |

| | | | | |
|----|---|---|--|--|
| ٥ | ١ | ١ | Pertussis | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, treatment, complication, prevention and prognosis. |
| ٦ | ١ | ١ | Poliomyelitis | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, D/Dx, treatment, complication, prevention and prognosis. |
| ٧ | ١ | | Chicken pox | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, D/Dx, treatment, complication, prevention and prognosis. |
| ٨ | ١ | ١ | Typhoid fever | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, D/Dx, treatment, complication, prevention and prognosis. |
| ٩ | ١ | | Viral hepatitis(A,B) | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, D/Dx, treatment, complication, prevention and prognosis. |
| ١٠ | ١ | | Malaria | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, treatment, complication, prevention and prognosis. |
| ١١ | ١ | ١ | Childhood HIV/AIDS | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, treatment, complication, prevention and prognosis. |
| ١٢ | ١ | ١ | Shigellosis(bacillary dysentery) and amebiasis | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, treatment, complication, prevention and prognosis. |
| ١٣ | ١ | ١ | Encephalitis & Encephalopathy | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, D/Dx, treatment, complication, prevention and prognosis. |
| ١٤ | ١ | ١ | Child hood pyogenic meningitis (ABM) | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, D/Dx, treatment, complication, prevention and prognosis. |
| ١٥ | ١ | ١ | Intestinal helminthosis | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, D/Dx, treatment, complication, prevention and prognosis. |
| ١٦ | ١ | ١ | Sepsis | Definition, Etiopathogenesis, Clinical feature, Lab. Exam, diagnosis, D/Dx, treatment, complication, prevention and prognosis. |

Textbooks for Pediatrics

Pediatric Internal Diseases or) Mary Anne Jackson

Format Hardback, Dimensions ١٥٢,٤ x ٢٢٦,٠٦ x ١٧,٧٨mm | ٥٨٩,٦٧g, Publication date ٢٨ Sep ٢٠١٥, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, ISBN١٠ ٠٣٢٣٣٩٥٦٧٨, ISBN١٣ ٩٧٨٠٣٢٣٣٩٥٦٧٠

Walker's Pediatric Gastrointestinal Disease

Format Hardback | ٢٣٦٨ pages, Dimensions ١٥٢ x ٢٢٩ x ١٤٤,٧٨mm | ٧,٦٨٨,٣٩g, Publication date ٢٠ Apr ٢٠١٨, Publisher PMPH-USA Limited, Publication City/Country Shelton, United States, Language English, Edition Revised, Edition Statement ٦th Revised edition Illustrations note ٧٥٠ figures, ٤٠٠ tables, ISBN١٠ ١٦٠٧٩٥١٨١٩, ISBN١٣ ٩٧٨١٦٠٧٩٥١٨١٠, Bestsellers rank ٣٧٢,٢٢٣

Diagnosis and Management of Pediatric Diseases r Consolato Sergi

Format Paperback | ١٤٦ pages, Dimensions ١٧٠ x ٢٤٤ x ١٠mm | ٣٢٢g, Publication date ١٠ Dec ٢٠١٩,

Publisher MDPI AG, Language English, ISBN10 3039219669, ISBN13 9783039219667

Ghai Essential Pediatrics V.k.Pual

Format Hardback | 814 pages, Publication date 30 Jun 2019, Publisher CBS Publishers & Distributors, Publication City/Country New Delhi, India, Language English, Edition Revised Edition Statement 9th Revised edition, Illustrations note Images, ISBN10 9387964108 ISBN13 9789387964100

CURRENT Medical Diagnosis and Treatment 2020 Maxine Papadakis

Format Paperback | 937 pages, Dimensions 182,88 x 251,46 x 73,0mm | 2,630g, Publication date 01 Oct 2019, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 09th edition, Illustrations note 220 Illustrations, unspecified ISBN10 1260400289, ISBN13 9781260400281, Bestsellers rank 72,364

Nelson Textbook of Pediatrics, 7-Volume Set

Format Hardback | 3880 pages, Dimensions 222 x 281 x 116,84mm | 7,416,24g, Publication date 01 May 2019, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 20th Revised edition, Illustrations note Approx. 1800 illustrations (1800 in full color) ISBN10 1400770660, ISBN13 9781400770668, Bestsellers rank 71,110

PEDRIATICS SURGERY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Objectives

Knowledge

- Variable requirements for communication according to age;
- Specific ethical and legal Issues affecting the practice of pediatric surgery (including issues of consent);
- The symptom patterns, differential diagnosis, investigation and management of common pediatric surgical conditions;
- The theoretical basis of life support approaches in pediatric surgery;
- The principles of surgical intervention.

Skills

- History taking relevant to specific age of developmental stage;
- Appropriate examination techniques of childten of different ages;
- Basic life support skills in pediatric practices;
- Ability t ocommunicate appropriately with:**
 - Patients
 - Relatives/carers.
 - Colleagues, including ward & outpatient teams
- In respect of common clinical presentations, including:**
 - The child with abdominal pain
 - Abdominal wall pathologies
 - The vomiting child
 - Common urological conditions
 - Trauma
 - Constipation
 - Head/neck swellings
 - Intussusception

- Ingrowing toe nail
- Abscess
- **Groin conditions:**
 - Hernia
 - Hyprocele
 - Penile inflammatory conditions
 - Undescended testis
 - Acute scrotum
- **The ability to:**
 - Construct a differential diagnosis
 - Interpret investigations
 - Construct a management plan for common conditions

| PEDIATRICS SURGERY | | | | |
|---------------------------|---------|-----------------------------|---|---|
| Discipline | | Professional | | |
| Department | | Pediatrics surgery | | |
| Course title | | Pediatric surgical diseases | | |
| Prerequisite | | Basic of surgery | | |
| Course code | | MED ١٠ ٣٧ | | |
| Academic year | | V | | |
| Semester | | ١٠ Spring | | |
| Number of Credits | | ٢ | | |
| | | Lecture | ١ | |
| | | Clerkship | ١ | |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ١ | ١ | Congenital Anomaly of the head | CranialcerebralHerniation (Definition, Incidence, Classification, Signandsymptom Diagnosis, Differential Diagnosis, Treatment Complication After surgery complication Cranio-synostosis(Definition, Clinical feature, Type of craniosynostosis, Treatment |
| ٢ | ١ | ١ | Hydrocephalus Spina bifida | Hydrocephlous: Definition, Classification, Clinical feature, investigation Treatment, Complication, Spina bifida: Definition, Classification, Diagnosis, Treatment. |
| ٣ | ١ | ١ | Abdominal wall anomalies | Urachal Anomalies (Defination, Clasification, Treatment), prune belly syndrome (diagnosis, Treatment, Prognosis). |
| ٤ | ١ | ١ | Abdominal wall anomalies | Umbilicalhernia (Defination, Signandsymptom, TreatmentExomphalocele (Defination, Type, Treatment) |
| ٥ | ١ | ١ | Infantile congenital Gastrointestinal obstruction | Meconium, Ileus,Defination,PathogonomicTest,Pathology,Surgical Treatment, Post operation Care),Micklelsdiverticulum (Defination,Type,Diagnosis,Complication,Treatment). |
| ٦ | ١ | ١ | Infantile congenital Gastrointestinal obstruction | Imperforated Anus(Definition, Classification, Deference between low variety and high variety, Diagnosis, Treatment). |
| ٧ | ١ | ١ | Infantile congenital Gastrointestinal obstruction | Intussusception (Definition, Causes, Incidence, Sign and symptom, Treatment, Complication of un operated patient), Incidence, pathology, Sign and symptom, Diagnosis, Differential Diagnosis, treatment, Operation Technique, Post Operation preparation, Complication) |

| | | | | |
|----|---|---|---|--|
| ٨ | ١ | ١ | Congenital Mega colon | Hirsch prong Disease (Definition, Causes, Incidence, Clinical Type, pathology Sign and symptom, Diagnosis, Treatment, Medical Treatment, Complication), Acquired Mega colon (definition, Treatment, Result). |
| ٩ | ١ | ١ | Hernia | Definition, Classification, Anotomopathology, Inguinal Hernia (Surgical Anatomy, Difference between direct and indirect inguinal hernia) Direct inguinal hernia(Definition, Clinical Type, Sign and symptom, Deferential Diagnosis, Treatment) Indirect Inguinal Hernia(definition classification, conservative treatment, Surgical Treatment). |
| ١٠ | ١ | ١ | Teratoma Postanal Dermoid cyst | Definition, Classification Sign and symptom Treatment |
| ١١ | ١ | ١ | Polycystic disease of the kidney | Definition, Incidence, Clinical Type pathology, Clinical Manifestation, diagnosis, Differential Diagnosis, Prognosis, Treatment). |
| ١٢ | ١ | ١ | Nephroblastoma | Wilm's Tumor (Definition, Clinical presentation, Staging, Differential Prognosis, Treatment). |
| ١٣ | ١ | ١ | Neuroblastoma Bladder Extrophy Bladder neck Selerosis | Definition, Incidence, Clinical Presentation, Diagnosis, Differential diagnosis, Staging, Treatment),(definition, Incidence, Sign and Symptom, omplication, Treatment, Osteotomy, Making Artificial Bladder),(definition, Sign and Symptom, Staging, Diagnosis, Treatment). |
| ١٤ | ١ | ١ | Cardiac Injuries Cardiac Transplantation | Definition, History, Donor and recipient, Contraindication of cardiac Transplantation, Compatibility of Donor-Recipient, Type and Specification of Donor, Operative Technic, Complication, Operation Result, Cardiac blind Injures. (Definition, Classification, Sign and symptom, Diagnosis, Treatment), Cardiac penetrating injuries (definition, Sign and Symptom, Diagnosis, Treatment). |
| ١٥ | ١ | ١ | Congenital heart Diseases | Atrial Septal Defect (A.S.D)(definition, Clinical Presentation, Diagnosis, Treatment), Ventricular septal defect (VSD)(definition, Sign and Symptom, Diagnosis, Treatment). |
| ١٦ | ١ | ١ | | Atria Ventricular Septal Defect (Definition Sign and Symptom, classification, diagnosis, Treatment, Prognosis) Tetralogy of Fallot (Definition, Emodynamic Change, Sign and Symptom, Diagnosis, Treatment). |

Textbooks and reference books recommended (Last edition)

Principles and practice of pediatrics surgery, Keith E Oldhham, paul M. Colombani.

Format Hardback | ١٨٥٠ pages, Dimensions ٢١٦ x ٢٧٩ x ١٠١,٦mm | ٦,٠٣٣g, Publication date ٢٨ Dec ٢٠٠٤, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement ٢nd Special ed.ISBN١٠٠٧٨١٧٤٢٩٠٠ ISBN١٣٩٧٨٠٧٨١٧٤٢٩٠٠, Bestsellers rank ٢,١٩٢,٢٠٧

Pediatrics surgery, Arnold G. Goran.

Format Paperback | ١٢١ pages, Publication date ٠١ Jun ١٩٩٤, Publisher Rapid Science Publishers, Publication City/Country United States, ISBN١٠١٨٥٩٢٢٦٣٨٨ ISBN١٣٩٧٨١٨٥٩٢٢٦٣٨٤

Principles of pedioiatrics surgery, James

Format Paperback | ٦٩٦ pages, Dimensions ١٥٦ x ٢٣٤ x ٣٥mm | ٩٥٧g, Publication date ١٩ Aug ٢٠١٧, Publisher Andesite Press, Language English, ISBN١٠١٣٧٥٥٥١٩٢٢ ISBN١٣٩٧٨١٣٧٥٥٥١٩٢٢

Pediatrics surgery, Diagnosis & Management, prem puri, Michael Hollwarth

Format Paperback ٩٩٨ pages, Dimensions ٢١٠ x ٢٧٩ x ٥١,٠٥mm | ٣,٥٠٠g, Publication date ٢٣ Aug ٢٠١٦, Publisher Springer-Verlag Berlin and Heidelberg GmbH & Co. KG, Imprint Springer-Verlag Berlin and Heidelberg GmbH & Co. K, Publication City/Country Berlin, Germany Language English, Edition Statement Softcover reprint of the original 1st ed. ٢٠٠٩, Illustrations note ١٥٣ Tables, black and white; XXIV, ٩٩٨ p, ISBN١٠٣٦٦٢٥٠٠٤١٨, ISBN١٣٩٧٨٣٦٦٢٥٠٠٤١٥

Clinical Scenarios in Surgery

Format Hardback | ٧٨٤ pages, Dimensions ٢١٣ x ٢٧٦ x ٣٨,١mm | ٢,٤٤٩g, Publication date ١١ Oct ٢٠١٨, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement ٢nd edition, ISBN١٠١٤٩٦٣٤٩٠٧٥ ISBN١٣٩٧٨١٤٩٦٣٤٩٠٧١, Bestsellers rank ٧٤٤,٢١٨

RCSI Handbook of Clinical Surgery for Finals

Format Paperback | ٣٧٦ pages, Dimensions ١٤٨ x ٢١٠ x ١٩,٠٥mm | ٦٧٦g, Publication date ٠٧ Dec ٢٠١٩,

CLINICAL PSYCHIATRY and CLINICAL NEUROLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absence is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory score is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scoring policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Learning objectives

At the end of the course, the student will be able to:

- Introducing concept of psychiatric disorders and their classification
- Awareness of general issues about etiology of psychiatric disorders and methodology used to study etiology of these disorders.
- Ability to diagnose and treat common psychiatric disorders like schizophrenia, acute manic episode, depression, anxiety disorders including phobias and OCD, conversion and dissociative disorders.
- To be able to diagnose severe/suicidal cases of depression and to refer them.
- Understand the concept of personality disorders.
- Ability to diagnosis and treat alcohol and drug dependence and withdrawal states.
- Ability to diagnose common psychiatric disorders in children.
- To know the role of counseling and psychological therapies in treatment of psychiatric disorders.
- Demonstrate role of psychological testing in assessment of psychiatric disorders.

Teaching and learning methodology

- Lectures and discussions with patient

Course content

| CLINICAL PSYCHIATRY | | | | |
|----------------------------|---------|--------------------------|-------------------------------------|---|
| Discipline | | Professional | | |
| Department | | Neurology and Psychiatry | | |
| Course title | | Clinical Psychiatry | | |
| Prerequisite | | Professional s | | |
| Course code | | MED ١١ ٤١ | | |
| Academic year | | VI | | |
| Semester | | ١١ | Fall | |
| Number of Credits | | ٢ | Knowledge | ١ |
| | | | Clerkship | ١ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ١ | ١ | Psychiatric history and examination | Presentation,(level of consciousness, General appearance), motor behavior, Affect, cognitive state (Attention,orientation, languages, memory),reasoning, mood, thought, perception. |
| ٢ | ١ | ١ | Schizophrenic disorders | Definition, natural history, incidence, prevalence, etiology, sign & symptoms, sub type of schizophrenia, course, D/Dx, diagnostic criteria, treatment, prognosis. |
| ٣ | ١ | ١ | Mood disorders | Epidemiology, natural history, etiology, clinic, DSM-IV diagnostic critic for mania, DSM-IV diagnostic criteria for anxiety patients, |
| ٤ | ١ | ١ | | Bipolar disorder, dysthymia, cyclothymia, types of bipolar disorders, course and prognosis, treatment for mania, social treatment, behavior treatment, psychotherapy. |
| ٥ | ١ | ١ | Anxiety disorders | Definition, epidemiology, theory of anxiety, panic stack, agoraphobia, social phobia, specific phobia, OCD, generalized anxiety disorders, treatment. |
| ٦ | ١ | ١ | Sexuality disorders | Human Sexuality, Sexual identity, sexual response cycle, sexual dysfunction, desire disorders, arousal disorder, orgasmic disorders, sexual pain disorders, paraphilias, gender identity disorder. |
| ٧ | ١ | ١ | Personality disorders | Definition, epidemiology, etiology, classification (paranoid personality disorders, schizoid personality disorders, schizotypal personality disorders, histrionic personality disorders, borderline personality disorders, Narcissistic personality disorders, antisocial personality disorders, avoidant personality disorders, OCD personality disorders, dependent personality disorders). |
| ٨ | ١ | ١ | Somatoform disorders | Definition, types, somatization disorders, conversion disorders, pain disorders, hypochondriasis, body dismorphic disorders, |
| ٩ | ١ | ١ | Mental retardation | Definition, nomenclature, classification, severity, epidemiology, neurological disorders, genetic syndromes. Psychosocial syndromes, etiology, genetic factors, Down syndrome, fragile x syndrome, cat cry syndrome, Acquired and developmental factors, environmental and sociocultural factors, diagnosis, prognosis, treatment. |

| | | | | |
|----|---|---|--------------------------------|---|
| ١٠ | ١ | ١ | Eating disorders | Definition, anorexia, eating disorder as a pathological behavior (epidemiology, etiology, clinic, diagnosis, course, prognosis, treatment). Elimination disorders Enuresis, encopresis (epidemiology, etiology, diagnosis, treatment), Bulimia nervosa (epidemiology, etiology, clinic, treatment), PICA, Rumination disorders. |
| ١١ | ١ | ١ | Cognitive disorders | Delirium (Definition, epidemiology, etiology, clinical sign and symptoms, Course, diagnosis, lab exam, treatment, Dementia (Definition, epidemiology, etiology, clinic), Alzheimer dementia, (etiology), vascular dementia, D/Dx of dementia diagnosis, treatment, Amnesic disorders (Definition, etiology). |
| ١٢ | ١ | ١ | Factitious disorders | Definition, epidemiology, etiology, diagnosis and clinical features, Factitious disorder with predominantly psychological sign and symptoms, Factitious disorders with predominantly physical sign and symptoms, Factitious disorder with combined psychological and physical sign and symptoms, Factitious disorder not otherwise specified, pathology and laboratory examination, differential diagnosis, prognosis, treatment) |
| ١٣ | ١ | ١ | Malingering | Definition, sign and symptoms, diagnosis, treatment. |
| ١٤ | ١ | ١ | Normal sleep & sleep disorders | Definition and sleep physiology, insomnia, hypersomnia, types of hypersomnia, sleep apnea, narcolepsy, (sleep attack, muscle atonia, sleep paralysis, hypnagogic and hypnopompic hallucination, treatment), klein Levine syndrome, parasomnia, night mare, night terror, Enuresis. |
| ١٥ | ١ | ١ | Dissociative disorders | Definition, types, dissociative amnesia (epidemiology, etiology, clinic, DDx, treatment), Dissociative fugue (epidemiology, etiology, clinic, D/Dx). Dissociative identity disorders (epidemiology, etiology, clinic, diagnosis, course and prognosis). Depersonalization disorders (epidemiology, etiology, clinic, diagnosis, course, treatment). |
| ١٦ | ١ | ١ | Adjustment disorders | Epidemiology, etiology, diagnosis and clinical feature, differential diagnosis, course and prognosis, treatment. |

Text books and reference books recommended (last edition)

Exxentials of psychiatry, Robert E. Hales, stuart C.

Format Paperback | ٨٠٦ pages, Dimensions ١٧٥ x ٢٥٤ x ٤٠mm | ١,٨١٤g, Publication date ٢٥ Aug ٢٠١٠, Publisher American Psychiatric Association Publishing, Publication City/Country VA, United States, Language English, Edition Revised, Edition Statement ٢rd Revised edition Illustrations note ٢ Halftones, black and white; ١٥ Line drawings, unspecified; ٢٢٨ Tables, unspecified, ISBN١٠ ١٥٨٥٦٢٩٣٢٢, ISBN١٢ ٩٧٨١٥٨٥٦٢٩٣٢٦, Bestsellers rank ١,٧٠١,٦١٨

Textbook of clinical psychiatry, Robert Hales.

Format Hardback | ١٨١٧ pages, Dimensions ٢١٦ x ٢٧٩ x ٥٧,٦٦mm | ٣,٨٠١,١g, Publication date ٠١ Apr ٢٠٠٨, Publisher American Psychiatric Association Publishing, Imprint American Psychiatric Press Inc, Publication City/Country VA, United States, Language English, Edition Statement ٥th edition, Illustrations note Illustrations (chiefly col.), ISBN١٠ ١٥٨٥٦٢٢٥٧٥ ISBN١٢ ٩٧٨١٥٨٥٦٢٢٥٧٣

Comprehensive clinical psychiatry, theodore E. stern, Jerrold F. Rosenbaum

Format Hardback | ١٠٦٠ pages, Dimensions ٢١٦ x ٢٧٦ x ٤٥,٩٧mm | ٢٨,٥٩٩,٤٥g, Publication date ٠٩ Apr ٢٠١٥, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ٢nd Revised edition, Illustrations note Approx. ٣٢٧ illustrations (٣٢٧ in full color) ISBN١٠ ٠٣٢٢٢٩٥٠٧X, ISBN١٢ ٩٧٨٠٣٢٢٢٩٥٠٧٩, Bestsellers rank ٨٠٩,٢٧٤

The neuroscience of clinical psychiatry, Edmond. S. Higgins, mark S. George.

Format Hardback | ٣٣٦ pages, Dimensions ١٧٨ x ٢٥٤ x ١٧,٧٨mm | ٩٠٧g, Publication date ٠٦ Apr ٢٠١٣, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement ٢nd edition, Illustrations note ٣١٨ ISBN١٠ ١٤٥١١٠١٥٤٦, ISBN١٢ ٩٧٨١٤٥١١٠١٥٤٦, Bestsellers rank ٥٨٥,٥٥١

Kaplan's & sadoques synopsis in psychiatry, benjamines James, sadock MD.

Format Paperback | ١٤٧٢ page, Publisher Lippincott India, Publication City/Country India, Edition Statement ١٠th edition, ISBN١٠ ٨١٨٩٩٦٠٣٧٧, ISBN١٢ ٩٧٨٨١٨٩٩٦٠٣٧٧

Clinical Handbook of Psychological Disorders

Format Hardback | ٧٦٨ pages, Dimensions ١٨٧ x ٢٣٥ x ٤٠,٨٩mm | ١,٤٥٢g, Publication date ١١ Apr ٢٠١٤,

CLINICAL NEUROLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning Objectives

At the end of the course, the student will be able to:

- List categories of diseases of the nervous system;
- Describe the common clinical presentations of nervous system diseases.
- Incorporate laboratory data into the assessment of a patient with a nervous system disorder;
- Correlate neuroradiographic and EEG findings with specipic CNS disorders;
- Identify the pathogens and recognize the clinical manifestations associated with CNS infections;
- Describe the diagnostic procedures, work up, approach to the patient and treatment options for various disorders including cerebrovascular accident, neoplastic diseases, headache and epilepsy;
- Discuss the goals of therapy of CNS disorders based on the underlying pathophysiological condition;
- Explain how the mechanisms of action of drugs that act in the CNS lead to their therapeutic effect;
- Identify the most common side effects and toxicities of each class of CNS-acting

Teaching and learning methodology

Department stress on teaching of basic fundamentals of clonical neurology through various methods especially bed teaching.

The following tools are employed:

- Didactic lectures discussion a particular topic at length in an one hour lecture;
- Clinical training: the clinical training of graduate medical students.

Course Contents:

| CLINICAL NEUROLOGY | | | | |
|---------------------------|---------|-------------------------------------|--------------------------------------|---|
| Discipline | | Professional | | |
| Department | | Neurology and Psychiatry Department | | |
| Course title | | Clinical Neurology | | |
| Prerequisite | | Professional | | |
| Course code | | MED ١٠٣٩ | | |
| Academic year | | V | | |
| Semester | | ١٠ | Fall | |
| Number of Credits | | ٢ | Knowledge | ١ |
| | | | Clerkship | ١ |
| weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| ١ | ١ | ١ | Neurological History and examination | Motor system examination (Inspection, tone, forces reflexes) Cranial nerves Examinations (olfactory, optic, oculomotor, trochlear, trigeminal, abducens, facial, vestibulocochlear, glossopharyngeal, vagus, accessory and hypoglossal nerves), co-ordination and cerebellar examination, station and gait, sensory system examination (laminisc and extra laminisc sensory system), Clinical approach to the Unconscious patients: Glasgow coma scale, Eye ball movement, Respiration, pupils and motor system examination. Laboratory investigations Blood, CSF, urine and stool, imaging. |
| ٢ | ١ | ١ | Ischemic Stroke | Definition, Epidemiology, etiology (thrombosis, Emboli&Hemorrhage). TIA (transient ischemic Attack) and Reversible ischemic neurological Deficit (RIND): Definition, risk factors, clinic (internal carotid circulation occlusion, vertebrobasilar circulation occlusion, important points during assessment of TIA patient, routine laboratory investigations. SpecialInvestigation and imaging: differential diagnosis, treatment, prevention. Cerebral infarction: Definition, cerebral thrombosis (risk factors, clinic, laboratory investigations and imaging, management, prognosis, follow up, prevention). Cerebral embolism (risk factors, clinic, laboratory investigations, differential diagnosis of embolic and thrombotic cerebral infarction, treatment, drugs used in treatment of cerebral infarction) |
| ٣ | ١ | ١ | Hemorrhagic Stroke | Intra Cerebral Hemorrhages: Definition, epidemiology, etiology, risk factors, clinic, investigations and imaging, treatment, prevention, prognosis, Differential diagnosis of stroke. Subarachnoid hemorrhage: (Definition, etiology, clinic, classification of stages I-V, Diagnosis, additional investigations and imaging, complication, medical treatment, surgical treatment, prognosis). Epidural Hematoma: (Definition, clinic, treatment, prognosis). Acute subdural hematoma: (Definition, clinic, treatment), Chronic subdural hematoma: Definition, diagnosis, treatment). |

| | | | | |
|----|---|---|---|--|
| ٤ | ١ | ١ | Unconsciousness and Coma | Definition, Mechanisms, classification, initial management of unconscious patient (ABCD), history, vital sign, respiration, head and neck, papilledema, position of eye ball, movement of eye ball, pupils, extremities, Etiology of unconsciousness and coma: metabolic & neurologic. Investigation: blood, VSF, urine, stool, imaging, special tests. Assessment of brain stem in unconscious patients, Glasgow Coma Scale: locked in syndrome, vegetative state special nursing care for unconscious patient. |
| ٥ | ١ | ١ | Parkinson Disease | Definition, epidemiology, etiology, classification, idiopathic (bradykinesia, rigidity, tremor) Post encephalitis: torticollis, blephero spasm, oculogyric crisis, siallhorrea. Atherosclerotic (pseudo bulbar play), strait nigral, toxic (co), drug induced (Reserpine, metoclopramide, phenothiazine derivatives), differential diagnosis, treatment prognosis. |
| ٦ | ١ | ١ | Multiple sclerosis | Definition, epidemiology, etiology, clinic, prognosis, diagnosis, complication, treatment, differential diagnosis, other clinical multiple sclerosis. |
| ٧ | ١ | ١ | Seizure Disorders | Definition, etiology, classification, petit mal seizure, Grand mal seizure, partial seizure: (simple & comlex seizure), reflex seizure, febrile convulsion, pseudo seizure, status epilepticus, management of tonic and colonics status epilepticus, laboratory investigation, differential diagnosis, treatment of seizures disorders, prognosis. |
| ٨ | ١ | ١ | Neuropathies | Definition, clinical manifestations, etiology, laboratory investigation. Gillian-Bare Syndrome: Definition, clinical lab exam, Imaging (NCV, EMG, & EEG), electrolytes, respiratory capacities, differential diagnosis, mood of onset, treatment, complications, Chronic inflammatory Demyelization polyradiculoneuropathy: Definition, clinic, differential diagnosis, treatment. Charcot Marie Tooth Neuropathy: Definition, classification, differential diagnosis, management, Brachial plexus neuropathy: etiology, classification. |
| ٩ | ١ | ١ | Degenerative neurological diseases | Definition, common sign and symptoms, classification, Alzheimer's disease: clinical manifestation, pathology, laboratory and imaging, differential diagnosis, treatment, prognosis. Dementia with lewy bodies: picks disease, multi infarct dementia, binswangers disease, Huntington's chorea, Olivopontocerebellers atrophy, Progressive supranuclear palsy, Shy-Dragger syndrome, Hallervoden – Spatz disease, Friedreichs ataxia, Roussy-levy syndrome. Motor neuron disease: classification, Amyotrophic Lateral Sclerosis, progressive spinal muscular atrophy, bulbar palsy, pseudo bulbar palsy, primary lateral sclerosis, labor's hereditary optic atrophy, cerebellar degeneration, spastic para paresis, acute transverse myelitis(clinic, treatment) |
| ١٠ | ١ | ١ | Trigeminal neuralgia and facial paralysis | Brief review of Anatomy physiology. Facial paralysis: Definition, incidence clinic, etiology, diagnosis, differential diagnosis, prognosis, treatment. Trigeminal neuralgia: definition, diagnosis, treatment, prognosis. |
| ١١ | ١ | ١ | Headache & vertigo | Headache: etiology, history, classification, Migraine: Definition, classification, differential diagnosis, treatment. Cluster headache: Definition, diagnosis, treatment, Vertigo: Definition, etiology, classification, important poin when faced to patient who has vertigo, clinic and investigation. |
| ١٢ | ١ | ١ | Cerebral tumor | Anatomy of the skull and brain, mechanism and sign of R I C P, Brain edema: body fluid, etiology, treatment, pseudo tumor cerebri, normal pressure hydrocephalus. Brain tumor: (clinical manifestation of the brain tumor, laboratory investigation, classification), primary brain tumors, Gliomas, meningioma, penialoma, treatment. |
| ١٣ | ١ | ١ | Sydenham chorea | Definition, incidence, pathology, etiology, sign & symptoms, reflex prognosis, diagnosis, treatment. |

| | | | | |
|----|---|---|---|--|
| ١٤ | ١ | ١ | Congenital nerves system malformation and low back pain | Low back pain: Definition, etiology, classification, history, laboratory and imaging, diagnosis, prolapsed inter vertebral disc, (clinic, and treatment). Congenital malformation of the CNS: cranial synostosis, platybasia (clinic, treatment, basilar investigation) anencephaly, Arnold- chiari malformation (clinic, diagnosis), dandy-walker syndrome, syringomelia (clinic, diagnosis), spine malformation: dysraphism, Diastematomyelia, KlipelFeil Anomaly. |
| ١٥ | ١ | ١ | Myopathies | Definition, primary Myopathy, Duchene dystrophic myopathy, (Definition, clinic, prognosis), neurogenic myopathy, congenital myopathy, secondary myopathy (Etiology, clinic), Neuromuscular Junction disease & myasthenia gravis: (Definition, clinic, investigation, differential diagnosis, treatment). |
| ١٦ | ١ | ١ | Movement disorders | (personal history, family history, drugs), Tremor: (resting tremor, action tremor, intention tremor), hemiballismus, athetosis, dystonia: classification, focal dystonia, blepharospasm, hemi facial spasm, occupational cramp, segmental dystonia, tardive dystonia, Generalized dystonia (etiology), Tic, Gilles de la turreted syndrome, treatment. |

Textbooks and reference books recommended (last edition)

Clinical Neurology

Format Paperback | ٧٤٤ pages, Dimensions ١٨٩ x ٢٤٦ x ٢٨,١mm | ١,٦٣٣g, Publication date ١٢ Mar ٢٠١٢, Publisher Taylor & Francis Ltd, Imprint Hodder Arnold, Publication City/Country London United Kingdom, Language English, Edition New edition, Edition Statement ٤th New edition Illustrations note ٤-page colour plate section; ٨٤ Line drawings, black and white; ١١٧ Halftones, black and white; ٣٠١ Illustrations, black and white, ISBN١٠ ٠٣٤٠٩٩٠٧٠٨, ISBN١٣ ٩٧٨٠٣٤٠٩٩٠٧٠٤ Bestsellers rank ٦٣٥,٥٨٢

Fenichel's Clinical Pediatric Neurology A Signs and Symptoms Approach

Format Hardback | ٤٠٠ pages, Dimensions ١٨٤ x ٢٦٠ x ٢٥,٤mm | ٩٧٥,٢٢g, Publication date ٠٣ Sep ٢٠١٩, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ٨th Revised edition, Illustrations note Approx. ١٣٥ illustrations (٣٥ in full color) ISBN١٠ ٠٣٢٣٤٨٥٢٨٦, ISBN١٣ ٩٧٨٠٣٢٣٤٨٥٢٨٩ Bestsellers rank ٣٨٧,٧٠٤

Kaufman's Clinical Neurology for Psychiatrists

Format Hardback | ٦٨٨ pages, Dimensions ٢١٦ x ٢٧٦ x ٣٣,٠٢mm | ٢,٠٤١,١٧g, Publication date ١٣ Jan ٢٠١٧, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ٨th Revised edition Illustrations note Approx. ٣٥٠ illustrations (٣٠٠ in full color) ISBN١٠ ٠٣٢٣٤١٥٥٩٨ ISBN١٣ ٩٧٨٠٣٢٣٤١٥٥٩٠, Bestsellers rank ٣٦٠,٨٢٥

Hankey's Clinical Neurology

Format Paperback | ٩٧٦ pages, Dimensions ٢٠٥,٧٤ x ٢٦٩,٧٤ x ٤٠,٦٤mm | ٢,٤٤٩g, Publication date ٠٤ Feb ٢٠١٤, Publisher Manson Publishing Ltd, Publication City/Country London, United Kingdom, Language English, Edition New edition, Edition Statement ٢nd New edition, Illustrations note ٦٩٨ Illustrations, color, ISBN١٠ ١٨٤٠٧٦١٩٣٨, ISBN١٣ ٩٧٨١٨٤٠٧٦١٩٣١, Bestsellers rank ٨٣٦,٥٧٥

Neurology An Illustrated Color Tex

Format Paperback | ١٤٤ pages, Dimensions ٢١٠ x ٢٩٧ x ٧,٦٢mm | ٤٣٠,٩١g, Publication date ٢١ Jul ٢٠١٠, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE, Publication City/Country London, United Kingdom, Language English, Edition Statement ٣rd edition, Illustrations note Illustrations (chiefly col.) ISBN١٠ ٠٧٠٢٠٣٢٢٤٤٧, ISBN١٣ ٩٧٨٠٧٠٢٠٣٢٢٤٠ Bestsellers rank ٣١٧,٥٩٧

Neurology A Queen Square Textbook

Format Hardback | ١٠٩٦ pages, Dimensions ٢١٧ x ٢٨٦ x ٥٤mm | ٣,١٣٦g, Publication date ١٦ Sep ٢٠١٦, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement ٢nd Edition, ISBN١٠ ١١١٨٤٨٦١٧X, ISBN١٣ ٩٧٨١١١٨٤٨٦١٧٧ Bestsellers rank ٤٤٣,٣١٧

Neurology and Neurosurgery Illustrated

Format Paperback | ٦١٢ pages, Dimensions ١٨٩ x ٢٤٦ x ٢٥,٤mm | ١,١٥٦,٦٦g, Publication date ٠٨ Sep ٢٠١٠, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE, Publication City/Country London, United Kingdom, Language English, Edition Illustrated, Edition Statement ٥th edition, Illustrations note Approx. ٢٢٢٦ illustrations; Illustrations, unspecified, ISBN١٠ ٠٤٤٣٠٦٩٥٧٣ ISBN١٣ ٩٧٨٠٤٤٣٠٦٩٥٧٤, Bestsellers rank ١١٠,٧٨

SURGERY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

The surgical clerkship is designed to introduce students to the theoretical and skills aspects of surgical patients care. Emphasis is placed on the underlying pathophysiology rather than technical aspects. Students are fully involved in the daily care of surgical patients and participate in diagnostic and therapeutic decision making. This course includes; didactic teaching sessions as well as bedside clerkship.

Learning OBJECTIVES

A. Knowledge

At the end of the course, the student shall be able to:

١. Describe aetiology, pathophysiology, and principles of diagnosis and management of common surgical problems including emergencies, in adults;
٢. Define indications and methods for fluid and electrolyte replacement therapy including blood transfusion;
٣. Define asepsis, disinfection and sterilization and recommend judicious use of antibiotics;
٤. Describe clinical features and risk factors of common malignancies in the country and their Management including prevention.

B. Skills

At the end of the course, the student should be able to:

١. Diagnose common surgical conditions both acute and chronic, in adult and children;
٢. Plan various laboratory tests for surgical conditions and interpret the results;
٣. Identify and manage patients of haemorrhagic, septicaemic and other types of shock;
٤. be able to maintain patent air-way and resuscitate a -
 - (i) A critically injured patient;
 - (ii) Patient with cardio-respiratory failure;
 - (iii) A drowning case.

- . Monitor patients of head, chest, spinal and abdominal injuries, both in adults and children;
- ∩. Provide primary care for a patient of burns;
- ∪. Acquire principles of operative surgery, including pre-operative, operative and post operative care and monitoring;
- ∧. Treat open wounds including preventive measures against tetanus and gas gangrene;

Procedures:

- Gets the permission;
- Explains the procedure;
- Wears gloves
- Chooses an appropriate site;
- Applies tourniquet
- Cleans the area with antiseptic
- Holds the cannula properly (avoids touching the catheter)
- Inserts the cannula at an appropriate angle (oblique angle & in line with the vein)
- Inspects the backflow of blood in the chamber
- **Advances the cannula for a further distance**
 - Withdraws the stylet & advances the cannula
 - Fixes the cannula
 - Connects the drip
 - Disposes the sharps in appropriate container
 - Disposes the glove in an appropriate container
 - Overall performance
 - Suturing
 - ET intubation
 - Bladder catheterization
 - Rectal examination
 - Forceps application
 - Surgical knot

Teaching Learning Methods

The following strategy is used for organizing teaching learning activities:

- Lectures are used for teaching the basic principles for 1 semester;
- Clinical teaching to a group of 12 students on surgical inpatient wards and OPD,s;
- Clinical skill training we teach basic surgical skill to our final year students and interns in minor OT, casualty theatre and main theatre . In the department also organize yearly workshop on suturing & knot tying where students get an opportunity to acquire hands on experience on these important skills.

Guidelines for student's clerkship in department of surgery

This is the first introductory posting in surgery to provide orientation, toward the general functioning of the department and the nature of clinical work performed of the department surgery student will be posted in the surgical out patients department the learning objectives for this session are to learn:

- The art and science of history taking;
- General evaluation of overall health;
- Basic principle of examination of a lump;
- Examination of hernia hydrocele and abdomen;
- Examination of breast;
- Examination of head and neck;
- Evaluation of wounds, ulcers;

Besides seeing patients

You should also acquire the following basic surgical skills:

- Wound dressing debridement abscess aspiration and drainage, excision biopsy of skin lesions, diploma and epidermal cysts skin suturing and knot tying proctoscopy rubber of piles;
- All MD students attend minor surgical operation theatre situated at the end of the surgical OPD corridor to acquire the above skills please maintain a record of cases seen and surgical skills learn in a diary\log book.

Course Content

| SURGERY (Module 1) | | | | |
|---------------------------|---------|-------------------|---------------------|--|
| Discipline | | Professional | | |
| Department | | Basics of Surgery | | |
| Course title | | First aid | | |
| Prerequisite | | None | | |
| Course code | | MED 01 27 | | |
| Academic year | | I | | |
| Semester | | 1 | | |
| Number of Credits | | 2 | | |
| | | Knowledge | | 1 |
| | | Clerkship | | 1 |
| Weeks | Hours | | Topics | Description |
| | Lecture | Clerkship | | |
| 1 | 1 | 1 | First aids | Introduction, Definition of first aid, Responsibilities of first aid, Philosophy of first aid. |
| 2 | 1 | 1 | | Health and safety, Exposure to biological Hazards, Universal precautions, Immediate action at scene following exposure, Priorities, General principles of first aid, General assessment of the situation. |
| 3 | 1 | 1 | Casualty assessment | The primary survey, DRS ABCD (Danger: (Moving a casualty), Response: (overview, causes of unconsciousness, How to check for responsiveness for level of, responsiveness), Send for help: (Activating the Emergency Medical services), Airway: (overview, airway obstruction, suffocation, strangulation, choking, how to check an airway). |
| 4 | 1 | 1 | | Breathing: (causes of absent or ineffective breathing, Signs of ineffective breathing, How to check for breathing, rescue breaths, Mouth to mouth, Mouth to mouth Ventilation: Bag valve mask Laryngeal mask, Endo-tracheal intubation, Cricothyroidectomy) Cardiopulmonary Resuscitation: Air way opening, Chest compressions, Rescue. |
| 5 | 1 | 1 | | Disability, Casualty position, Stable side position, Foreign Body Airway obstruction (Choking), Airway obstruction (partial, complete, signs and symptoms, treatment). |
| 6 | 1 | 1 | | The secondary survey: secondary assessment procedure, Managing a responsive casualty, vital signs. |
| 7 | 1 | 1 | Stop the Bleeding | General: Clothing, methods of temporary, homeostasis, elevation, bandage, application, direct pressure, bent the joint, Tourniquet application, methods, indications, inconvenients, mistake, application. |

| | | | | |
|----|---|---|--|--|
| 8 | 1 | 1 | | Clamping the bleeding vessels, Special types of external bleeding, From and open fracture, From a tooth socket, From the ear passage, From the nose, From the lips, check and tongue, Internal bleeding. Check for Shock: Signs and Symptoms of hemorrhagic Shock. First Aid Measures for hemorrhagic Shock. |
| 9 | 1 | 1 | Dressings, Bandages, Slings and Splint | Standard dressing, Bandage: Bandages; rules, fixing the end of bandage: type of bandage, Tube gauze finger bandage, Triangular bandage, Broad and narrow fold bandage, Hand bandage, Wrist and palm bandage. |
| 10 | 1 | 1 | | Elbow bandage, Shoulder bandage, crutch bandage, Hip bandage, Knee bandage, Foot bandage, Eye bandage, Head and scalp bandage, Ring pad. Slings, Splints. |
| 11 | 1 | 1 | First aid for fractures | General, Types of Fractures, Signs and Symptoms of Fractures, Management. Principles of treatment, Examination, General treatment, Collarbone, Shoulder blade and shoulder upper arm, elbow, forearm and wrist, Hand fingers, crush injury to the hand, Hip to knee, Kneecap, Knee to foot lower limb, Ankle, Hell bone; Bones of the foot, Both legs, Jaw, spine, Neck, Pelvis. |
| 12 | 1 | 1 | | Dislocation. Soft tissue injury, Overview Treatment – RICED, Signs and symptoms, Management. |
| 13 | 1 | 1 | Basic Clinical Procedures | Introduction, General principles, Needle thoracocentesis, Urinary catheterization Vein puncture, Venous cut down wound suturing techniques. |
| 14 | 1 | 1 | First aid for specific injuries | General, First Aid for head, Neck, and Facial Injuries, First Aid for Chest Wounds, First Aid for Abdominal Wounds, First aid for Burn Injuries, Heat Injuries. |
| 15 | 1 | 1 | | Cold Injuries, Chemical burn, Eye injury, loose foreign body, Ear injuries, foreign body, Nose injury, foreign bodies. |
| 16 | 1 | 1 | First aid for bites and stings | General, Types of Snakes, Snakebites, Human or Animal Bites, Insect Bites and Stings, First Aid for Bites and sting. |

Textbooks & reference books recommended for all surgery decipline (last edition)

Short practice of Surgery – Bailey & Loves, Norman S. Williams. Christopher JK. Bulstrode.

Format Paperback : 133 pages, ISBN-13 : 978-1138.31647, ISBN-10 : 9781138.31647, Product Dimensions : 7.87 x 0.01 x 1.07 inches, Publisher : CRC Press; 1st Edition (January 17, 2018). ASIN 1138.31647X, Language English

Schwartz Principle of Surgery

Format Paperback Print Length : 74.2 pages, Publication Date : May 29, 2019, File Size : 280.38 KB, Publisher McGraw-Hill Education / Medical, 11th Edition (May 29, 2019), Word Wise : Not Enabled, ASIN : B0YQBBYQN6, Language: : English

Hamilton Bailey's Physical Signs in Surgery

Format Paperback Hardcover, 7.4 pages Item Weight : 4.3 pounds Product Dimensions : 8.20 x 1.20 x 10.0 inches Publisher, CRC Press; 19th Edition (March 17, 2016) Language English, ISBN-10 : 1444169181, ISBN-13 : 978-1444169188, Best Sellers Rank: #1,147,111 in Books

General Thoracic surgery, Thomas .WShields, Joseph Losicro.

Format Undefined | 211 pages, Publication date 24 Apr 2010, Publisher LIPPINCOTT WILLIAMS & WILKINS, Publication City/Country United States, ISBN10 : 1401167377 ISBN13 9781401167377

Oxford Cardiothoracic surgery, Joana Chikwe, Emma Beddow.

Format Paperback | 808 pages, Dimensions 100 x 180 x 30 mm | 427g, Publication date 30 Mar 2006, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Illustrations note 200 line illustrations, halftones and tables ISBN10 : 0198060887, ISBN13 9780198060888, Bestsellers rank 913,391

Priciples of Neurosurgery, Robert G. Grossman, Christopher M Loftus

Format Hardback | 873 pages, Dimensions 216 x 279 x 38,1 mm | 2,710g, Publication date 01 Jan 1999, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 2nd Revised edition Illustrations note 037 halftones, 141 line illustrations, 109 tables, ISBN10 : 0397018404 ISBN13 9780397018404

Emergency Surgery, Adam Brooks, Bryon A. Cotton.

Format Paperback | 228 pages, Dimensions 214 x 276 x 13 mm | 084g, Publication date 00 Apr 2011, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell (an imprint of John Wiley & Sons Ltd), Publication City/Country Chicester, United Kingdom, Language English, Edition Statement 1. Auflage, ISBN10 : 1400170200, ISBN13 9781400170200, Bestsellers rank 1,043,041

SURGERY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to 5% with reasonable excuse.
- More than 5% of absence is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from 10 points
- Students factory score is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scoring policy

- How to evaluate and how to divide the scores in accordance with article 19 of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) 20%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam 20%
- Final semester exam 60%
- Total 100%

Course description

The surgical clerkship is designed to introduce students to the theoretical and skills aspects of surgical patients care. Emphasis is placed on the underlying pathophysiology rather than technical aspects. Students are fully involved in the daily care of surgical patients and participate in diagnostic and therapeutic decision making. This course includes; didactic teaching sessions as well as bedside clerkship.

Learning OBJECTIVES

C. Knowledge

At the end of the course, the student shall be able to:

1. Describe aetiology, pathophysiology, and principles of diagnosis and management of common surgical problems including emergencies, in adults;
2. Define indications and methods for fluid and electrolyte replacement therapy including blood transfusion;
3. Define asepsis, disinfection and sterilization and recommend judicious use of antibiotics;
4. Describe clinical features and risk factors of common malignancies in the country and their Management including prevention.

D. Skills

At the end of the course, the student should be able to:

1. Diagnose common surgical conditions both acute and chronic, in adult and children;
2. Plan various laboratory tests for surgical conditions and interpret the results;
3. Identify and manage patients of haemorrhagic, septicaemic and other types of shock;
4. be able to maintain patent air-way and resuscitate a -
 - (i) A critically injured patient;
 - (ii) Patient with cardio-respiratory failure;
 - (iii) A drowning case.

- . Monitor patients of head, chest, spinal and abdominal injuries, both in adults and children;
- ٦. Provide primary care for a patient of burns;
- ٧. Acquire principles of operative surgery, including pre-operative, operative and post operative care and monitoring;
- ٨. Treat open wounds including preventive measures against tetanus and gas gangrene;

Procedures:

- Gets the permission;
- Explains the procedure;
- Wears gloves
- Chooses an appropriate site;
- Applies tourniquet
- Cleans the area with antiseptic
- Holds the cannula properly (avoids touching the catheter)
- Inserts the cannula at an appropriate angle (oblique angle & in line with the vein)
- Inspects the backflow of blood in the chamber
- **Advances the cannula for a further distance**
 - Withdraws the stylet & advances the cannula
 - Fixes the cannula
 - Connects the drip
 - Disposes the sharps in appropriate container
 - Disposes the glove in an appropriate container
 - Overall performance
 - Suturing
 - ET intubation
 - Bladder catheterization
 - Rectal examination
 - Forceps application
 - Surgical knot

Teaching Learning Methods

The following strategy is used for organizing teaching learning activities:

- Lectures are used for teaching the basic principles for ١ semester;
- Clinical teaching to a group of ١٢ students on surgical inpatient wards and OPD,s;
- Clinical skill training we teach basic surgical skill to our final year students and interns in minor OT, casualty theatre and main theatre . In the department also organize yearly workshop on suturing & knot tying where students get an opportunity to acquire hands on experience on these important skills.

Guidelines for student's clerkship in department of surgery

This is the first introductory posting in surgery to provide orientation, toward the general functioning of the department and the nature of clinical work performed of the department surgery student will be posted in the surgical out patients department the learning objectives for this session are to learn:

- The art and science of history taking;
- General evaluation of overall health;
- Basic principle of examination of a lump;
- Examination of hernia hydrocele and abdomen;
- Examination of breast;
- Examination of head and neck;
- Evaluation of wounds, ulcers;

Besides seeing patients

You should also acquire the following basic surgical skills:

- Wound dressing debridement abscess aspiration and drainage, excision biopsy of skin lesions, diploma and epidermal cysts skin suturing and knot tying proctoscopy rubber of piles;
- All MD students attend minor surgical operation theatre situated at the end of the surgical OPD corridor to acquire the above skills please maintain a record of cases seen and surgical skills learn in a diary\log book.

Course Contents

| SURGERY (Module ٢) | | | | |
|---------------------------|-------|----------------------------|--|---|
| Discipline | | Professional | | |
| Department | | Basics of Surgery | | |
| Course title | | Principles of surgery | | |
| Prerequisite | | Basics Biomedical Sciences | | |
| Course code | | MED ٠٥ ٢٧ | | |
| Academic year | | III | | |
| Semester | | Spring | | |
| Number of Credits | | Knowledge | | ٢ |
| | | Clerkship | | ٢ |
| week s | Hours | | Topics | Description |
| | Lectu | Clerk ship | | |
| ١ | ٢ | ٢ | Principles to complete the file of surgical patient | Taking History of the patient physical exam of the patient, provisional diagnosis, special exam. Clinical diagnosis, treatment, prognosis, follow up, termination. |
| ٢ | ٢ | ٢ | General responses to injury and acute illness | Introduction, Clinical responses to tissue injury Initiating factors, Inflammatory responses Cytokine Response to Injury, Hormonal responses, Metabolic effect, salt and water balance, Glucose, fat, protein, Modification of responses, General anesthesia, regional an aesthesia, Blockade of inflammatory mediators. |
| ٣ | ٢ | ٢ | Aseptic Techniques (Antisepsis & Asepsis) | Antisepsis, definition, mechanical antiseptics, chemical antiseptics, physical antiseptics Biological antiseptic, Antibiotics. |
| ٤ | ١ | ١ | Aseptic Techniques (Antisepsis & Sepsis) | Asepsis, Disinfection, sterilization Techniques and Methods, Scrubbing up, gowning, gloving, preparation of surgical area, operative theatre, infection control in surgical ward & in the hospital. |
| ٥ | ١ | ١ | Fluid and electrolyte Management of the surgical patient | Introduction, Body fluids, Total body water, Fluid compartment, Composition of fluid compartment, Osmotic pressure, Classification of body fluid changes, Normal exchange of Fluid and electrolyte, Disturbances of in Fluid balance, volume control, concentration change hyponatremia, hypernatremia, composition change: etiology and diagnosis, potassium abnormality, magnesium abnormality, Acid – base balance, Acid- base homeostasis, Metabolic derangement, Respiratory derangement, Fluid, and eelectrolyte therapy, Alternative resuscitative fluids, Correction of life-threatening electrolyte abnormality. |
| ٦ | ١ | ١ | Fluid and electrolyte Management of the surgical patient | Pre-operative fluid therapy, intra operative fluid therapy, post-operative fluid therapy. |

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|----|---|---|--------------------------------------|--|
| | ١ | ١ | Pre and post operative | Definition and goals, preoperative care, preoperative evaluation, preoperative preparation, Consultations, preoperative note, preparations, awareness of patient, operation, consent, preoperative order. |
| ٧ | ٢ | ٢ | Pre and post operative care | Post operative care, the immediate post operative period, postoperative orders, Monitoring, Respiratory care, Position In bed and mobilization, Diet, Administration of fluid and electrolytes, Drainage tube, Medication, Laboratory examination and imaging, the intermediate period, care of the wound Management of drains, postoperative pulmonary care, respiratory failure, postoperative fluid and electrolyte management Postoperative care of the gastrointestinal tract |
| ٨ | ١ | ١ | Pre and post operative care | Postoperative pain and treatment of pain |
| | ١ | ١ | Postoperative complication | Introduction, wound complication, hematoma, wound dehiscence, A- systemic risk factors, B-local risk factors, C- diagnosis and management, Miscellaneous problems of the operative wound |
| ٩ | ٢ | ٢ | Postoperative complications | Respiratory complications, Atelectasis, pulmonary aspiration, postoperative pneumonia, postoperative pleural effusion and pneumothorax, Fat embolism, Cardiac complication, peritoneal complications Hemoperitoneum, complications of drains postoperative alteration of gastro intestinal motility gastric dilatation, Bowel obstruction, postoperative pancreatitis, post-operative hepatic dysfunction, postoperative cholecystitis, Clostridium defficil colitis, urinary complications, postoperative urinary retention, urinary tract infection, complication of intravenous, Air embolism, phlebitis, post operative fever. |
| ١٠ | ١ | ١ | Dressing | Dressing goals, purpose of wound Dressings, Types of dressing: primary dressing, secondary dressing, one layer dressings, skin closure dressing (island dressing), Dry sterile dressing, Three layer dressing, pressures dressing, stent dressing, Bolster/ tie over dressing, wet-to-dry dressings, wet-to-wet dressing Vacuum-assisted dressing, changing the dressing, material to fix the dressing. |
| | ١ | ١ | Blood- borne viruses and the surgeon | Introduction, Risk for surgeons, post exposure prophylaxis for occupational exposure, Risk for the patient of acquisition of infection during surgery, Acquired immunodeficiency syndrome and the human immunodeficiency, Viral hepatitis. |
| ١١ | ١ | ١ | Wound healing | Introduction, step of wound healing, elements of healing, phase of healing, Types of wound healing, Factors affecting wound healing, Surgical wound classification. |
| | ١ | ١ | Surgical metabolism and nutrition | Introduction, Nutrient requirement and substrates Carbohydrate metabolism, protein metabolism, A- glutamine, B-arginine. |
| ١٢ | ١ | ١ | Surgical metabolism and nutrition | Lipid metabolism, Nucleotide, vitamins and trace elements, Nutritional pathophysiology, starvation, Elective operation or trauma, sepsis, Enteral nutrition therapy, parenteral nutrition therapy, ١-peripheral parenteral nutrition ٢-Total parenteral nutrition |
| | ١ | ١ | Power sources in surgery | Introduction, Electro- surgery, principles of electricity, - electro cautery, -principals of electro-surgery, Mono-polar circuit. |
| ١٣ | ١ | ١ | Power sources in surgery | Bipolar circuit, The electromagnetic spectrum and tissue effects, Types of electro- surgery Cutting Coagulation, principal applications for electro surgery, Ultrasonic scalpels and clamps Cavitational ultrasonic surgery aspiration. |
| | ١ | ١ | Surgical Oncology | Introduction, tumor nomenclature, Tumor grade, Tumor stage, Cancer epidemiology Role of the surgical oncology, Diagnosis and staging, Curative surgery, palliation, prophylaxis. |
| ١٤ | ١ | ١ | Surgical oncology | Cytotoxic, chemotherapy, principles of chemotherapy Use, A- curative chemotherapy B- Adjuvant treatment, C- neo adjuvant treatment, D- chemotherapy for metastatic disease Classes of chemotherapeutic agents, side effects of chemotherapy, Regional therapy, Targeted therapies, Hormonal therapies, Radiation therapy. |

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|----|---|---|-----------------------------|--|
| | 1 | 1 | Organ transplantation | Introduction, Kidney transplantation Heart transplantation |
| | 1 | 1 | Organ transplantation | Lung transplantation, Liver transplantation pancreas transplantation |
| 10 | 1 | 1 | Minimally- invasive surgery | The Minimally- Invasive team, physiology Laparoscopy, thoracoscopy, Extracavitary Minimally-Invasive surgery, Anesthesia General principles of Access and Equipment Laparoscopic Access, Access for subcutaneous and extraperitoneal surgery. |
| 16 | 1 | 1 | Minimally- invasive surgery | Hand- Assisted laparoscopic Access, post placement, Imaging Systems, Energy source for Endoscopic, Instrumentation, Robotic Assistance, Room setup and the Minimally- invasive suite, patient positioning, special considerations, Cirrhosis and portal, Hypertension, Economics of Minimally- invasive surgery. |
| | 1 | 1 | Ulcer , fistula and sinus | Ulcer: Classification, non specific ulcer, clinical exam, symptomatology, pathologic exam sinus and fistula: treatment |

Textbooks & reference books recommended for all surgery decipline (last edition)

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Format Undefined | 261 pages, Publication date 24 Apr 2010, Publisher LIPPINCOTT WILLIAMS & WILKINS, Publication City/Country United States, ISBN10 1451166737 ISBN13 9781451166737

Oxford Cardiothoracic surgery, Joana Chikwe, Emma Beddow.

Format Paperback | 108 pages, Dimensions 10 x 18 x 30mm | 422g, Publication date 30 Mar 2016, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Illustrations note 200 line illustrations, halftones and tables ISBN10 0198060887, ISBN13 9780198060888, Bestsellers rank 913,391

Principles of Neurosurgery, Robert G. Grossman, Christopher M Loftus

Format Hardback | 164 pages, Dimensions 216 x 279 x 38,1mm | 2,710g, Publication date 01 Jan 1999, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 2nd Revised edition Illustrations note 236 halftones, 141 line illustrations, 109 tables, ISBN10 0397018404 ISBN13 9780397018401

Emergency Surgery, Adam Brooks, Bryon A. Cotton.

Format Paperback | 228 pages, Dimensions 215 x 276 x 13mm | 584g, Publication date 00 Apr 2011, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell (an imprint of John Wiley & Sons Ltd), Publication City/Country Chicester, United Kingdom, Language English, Edition Statement 1. Auflage, ISBN10 1405170200, ISBN13 9781405170203, Bestsellers rank 1,043,041

SUGERY ۳

Attendance policy

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- Mid semester exam ۳۰%
- Final semester exam ۳۰%
- Total ۱۰۰%

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Procedures:

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- Examination of hernia hydrocele and abdomen;
- Examination of breast;
- Examination of head and neck;
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Besides seeing patients

You should also acquire the following basic surgical skills:

- Wound dressing debridement abscess aspiration and drainage, excision biopsy of skin lesions, diploma and epidermal cysts skin suturing and knot tying proctoscopy rubber of piles;
- All MD students attend minor surgical operation theatre situated at the end of the surgical OPD corridor to acquire the above skills please maintain a record of cases seen and surgical skills learn in a diary\log book.

Course Content

| SUGERY (Module ۳) | | | | |
|--------------------------|-----------|-----------------------|------------------------|--|
| Discipline | | Professional | | |
| Department | | Basic of surgery | | |
| Course title | | Surgical Emergencies | | |
| Pre-requisites | | Principles of surgery | | |
| Course code | | MED ۰۶ ۲۷ | | |
| Academic year | | III | | |
| Semester | | ۶ Fall | | |
| Number of Credits | | ۴ | Knowledge | ۲ |
| | | | Clerkship | ۲ |
| weeks | Hours | | Topics | Detrition |
| | Knowledge | Laboratory | | |
| ۱ | ۲ | ۲ | Bleeding & transfusion | Definition, classification, clinic, body reaction to bleeding, treatment of bleeding; permanent homeostasis, methods, mechanical, thermal chemical, biological, transfusion: definition, blood groups compatibility transfusion root< indication & chntraindication, deferent forms of transfusion. |
| ۲ | ۲ | ۲ | Shock | Definition, ethology, classification, hypovolemic shock: path physiology, immediate and continue compensatory, reaction, septic shock: path physiology, diagnosis, treatment, neurogenic shock: pathophysiology, diagnosis, treatment, cardiac compressive shock: path physiology, diagnosis, treatment, cardiac obstructive shock, vasovagal shock, psychogenic shock, burn shock anaphylactic shock |
| ۳ | ۲ | ۲ | Trauma | Definition, epidemiology, prophylaxis, mechanism and intensity of trauma, death due to trauma, management before hospital triage, evaluation, care in the hospital, primary survey score, resuscitation phases, secondary survey and treatment priority, definitive care. |
| ۴ | ۲ | ۲ | Andominal Emergencies | Intra-peritoneal sepsis, introduction, abdominal wound complication, intra-abdominal sepsis, advanced diffuse peritonitis, abdominal abscesses Hernia: sreangulated inguinal hernia, strangulated sliding hernia, strangulated femoral hernia, acure gastric dilatation, Gastric outflow onstruction. Pyloric stenosis, volvulus, special situations Acute gastrointestinal bleeding: instroduction, bleeding peptic ulcer, oother complecations of uncer, stress gastritis, Mallory-weiss syndrome, acute gallbladder diseases: acute cholecystitis and biliary colic, acute acalculous cholecystitis, acute gaseous, choloecystitis, biliary peritonitis, acute cholangitis. |

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| ٥ | ٢ | ٢ | | Acute pancreatitis, acute duodenal ileus, small bowel volvulus, emergencies connected with meckel's diverticulum, lower gastrointestinal bleeding, torsion of an appendix epiploica, acute lesions of the greater omentum, acute non specific mesentericadenitis Acute appendicitis, intestinal obstruction, the acute anus and perineal injuries. |
| ٦ | ٢ | ٢ | | Abdominal trauma , clinical, principles in diagnosis, radio logic finding, para syntheses, peritoneal lavage, penetrating trauma of the abdomen, gunshot wounds, treatment of abdominal wall trauma, trauma of the liver, biliary tract, spleen, pancreas and GI tract trauma |
| ٧ | ٢ | ٢ | Chest emergencies | Thoracic injury and sepsis: airway obstruction chest trauma: form of chest trauma, chest wall trauma, trauma of trachea, branches, lung, diaphragm, pleural cavity (hemothorax, pneumothorax, chylothorax). A etiology, diagnosis, management, chest tube application, Heart and great vessels: introduction, pericardial tamponade, penetrating injuries of the great vessels, traumatic rupture of the aorta, dissecting aneurysm of the aorta Esophagus: introduction, acute dysphagia, esophageal perforation, corrosive injuries of the esophagus |
| ٨ | ٢ | ٢ | Head and neck emergencies | Head injuries: introduction, forms of head trauma, care of head trauma patients, reanimation, evaluation, diagnosis study, treatment, scalp injuries, skull fractures, intra cranial hematomas, gunshot wounds, intracranial compression and sepsis, introduction, extra- dural abscess, subdural empyema, brain abscess The spine: introduction, spinal infection, spinal trauma. the neck: neck wound closed injury, infection |
| ٩ | ١ | ١ | Wounds | Definition, pathophysiology, clinic, classification Acute wounds, open, close, complex War wound: entertains & exit whole mechanism of missile wound pathophysiology, and treatment. |
| | ١ | ١ | | Definition, etiology, determination of servery, depth & site of burn, inhalation injuries, co morbid factors, categorization, pathophysiology of thermal burn, metabolic reaction, |
| ١٠ | ١ | ١ | Burns | Clinic, treatment, definitive treatment, fluid management. Respiratory care, nutrition & metabolic needs, wound care, complications frost bite: definition, etiology, pathophysiology, clinic, treatment. Electric burn: etiology, pathophysiology, clinic, treatment. Chemical burn: etiology, pathophysiology, clinic, treatment. Radiation burn: immediate action, on normal tissue, systemic reaction, prevention, treatment, late reaction to radiation |
| | ٢ | ٢ | | |
| ١٢ | ٢ | ٢ | Vascular emergencies | Venous emergencies: introduction, classification clinical features, management, superficial thrombophlebitis, deep venous thrombosis pulmonary embolism |
| ١٣ | ١ | ١ | Dislocation Ligamentous teats | Vascular injuries: introduction, arterial injury Accidental intra-artirial of drugs, acute-one-chronic occlusion from atheroma, arteio venous fistula |
| | ١ | ١ | | Introduction, dislocations etiology, pathology, clinic forms, diagnosis, treatment, Ligament and joint injuries |
| ١٤ | ١ | ١ | Nerves injuries | |

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|----|---|---|-------------------------------------|---|
| | | | Injuries of the hand | Nerves injuries: introduction, classification and diagnosis, open wounds, closed wounds Injuries of the hand: introductions, types of injuries diagnosis. |
| | 1 | 1 | Surgical infection | Definition, pathogenesis, principles for treatment, sepsis, forms of surgical infection, lymphangitis, erysipelas, erysipeloid, abscess, hydraadinitis, carbuncle, furuncle, phlegmon, anthrax, actinomycosis, clostridial infection, tetanus, clinic, differential diagnosis, treatment, other clostridial infections, postoperative & iatrogenic infections |
| 10 | 1 | 1 | | Hand infections, periosteal infections, felon, subcutaneous infections and abscess, infection of the web space, deep palmar abscess, tendon sheath infection, hydatid disease, liver hydatid disease, lung hydatid disease, amebiasis |
| | 1 | 1 | The surgery of urban violence | Introduction, injury control, primary prevention, secondary prevention, tertiary prevention, urban injuries, pattern of injury, vehicular, pedestrian Other blunt injuries |
| 16 | 1 | 1 | Urological emergency | Urinary tract obstruction: upper urinary tract obstruction, Lower urinary tract obstruction Trauma of urethra, urinary bladder, kidney and genital emergencies, acute urinary tract bleeding and infection |
| | 1 | 1 | Obstetrics and gynecology emergency | Abortion, ectopic pregnancy, uterine rupture, preeclampsia, eclampsia, torsion of ovarian cyst, trauma of uterus |

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SURGERY ٤

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At the end of the course, the student shall be able to:

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 - (i) A critically injured patient;
 - (ii) Patient with cardio-respiratory failure;
 - (iii) A drowning case.

- . Monitor patients of head, chest, spinal and abdominal injuries, both in adults and children;
- ٦. Provide primary care for a patient of burns;
- ٧. Acquire principles of operative surgery, including pre-operative, operative and post operative care and monitoring;
- ٨. Treat open wounds including preventive measures against tetanus and gas gangrene;

Procedures:

- Gets the permission;
- Explains the procedure;
- Wears gloves
- Chooses an appropriate site;
- Applies tourniquet
- Cleans the area with antiseptic
- Holds the cannula properly (avoids touching the catheter)
- Inserts the cannula at an appropriate angle (oblique angle & in line with the vein)
- Inspects the backflow of blood in the chamber
- **Advances the cannula for a further distance**
 - Withdraws the stylet & advances the cannula
 - Fixes the cannula
 - Connects the drip
 - Disposes the sharps in appropriate container
 - Disposes the glove in an appropriate container
 - Overall performance
 - Suturing
 - ET intubation
 - Bladder catheterization
 - Rectal examination
 - Forceps application
 - Surgical knot

Teaching Learning Methods

The following strategy is used for organizing teaching learning activities:

- Lectures are used for teaching the basic principles for ١ semester;
- Clinical teaching to a group of ١٢ students on surgical inpatient wards and OPD,s;
- Clinical skill training we teach basic surgical skill to our final year students and interns in minor OT, casualty theatre and main theatre . In the department also organize yearly workshop on suturing & knot tying where students get an opportunity to acquire hands on experience on these important skills.

Guidelines for student's clerkship in department of surgery

This is the first introductory posting in surgery to provide orientation, toward the general functioning of the department and the nature of clinical work performed of the department surgery student will be posted in the surgical out patients department the learning objectives for this session are to learn:

- The art and science of history taking;
- General evaluation of overall health;
- Basic principle of examination of a lump;
- Examination of hernia hydrocele and abdomen;
- Examination of breast;
- Examination of head and neck;
- Evaluation of wounds, ulcers;

Besides seeing patients

You should also acquire the following basic surgical skills:

- Wound dressing debridement abscess aspiration and drainage, excision biopsy of skin lesions, diploma and epidermal cysts skin suturing and knot tying proctoscopy rubber of piles;
- All MD students attend minor surgical operation theatre situated at the end of the surgical OPD corridor to acquire the above skills please maintain a record of cases seen and surgical skills learn in a diary\log book.

Course Content

| SURGERY (Module 4) | | | | |
|---------------------------|-----------|-----------------------|--|---|
| Discipline | | Professional | | |
| Department | | Abdominal surgery | | |
| Course title | | Abdominal surgery | | |
| Pre-requisites | | Principles of surgery | | |
| Course code | | MED 07 27 | | |
| Academic year | | Iv | | |
| Semester | | Spring | | |
| Number of Credits | | ε | Knowledge | 2 |
| | | | Clerkship | 2 |
| weeks | Hours | | Topics | Detrition |
| | Knowledge | Laboratory | | |
| 1 | 2 | 2 | The stomach and duodenum peptic ulcer | Complication, common surgical treatment of peptic ulcer. |
| 2 | 2 | 2 | Perforated peptic ulcer Pyloric stenosis | Etiology, pathology, clinical features and treatment |
| 3 | 2 | 2 | Peptic ulcer bleeding Gastric neoplasm | Classification, etiology, pathology, clinical features and treatment. |
| 4 | 2 | 2 | Other gastric surgical disease | Foreign bodies in the stomach (clinical features and treatment), volvulus of the stomach (etiology, clinical features and management: preoperative, operative, and postoperative). |
| 5 | 2 | 2 | The small intestine | Brief review anatomy, physiology, mickel's diverticulum and TB of small bowl (pathology, clinic and treatment) |
| 6 | 2 | 2 | Obstruction of the mesenteric vessels and small intestine Tumors of small intestine | Etiology, pathology, clinical features and treatment: non surgical and surgical classification. clinical features , treatment |
| 7 | 2 | 2 | Intestinal obstructions | Definition, classification, etiology, Anatomopathology, clinical features, specific type of obstruction, intussuception, pathology, etiology, clinics, and treatment. |
| 8 | 2 | 2 | | Volvulus of colon sigmoid and ceacum: Etiology, pathology. Clinical features, differential diagnosis and treatment. Paralytic ileus: etiology, clinical features, differential diagnosis and treatment. |
| 9 | 2 | 2 | The appendix vermiform | Acute appendicitis : etiology, pathology, clinical features, diagnosis , DD and treatment the appendix mass : pathology, clinical features, treatment |
| 10 | 2 | 2 | The colon | Sign and symptoms of colon diseases colostomy; classification, indications, preparation and complications. |

| | | | | |
|----|---|---|---|---|
| ١١ | ٢ | ٢ | Ulcerative colitis Diverticulitis and diverticulosis | Definition, etiology, pathology, clinical features, investigation, DD, complications and treatment amoebic colitis: etiology, pathology, clinical features, complications and treatment. |
| ١٢ | ٢ | ٢ | Tuberculosis of colon And colonic tumors | Tuberculosis of ileocecal : definition, clinical features, anatomopathology diagnosis and treatment, colon cancer: classifications, pathology, clinical features, investigations, differential diagnosis and treatment. |
| ١٣ | ٢ | ٢ | The hernia | Definition, etiology, composition of a hernia, classification or anatomopathology. Reducible hernia: etiology, clinical features, pathology, and treatment. |
| ١٤ | ٢ | ٢ | Heamorrhoids, Anal fissure | Definition, classification, etiology, course of heamorrhoid, clinical features, treatment and complications, etiology, clinical features, deferential diagnosis and treatment: surgical and nonsurgical |
| ١٥ | ٢ | ٢ | The ano- rectal fistula And abscess | Incidence, etiology, classifications, clinical features, and ,management, abscess: etiology, clinical features, differential differential diagnosis, drainage and management, |
| ١٦ | ٢ | ٢ | The ano- rectal prolapse And the ano- rectal tumors | Definition, etiology, pathology, clinical features complication and treatment, classification, pathology, clinical features, differential diagnosis, surgical and neo- adjuvant therapy |

Textbooks & reference books recommended for all surgery decipline (last edition)

General Thoracic surgery, Thomas .WSields, Joseph Losicro.

Format Undefined | ٢٦٤ pages, Publication date ٢٤ Apr ٢٠١٥, Publisher LIPPINCOTT WILLIAMS & WILKINS, Publication City/Country United States, ISBN١٠ ١٤٥١١٦٦٧٣٧ ISBN١٣ ٩٧٨١٤٥١١٦٦٧٣٦

Oxford Cardiothoracic surgery, Joana Chikwe, Emma Beddow.

Format Paperback | ٨٠٨ pages, Dimensions ١٠٠ x ١٨٠ x ٢٠mm | ٤٢٢g, Publication date ٣٠ Mar ٢٠٠٦, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Illustrations note ٢٠٠ line illustrations, halftones and tables ISBN١٠ ٠١٩٨٥٦٥٨٨٧, ISBN١٣ ٩٧٨٠١٩٨٥٦٥٨٨٨, Bestsellers rank ٩١٣,٣٩١

Priciples of Neurosurgery, Robert G. Grossman, Christopher M Loftus

Format Hardback | ٨٦٤ pages, Dimensions ٢١٦ x ٢٧٩ x ٣٨,١mm | ٢,٧١٠g, Publication date ٠١ Jan ١٩٩٩, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ٢nd Revised edition Illustrations note ٥٣٦ halftones, ١٤١ line illustrations, ١٠٩ tables, ISBN١٠ ٠٣٩٧٥١٨٤٠٤ ISBN١٣ ٩٧٨٠٣٩٧٥١٨٤٠٤

Emergency Surgery, Adam Brooks, Bryon A. Cotton.

Format Paperback | ٢٢٨ pages, Dimensions ٢١٤ x ٢٧٦ x ١٣mm | ٥٨٤g, Publication date ٠٥ Apr ٢٠١١, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell (an imprint of John Wiley & Sons Ltd), Publication City/Country Chicester, United Kingdom, Language English, Edition Statement ١. Auflage, ISBN١٠ ١٤٠٥١٧٠٢٥٥, ISBN١٣ ٩٧٨١٤٠٥١٧٠٢٥٣, Bestsellers rank ١,٥٤٣,٥٤١

Short practice of Surgery – Bailey & Loves, Norman S. Williams. Christopher JK. Bulstrode.

Format Paperback : ١٣٣ pages, ISBN-١٣ : ٩٧٨-١١٣٨٠٣١٦٤٧, ISBN-١٠ : ٩٧٨١١٣٨٠٣١٦٤٧, Product Dimensions : ٧,٨٧ x ٥,٥١ x ١,٥٧ inches, Publisher : CRC Press; ١st Edition (January ١٧, ٢٠١٨). ASIN ١١٣٨٠٣١٦٤X, Language English

Schwartz Principle of Surgery

Format Paperback Print Length : ٧٤٠٢ pages, Publication Date : May ٢٩, ٢٠١٩, File Size : ٢٨٠٠٣٨ KB, Publisher McGraw-Hill Education / Medical, ١١th Edition (May ٢٩, ٢٠١٩), Word Wise : Not Enabled, ASIN : B٠٧QBB٢QN٦, Language: : English

Hamilton Bailey's Physical Signs in Surgery

Format Paperback Hardcover, ٧٠٤ pages Item Weight : ٤,٣ pounds Product Dimensions : ٨,٢٥ x ١,٢٥ x ١٠,٥ inches Publisher, CRC Press; ١٩th Edition (March ١٧, ٢٠١٦) Language English, ISBN-١٠ ١٤٤٤١٦٩١٨١, ISBN-١٣, ٩٧٨-١٤٤٤١٦٩١٨٨, Best Sellers Rank: #١,١٤٧,١١١ in Books

SURGERY 5

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

The surgical clerkship is designed to introduce students to the theoretical and skills aspects of surgical patients care. Emphasis is placed on the underlying pathophysiology rather than technical aspects. Students are fully involved in the daily care of surgical patients and participate in diagnostic and therapeutic decision making. This course includes; didactic teaching sessions as well as bedside clerkship.

Learning OBJECTIVES

I. Knowledge

At the end of the course, the student shall be able to:

١. Describe aetiology, pathophysiology, and principles of diagnosis and management of common surgical problems including emergencies, in adults;
٢. Define indications and methods for fluid and electrolyte replacement therapy including blood transfusion;
٣. Define asepsis, disinfection and sterilization and recommend judicious use of antibiotics;
٤. Describe clinical features and risk factors of common malignancies in the country and their Management including prevention.

J. Skills

At the end of the course, the student should be able to:

١. Diagnose common surgical conditions both acute and chronic, in adult and children;
٢. Plan various laboratory tests for surgical conditions and interpret the results;
٣. Identify and manage patients of haemorrhagic, septicemic and other types of shock;
٤. be able to maintain patent air-way and resuscitate a -
 - (i) A critically injured patient;
 - (ii) Patient with cardio-respiratory failure;
 - (iii) A drowning case.

- . Monitor patients of head, chest, spinal and abdominal injuries, both in adults and children;
- ٦. Provide primary care for a patient of burns;
- ٧. Acquire principles of operative surgery, including pre-operative, operative and post operative care and monitoring;
- ٨. Treat open wounds including preventive measures against tetanus and gas gangrene;

Procedures:

- Gets the permission;
- Explains the procedure;
- Wears gloves
- Chooses an appropriate site;
- Applies tourniquet
- Cleans the area with antiseptic
- Holds the cannula properly (avoids touching the catheter)
- Inserts the cannula at an appropriate angle (oblique angle & in line with the vein)
- Inspects the backflow of blood in the chamber
- **Advances the cannula for a further distance**
 - Withdraws the stylet & advances the cannula
 - Fixes the cannula
 - Connects the drip
 - Disposes the sharps in appropriate container
 - Disposes the glove in an appropriate container
 - Overall performance
 - Suturing
 - ET intubation
 - Bladder catheterization
 - Rectal examination
 - Forceps application
 - Surgical knot

Teaching Learning Methods

The following strategy is used for organizing teaching learning activities:

- Lectures are used for teaching the basic principles for ١ semester;
- Clinical teaching to a group of ١٢ students on surgical inpatient wards and OPD,s;
- Clinical skill training we teach basic surgical skill to our final year students and interns in minor OT, casualty theatre and main theatre . In the department also organize yearly workshop on suturing & knot tying where students get an opportunity to acquire hands on experience on these important skills.

Guidelines for student's clerkship in department of surgery

This is the first introductory posting in surgery to provide orientation, toward the general functioning of the department and the nature of clinical work performed of the department surgery student will be posted in the surgical out patients department the learning objectives for this session are to learn:

- The art and science of history taking;
- General evaluation of overall health;
- Basic principle of examination of a lump;
- Examination of hernia hydrocele and abdomen;
- Examination of breast;
- Examination of head and neck;
- Evaluation of wounds, ulcers;

Besides seeing patients

You should also acquire the following basic surgical skills:

- Wound dressing debridement abscess aspiration and drainage, excision biopsy of skin lesions, diploma and epidermal cysts skin suturing and knot tying proctoscopy rubber of piles;
- All MD students attend minor surgical operation theatre situated at the end of the surgical OPD corridor to acquire the above skills please maintain a record of cases seen and surgical skills learn in a diary\log book.

Course content

| SURGERY (Module 5) | | | | |
|----------------------------|-----------|-----------------------|--|---|
| Discipline | | Professional . | | |
| Department | | Abdominal surgery | | |
| Course title | | Abdominal surgery | | |
| Prerequisite | | Principles of surgery | | |
| Course code | | MED ٠٨ ٢٧ | | |
| Academic year | | Iv | | |
| Semester | | ٨ | Fall | |
| Number of Credits | | ٤ | Knowledge | ٢ |
| | | | Clerkship | ٢ |
| weeks | Hours | | Topics | Description |
| | Knowledge | Practical | | |
| ١ | ٢ | ٢ | The liver | Brief review of anatomy – physiology of the liver and specific investigations. Hepatic and post hepatic jaundice: History, examinations, specific investigations. |
| ٢ | ٢ | ٢ | The liver traumas Pyogenic abscess The amebic abscess of liver | Type of hepatic injuries, clinical features and treatment. Abscess: etiology, pathology, clinical features and treatment/ |
| ٣ | ٢ | ٢ | The liver hydatid cyst Hepatic neoplasm | Etiology, pathology, clinical features and medical and surgical treatment. |
| ٤ | ٢ | ٢ | The gall bladder | Review anatomy, physiology, congenital anomalies and investigations. Gall stones or cholelithiasis: Epidemiology, etiology, pathology, type of stones, course of gall stones. |
| ٥ | ٢ | ٢ | Acute and chronic Cholecystitis , the bile duct stones | Etiology, pathology, clinical features and medical and surgical management. |
| ٦ | ٢ | ٢ | Sclerosing cholangitis | Definition, etiology, pathology, clinical features, treatment. |
| | | | Carcinoma of gall bladder and Biliary fistula | Etiology, clinical, features, pathology, differential diagnosis and treatment. |
| ٧ | ٢ | ٢ | The pancreas | Brief review of anatomy, physiology, congenital anomalies. Injury to the pancreas and pancreatic fistula: etiology, clinical features, differential diagnosis, and management. |
| ٨ | ٢ | ٢ | Acute pancreatitis And chronic pancreatitis | Definition, etiology, pathology, clinical features complication and treatment. Etiology, pathology, clinical features, treatment. |
| ٩ | ٢ | ٢ | Pancreatic cysts and tumors | Definition, classification, etiology, pathology, clinical features, complication and treatment |
| ١٠ | ٢ | ٢ | The spleen | Anatomy, physiology, splenomegaly, Rupture of spleen: etiology, pathology, clinical features and treatment |

| | | | | |
|----|---|---|--|---|
| ١١ | ٢ | ٢ | The peritoneum | Anatomy , physiology , clinical features and treatment |
| ١٢ | ٢ | ٢ | Acute localized peritonitis | Etiology, physiology, clinical features and treatment, etiology, pathology, clinical features and treatment |
| ١٣ | ٢ | ٢ | The hernias | Definition, etiology, composition of a hernia, Classification or anatomopathology. Reducible hernia: etiology, clinical features, pathology and treatment |
| ١٤ | ٢ | ٢ | Irreducible hernia or strangulated hernias | Etiology, pathology, clinical features, treatment inguinal hernia: anatomy, etiology, clinical features, differential diagnosis, and ,management. |
| ١٥ | | | | |
| ١٦ | | | | |

Textbooks & reference books recommended for all surgery decipline (last edition)

Hamilton Bailey’s Physical Signs in Surgery

Format Paperback Hardcover, ٧٠٤ pages Item Weight : ٤,٣ pounds Product Dimensions : ٨,٢٥ x ١,٢٥ x ١٠,٥ inches Publisher, CRC Press; ١٩th Edition (March ١٧, ٢٠١٦) Language English, ISBN-١٠ ١٤٤٤١٦٩١٨١, ISBN-١٣, ٩٧٨-١٤٤٤١٦٩١٨٨, Best Sellers Rank: #١,١٤٧,١١١ in Books

General Thoracic surgery, Thomas .WShields, Joseph Losicro.

Format Undefined | ٢٦١٤ pages, Publication date ٢٤ Apr ٢٠١٥, Publisher LIPPINCOTT WILLIAMS & WILKINS, Publication City/Country United States, ISBN١٠ ١٤٥١١٦٦٧٣٧ ISBN١٣ ٩٧٨١٤٥١١٦٦٧٣٦

Oxford Cardiothoracic surgery, Joana Chikwe, Emma Beddow.

Format Paperback | ٨٠٨ pages, Dimensions ١٠٠ x ١٨٠ x ٣٠mm | ٤٢٢g, Publication date ٣٠ Mar ٢٠١٦, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Illustrations note ٢٠٠ line illustrations, halftones and tables ISBN١٠ ٠١٩٨٥٦٥٨٨٧, ISBN١٣ ٩٧٨٠١٩٨٥٦٥٨٨٨, Bestsellers rank ٩١٣,٣٩١

Priciples of Neurosurgery, Robert G. Grossman, Christopher M Loftus

Format Hardback | ٨٦٤ pages, Dimensions ٢١٦ x ٢٧٩ x ٣٨,١mm | ٢,٧١٠g, Publication date ٠١ Jan ١٩٩٩, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ٢nd Revised edition Illustrations note ٥٣٦ halftones, ١٤١ line illustrations, ١٠٩ tables, ISBN١٠ ٠٣٩٧٥١٨٤٠٤ ISBN١٣ ٩٧٨٠٣٩٧٥١٨٤٠١

Emergency Surgery, Adam Brooks, Bryon A. Cotton.

Format Paperback | ٢٢٨ pages, Dimensions ٢١٤ x ٢٧٦ x ١٣mm | ٥٨٤g, Publication date ٠٥ Apr ٢٠١١, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell (an imprint of John Wiley & Sons Ltd), Publication City/Country Chicester, United Kingdom, Language English, Edition Statement ١. Auflage, ISBN١٠ ١٤٠٥١٧٠٢٥٥, ISBN١٣ ٩٧٨١٤٠٥١٧٠٢٥٣, Bestsellers rank ١,٥٤٣,٥٤١

Short practice of Surgery – Bailey & Loves, Norman S. Williams. Christopher JK. Bulstrode.

Format Paperback : ١٣٣ pages, ISBN-١٣ : ٩٧٨-١١٣٨٠٣١٦٤٧, ISBN-١٠ : ٩٧٨١١٣٨٠٣١٦٤٧, Product Dimensions : ٧,٨٧ x ٥,٥١ x ١,٥٧ inches, Publisher : CRC Press; ١st Edition (January ١٧, ٢٠١٨). ASIN ١١٣٨٠٣١٦٤X, Language English

Schwartz Principle of Surgery

Format Paperback Print Length : ٧٤٠٢ pages, Publication Date : May ٢٩, ٢٠١٩, File Size : ٢٨٠٠٣٨ KB, Publisher McGraw-Hill Education / Medical, ١١th Edition (May ٢٩, ٢٠١٩), Word Wise : Not Enabled, ASIN : B٠٧QBB٢QN٦, Language: : English

SURGERY 6

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

The surgical clerkship is designed to introduce students to the theoretical and skills aspects of surgical patients care. Emphasis is placed on the underlying pathophysiology rather than technical aspects. Students are fully involved in the daily care of surgical patients and participate in diagnostic and therapeutic decision making. This course includes; didactic teaching sessions as well as bedside clerkship.

Learning OBJECTIVES

K. Knowledge

At the end of the course, the student shall be able to:

١. Describe aetiology, pathophysiology, and principles of diagnosis and management of common surgical problems including emergencies, in adults;
٢. Define indications and methods for fluid and electrolyte replacement therapy including blood transfusion;
٣. Define asepsis, disinfection and sterilization and recommend judicious use of antibiotics;
٤. Describe clinical features and risk factors of common malignancies in the country and their Management including prevention.

L. Skills

At the end of the course, the student should be able to:

١. Diagnose common surgical conditions both acute and chronic, in adult and children;
٢. Plan various laboratory tests for surgical conditions and interpret the results;
٣. Identify and manage patients of haemorrhagic, septicaemic and other types of shock;
٤. be able to maintain patent air-way and resuscitate a -
 - (i) A critically injured patient;
 - (ii) Patient with cardio-respiratory failure;
 - (iii) A drowning case.

- . Monitor patients of head, chest, spinal and abdominal injuries, both in adults and children;
- ٦. Provide primary care for a patient of burns;
- ٧. Acquire principles of operative surgery, including pre-operative, operative and post operative care and monitoring;
- ٨. Treat open wounds including preventive measures against tetanus and gas gangrene;

Procedures:

- Gets the permission;
- Explains the procedure;
- Wears gloves
- Chooses an appropriate site;
- Applies tourniquet
- Cleans the area with antiseptic
- Holds the cannula properly (avoids touching the catheter)
- Inserts the cannula at an appropriate angle (oblique angle & in line with the vein)
- Inspects the backflow of blood in the chamber
- **Advances the cannula for a further distance**
 - Withdraws the stylet & advances the cannula
 - Fixes the cannula
 - Connects the drip
 - Disposes the sharps in appropriate container
 - Disposes the glove in an appropriate container
 - Overall performance
 - Suturing
 - ET intubation
 - Bladder catheterization
 - Rectal examination
 - Forceps application
 - Surgical knot

Teaching Learning Methods

The following strategy is used for organizing teaching learning activities:

- Lectures are used for teaching the basic principles for ١ semester;
- Clinical teaching to a group of ١٢ students on surgical inpatient wards and OPD,s;
- Clinical skill training we teach basic surgical skill to our final year students and interns in minor OT, casualty theatre and main theatre . In the department also organize yearly workshop on suturing & knot tying where students get an opportunity to acquire hands on experience on these important skills.

Guidelines for student's clerkship in department of surgery

This is the first introductory posting in surgery to provide orientation, toward the general functioning of the department and the nature of clinical work performed of the department surgery student will be posted in the surgical out patients department the learning objectives for this session are to learn:

- The art and science of history taking;
- General evaluation of overall health;
- Basic principle of examination of a lump;
- Examination of hernia hydrocele and abdomen;
- Examination of breast;
- Examination of head and neck;
- Evaluation of wounds, ulcers;

Besides seeing patients

You should also acquire the following basic surgical skills:

- Wound dressing debridement abscess aspiration and drainage, excision biopsy of skin lesions, diploma and epidermal cysts skin suturing and knot tying proctoscopy rubber of piles;
- All MD students attend minor surgical operation theatre situated at the end of the surgical OPD corridor to acquire the above skills please maintain a record of cases seen and surgical skills learn in a diary\log book.

Course content

| SURGERY (Module 6) | | | | |
|----------------------------|-----------|-------------------------------|--------------------------|---|
| Discipline | | Professional | | |
| Department | | Thoracic and vascular surgery | | |
| Course title | | Thoracic and vascular surgery | | |
| Pre-requisites | | Principles of surgery | | |
| Course code | | MED 09 27 | | |
| Academic year | | V | | |
| Semester | | 9 | Spring | |
| Number of Credits | | ε | Knowledge | |
| | | | Clerkship | |
| weeks | Hours | | Topics | Description |
| | Knowledge | Clerkship | | |
| 1 | 2 | 2 | Thyroid disease | Surgical anatomy, physiology, Classification, History and Physical examination. Thyroid function tests, Simple goiter. |
| 2 | 2 | 2 | Thyroid disease | Thyrotoxicosis, Symptoms and signs, Treatment, Thyroid tumors, Thyroiditis |
| 3 | 2 | 2 | Breast disease | Surgical anatomy, Physiology, Symptoms, Breast injury, Acute and Chronic infection and inflammation. |
| 4 | 2 | 2 | Breast disease | Breast cyst, Tumor, Spread of breast tumors, Clinical features, Treatment |
| 5 | 2 | 2 | Thoracic trauma | Thorax injury and trauma , Rib fracture, Sternum fracture, Flail chest . |
| 6 | 2 | 2 | Thoracic trauma | Pneumothorax, Hemothorax , Cardiac tamponade, Mediastinal emphysema, Thoracotomy. |
| 7 | 2 | 2 | Diaphragmatic Hernia | Hiatus hernia, Clinical feature, Treatment, Treatment of reflux esophagitis. |
| 8 | 2 | 2 | Mediastinum | Mediastinitis, Clinical features, Treatment, Cysts and tumors of mediastinum |
| 9 | 2 | 2 | Esophageal disease | Surgical anatomy and physiology , Esophageal foreign bodies and injuries. |
| 10 | 2 | 2 | Esophageal disease | Corrosive esophagitis, Esophageal diverticula, Achalasia , Benign stricture and Tumors of esophageal, Treatment |
| 11 | 2 | 2 | Lung and Pleural disease | Lung and Pleural disease, Surgical anatomy, Inhaled foreign bodies, Lung abscess , Bronchiectasis, Lung cysts. |
| 12 | 2 | 2 | Lung and Pleural disease | Lung TB, Bronchopleural fistula, Pleural empyema , Lung and Bronchial tumor, Clinical feature, treatment. |
| 13 | 2 | 2 | Heart disease | Anatomy and physiology, Physical examination, Cardiac arrest, Prosthetic valves, Aortic valvular heart disease, Mitral valve disease, Tricuspid stenosis and insufficiency, Pulmonic valve disease. |

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| ١٤ | ٢ | ٢ | Heart disease | Coronary artery disease, Pericardial disorder, Congenital heart disease, Thoracic aortic aneurysms. |
| ١٥ | ٢ | ٢ | Arterial disease | Arterial stenosis, Acute arterial occlusion due to embolism and trauma, Peripheral aneurysms, AV fistula, Vasospastic disorders. |
| ١٦ | ٢ | ٢ | Venous diseases | Pathophysiology, Investigation, Deep vein thrombosis superficial vein thrombosis, Varicose vein, Symptoms, Treatment. |

Textbooks & reference books recommended for all surgery decipline (last edition)

Oxford Cardiothoracic surgery, Joana Chikwe, Emma Beddow.

Format Paperback | ٨٠٨ pages, Dimensions ١٠٠ x ١٨٠ x ٣٠mm | ٤٢٢g, Publication date ٣٠ Mar ٢٠٠٦, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Illustrations note ٢٠٠ line illustrations, halftones and tables ISBN١٠ ٠١٩٨٥٦٥٨٨٧, ISBN١٣ ٩٧٨٠١٩٨٥٦٥٨٨٨, Bestsellers rank ٩١٣,٣٩١

Principles of Neurosurgery, Robert G. Grossman, Christopher M Loftus

Format Hardback | ٨٦٤ pages, Dimensions ٢١٦ x ٢٧٩ x ٣٨,١mm | ٢,٧١٠g, Publication date ٠١ Jan ١٩٩٩, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ٢nd Revised edition Illustrations note ٥٣٦ halftones, ١٤١ line illustrations, ١٠٩ tables, ISBN١٠ ٠٣٩٧٥١٨٤٠٤ ISBN١٣ ٩٧٨٠٣٩٧٥١٨٤٠١

Emergency Surgery, Adam Brooks, Bryon A. Cotton.

Format Paperback | ٢٢٨ pages, Dimensions ٢١٤ x ٢٧٦ x ١٣mm | ٥٨٤g, Publication date ٠٥ Apr ٢٠١١, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell (an imprint of John Wiley & Sons Ltd), Publication City/Country Chicester, United Kingdom, Language English, Edition Statement ١. Auflage, ISBN١٠ ١٤٠٥١٧٠٢٥٥, ISBN١٣ ٩٧٨١٤٠٥١٧٠٢٥٢, Bestsellers rank ١,٥٤٣,٥٤١

Short practice of Surgery – Bailey & Loves, Norman S. Williams. Christopher JK. Bulstrode.

Format Paperback : ١٣٣ pages, ISBN-١٣ : ٩٧٨-١١٣٨٠٣١٦٤٧, ISBN-١٠ : ٩٧٨١١٣٨٠٣١٦٤٧, Product Dimensions : ٧,٨٧ x ٥,٥١ x ١,٥٧ inches, Publisher : CRC Press; ١st Edition (January ١٧, ٢٠١٨). ASIN ١١٣٨٠٣١٦٤X, Language English

Schwartz Principle of Surgery

Format Paperback Print Length : ٧٤٠٢ pages, Publication Date : May ٢٩, ٢٠١٩, File Size : ٢٨٠٠٣٨ KB, Publisher McGraw-Hill Education / Medical, ١١th Edition (May ٢٩, ٢٠١٩), Word Wise Not Enabled, ASIN B٠٧QBB٢QN٦, Language: : English

Hamilton Bailey’s Physical Signs in Surgery

Format Paperback Hardcover, ٧٠٤ pages Item Weight : ٤,٣ pounds Product Dimensions ٨,٢٥ x ١,٢٥ x ١٠,٥ inches Publisher, CRC Press; ١٩th Edition (March ١٧, ٢٠١٦) Language English, ISBN-١٠ ١٤٤٤١٦٩١٨١, ISBN-١٣, ٩٧٨-١٤٤٤١٦٩١٨٨, Best Sellers Rank ١,١٤٧,١١١ in Books

General Thoracic surgery, Thomas .WShields, Joseph Losicro.

Format Undefined | ٢٦١٤ pages, Publication date ٢٤ Apr ٢٠١٥, Publisher LIPPINCOTT WILLIAMS & WILKINS, Publication City/Country United States, ISBN١٠ ١٤٥١١٦٦٧٣٧ ISBN١٣ ٩٧٨١٤٥١١٦٦٧٣٦

NEUROSURGERY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to 5% with reasonable excuse.
- More than 5% of absence is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from 10 points
- Students factory score is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scoring policy

- How to evaluate and how to divide the scores in accordance with article 19 of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) 20%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam 20%
- Final semester exam 60%
- Total 100%

Learning objectives

Knowledge

At the end of course the students must be able to:

- Perform comprehensive neurologic examination;
- Assess clinical level of neurologic dysfunction and propose etiologic differential diagnosis;
- Assess skull and spine x-ray films, CT and CTA scans MRI;
- Access relevant laboratory data including intracranial pressure, arterial blood pressure arterial blood gases serum electrolytes and osmolality, and central venous pressure as they relate to proper management of neurologically impaired patient;
- Demonstrate the ability to differentiate between trauma, metabolic of disorders congenital anomalies, tumors and infection which result in neurologic dysfunction with specific reference to their manner of presentation and methods of treatment
- Undertake initial management of the acutely impaired neurologic patient by assessing the degree of neurologic dysfunction assessing the quality of airway

Skills/Procedures

- Perform neurologic examination (determine Glasgow coma scale);
- Perform a lumbar puncture for cerebrospinal fluid analysis and placement of lumbar drain;
- Understand the indication for various invasive procedures including pyelography; Angiography, intracranial pressure monitoring and placement of arterial and central lines.

- Develop interpersonal skills with neurologic patients and their families.

Skills:

- the Neurological examination;
- Examination the cranial nerves;
- Evaluate patient's mental status and speech;
- Examine cerebellar function and gait;
- Examine central and peripheral sensory function;
- Examine cranial and peripheral reflexes;
- Fundamental of Neuro-Imaging;
- Recognize spine fractures and dislocation;
- Differentiate on computerized images between blood, air, fat, CSF, and bone,
- Recognize specific diseases entities listed below such as epidural, subdural intracranial hematoma, subarachnoid hemorrhage, brain tumors and hydrocephalus
- Understand the pathophysiology of elevated intracranial pressure cerebral perfusion and the influence of blood pressure, blood gasses, and fluid and electrolyte balance;
- Recognize the clinical manifestation of acute brain herniation including the Cushing reflex, midbrain effects and vital signs;
- Understand the impact of focal mass lesions structural shifts and their cosequeces

| NEUROSURGERY | | | | |
|---------------------|-----------|-------------------------------------|--|---|
| Discipline | | Professional | | |
| Department | | Neurosurgery | | |
| Course title | | Neurosurgery | | |
| Pre-requisites | | Principles of surgery and Neurology | | |
| Course code | | MED ١٠٢٧ | | |
| Academic year | | V | | |
| Semester | | ١٠ | Fall | |
| Number of Credits | | ٢ | Knowledge | ١ |
| | | | Clershio | ١ |
| weeks | Hours | | Topics | Detrition |
| | Knowledge | Clearship | | |
| ١ | ١ | ١ | Introduction and History of Neurosurgery | Introduction of Neurosurgery, Historical Background of Neurosurgery, Neuroanatomical (function), Brain and Cranial Nerves, spinal Cord, Peripheral Nerves, CSF and Neurovascular Review, The principals of Neuro-investigation. |
| ٢ | ١ | ١ | Intracranial disease Topics Diagnosis and Management of Head Trauma | Introduction and classification of H.I Understand and assign the Glasgow Coma Score Recognize the presentation of brain herniation syndromes in the setting of trauma. Initiate management of elevated intracranial pressure in head trauma. Recognize and initiate management of concussion, brain constusion and diffuse axonal injury. |
| ٣ | ١ | ١ | Intracranial disease Topics Diagnosis and Management of Head Trauma | Recognize and initiate management of acute subdural and epidural hematoma, including surgical indications. Recognize and initiate management of penetrating trauma including gunshot wounds. Recognize and understand the principles of management of open, closed and basilar skull fractures, including cerebrospinal fluid leak, and chronic subdural hematoma (in children and adults) |
| ٤ | ١ | ١ | Closed head injury | Scalp Injury, Abrasion, Laceration, Infection wound of the skull, Vault fractures. Liner fracture Depressed Fracture, Compound Depressed Fracture b. Base Crani fractures. Anterior cranial fossa. Middle Cranial Fossa, Posterior cranial fossa. |
| ٥ | ١ | ١ | Head Injury | Traumatic Brain Injury, Consussion Cerebral. Contusion Cerebral. Compression. (EDH and SDH) Laceration Cerebral, Management and principles of treatment. Complicated of Head Injury. Traumatic Coma Synd Increased Intracranial Pressure Brain Death. |
| ٦ | ١ | ١ | Open Head Injury | Open Head Injury Penetrated Brain Injury. Perforated Brain Injury (War wound and Non war wound) |

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| ٧ | ١ | ١ | Spinal diseases | Introduction and classification of SCI The emergency room diagnosis and interpretation of radiologic studies in spinal trauma. Initiate acute management of spinal cord injury including immobilization, steroids and systemic measures. Understand the definition and subsequent management principles in spinal cord injury including indications for decompressive surgery and treatment of the medical complications associated with cord injury (skin, bladder, bowel movement, respiratory). |
| ٨ | ١ | ١ | Spinal cord injury | The history and examination of SCI Complication of spinal cord injury, Paraplegia (Caring). Caring for a spinal injury and principles of treatment. Neuro-Rehabilitation |
| ٩ | ١ | ١ | Diagnosis and management of Brain Abscess | Recognize the clinical manifestations of abscess and focal infection due to local spread, hematogenous disease associated with immune deficiency, and how they differ from the meningiomas. Understand the general principles in the treatment of abscess and focal intracranial infections. Brain abscess, T.B (Complications) Parasites (Hydatid cyst) |
| ١٠ | ١ | ١ | Diagnosis and management of peripheral Nerve injury and Entrapment | Diagnosis traumatic nerve injury (laceration, stretch and compression) and understand indication and general strategies of treatment recognize the signs and symptoms of common nerve entrapment (carpal tunnel syndrome, ulnar nerve entrapment, thoracic outlet syndrome and meralgia paresthetica), their etiology, conservative management strategies and indications for surgical intervention |
| ١١ | ١ | ١ | Spine TB And Spinal cord Tumors | Introduction, Etiology, Pathophysiology, Clinical, Laboratory and imaging, Diagnosis, Complications, Surgical and medical management and prognosis. |
| ١٢ | ١ | ١ | Diagnosis and management of Non-traumatic Neck and Back Problems | Diagnosis and understand the natural history and management principles of whiplash and soft tissue injury. Recognize the broad categories of spinal pain and radiculopathy: The signs and symptoms (including cauda equina syndrome) their common causes their diagnosis and their management. their differential diagnosis and management (including metastatic disease and primary spinal tumors) recognize the broad categories of myelopathy the signs and symptoms (including comparison of acute and chronic spinal cord injury) the common causes their Diagnosis and their management (cervical and lumbar disc herniation and osteoarthritic diseases) Differential diagnosis and management (including transverse myelopathy, metastatic disease and primary spinal tumors), |
| ١٣ | ١ | ١ | Diagnosis and management of brain tumor | Introduction: know the relative incidence and location of the major types of primary and secondary tumors. Understand the general clinical manifestations (focal deficit and irritations, mass effect; supratentorial vs infratentorial) of brain tumor recognize specific syndromes: extra-axial, in brain tumor presentation review the diagnostic tools that are currently used for, evaluation (laboratory tests, radiology, and biopsy). Understand board treatment strategies (surgery, radiosurgery, radiation, and chemotherapy), in the treatment of tumors. |

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| ١٤ | ١ | ١ | Diagnosis and management of surgically treatment pain problems Movement disorders | Recognize the features of trigeminal and glossopharyngeal neuralgia causalgia and cancer pain indication for surgical referral and the spectrum of surgical therapeutic options recognize movement disorders amenable to surgical intervention including Parkinson, |
| ١٥ | | | Diagnosis and management of surgically treatable pain problems, movement disorders | Dystonia, spasticity and hemi facial spasm indication for surgical referral and the spectrum of surgical therapeutic options, understand the general classification of seizure disorders, definition of intractable epilepsy and the board categories of surgical intervention for epilepsy including invasive electrodes respective and disconnected surgery . |
| ١٦ | ١ | ١ | Diagnosis and management of headaches | Know the major causes of intracranial hemorrhage: vasculopathy in the aged (hypertension and amyloidosis), aneurysm, vascular malformation, tumor and coagulopathy recognize the symptoms and sign of subarachnoid, cerebral and cerebellar hemorrhage, apply diagnostic tools in evaluation of acute headache (CT and MRI role of lumbar puncture) understand the natural history and board treatment strategies (surgery, radiosurgery, interventional radiology as well as treatment of vasospasm) of intracranial aneurysms and vascular malformation. Differentiate the symptomology of migraine. Cluster and tension headache and sinusitis headache |

Textbooks & reference books recommended for all surgery decipline (last edition)

Neurology and Neurosurgery Illustrated

Format Paperback | ٦١٢ pages, Dimensions ١٨٩ x ٢٤٦ x ٢٥,٤mm | ١,١٥٦,٦٦g, Publication date ٠٨ Sep ٢٠١٠, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE, Publication City/Country London, United Kingdom, Language English, Edition Illustrated, Edition Statement ٥th edition, Illustrations note Approx. ٢٢٢٦ illustrations; Illustrations, unspecified, ISBN١٠ ٠٤٤٣٠٦٩٥٧٣ ISBN١٣ ٩٧٨٠٤٤٣٠٦٩٥٧٤, Bestsellers rank ١١٠,٧٨

Schwartz Principle of Surgery

Format Paperback Print Length : ٧٤٠٢ pages, Publication Date : May ٢٩, ٢٠١٩, File Size : ٢٨٠٠٣٨ KB, Publisher : McGraw-Hill Education / Medical, ١١th Edition (May ٢٩, ٢٠١٩), Word Wise : Not Enabled, ASIN : B٠٧QBB٢QN٦, Language: : English

Hamilton Bailey’s Physical Signs in Surgery

Format Paperback Hardcover, ٧٠٤ pages Item Weight : ٤,٣ pounds Product Dimensions : ٨,٢٥ x ١,٢٥ x ١٠,٥ inches Publisher, CRC Press; ١٩th Edition (March ١٧, ٢٠١٦) Language English, ISBN-١٠ ١٤٤٤١٦٩١٨١, ISBN-١٣, ٩٧٨-١٤٤٤١٦٩١٨٨, Best Sellers Rank: #١,١٤٧,١١١ in Books

General Thoracic surgery, Thomas . Priciples of Neurosurgery, Robert G. Grossman, Christopher M Loftus

Format Hardback | ٨٦٤ pages, Dimensions ٢١٦ x ٢٧٩ x ٣٨,١mm | ٢,٧١٠g, Publication date ٠١ Jan ١٩٩٩, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ٢nd Revised edition Illustrations note ٥٣٦ halftones, ١٤١ line illustrations, ١٠٩ tables, ISBN١٠ ٠٣٩٧٥١٨٤٠٤ ISBN١٣ ٩٧٨٠٣٩٧٥١٨٤٠٤

Emergency Surgery, Adam Brooks, Bryon A. Cotton.

Format Paperback | ٢٢٨ pages, Dimensions ٢١٤ x ٢٧٦ x ١٣mm | ٥٨٤g, Publication date ٠٥ Apr ٢٠١١, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell (an imprint of John Wiley & Sons Ltd), Publication City/Country Chichester, United Kingdom, Language English, Edition Statement ١. Auflage, ISBN١٠ ١٤٠٥١٧٠٢٥٠, ISBN١٣ ٩٧٨١٤٠٥١٧٠٢٥٣, Bestsellers rank ١,٥٤٣,٥٤١

UROLOGY

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

Urology is a surgical specialty that treats diseases of the male and female urinary tract and the male reproductive organs. Although urology is classified as surgical specialty; knowledge of internal medicine, gynecology, and other special sties is also required because of the wide variety of clinical problems encountered. In recognition of the wide scope of urology.

Learning objectives:

At the end of course and clerkship the student must be able to:

- List the distinctions between urinary infection, contamination and colonization in distinction AUI;
- List the important host and bacterial characteristics involved in the genesis of a clinically important UTI;
- Name the most common gram negative and gram- positive bacteria associated with adult UTI;
- Name the five organisms constituting normal perineal flora;
- List methods of urine collection and the advantages of each;
- Describe the different signs and symptoms associated with upper and lower adult UTIs and the organs involved with each;
- Name six pathogens or disease entities that need to be considered in the differential diagnosis of UTI;
- Describe the differences between complicated and uncomplicated adult UTI,
- List imaging modalities used in the diagnosis of adult UTI and the indication to order them
- Outline treatment principles of both complicated and uncomplicated adult;
- Define microscopic hematuria;
- Describe the proper technique for performing microscopic urinalysis;
- Identify four risk factors that increase the likelihood of finding malignancy during evaluation of micro hematuria;

- Explain the significance of finding red blood cells in patients with microscopic hematuria;
- Contrast the evaluation of hematuria in the low risk patient with that of high risk patient;
- Identify the indications for screening urinalyses in the general population;
- Understand the controversy surrounding the use of serum PSA as screening tool for prostate cancer;
- List the signs symptoms of prostate cancer;
- Describe the natural history and the common patterns of progression of prostate cancer;
- List the major components in the staging of prostate cancer;
- Briefly describe the treatment options for localized and metastatic prostate cancer
- Describe when prostate cancer does NOT need to be treated;
- List risk factors for the most common types of kidney stones;
- Contrast differences between the clinical presentation of acute renal colic versus an acute abdomen;
- Names of kidney stone chemical compositions;
- Describe the best imaging study to diagnose kidney or ureteral stones;
- Describe 3 types of medications effective for relief of renal colic pain;
- List 3 clinical situations that warrant urgent decompression of a ureteral stone;
- Medications that may help medical expulsion therapy of a distal ureteral stone;
- Medical prophylaxis options for hypercalciuria
- Common surgical techniques to manage a renal stone and a ureteral stone that fails to pass with observation;
- Define incontinence;
- List the symptoms and signs of the various types of incontinence; stress, urge, overflow and mixed;
- Describe the epidemiological features of incontinence;
- Describe the natural history and progression of incontinence;
- List the risk factors for incontinence;
- List the important components of the history when interviewing a patient with incontinence;
- List the importance of the physical exam of a patient with incontinence;
- Summarize the laboratory, radiologic, or urodynamic tests, if any, that should be ordered in a patient with incontinence;
- List the indications for treatment of incontinence;
- List the nonsurgical options for stress and urge incontinence, describe their side effects and outline the mechanisms by which they work;
- Briefly describe the surgical treatment options for stress and urge incontinence;
- Distinguish, through the history, physical examination and laboratory, testicular tumor, scrotal trauma and hernia;
- Appropriately order imaging studies to make the diagnosis of the acute scrotum;
- Determine which acute scrotal conditions require emergent surgery and which may be handled less emergently or electively.

Course content

| UROLOGY | | | | |
|-------------------|-----------|---|---|--|
| Discipline | | Professional | | |
| Department | | Urology | | |
| Course title | | Urology | | |
| Pre-requisites | | Principles of surgery, Internal Medicine and Gynecology | | |
| Course code | | MED 11 22 | | |
| Academic year | | VI | | |
| Semester | | 11 Spring | | |
| Number of Credits | | Knowledge | | 1 |
| | | clerkship | | 1 |
| weeks | Hours | | Topics | Description |
| | Knowledge | Clerkship | | |
| 1 | 1 | | Brief Review of Anatomy and physiology of Urogenital system | Kidney, Calices & Pelvis, Ureter, Urinary bladder, Prostate gland, seminal vesicle, spermatic cord, Epididymis, testes, Male urethra and Penis, Female Urethra, Physiology of Urogenital tract. |
| 2 | 1 | | Signs and symptoms in Urologic Disorders | Pain, Dysuria, Frequency, Dysuria, Urinary Incontinence, Urgency, Nocturia, Enuresis, Urine retention, Polyuria, Oliguria, Anuria, Hematuria. Pyuria, Hemoglobinuria, Myoglobinuria, Chyluria,, Pneumaturia, Echinococcuria, Calciruiia, Lipouria. |
| 3 | 1 | | Physical and special examination | Physical Examination of UG system. UB catheterization, Urethroscopy, Cystoscopy, Ureteral catheterization, Radiology and imaging examination, Pyelography, Uretrography, |
| 4 | 1 | | Congenital anomalies of Urogenital system | Kidney: Agenesis, Hypoplasia, Malrotation, Renal, Fusion, Sigmoid Kidneys, Horse shoes Kidney, Ectopic Kidney. Pelvis and Ureter: Double pelvis and Ureter, Ureterohydronephrosis, Retrocaval ureter, Ureterocele. UB and urachus congenital malformation, Penis: Melgalopenis, Micropenis, Hypospadiasis, Epispadiasis. Urethra: congenital stenosis, valve in protatic urethra, urethro-rectal and Vesico-rectal fistula. Tetes: Polyorchidism, Hupognadism, Cryptorchidsim. |
| 5 | 1 | | Urinary Tract Infection | Acute Pyelonephritis, Acute Cystitis, recurrent /chronic cystitis, Epididymitis, Acute orchitis., Acute bacterial prostatitis, prostate abscess, Urethritis, GU tract tuberculosis, |
| 6 | 1 | | Benign prostate Hyperplasia and cancer pf prostate | Benign prostate Hyperplasia (BPH) Antomopathology, Symptomes and signs, Lab exam, Complication of BPH, Management. Carcinoma of prostate: Antomopathology, Symptomes and signs, Management. |
| 7 | 1 | | Urinary tract Stones (Urolithiasis) | General considerations, Kidney stones, Ureteral Stones, Urinary bladder stones. Management: Chemolysis, shoke wave lithotripsy, pneumatic lithotripsy, Electro hydrolic, lithotripsy, Ultrasonic lithotripsy, Cystolitholapaxy, percutaneous, cystolithotomy, Cystolithotomy. |

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| ١٠ | ١ | | Traumatic injuries of UG system | Closed kidney injuries: anatomopathology, Symptoms and signs, Arteriography, management. Ureter injuries: Closed ureter injuries, Iatrogenic symptoms and signs, management. |
| | | | | UB injuries: Iatrogenic, Accidental, closed, Extraperitoneal rupture of UB. Urethra injuries: Etiology, symptoms and signs, management. |
| ١١ | ١ | | Hydronephrosis | Congenital, Aquired, Symptoms and signs and management. |
| ١٢ | ١ | | Bladder Neck Obstruction Urethral strictures | Bladder Neck Obstruction: Etiology, Diagnosis and management. Urethral Stricture: Definition, Etiology, Trauma, Infection, Congenital strictures, pathology, Clinic, Diagnosis, DDx, complications, management. |
| ١٣ | ١ | | Urogenital System tumors | Kidney tumors: Lipoma, Hemangioma, Adenoma, fibroma, malignant tumors, Adenocarcinoma, Emberyoma, Sarcoma, Anatomopathology, Symptoms and signs, Diagnosis and management. |
| | | | | Renal pelvis and ureter tumors: anatomopathology, Clinic and management. UB Tumors: Benign UB tumors; papilloma, Diagnosis and management. UBCarcinoma: Anatomopathology,, Clinic, Radiography, Ultrasound, Cystoscopy, management. |
| | | | | Penis Ca: Anatomopathology, Clinic, Diagnosis and management. |
| | | | | Tetes tumors: Anatomopathology, Non-Germinal cell tumors, metastasis, Clinical staging, Clinic, management. |
| ١٤ | ١ | Scrotal Contents Disorders | Spermatocoele, Varicocele, hydrocele, Clinic, Complication, Diagnosis, management. | |
| ١٥ | ١ | | Torsion of Spermatic Cord and Torsion of tetes: Clinic, management, prognosis. | |
| ١٦ | ١ | | Torsion of Tetes appendage and Epididymis: Clinic and management. | |

Textbooks & reference books recommended for all surgery decipline (last edition)

Compbell – Walsh Urology, Alan J. Vien MD. Penn Clinical manual of Urology.

Format Paperback | ١٠٠٨ pages, Dimensions ١٢٧ x ٢٠٣ x ٥٠mm | ٩٧٨g, Publication date ٠١ May ٢٠٠٧, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Illustrations note ١, black & white illustrations, ISBN١٠ ١٤١٦٠٣٨٤٨٥, ISBN١٣ ٩٧٨١٤١٦٠٣٨٤٨١, Bestsellers rank ٢,٢٣٤,٨٦٢

Philip M Hanno, Alan J, Wein, Bruce Malkowicz.

Format Hardback | ١٧٥ pages, Dimensions ١٧٨ x ٢٥٤ x ١٥,٢٤mm | ٤,٩٦٩g, Publication date ١٦ Nov ٢٠١٧, Publisher Springer International Publishing AG, Publication City/Country Cham, Switzerland, Language English, Edition Revised, Edition Statement ٢nd ed. ٢٠١٨, Illustrations note ١٠٨ Illustrations, color; ٦٩ Illustrations, black and white; VII, ١٧٥ p. ١٧٧ illus., ١٠٨ illus. in color. ISBN١٠ ٣٣١٩٦١٤٤٨٧, ISBN١٣ ٩٧٨٣٣١٩

Emergency Surgery, Adam Brooks, Bryon A. Cotton.

Format Paperback | ٢٢٨ pages, Dimensions ٢١٤ x ٢٧٦ x ١٣mm | ٥٨٤g, Publication date ٠٥ Apr ٢٠١١, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell (an imprint of John Wiley & Sons Ltd), Publication City/Country Chicester, United Kingdom, Language English, Edition Statement ١. Auflage, ISBN١٠ ١٤٠٥١٧٠٢٥٥, ISBN١٣ ٩٧٨١٤٠٥١٧٠٢٥٣, Bestsellers rank ١,٥٤٣,٥٤١

Oxford American Handbook of Urology

Format Paperback | ١٢٠ pages, Dimensions ١٠٦ x ١٨٠ x ٢٦mm | ٣٤٠g. Publication date ٢٥ Nov ٢٠١٠, Publisher Oxford University Press Incm Publication City/Country New York, United State Language English, ISBN١٠ ٠١٩٥٣٧١٣٩٩, ISBN١٣ ٩٧٨٠١٩٥٣٧١٣٩٠, Bestsellers rank ٣٧٣,١٩٢

ENGLISH LANGUAGE

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives

First semester

By the end of this course, students should be able to:

- Enhance their language skills of speaking, reading, listening and writings;
- They will learn how to pronounce the English vocabularies and medical expressions correctly, and will be familiarized with phonetic transcription of standard dictionaries such as (Longman and Oxford, etc);
- And as part of grammar, they will learn the parts of speech in English in order to be able to use the words correctly in a sentence;
- In addition, they will learn how to read a text of reading with comprehension and to be able to introduce himself, describe a friend, a place or solve his/his problems by himself;

Our focus in the first semester is to stress on General English more than Medical English.

Second semester

- Meet their real life communicative needs;
- Talk fluently and read the texts with comprehension;
- Standing by himself, solving his/her problems by using dictionaries, internet and other available source;
- Enhancing their language skills of speaking, reading, listening and writings perfectly;
- Knowing medical terms derived from Greek of Latin and number of most common abbreviations, such as AIDS etc;
- Inaddition they will be able to catch their lectures in English properly;
- And finally they will be able to write, case note, medical report, surgery report, paragraph and letter writing, in this semester we focus more and more on Medical English than General English.

| ENGLISH LANGUAGE (MODULE ١) | | | | |
|--------------------------------------|--------|-----------------------------------|---|--|
| Discipline | | University Inclusive | | |
| Department | | Department of English language | | |
| Subject | | General English / interchange two | | |
| Course code | | MED ٠١ ٠٤ | | |
| Class | | First | | |
| Semester | | ١ Spring | | |
| Credits | | ٤ | | ٤ |
| | | Theory | | Practical |
| weeks | Hours | | Topics | Detrition |
| | Theory | Practical | | |
| ١ | ٤ | | Unit one: People: childhood; memories | Speaking: talking about yourself, asking about someone's childhood Reading: reading about a career Writing: writing a short paragraph about childhood Listening: listening to the people talking about their past Grammar: past tense; used to for habitual activities in the past |
| ٢ | ٤ | | Unit two: Transportation; Transportation problems; City cervices | Speaking: talking about transportation and transportation problems Reading: reading about new transportation inventions Writing: writing a letter to the editor Listening: as of personal information Grammar: adverbs of quantity with count and noncount nouns |
| ٣ | ٤ | | Unit three: Houses and apartment; Lifestyle change' wishes | Speaking: describing positive and negative features; making comparison Reading: reading about ways to end bad habits Writing: writing an e-mail describing an apartment Listening: listening to people ask and answer questions about apartment for rent Grammar: Evaluations and comparison with adjectives |
| ٤ | ٤ | | Unit four: Food; recipes; Instructions; cooking methods | Speaking: Talking about food Reading: Reading about how food affects the way we feel Writing: Writing a recipe Listening: Listening to description of food Grammar: Simple past vs. present perfect |
| ٥ | ٤ | | Unit five: Travel; vacations; plans | Speaking: Describing vacation plan Reading: Reading tips about an expert backpacker Writing: Writing travel suggestions Listening: Listening to people discuss vacation plan Grammar: Future with be going to and will |

| | | | |
|----|---|---|--|
| ٦ | ٤ | Unit six: Complaints; households; chores; requests; excuses; apologies | Speaking: Making request; complaining; apologizing; giving excuses Reading: Reading about ways to deal with neighbors Writing: Writing a set of guidelines Listening: Listening to people making requests Grammar: Two – part verbs |
| ٧ | ٤ | Unit seven: Technology; instructions | Speaking: Describing technology; giving instructions; giving suggestions Reading: Reading about the life in the future Writing: Writing a note giving instructions Listening: Listening to people discuss computers Grammar: Infinitives and gerunds for uses and purposes |
| ٨ | ٤ | Unit eight: holidays; festivals; customs; celebrations | Speaking: Describing holidays, festivals, customs and special events Reading: Reading about read holidays and unusual customs Writing: Writing a travel guide Listening: Listening someone talk about Halloween Grammar: Relative clauses of time |
| ٩ | ٤ | Unit nine: Life in the past; present; and future; changes and contrast; consequences | Speaking: Talking about change; comparing time periods; describing possibilities Reading: Reading about the signs of being in love Writing: Writing a description of a person Listening: Listening to people talk about changes Grammar: Time contrasts; conditional sentences with if clause |
| ١٠ | ٤ | Unit ten: Abilities and skills; job preferences; personality traits; careers | Speaking: Describing abilities and skills; talking about job preferences Reading: Read about how to find a job Writing: Writing a cover letter for a job application Listening: Listening to people talk about their job preferences Grammar: Gerund; short responses; clause with because |
| ١١ | ٤ | Unit eleven: Landmarks and monuments; world knowledge | Speaking: talking about landmarks and monuments; describing countries Reading: Reading about interesting museums Writing: Writing a guidebook introduction sa Listening: Listening for information about country Grammar: Passive with by (simple past) ; passive without by (simple present) |
| ١٢ | ٤ | Unit twelve: Information about someone's past; recent past events | Speaking: Asking about someone's past describing recent experience Reading: Reading about gifted children Writing: Writing a short story Listening: Listening to people talk about recent experiences Grammar: Past continuous vs. simple past; present perfect continuous |
| ١٣ | ٤ | Unit thirteen: Entertainment; movies and books; reactions and opinions | Speaking: Describing movies and book Reading: Reading about author's careers Writing: Writing a movie review Listening: Listening to opinions Grammar: Participate as adjectives, relative clause |

| | | | |
|----|---|---|---|
| ١٤ | ٤ | Unit fourteen: Nonverbal communication Gestures and meanings; signs; drawing conclusions | Speaking: Interpreting body language; explaining gestures and meaning Reading: Reading about the proverbs Writing: Writing a list of rules Listening: Listening to people talk about the meaning of signs Grammar: Modals and adverbs |
| ١٥ | ٤ | Unit fifteen: Money; hopes; predicaments; speculations | Speaking: Speculating about past and future events; giving advice and suggestions Reading: Reading an advice column Writing: Writing a letter to an advice columnist Listening: Listening to a radio talk show Grammar: Unreal conditional sentences with if clause; past modals |
| ١٦ | ٤ | Unit sixteen: Requests; excuses; invitations | Speaking: Reporting what people say; making requests; making invitations Reading: Reading about "white lies" Writing: Writing a voice mail message Listening: Listening for excuses; listening to a voice mail message Grammar: Reported speech. General review: solve problems of the students/ quizzes and test |

Textbooks & Reference books recommended (last edition)

Professional English in use Medicine, Erich H Glendenning, Cambridge university, ٢٠٠٧

Format Paperback | ١٧٥ pages, Dimensions ١٩٧ x ٢٦٣ x ٩mm | ٤٣٠g, Publication date ٣١ May ٢٠٠٧, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, ISBN١٠ ٠٥٢١٦٨٢٠١٠, ISBN١٣ ٩٧٨٠٥٢١٦٨٢٠١٥, Bestsellers rank ٩٢,٥

Grammar in context, by

Format Mixed media product | ٢٤٠ pages, Dimensions ٢٢٠ x ٢٧٧ x ١٢mm | ٧٢١g, Publication date ٠١ Jan ٢٠٠٨, Publisher Macmillan Education, Publication City/Country London, United Kingdom, Language English, ISBN١٠ ١٤٠٥٠٧٠٥٤٤, ISBN١٣ ٩٧٨١٤٠٥٠٧٠٥٤٦, Bestsellers rank ١٣,٠٨٧

English grammar and composition by Wren and Martin, ٢٠٠٦

Format Paperback | ١٤٠ pages, Dimensions ١٧٥ x ٢٤٥ x ٦mm | ٢٠٢g, Publication date ٠١ Mar ٢٠٠٦, Publisher S Chand & Co Ltd, Publication City/Country New Delhi, India, Edition New edition, Edition Statement New edition, Illustrations note Color Line drawings ISBN١٠ ٨١٢١٩٢٤٨٩٨, ISBN١٣ ٩٧٨٨١٢١٩٢٤٨٩٤, Bestsellers rank ٢١٠,٠٢٠

Professional English in use Medicine, Erich H Glendenning, Cambridge university, ٢٠٠٧

Format Paperback | ١٧٥ pages, Dimensions ١٩٧ x ٢٦٣ x ٩mm | ٤٣٠g, Publication date ٣١ May ٢٠٠٧, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, ISBN١٠ ٠٥٢١٦٨٢٠١٠, ISBN١٣ ٩٧٨٠٥٢١٦٨٢٠١٥, Bestsellers rank ٩٠,٦٩

English grammar by Betty Scamper, ٥rd edition

Format Paperback | ٢٨٨ pages, Dimensions ٢١٤ x ٢٧٥ x ٩mm | ٥١٠g, Publication date ٢٩ Jan ٢٠١٧, Publisher Pearson Education (US), Publication City/Country Upper Saddle River, United States, Language English, Edition Statement ٥th edition, ISBN١٠ ٠١٣٤٢٧٥٤٤٦ ISBN١٣ ٩٧٨٠١٣٤٢٧٥٤٤٤, Bestsellers rank ٢٥٠,٦٥٠

Essential grammar in use by Roy mound Murphy, ٤rd edition, ٢٠١٥

Format Paperback | ٣٢٠ pages, Dimensions ١٩٧ x ٢٦٤ x ١٥mm | ٦٧٠g, Publication date ٢٣ Sep ٢٠١٥, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, Edition Revised, Edition Statement ٤th Revised edition Illustrations note Worked examples or Exercises, ISBN١٠ ١١٠٧٤٨٠٥٥٨, ISBN١٣ ٩٧٨١١٠٧٤٨٠٥٥١ Bestsellers rank ٨,٥٤٦

New inter change book one, by Jack C Richards, students text book, ٢٠٠١

Format Mixed media product | ١٥٢ pages, Dimensions ٢٢٠ x ٢٨٠ x ١٠mm | ٣٩٩,١٧g, Publication date ٣٠ Jan ٢٠٠١, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, Edition Student edition, Edition Statement Student edition, ISBN١٠ ٠٥٢١٠٠٥٧٢, ISBN١٣ ٩٧٨٠٥٢١٠٠٥٧٤

ENGLISH LANGUAGE MODULE ۲

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives

First semester

By the end of this course, students should be able to:

- Enhance their language skills of speaking, reading, listening and writings;
- They will learn how to pronounce the English vocabularies and medical expressions correctly, and will be familiarized with phonetic transcription of standard dictionaries such as (Longman and Oxford, etc);
- And as part of grammar, they will learn the parts of speech in English in order to be able to use the words correctly in a sentence;
- In addition, they will learn how to read a text of reading with comprehension and to be able to introduce himself, describe a friend, a place or solve his/his problems by himself;
- Our focus in the first semester is to stress on General English more than Medical English.

Second semester

- Meet their real life communicative needs;
- Talk fluently and read the texts with comprehension;
- Standing by himself, solving his/her problems by using dictionaries, internet and other available source;
- Enhancing their language skills of speaking, reading, listening and writings perfectly;
- Knowing medical terms derived from Greek of Latin and number of most common abbreviations, such as AIDS etc;
- Inaddition they will be able to catch their lectures in English properly;
- And finally they will be able to write, case note, medical report, surgery report, paragraph and letter writing, in this semester we focus more and more on Medical English than General English.

| ENGLISH LANGUAGE (MODULE ٧) | | | | |
|--------------------------------------|--------|-----------|--|---|
| Discipline | | | University Inclusive | |
| Department | | | Department of English language | |
| Subject | | | ESP/Professional English in use | |
| Course code | | | MED ٠٢ ٠٤ | |
| Class | | | First year | |
| Semester | | ٢ | | |
| Credits | | ٤ | | |
| | | Theory | ٤ | |
| | | Practical | | |
| weeks | Hours | | Topics | Description |
| | Theory | Practical | | |
| ١ | ٤ | | Health and illness Parts of the body | Speaking: Talk about health, sickness, and recovery and name part of the body Reading: Read the passage Writing: Listen to someone who is talking about the radiation of pain in his body Listening: Homework assignment – Write an advice for keeping fit |
| ٢ | ٤ | | Function of the body Medical practitioner | Speaking: Talk about the function of year organ/job of GPs Reading: Read the passage Writing: Write five questions about a patient who has diabetes Listening: Listen to the pronunciation of the new words |
| ٣ | ٤ | | | |
| ٤ | ٤ | | Nurses Allied health Professional s | Speaking: Talk about the job of nurses and their grades Reading: Read the passage silently Writing: Write an article about the nurses responsibility in a hospital Listening: Listen to a nurse talk about her routine |
| ٥ | ٤ | | Hospitals Primary care | Speaking: Talking about the hospital and the different ward of a hospital Reading: Read the relevant passages about a hospital Listening: Listen to a doctor introducing a hospital |
| ٦ | ٤ | | Medical education The overseas doctor | Speaking: Talk about medical education in your country Reading: Read the passage Writing: Write about the systems of education in your country Listening: Listen to the pronunciation of new word |

| | | | | |
|----|---|--|---------------------------------|---|
| ٧ | ٤ | | Signs and symptoms Blood | Speaking: Describe anemia, Reading: Read the passages Listening: Listen to the pronunciation of the new words Writing: Write a short case report. |
| ٨ | ٤ | | Bones Childhood | Speaking: Look at the human skeleton and name them Reading: Read the passages Listening: Listen how the anatomical name of bones pronounced Writing: Write a short article about a stress fracture |
| ٩ | ٤ | | The endocrine system The eye | Speaking: Talk about the glands and their functions in the body Reading: read the passage Listening: Listen to the pronunciation of the new words Writing: Write a referral letter |
| ١٠ | ٤ | | The gastrointestinal system | Speaking: Talk about digestive system Reading: Read the passage about the abdomen Listening: Listen to people making invitation Writing: Write a short article about human digestive system |
| ١١ | ٤ | | Gynecology | Speaking: Talk about reproductive system of women Reading: Read the passages Listening: Listen to pronunciation of the new words in the cassette Writing: Write a passage about women menstruation |
| ١٢ | ٤ | | The heart and circulation | Speaking: Talk about heart and its function in the body Listening: Listen for a medical conversation about heart Writing: Write about hear failure |
| ١٣ | ٤ | | Infections Mental illness | Speaking: Talk about microorganism/ about mental illness Reading: Read the passage Listening: Listen to the new words Writing: Write about the cases of HIV in your country |
| ١٤ | ٤ | | The nervous system | Speaking: Talk about sensory loss and motor loss Reading: Read the passages about epileptic fit and syncope attack Listening: Listen to the pronunciation of the new words Writing: Write about tendon reflex |
| ١٥ | | | Oncology | Speaking: Talk about neoplasm Reading: Read the passages silently and loud Listening: Listen to medical conversation Writing: Write about the treatment of tumors |
| ١٦ | ٢ | | Pregnancy and child birth | Speaking: what is labour? Describe it Reading: Read the passages about labour and lie presentation Listening: Listen to the new words Writing: Write a short article about the oldest and youngest age in your country |
| | ٢ | | The respiratory system | Speaking: Talk about respiratory system Reading: Read the passages Listening: Listen to doctor talking about cough Writing: Write a case report about a man who is complaining of chest pain |

Textbooks & Reference books recommended (last edition)

Professional English in use Medicine, Erich H Glendenning, Cambridge university, 2007

Format Paperback | 170 pages, Dimensions 197 x 263 x 9mm | 430g, Publication date 31 May 2007, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, ISBN10 0521682010, ISBN13 9780521682010, Bestsellers rank 92,0

Grammar in context, by

Format Mixed media product | 240 pages, Dimensions 220 x 277 x 15mm | 721g, Publication date 01 Jan 2008, Publisher Macmillan Education, Publication City/Country London, United Kingdom, Language English, ISBN10 1405100444, ISBN13 9781405100446, Bestsellers rank 13,087

English grammar and composition by Wren and Martin, 2006

Format Paperback | 140 pages, Dimensions 170 x 240 x 7mm | 202g, Publication date 01 Mar 2006, Publisher S Chand & Co Ltd, Publication City/Country New Delhi, India, Edition New edition, Edition Statement New edition, Illustrations note Color Line drawings ISBN10 8121924898, ISBN13 9788121924894, Bestsellers rank 210,020

Professional English in use Medicine, Erich H Glendenning, Cambridge university, 2007

Format Paperback | 170 pages, Dimensions 197 x 263 x 9mm | 430g, Publication date 31 May 2007, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, ISBN10 0521682010, ISBN13 9780521682010, Bestsellers rank 90,69

English grammar by Betty Scamper, 9th edition

Format Paperback | 288 pages, Dimensions 214 x 270 x 9mm | 510g, Publication date 29 Jan 2017, Publisher Pearson Education (US), Publication City/Country Upper Saddle River, United States, Language English, Edition Statement 9th edition, ISBN10 0134270446 ISBN13 9780134270444, Bestsellers rank 200,600

Essential grammar in use by Roy mound Murphy, 4th edition, 2010

Format Paperback | 320 pages, Dimensions 197 x 264 x 10mm | 670g, Publication date 23 Sep 2010, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, Edition Revised, Edition Statement 4th Revised edition Illustrations note Worked examples or Exercises, ISBN10 1107480008, ISBN13 9781107480001 Bestsellers rank 8,046

MEDICAL PHYSICS

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
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- More than ۲۰% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives

At the end of course the students must be learn about

- To understand of the nature of the sound, mechanism of hearing and clinical uses of sound;
- To understand the concept of the physiological effects of electricity and detection of bioelectricity;
- To learn about electromagnetic spectrum and waves and their interaction with body;
- To explain the mechanism of vision and cause of vision defects;
- To understand the mechanism of laser production and its application in medicine;
- To learn the mechanism of X-ray production, production of radiology image, the x-ray interaction with the body and to know different modalities of radiology;
- To get acquainted with basic concepts of nuclear and its spectrum of application;
- To learn about radiotherapy and its mechanism of the work in medicine;
- To learn about radiobiology, effect of radiation on the body and how to protect patient and other individuals from unnecessary exposure;
- To understand the basic fundamentals of magnetism and application of magnetism in the medicine, MRI and its safety.

Skills

- **Introduction** to practical course of medical physics, unites of measurement, metric system, British system;
- **Centrifuge:** introduction, the use of centrifuge in medicine, sedimentation principle,
- **Blood pressure:** Sphygmomanometer, physical aspects of measurement of blood pressure, demonstration and practical measurement of blood pressure'
- **Thermometers and units used in heath:** Centigrade, Fahrenheit, Kelvin, Conversion of heath units;
- **Microscope:** types of microscopes physical aspects, magnification factor, mechanism of the work:
- **Defirillator:** electrical current of the heart, physical aspects of defibrillator, demonstration of defibrillator;

- **Cheat tube and water seal:** physics of respiration, what is chest tube and water seal? Pathologies require chest tube, mechanism of chest tube work;
- **Ultra sound machine:** probes, different parts of the machine, demonstration of the work of ultrasound machine;
- **ECG amchine:** electrical activity of the heart, demonstration of the machine and mechanism of its work;
- **Optometry:** defects of vision, concave and convex lenses and glasses;
- **Intrpduction to laser machine:** demonstration of the machine, mechanism of its work;; wavelength and filters;
- **E-ray machine:** x-ray tube, table, cassette film, analogue and digital x-ray;
- **CT scan machine-ray machine:** table, gantry, control unit, density, contrast, Hounsfield unit, CT protocols;
- **Radiotherapy:** introduction to linear accelerator, treatment planning, dose distribution, dose fractionation, PTV, CTV
- **MRI machine:** table, gantry, intensity, TI contrast T₁ contrast images, proton density, MRI protocols;
- **Endoscopes Demonstrations. :** (esophagogastroduodenoscopy, cystoscopy and bronchoscopy).

Course contents

| MEDICAL PHYSICS | | | | |
|------------------------|-----------|-----------------|-------------------------------|---|
| Discipline | | Basic Subjects | | |
| Department | | Physics | | |
| Course title | | Medical physics | | |
| Pre-requisites | | None | | |
| Course code | | MED 0110 | | |
| Academic year | | 1 | | |
| Semester | | Spring | | |
| Number of Credits | | 3 | | Knowledge 2 Practical 1 |
| | | | | |
| weeks | hours | | Topics | Description |
| | Knowledge | Laboratory | | |
| 1 | 1 | 1 | Waves and sound | Properties of sound, some properties of waves (Reflection and Refraction, Interference, Diffraction) |
| 2 | 1 | 1 | Hearing mechanism and defects | Hearing and ear (performance of the ear frequency and pitch, intensity and loudness), Clinical uses of sound, hearing defects, hearing aids |
| 3 | 1 | 1 | Ultrasound | What is Ultrasound? Ultrasound and energy, how echoes are formed? How to produce ultrasound? Images from echoes, Ultrasound scanner design, Ultrasound absorbed by the body, Limitations of ultrasound: Image quality and artifacts |
| 4 | 1 | 1 | | How safe is ultrasound imaging? Obstetrical ultrasound imaging, Echocardiography: Ultrasound images of the heart, Origins of the Doppler effects, using the Doppler effect to measure blood flow, color flow images, three – dimensional ultrasound |

| | | | | |
|----|---|---|----------------------------------|--|
| 5 | 1 | 1 | Electromagnetic waves | Definition, Electro magnetic Spectrum, radio waves, Micro waves, Infra-Red, Visible light, Ultraviolet, X-rays, Gamma Rays, Interaction of Electro magnetic Radiations with human body, Non Ionizing radiations, Ionizing radiations, NCRP, ICNIRP. |
| 6 | 1 | 1 | Application of light on medicine | Optics fiber, imaging, endoscopy, fiber optics endoscopy, video endoscopy |
| 7 | 1 | 1 | Laser | Introduction, what is laser? How laser work? Photocoagulation, trade –offs in photocoagulation, photovaporization, laser and color |
| 8 | 1 | 1 | Application of laser in medicine | How selective absorption is used in Laser surgery? Lasers in Dermatology, Laser surgery on the eye, Lasers in Dentistry, advantages and drawbacks of laser for medicine, photodynamic therapy. |
| 9 | 1 | 1 | Radiology | Introduction, diagnosis x-rays. The body's x-ray shadow, types of x-ray interactions with matter, basic issues in x-ray image formation, contrast how x-ray are generated, X-ray detectors, Different modalities in Radiology, Conventional radiology, Digital Radiology, fluoroscopy, mammography, dental radiology, OPG , Angiography. |
| 10 | 1 | 1 | CT scan | Basic of computed tomography, Generations of CT scan, Hounsfield units, Density, how images are created in CT – scan, Indications and Contraindications of using radiation for diagnosis how images are created in CT-scan, indications and Contraindications of using radiation for diagnosis. |
| 11 | 1 | 1 | Radioactivity | Radioisotopes, Radioactivity and medicine, Nuclear physics basics, Decay, half – life (physical, biological), Alpha, Beta and Gamma rays. |
| 12 | 1 | 1 | Nuclear medicine | Selection of radiopharmaceuticals, Gamma camera imaging, Emission tomography with radionuclides: SPECT and PET, radiation in medical treatment. |
| 13 | 2 | 1 | Radiology | Introduction, External Beam Radiotherapy, Cobalt 60 machine, Linear accelerators, Brachytherapy (LDR, HDR). |
| 14 | 2 | 1 | | Interaction of radiation with the body, Radiation units, absorbed dose, equivalent dose, effective dose, radiation constraints. |
| 15 | 2 | 1 | Radiation protection | Shielding, Personal protection, protection of patients, Environmental safety, dosimetry, detectors and imaging machines, types of detectors |
| 16 | 2 | 1 | Magnetism and MRI | Introduction, the science of magnetism, Nuclear magnetism, Contrast mechanism for MRI, Listening to spin echoes, how MRI maps the body, how safe is MRI? |

Textbooks & Reference books recommended (last edition)

Suzanne Amador Kane; physics in modern Medicine,

Format Paperback | 432 pages, Dimensions 106 x 230 x 20,4mm | 608g, Publication date 07 Jul 2020, Publisher Taylor & Francis Ltd, Imprint CRC Press, Publication City/Country London, United Kingdom, Language English, Edition New edition, Edition Statement 3rd New edition Illustrations note 184 Line drawings, black and white; 78 Halftones, black and white; 17 Tables, black and white; 262 Illustrations, black and white, ISBN10 113803603X, ISBN13 9781138036031

Perry Sprauls, Slavik Tabakov; Medical physics International;

Format Hardback | 908 pages, Dimensions 216 x 279 x 50,8mm | 2,945g, Publication date 11 Jan 2013, Publisher Taylor & Francis Inc, Imprint CRC Press Inc, Publication City/Country Bosa Roca, United States, Language English, Illustrations note 482; 1 Tables, black and white; 1107 Illustrations, black and white,

ISBN10 1439846029, ISBN13 9781439846020.

William Bialek; Biophysics, Searching for principles,

Format Hardback | 640 pages, Dimensions 203 x 204 x 40.64mm | 1,928g, Publication date 28 Oct 2012, Publisher Princeton University Press, Publication City/Country New Jersey, United States, Language English, Edition Annotated, Illustrations note 62 color illus. 14 halftones. 129 line illus. ISBN10 0691138910, ISBN13 9780691138916, Bestsellers rank 1,068,370.

Irving P.Herman; physics of the Human Body

Format Hardback | 903 pages, Dimensions 100 x 230 x 07.66mm | 1,791g, Publication date 19 Jan 2016, Publisher Springer International Publishing AG, Publication City/Country Cham, Switzerland, Language English, Edition Revised, Edition Statement 2nd ed. 2016, Illustrations note 100 Tables, color; 66 Illustrations, black and white; XXIV, 903 p. 66 illus. ISBN10 3319239309, ISBN13 9783319239309, Bestsellers rank 026,797

Simon R.Cherry . physics in Nuclear Medicine.

Format Hardback | 044 pages, Dimensions 203 x 279 x 27.94mm | 1,042,21g, Publication date 17 Apr 2012, Publisher Elsevier Health Sciences, Imprint W B Saunders Co Ltd, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 4th Revised edition, Illustrations note Approx. 000 illustrations (300 in full color) ISBN10 1416001988, ISBN13 9781416001980, Bestsellers rank 290,031

BIOPHYSICS

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to 50% with reasonable excuse.
- More than 50% of absence is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from 10 points
- Students factory score is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scoring policy

- How to evaluate and how to divide the scores in accordance with article 19 of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) 20%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam 20%
- Final semester exam 60%
- Total 100%

Learning objectives

- Develop basic understanding of biophysics concepts;
- To learn the effect of stability and static forces applied in different states of the body and calculation of forces using lever rules;
- To understand the friction principles and its effect in the joints;
- To learn the formulas and equations used to evaluate the motion of fluids;
- To learn the fundamentals of the heat and thermoregulation in the body;
- To understand the concept of the physiological effects of electricity and detection of bioelectricity;
- To explain the mechanism of vision;
- To understand the cause of vision defects and their correction;
- To understand the hemodynamic rules in cardiovascular medicine (e.g. Frank-Starling law, Laplace law, Bernoulli-Venturi effect etc.)

Course content

| BIOPHYSICS | | | | |
|-------------------|-----------|-----------------|--------------------------------------|---|
| Discipline | | Basic Subjectss | | |
| Department | | Physics | | |
| Course title | | Biophysics | | |
| Pre-requisites | | None | | |
| Course code | | MED ٠١ ١١ | | |
| Academic year | | I | | |
| Semester | | Spring | | |
| Number of Credits | | Knowledge | | ١ |
| | | Practical | | |
| weeks | hours | | Topics | Detrition |
| | Knowledge | Laboratory | | |
| ١ | ١ | | Introduction | Introduction to physics application in Medical Sciences , Equilibrium and Stability , General Anatomy of the skeletal system |
| ٢ | ١ | | Biomechanics | Equilibrium considerations for the human body, Stability of the human body under the action of an external force, Standing , bending , Lifting |
| ٣ | ١ | | Friction | Definition of Friction, Standing at an Incline , Friction at the Hip Joint |
| ٤ | ١ | | The Cell | Cells and sizes , diffusion via membrane, dance of the cells |
| ٥ | ١ | | Heat and Kinetic Theory | Heat and Hotness , Kinetic Theory of Matter, Definitions: (Unit of heat , Specific heat , Latent Heats), Transfer of Heat, Conduction. |
| ٦ | ١ | | | Convection , Radiation , Diffusion , Transport of Molecules by Diffusion , Diffusion Through Membranes , The Respiratory System , Surfactants and Breathing , Diffusion and Contact Lenses |
| ٧ | ١ | | Thermal regulation | Energy Requirements of people , Energy from food , Regulation of Body temperature , Control of Skin temperature , Convection , Radiation , Radiative Heating by the Sun, Evaporation , Resistance to Cold , BMR |
| ٨ | ١ | | Electricity and electric potential | Bio potential, Nerve tissues , action potential and resting potential, heart and vessels system, control of heart function |
| ٩ | ١ | | Muscles Activities | Brain activities , electrotherapy (ECT), defibrillation , heart stimulation counter, diathermy, electro cauterization(electrical surgery) |
| ١٠ | ١ | | Bioelectricity | Detection of electrical signals from body , ECG , EMG , EEG |
| ١١ | ١ | | Interaction of Electricity with body | Physiological effects of electricity, Electric shock. Heath, Factors in lethality of electric shock(current frequency, direction of current, time, AC/DC). |

| | | | | |
|----|---|---|--|--|
| ١٢ | ١ | | Fluid dynamics | Bernoulli's Equation , Viscosity and Poiseuille's law , Laminar Flow , Turbulent Flow , Circulation of the Blood , Blood pressure , Control of Blood Flow. |
| ١٣ | ١ | | Hemodynamics | Energetics of Blood Flow , Turbulence in the Blood , Arteriosclerosis and Blood Flow , Power Produced by , the HEART , Measurement of Blood pressure , Laplace's law , Frak Starling's law related to the heart mechanics. |
| ١٤ | ١ | | Optics and vision , Defects in vision and correction | Vision , Nature of Light , structure of the Eye , Accommodation , Eye and the Camera , Aperture and Depth of Field , lens System of the Eye . |
| ١٥ | ١ | Reduced eye (a model for calculations) , Retina Resolving power of the Eye , threshold of Vision, Vision and the Nervous System | | |
| ١٦ | ١ | Defects in vision , lens for Myopia , Lens for presbyopia and Hyperopia , Astigmatism. | | |

Textbooks & Reference books recommended (last edition)

Suzanne Amador Kane; physics in modern Medicine,

Format Paperback | ٤٣٢ pages, Dimensions ١٥٦ x ٢٣٥ x ٢٥,٤mm | ٦٥٨g, Publication date ٠٧ Jul ٢٠٢٠, Publisher Taylor & Francis Ltd, Imprint CRC Press, Publication City/Country London, United Kingdom, Language English, Edition New edition, Edition Statement ٣rd New edition Illustrations note ١٨٤ Line drawings, black and white; ٧٨ Halftones, black and white; ١٧ Tables, black and white; ٢٦٢ Illustrations, black and white, ISBN١٠ ١١٣٨٠٣٦٠٣X, ISBN١٣ ٩٧٨١١٣٨٠٣٦٠٣١

Perry Sprauls, Slavik Tabakov; Medical physics International;

Format Hardback | ٩٠٨ pages, Dimensions ٢١٦ x ٢٧٩ x ٥٠,٨mm | ٢,٧٤٤g, Publication date ١١ Jan ٢٠١٣, Publisher Taylor & Francis Inc, Imprint CRC Press Inc, Publication City/Country Bosa Roca, United States, Language English, Illustrations note ٤٨٣; ١ Tables, black and white; ١١٥٧ Illustrations, black and white, ISBN١٠ ١٤٣٩٨٤٦٥٢٩, ISBN١٣ ٩٧٨١٤٣٩٨٤٦٥٢٠

William Bialek; Biophysics, Searching for principles,

Format Hardback | ٦٤٠ pages, Dimensions ٢٠٣ x ٢٥٤ x ٤٠,٦٤mm | ١,٩٢٨g, Publication date ٢٨ Oct ٢٠١٢, Publisher Princeton University Press, Publication City/Country New Jersey, United States, Language English, Edition Annotated, Illustrations note ٦٢ color illus. ١٤ halftones. ١٢٩ line illus. ISBN١٠ ٠٦٩١١٣٨٩١٥, ISBN١٣ ٩٧٨٠٦٩١١٣٨٩١٦, Bestsellers rank ١,٠٦٨,٣٧٠

Irving P.Herman; physics of the Human Body

Format Hardback | ٩٥٣ pages, Dimensions ١٥٥ x ٢٣٥ x ٥٧,٦٦mm | ١,٧٩١g, Publication date ١٩ Jan ٢٠١٦, Publisher Springer International Publishing AG, Publication City/Country Cham, Switzerland, Language English, Edition Revised, Edition Statement ٢nd ed. ٢٠١٦, Illustrations note ١٠٠ Tables, color; ٦٠٦ Illustrations, black and white; XXIV, ٩٥٣ p. ٦٠٦ illus. ISBN١٠ ٣٣١٩٢٣٩٣٠٩, ISBN١٣ ٩٧٨٣٣١٩٢٣٩٣٠٩, Bestsellers rank ٥٢٦,٧٩٧

RADIOLOGY & MEDICAL IMAGING

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ٢٥% with reasonable excuse.
- More than ٢٥% of absente is within result in disqualification from the final content exam

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- Students homework is calculated from ١٠ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ١٩ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ٢٠%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

Course description

MD doctors should have enough knowledge and exposure to various radiological techniques and be able to interpret radiological findings with accuracy and confidence different pathologies have characteristics radiological features which are strong basis for diagnosis of different diseases. Modern imaging facilities e.g. Intravenous urography ,ultrasonography, CT and MRI have made diagnosis easy and accurate.

Learning objectives

At the end of this course , students should be able to :

- To select/order and justify the required radiological examination correctly ,
- Identify gross abnormalities in the films;
- List indications and advantages of modern techniques;
- Recognize major abdominal viscera and their imaging characters.

Skills (able to demonstrate radiological abnormalities)

A-Plain Radiography

١-Chest

- Normal anatomy and projections
- Pneumothorax
- Pneumonia

- Effusion
- Cardiomegaly
- Pulmonary edema
- Fractures
- Surgical Emphysema
- Neoplastic diseases
- Chronic inflammatory disease (TB)

γ-Skill

- Normal Anatomy and projections
- Fracture
- Lytic lesions
- Calcifications
- Pituitary

ϒ-Abdomen

- Normal anatomy and projections
- Renal and urinary tract stones, gall stones and other calcifications
- Fluid levels (intestinal obstruction)
- Free gas under diaphragm (perforation)
- Enlarged Liver and spleen

ξ-Spine/bones:

- Normal Anatomy and various projections.
- Disc space reduction
- Vertebral collapse
- To recognize changes due to rickets
- Fractures in children and adults
- To understand the importance of plain x-rays in bone tumors

B-Barium studies single and double contrast

- Normal anatomy and various projections
- Gastric outlet obstruction
- Stomach mass/filling defect
- Esophageal outline/strictures
- Intussusception
- Stricture
- Any filling defect
- Ulcerative colitis

c-Intravenous Urograms

- Hydro nephrosis and renal masses
- Micturating cystourethrogram
- Vesico-uretric reflux

d- Echocardiogram

- Be able to interpret the reports.

e-Computerized Tomography (CT)/Magnetic resonance Imaging (MRI)

- To know the cross sectional anatomy
- Understand the principals of radiation safety in CT scan.
- To know and understand the clinical indications and contraindications
- Be able to interpret the report

f-Ultrasound

- Understand the indication and applications of ultrasound.
- Able to interpret the report of ultrasound

g-Nuclear medicine

- Understand the indication of unclar studies
- Able to understand the hazards of radionuclides and internalize the rules of radiation projecton
- Able to interpret the reports

Course Content

| MEDICAL IMAGING AND SCIENCE OF RADIATION (Module 1) | | | | |
|--|-----------|---|-------------------------------|--|
| Discipline | | Professional Subjects | | |
| Department | | Medical Imaging and science of Radiation | | |
| Course title | | Medical Imaging and radiology | | |
| Pre-requisites | | Medical physics, medicine & surgery courses | | |
| Course code | | MED 0730 | | |
| Class | | IV | | |
| Semester | | 7 | Spring | |
| Number of Credits | | 2 | Knowledge | 1 |
| | | | Practical | 1 |
| weeks | hours | | Topics | Detrition |
| | Knowledge | Laboratory | | |
| 1 | 1 | 1 | Radiology and Medical imaging | Preface , Technics of Medical Imaging , Definition of X-Ray , Conventional Radiography , X-Rays Production , Dynamic Spatial Reconstruct of (DSR), Radioscopy, positron Emission Tomography (PET) |
| 2 | 1 | 1 | | Image quality , Technology of screen intensifier, Danger of X-Rays (Local accident , General accident), Radioprotection (radioprotection of patient , Radioprotection of medical staff, protection material, Drug Protection , Radio detection) |
| 3 | 1 | 1 | Ultrasonography | Mechanism of production of sound , physics of Ultrasound , types of wave of sound , transmission of sound in tissue , Different types of transducer Usefulness of ultrasound , Mass in ultrasound view |
| 4 | 1 | 1 | Angiography | Cronography (procedure of coronography , value of therapeutic coronography) Computed tomography (CT Scan), Sciitigraphy or Radionucleid scan |

| | | | | |
|----|---|---|-------------------------------------|--|
| ٥ | ١ | ١ | Contrast material M R I (principle) | Positive contrast , minus contrast , double contrast , Magnetic Resonance Image (production of image , uses of MRI , usefulness of MRI , use of contrast in MRI, Contra indication for MRI |
| ٦ | ١ | ١ | Radiography of Chest | Thoracic Disease , (Technics of imaging , Simple chest X-Ray, studies of diaphragm, heart , mediastinum , lungs, hilus of the lung), Computed Tomography (Technics, Indication and normal images), MRI imaging , Radionuclide lung scanning PET scanning , Ultrasound of Chest , Thoracic disease with normal chest X ray , Abnormal Chest Silhouette sign) |
| ٧ | ١ | ١ | | Radiologic sign of pulmonary disease (Air space filling , pulmonary collapse , spherical shadow , calcification , cavitation , increase pulmonary radiolucency , pleural effusion , pneumothorax) |
| ٨ | ١ | ١ | | Mediastinum (mediastinal mass , calcification), Hiatus hernia , pneumomediastinum, Aortic aneurism , Hilar enlargement , Neoplasm , Specific Disease (Bacterial pneumonia, Viral and mycoplasma pneumonia ,Lung abscesses , pulmonary tuberculosis , Sarcoidosis, Carcinoma of the Bronchus, Lymphoma. |
| ٩ | ١ | ١ | Heart | Cardiac disorder (plain chest X ray, heart size and shape , Cardio-Thoracic Ratio (CTR), Increased pulmonary blood flow due to left to right shunt , pulmonary arterial and venous hypertension , pulmonary edema |
| ١٠ | ١ | ١ | | Echocardiography, Radionuclide study CT Scan ,MRI, Specific cardiac disorder (Heart failure , Pericardial effusion , Valvular heart disease , Ischemic heart disease , congenital heart diseases). |
| ١١ | ١ | ١ | Urinary tract disorders | Method of imaging (ultrasound , Urography IVU, CT urography, CT KUB, CT after contrast injection MRI Radionuclide examination , Specific technics |
| ١٢ | ١ | ١ | | Congenital anomalies of the urinary tract (bifid collecting system , ectopic kidney, horse-shoe kidney , renal agenesis), Urinary tract Disorder (urinary calculi Nephrocalcinosis, urinary tract obstruction , etiology of ureter-obstruction , Renal parenchymal masses (ultrasound , IVU, CT scan &MRI),Urethral tumors. |
| ١٣ | ١ | ١ | | Renal and peri-renal abscess, Tuberculosis, Chronic pyelonephritis, Renal trauma , Bladder (Tumor of Bladder , diverticula ,trauma of bladder and urethra, prostate and urethra (prostatic enlargement , bladder outflow obstruction , ureteral stricture),scrotum and testis renal trauma, |
| ١٤ | ١ | ١ | Digestive system | Diagnostic methods , Plain abdomen , intestinal gas pattern , Esophagus , normal swallow of barium, indication , contraindication ,dysphagia, pharyngeal pouch(Zinker's diverticulum)reflux esophagitis. |
| ١٥ | ١ | ١ | | Achalasia , Schatzi's ring, diaphragmatic herniation , sliding hiatus hernia , rolling hiatus hernia , foreign bodies and trauma , varices , esophageal tumors |

| | | | |
|----|---|---|--|
| ١٦ | ١ | ١ | Pneumoperitoneum, abdominal calcificaon , Gastrointestinal tract Contrast examination , Barium Examination , small bowel , Large Intesting , malignant tumors , gastric carcinoma , lymphoma , acute abdomen, intestinal obstruction , acute appendicitis, acute cholecystitis, Crohn's disease , Ulcerative colitis ,Diverticular Disease, Volvulus, Intussusception , Colorectal tumors, |
|----|---|---|--|

Textbooks & reference books recommended (last edition)

David Sutton . Textbook of Radiology and Imaging,

Format Hardback | ١٨٠٠ pages, Publication date ٢٤ Feb ٢٠١٤, Publisher Elsevier India Publication City/Country New Delhi, India, Language English, Edition Revised, Edition Statement ٧th Revised edition, ISBN١٠ ٨١٣١٢٢٠١٦٨, ISBN١٣ ٩٧٨٨١٣١٢٢٠١٦٠, Bestsellers rank ١,١٨٧,٨٦٨

Adams , A.K.Dixon, Diagnostic Radiology ,

Format Hardback | ٢٤٠٠ pages, Dimensions ٢٢٢ x ٢٨١ x ١٠١,٦mm | ٧٢,٩٩٨,٤٣g, Publication date ٣٠ Jul ٢٠٢٠, Publisher Elsevier Health Sciences, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement ٧th Revised edition, Illustrations note Approx. ٣٧٢٠ illustrations (٢٢٠ in full color), ISBN١٠ ٠٧٠٢٠٧٠٢٤٤٨ ISBN١٣ ٩٧٨٠٧٠٢٠٧٠٢٤٤٧, Bestsellers rank ٦٠٤,٠١٣

Jerry L,Prince ,Medical imaging , Signal and System,

Format Paperback | ٧٢٧ pages, Dimensions ١٠٠ x ٢٣٠ x ٢٧,٩٤mm | ١,٠١٦,٠٠g, Publication date ٠١ Jul ٢٠٠٩, Publisher Springer-Verlag Berlin and Heidelberg GmbH & Co. KG Imprint Springer-Verlag Berlin and Heidelberg GmbH & Co. K, Publication City/Country Berlin, Germany, Language English, Edition Statement ٢٠٠٩ ed. Illustrations note XVIII, ٧٢٧ p. ISBN١٠ ٣٦٤٢٠٢٤٩٧١, ISBN١٣ ٩٧٨٣٦٤٢٠٢٤٩٧٩

Sabala R .Mandava.Breast Imaging, Biren A.Shah.

Format Paperback | ٣٢٠ pages, Dimensions ٢١٠,٨٢ x ٢٧٤,٣٢ x ١٠,١٦mm | ٧٠٣g, Publication date ٢٩ Sep ٢٠١٧, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement ٢nd edition ISBN١٠ ١٤٩٦٣٠٨٢٠١, ISBN١٣ ٩٧٨١٤٩٦٣٠٨٢٠٢, Bestsellers rank ١,٩٦٧,٦٣٩

RADIOLOGY & MEDICAL IMAGING ٢

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- Plagiarism and copying the scientific research work of other deprive the factory score.
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- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ٢٠%
- Final semester exam ٦٠%
- Total ١٠٠%

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- Identify gross abnormalities in the films;
- List indications and advantages of modern techniques;
- Recognize major abdominal viscera and their imaging characters.

Skills (able to demonstrate radiological abnormalities)

A-Plain Radiography

- Normal anatomy and projections
- Pneumothorax
- Pneumonia
- Effusion
- Cardiomegaly
- Pulmonary edema
- Fractures
- Surgical Emphysema
- Neoplastic diseases
- Chronic inflammatory disease (TB)

٢-Skill

- Normal Anatomy and projections
- Fracture
- Lytic lesions
- Calcifications
- Pituitary

٧-Abdomen

- Normal anatomy and projections
- Renal and urinary tract stones, gall stones and other calcifications
- Fluid levels (intestinal obstruction)
- Free gas under diaphragm (perforation)
- Enlarged Liver and spleen

٨-Spine/bones:

- Normal Anatomy and various projections.
- Disc space reduction
- Vertebral collapse
- To recognize changes due to rickets
- Fractures in children and adults
- To understand the importance of plain x-rays in bone tumors

B-Barium studies single and double contrast

- Normal anatomy and various projections
- Gastric outlet obstruction
- Stomach mass/filling defect
- Esophageal outline/strictures
- Intussusception
- Stricture
- Any filling defect
- Ulcerative colitis

c-Intravenous Urograms

- Hydro nephrosis and renal masses
- Micturating cystourethrogram
- Vesico-uretric reflux

d- Echocardiogram

- Be able to interpret the reports.

e-Computerized Tomography (CT)/Magnetic resonance Imaging (MRI)

- To know the cross sectional anatomy
- Understand the principals of radiation safety in CT scan.
- To know and understand the clinical indications and contraindications
- Be able to interpret the report

f-Ultrasound

- Understand the indication and applications of ultrasound.
- Able to interpret the report of ultrasound

g-Nuclear medicine

- Understand the indication of unclear studies
- Able to understand the hazards of radionuclides and internalize the rules of radiation protection
- Able to interpret the reports

Course Content

| MEDICAL IMAGING AND SCIENCE OF RADIATION (Module ٧) | | | | |
|--|-------|---|-------------------------------|---|
| Discipline | | Professional Subjects | | |
| Department | | Medical Imaging and science of Radiation | | |
| Course title | | Medical Imaging and radiology | | |
| Pre-requisites | | Medical physics , Medical & surgical diseases | | |
| Course code | | MED ٠٨ ٢٩ | | |
| Academic year | | IV | | |
| Semester | | ٨ | | |
| Number of Credits | | ٢ | | |
| | | Lecture | | ١ |
| | | Practical | | ١ |
| weeks | hours | | Topics | Detrition |
| | ١ | ٢ | | |
| ١ | ١ | ١ | Neuroradiology | Brain & Cranium , Simple skull X-ray, CT scan ,MRI Angiography , Nuclear Medicine , cerebrovascular disease , infarction with different types, Intracerebral heamatoma |
| ٢ | ١ | ١ | | Trauma of brain , contusion, subdural hematoma, extradural heamatoma |
| ٣ | ١ | ١ | | Inter crainial tumors in adult, glioblastoma, meningioma, neurodiologic diagnosis, infection of central nervous system, meningitis, TB meningitis, empyema of brain, brain abscess |
| ٤ | ١ | ١ | Paranasal sinuses | Developmental anatomy of sinuses, Techniques, different projection in sinuses finding, anatomical changes with nasal obstruction |
| ٥ | ١ | ١ | | Choanal Atresia, opaque sinus, mucocele, Acute sinusitis, nasal polyposis, mucosa retention cyst, Truma |
| ٦ | ١ | ١ | Musculoskeletal system | Reaction of bone against disease, hyperactivity of osteoblast, truma, classification of fracture, complication of fracture, |
| ٧ | ١ | ١ | Spine | Spondylosis, spondylolysis, spondylolisthesis, ankylosing spondylitis, cervical spine position, Thoracic lambar spine, congenital skeletal anomalies, chromosomal disorder, springel's shoulder. |
| ٨ | ١ | ١ | The lower limb | Congenital dislocation of the hip, proximal femoral focal diffeincy, abnormalities of the patella, hemivertebra, congenital vertebral fusion, cervical rib, spina bifeda, osteogenesis imperfect, separated odontoid, down syndrome, periosteal reaction. |
| ٩ | ١ | ١ | Congenital skeletal anomalies | Congenital skeletal anomalies, chromosomal disorders, springle souldre, congenital dislocation of the hip, proximal femoral focal diffeincy. |
| ١٠ | ١ | ١ | Infection of the bones | Osteomyelitities (radiologic findings), tuberculosis of bone and joints,(radiographic appearance), greater trochanter lesion, spine (radiographic apperance), tumors and tumors like condition of the bone, bone forming tumors (osteoma, osteoid osteoma, osteoblastoma, osteosarcoma) |
| ١١ | ١ | ١ | Tumors of the bone | Tumors or tumors like condition of the bone, bone forming tumors, (osteoma, osteoid osteoma, osteoblastoma, osteosarcoma) |

| | | | | |
|----|---|---|---|---|
| ۱۲ | ۱ | ۱ | Metabolic and endocrine disorder affecting bone | Change due to vitamin D deficiency, Ricetes osteomalacia, hypophysphatesia, vitamin C deficiency, scurvy, osteoporosis, local osteoporosis A vascular necrosis, osteonecrosis |
| ۱۳ | ۱ | ۱ | Female genital tract | Normal appearance (altrasound, computed tomography, MRI, PET/CT, gynecological pathology (pelvic masses, ovarain masses, urine tumors (fibroid, adenomyosis) |
| ۱۴ | ۱ | ۱ | | Carcinoma of uterine body and cervics, pelvic inflammatory disease, endometrisis, intrauterine contraceptive disease, hyterosalphangography, obstetric ultrasound, ultrasound in the first, second and third trimester, placenta large for dates, entra uterine growth retaredation, ultrasound for caryotyping, fetal death, ectopic pregnancy |
| ۱۵ | ۱ | ۱ | Mastoiditis | Acute and chronic mastoiditis, cholesteatoma, congenital cholesteatoma. |
| ۱۶ | ۱ | ۱ | Mannigraphy | Indications and technics |

Textbooks & reference books recommended (last edition)

David Sutton . Textbook of Radiology and Imaging,

Format Hardback | ۱۸۰۰ pages, Publication date ۲۴ Feb ۲۰۱۴, Publisher Elsevier India Publication City/Country New Delhi, India, Language English, Edition Revised, Edition Statement ۷th Revised edition, ISBN۱۰ ۸۱۳۱۲۲۰۱۶۸, ISBN۱۳ ۹۷۸۸۱۳۱۲۲۰۱۶۰, Bestsellers rank ۱,۱۸۷,۸۶۸

Adams , A.K.Dixon, Diagnostic Radiology ,

Format Hardback | ۲۴۰۰ pages, Dimensions ۲۲۲ x ۲۸۱ x ۱۰۱,۶mm | ۷۶,۹۹۸,۴۳g, Publication date ۳۰ Jul ۲۰۲۰, Publisher Elsevier Health Sciences, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement ۷th Revised edition, Illustrations note Approx. ۳۷۲۰ illustrations (۲۲۰ in full color), ISBN۱۰ ۰۷۰۲۰۷۵۲۴۸ ISBN۱۳ ۹۷۸۰۷۰۲۰۷۵۲۴۷, Bestsellers rank ۶۵۴,۰۱۳

Jerry L,Prince ,Medical imaging , Signal and System,

Format Paperback | ۷۲۷ pages, Dimensions ۱۵۵ x ۲۳۵ x ۲۷,۹۴mm | ۱,۰۱۶,۰۵g, Publication date ۰۱ Jul ۲۰۰۹, Publisher Springer-Verlag Berlin and Heidelberg GmbH & Co. KG Imprint Springer-Verlag Berlin and Heidelberg GmbH & Co. K, Publication City/Country Berlin, Germany, Language English, Edition Statement ۲۰۰۹ ed. Illustrations note XVIII, ۷۲۷ p. ISBN۱۰ ۳۶۴۲۰۲۴۹۷۱, ISBN۱۳ ۹۷۸۳۶۴۲۰۲۴۹۷۹

Sabala R .Mandava.Breast Imaging, Biren A.Shah.

Format Paperback | ۳۲۰ pages, Dimensions ۲۱۰,۸۲ x ۲۷۴,۳۲ x ۱۰,۱۶mm | ۷۰۳g, Publication date ۲۹ Sep ۲۰۱۷, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States,

INFORMATION COMMUNICATION TECHNOLOGY-ICT

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰

Learning objectives

At the end of course the student should be able to:

- Demonstrate literacy for all,
- Introduce the main concept of:
 - Information Communication Technology
 - Hardwar
 - Software
 - Data storage and memory
 - Computer performance
- Demonstrate knowledge and competence in using the common functions of a personal computer and it is operating system;
- Basic operations , Formatting, Installation , Editing documents , proofing and printing,
- Work with Microsoft Word , Microsoft PowerPoint and Microsoft Excel;
- Web Navigation , Web Searching , downloading , Security issues.

| INFORMATION COMMUNICATION THECNOLOGY-ICT(Mdule ١) | | | | |
|--|-----------|---|--|---|
| Discipline | | University Inclusive | | |
| Department | | Information communication technology | | |
| Course Title | | ICDL module ١ & ٣ (concepts of information and communication technology, word processing) | | |
| Pre-requisites | | None | | |
| Course code | | MED ٠١ ٠٥ | | |
| Academic year | | I | | |
| Semester | | ١ Spring | | |
| Number of Credits | | ٢ | | ١ |
| | | | | ١ |
| weeks | hours | | Topics | Detrition |
| | Knowledge | practice | | |
| ١ | ١ | ١ | Concept and hardware | Concept: personal computer (laptop and palmtop computers, futures of handheld portable digital devices, PDA, mobile phones, Media players, Smart phones) parts of computers the CPU, memory, ROM-BIOS, Disks |
| ٢ | ١ | ١ | Input and output part and computer performance | Input/output parts: USB port, serial part, parallel part, network part, firmware part, computer performance: factors affecting performance (CPU, Clock speed, RAM size, Hard disk, free hard disk space, fragmentation, defragmentation files, multitasking consideration, CPU speed) |
| ٣ | ١ | ١ | Memory and storage | Memory: RAM, ROM, ROM Bios, video, (graphics) memory, measurement of storage capacity, measurement of storage capacity. Type of storage |
| ٤ | ١ | ١ | Input Devices | Input Devises : Keyboard, mouse ,Scanners, Tracker ball Touch pads, Joysticks, webcams Digital Cameras ,Microphones |
| ٥ | ١ | ١ | Output Devices | Output devices: Traditional Computer Monitors, Flat Screen Computer Screens, Projection Devices, Speakers And Headphones, printers, Type of Printers, Laser Printers, Inkjet printers, Dot Matrix printers Input and output devices. |
| ٦ | ١ | ١ | Software | Operating System: Example of Software Application are: Word Processing Application, Spreadsheets Application Databases Application , Presentations Application E-mailing Application, Web browsers Application photo editing Application. |
| ٧ | ١ | ١ | Software | Software: Difference between operating systems and application software , Accessibility options , voice recognition Software, Screen Reader Software , Screen magnifier Software , On-Screen Keyboard. |

| | | | | |
|----|---|----|-------------------------------------|---|
| ٨ | ١ | ١١ | Networks and DATA Transfer | Network: Network Types (LAN,WAN,MAN,Client/server network, Internet,WWW,Internet, and Extranet)DATA Transfer: Downloading from and uploading to a network Broadband versus Dial-up Internet connection services Internet connection Options Features of Internet connection. |
| ٩ | ١ | ١ | ICT in Everyday Life | ICT in Electronic World, ICT in Communication ICT in Virtual Communication , ICT in Health ICT in Environment. |
| ١٠ | ١ | ١ | Security | Security: Identity and Authentication, password policies, off-site backups , Firewalls ,Data theft Issues, Viruses, Computer Virus(Computer Virus infection issue , Protecting Against Computer Virus infection, What to do if you discover a virus on your Computer , The limitation of antivirus Software). |
| ١١ | ١ | ١ | Legal Issue and Site licenses | Legal issue Copyright , Copyright issue when copying files. Site Licenses , End-user license agreement , types of Software license Copying files . Site Licenses ,End-user license agreement, Types of software license agreements , Shareware , Freeware, Open source software , open sources software , Data protection and privacy , Data protection Legislation |
| ١٢ | ١ | ١ | The Microsoft Word | Working with Documents: Starting Microsoft Word, The Microsoft Word Screen The level of Command Organization, The Office Button, ribbon Tabs, Switching between tabs using the mouse wheel Groups. |
| ١٣ | ١ | ١ | Starting To Use Microsoft word | Using the default Microsoft Word document: Saving Microsoft Word document, Opening and Closing documents , Saving your file using a different file name , Creating a new document, Using Help within Microsoft word, Alt key help Saving document using different formats , Creating document using different templates, Switching between word Views. |
| ١٤ | ١ | | Manipulating Text And The Clipboard | Manipulating Text :Select , then format , Inserting text Inserting , deleting , undo and redo , insert and ovrtype mode , copying text within a document Moving text within a document. The Clipboard : Using the clipboard , The office Clipboard Removing items from Clipboard. |
| ١٥ | ١ | ١ | Formatting | Text Formatting : Changing the font size or font type . Formatting text as bold , italic or underline Applying subscript or superscript formatting Applying Colors to selected text , Applying different background colors to selected text changing the text case Setting hyphenation options. |
| ١٦ | ١ | ١ | Paragraph formatting | Paragraph Formatting : paragraph marks , Creating a paragraph , Deleting a paragraph , merging , paragraphs, Aligning text within a different bullet or numbering style to al list , Adding border and Shading , Finding and Replacing Text. |

Textbooks & Reference books Recommended (last edition)

Nell Dale & john Levis. Computer Science Illuminated.

Format Hardback | ٧٤٥ pages, Dimensions ١٨٥,٤٢ x ٢٢٨,٦ x ٢٥,٤mm | ٩٣٦g, Publication date ٣١ Jan ٢٠١٩, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Revised, Edition Statement ٧th Revised edition ISBN١٠ ١٣٢٤١٥٥٦١٧, ISBN١٣ ٩٧٨١٣٢٤١٥٥٦١٧, Bestsellers rank ٣٣١,٢٢١

G Michael Schneider , Judith L.Gersting. Invitation to computer Science.

Format Loose-leaf | 898 pages, Dimensions 203 x 251 x 33mm | 1,633g, Publication date 31 Jan 2018,
Publisher Cengage Learning, Inc, Imprint CENGAGE Learning Custom Publishing Publication City/Country Mason,
OH, United States, Language English, Edition Statement 8th ed. ISBN10 1337680933, ISBN13 9781337680931

William Stallings. Computer Organization and Architecture.

Format Mixed media product | 864 pages, Dimensions 180 x 230 x 40mm | 1,218g, Publication date 20 Apr 2010,
Publisher Pearson Education Limited, Publication City/Country Harlow, United Kingdom, Language English, Edition
Statement 10th edition, ISBN10 1292096803 ISBN13 9781292096808, Bestsellers rank 971,641

Seema Bhatnagar . Textbook of Computer Science .

Format Paperback | 736 pages, Publication date 01 Dec 2008, Publisher Prentice-Hall of India Pvt. Ltd, Publication
City/Country India, ISBN10 812033018X, ISBN13 978812033018

Angela B.Shiflet & George W.Shiflet.Introduction to Computer Science .

Format Hardback | 806 pages, Dimensions 178 x 204 x 53,35mm | 1,871g, Publication date 30 Mar 2014,
Publisher Princeton University Press, Publication City/Country New Jersey, United States, Language English,
Edition Revised, Edition Statement 2nd Revised edition, Illustrations note 3 halftones. 192 line illus. 82 tables.
ISBN10 0691160716, ISBN13 9780691160719 Bestsellers rank 1,688,87

J.Glenn Brook Computer Science .

Format Paperback | 202 pages, Dimensions 219 x 277 x 8mm | 530g, Publication date 17 Apr 2017,
Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom,
Language English, Illustrations note Worked examples or Exercises ISBN10 1316617823,
ISBN13 9781316617823, Bestsellers rank 24,300

INFORMATION COMMUNICATION TECHNOLOGY-ICT ۲

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
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- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Learning objectives

At the end of course the student should be able to:

- Demonstrate literacy for all,
- Introduce the main concept of:
 - Information Communication Technology
 - Hardwar
 - Software
 - Data storage and memory
 - Computer performance
- Demonstrate knowledge and competence in using the common functions of a personal computer and it is operating system;
- Basic operations , Formatting, Installation , Editing documents , proofing and printing,
- Work with Microsoft Word , Microsoft PowerPoint and Microsoft Excel;
- Web Navigation, Web Searching , downloading , Security issues.

| INFORMATION COMMUNICATION THECNOLOGY-ICT(Module ٧) | | | | |
|---|-----------|---|--|--|
| Discipline | | University Inclusive | | |
| Department | | Information communication technology | | |
| Course Title | | ICDL Module ٤ & ٦ (Spread Sheet , Presentation) | | |
| Pre-requisites | | None | | |
| Course code | | MED .٠٢ .٠٥ | | |
| Academic year | | I | | |
| Semester | | ٢ | Fall | |
| Number of Credits | | ٢ | Knowledge | ١ |
| | | | Practical | ١ |
| weeks | hours | | Topics | Detrition |
| | Knowledge | Practice | | |
| ١ | ١ | ١ | The Microsoft Excel | Starting the excel program , what is active cell, The excel referencing system , Entering numbers and text , Default text and number alignment , Summing a column of numbers , Entering a date , worksheets and workbooks selection techniques. |
| ٢ | ١ | ١ | Manipulating Rows and Columns , Manipulating Cells and Cell contents | Manipulating Rows and Columns: Inserting rows and columns into a worksheet, Deleting rows and columns within a worksheet , modifying columns widths and heights , Automatically resizing the column width to fit contents , Manipulating Cells and Cell contents : Copying a cell or range contents within a workbook , Deleting cell contents , Editing cell content , Auto fill , Copying a data range using AutoFill , Sorting a cell range |
| ٣ | ١ | ١ | Worksheets, Formatting Freezing row and Column Titles | Worksheets : Switching between worksheet , Renaming , Inserting , Deleting , Copying, Moving a worksheet, Formatting :Alignment Formatting (Aligning Contents in a cell range , Centering a title over a cell range , cell Orientation , Text wrapping)k, Number formatting (decimal point display , currency symbol , date styles, percentages), Freezing : Freezing row and column titles. |
| ٤ | ١ | ١ | Formatting | Formula: Creating formulas, Copying , Formulas , Operators , Using operator in formulas , Formula error messages. |
| ٥ | ١ | ١ | Functions | What is a function, common functions (sum, Average, Max, Min, Count, Count Blank Round and If function) |
| ٦ | ١ | ١ | Charts | Charts: Inserting (column chart , line chart , bar chart, pie chart), Resizing a chart) Deleting a chart , Chart title or labels. |
| ٧ | ١ | ١ | Charts | Charts : Changing the chart background color , Changing the column , bar , line or pie slice colors in chart , Modifying the legend fill color , Changing the chart type , Modifying charts using the layout tab copying and moving charts within a worksheet , copying and moving charts between worksheets and workbooks. |

| | | | | |
|----|---|---|-------------------------------------|--|
| 8 | 1 | 1 | Printing | Printing : Worksheet setup (worksheet margins , worksheet Orientation, worksheet page size , Header And footers) |
| 9 | 1 | 1 | Preparing to print A worksheet | Preparing to print A worksheet : Visually check your calculations, Displaying gridlines when printing ,printing titles on every page when printing , printing the excel row and column headings, Spell checking previewing a worksheet, comparing workbooks side by side, Zooming the view , printing options. |
| 10 | 1 | 1 | PowerPoint Presentation | Opening and Viewing : First Steps with Presentations Creating a presentation (Manipulating Slides ,Themes : Text editing and formatting). |
| 11 | 1 | 1 | Tables | Tables: Table selection techniques , Creating a table Apply style to a table , Apply border to cells inserting , Deleting & Modifying rows or columns . |
| 12 | 1 | 1 | Illustrations | Formatting Shapes: (Grouping and ungrouping objects , Rotating or flipping an illustration)Formation chars: (Changing the chart type , Adding data table to chart). Organization charts : (what is an organize chart , creating an organize chart , Adding a manager whiten an organization chart) |
| 13 | 1 | 1 | Moving ,Copying and Deleting Slides | Moving , Copying and Deleting Slides: Moving sides within a presentation or between presentations , copying slides within a presentation ,Deleting slides Copying slides between presentations , moving slides between presentations. |
| 14 | 1 | 1 | Slide Masters | Slide masters: what is slide master , inserting a picture (clip art) into a master slide , Creating a footer and automatic slide numbering . |
| 15 | 1 | 1 | Slide show & printing and proofing | Slide shows: Running a slide show , Slide show transition effects . Slide Show animation effects printing And proofing : Spell-checking, selecting your output format , printing a presentation. |
| 16 | 1 | 1 | Customizing & Compatibility issues | Customized & Compatibility Issues: Modifying power point options compatibility issues when saving a presentation other files types you can use for saving a presentation saving a presentation as a template, Creating a new presentation based on a customized template. |

Textbooks & Reference books Recommended (last edition)

Nell Dale & john Levis. Computer Science Illuminated.

Format Hardback | ٧٤٥ pages, Dimensions ١٨٥,٤٢ x ٢٢٨,٦ x ٢٥,٤mm | ٩٣٦g, Publication date ٣١ Jan ٢٠١٩, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Revised, Edition Statement ٧th Revised edition ISBN١٠ ١٣٢٤١٥٥٦١٧, ISBN١٣ ٩٧٨١٣٢٤١٥٥٦١٧, Bestsellers rank ٣٣١,٢٢١

G Michael Schneider , Judith L.Gersting. Invitation to computer Science.

Format Loose-leaf | ٨٩٨ pages, Dimensions ٢٠٣ x ٢٥١ x ٣٣mm | ١,٦٣٣g, Publication date ٣١ Jan ٢٠١٨, Publisher Cengage Learning, Inc, Imprint CENGAGE Learning Custom Publishing Publication City/Country Mason, OH, United States, Language English, Edition Statement ٨th ed. ISBN١٠ ١٣٣٧٦٨٥٩٣٣, ISBN١٣ ٩٧٨١٣٣٧٦٨٥٩٣٣

William Stallings. Computer Organization and Architecture.

Format Mixed media product | ٨٦٤ pages, Dimensions ١٨٠ x ٢٣٠ x ٤٠mm | ١,٢١٨g, Publication date ٢٠ Apr ٢٠١٥, Publisher Pearson Education Limited, Publication City/Country Harlow, United Kingdom, Language English, Edition Statement ١٠th edition, ISBN١٠ ١٢٩٢٠٩٦٨٥٣ ISBN١٣ ٩٧٨١٢٩٢٠٩٦٨٥٣

BSeema Bhatnagar . Textbook of Computer Science .

Format Paperback | ٧٣٦ pages, Publication date ٠١ Dec ٢٠٠٨, Publisher Prentice-Hall of India Pvt. Ltd, Publication City/Country India, ISBN١٠ ٨١٢٠٣٣٥١٨X, ISBN١٣ ٩٧٨٨١٢٠٣٣٥١٨

Angela B.Shiflet & George W.Shiflet.Introduction to Computer Science .

Format Hardback | 806 pages, Dimensions 178 x 208 x 23,3mm | 1,87g, Publication date 30 Mar 2018,
Publisher Princeton University Press, Publication City/Country New Jersey, United States, Language English,
Edition Revised, Edition Statement 2nd Revised edition, Illustrations note 3 halftones. 192 line illus. 82 tables.
ISBN10 0691160716, ISBN13 9780691160719 Bestsellers rank 1,688,87

J.Glenn Brook Computer Science .

Format Paperback | 202 pages, Dimensions 219 x 277 x 8mm | 030g, Publication date 17 Apr 2017,
Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom,

SUBSTANCE RELATED DISORDERS

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۰% with reasonable excuse.
- More than ۲۰% of absente is within result in disqualification from the final content exam

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- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scorning policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

Course description

This course provides an overview of the fundamental concepts in substance related disorders. The contents of this course will help to introduce participants to terminologies used in substance related disorders, as well as their definitions . Students will be provided with a comprehensive overview or these substances that ate most commonly used in the Afghanistan, in addition to an overview of common substance induced disorders.

Factors (historical, geographic, economic, socio-cultural, genetic)impacting on substance related disorders in the Afghanistan will be also covered.

It describes the problems associated with substance related disorders (personal , public health , family , social , economic), explaining the transition from experimentation with substances to dependence , and identifying substance misuse as a chronic medical illness. Personal and social responsibilities in the onset of substance misuse are highlighted and the economic impacts of these disorders in Afghanistan is also discussed.

Learning Objectives:

At the end of this course student will be able to :

- Explain why there is a drug abuse problem in our country;
- Recall what are the substances being abused ;
- Design prevention initiatives suitable for various groups ; and predict integrated programs that increase the probability of successfully preventing substance misuse;
- Define and distinguish misuse as a chronic medical illness ;
- Describe substance misuse as a chronic medical illness;
- Explain the public health outcome of substance related disorders;
- Approaches to managing drug abuse , with particular reference to primary , Secondary and tertiary prevention ;
- Summarize the stages of motivational change in the process of addiction treatment;
- Identify mood altering substances, most frequently abused in our community;
- Explain the biological , psychological and social origins of substance addiction;
- Describe the stages of adolescent development and explain how these stages and other factors relate to or influence experimentation or substance abuse;
- Recall the signs, risks and consequences of experimentation and substance abuse among adolesce

Course Content

| SUBSTANCE RELATED DISORDERS | | | | |
|------------------------------------|-----------|----------|---|--|
| Discipline | | | Professional | |
| Department | | | Neuropsychiatry | |
| Course Title | | | Substance-Related Disorders | |
| Course code | | | MED ١١ ٤٤ | |
| Class | | | ٦ th | |
| Semester | | | ١ st | |
| Credits | | ٢ | Knowledge | ١ |
| | | | Practical | ١ |
| weeks | hours | | Topics | Detrition |
| | Knowledge | Practice | | |
| ١ | ١ | ١ | Introduction and overview about Substance-related Disorders | Afghanistan National Drug Use survey , Substance disorders in DMS-IV-TR and ICD-١٠ Definition and Diagnosis, Substance Dependence , Abuse, |
| ٢ | ١ | ١ | Introduction and overview about Substance-related Disorders | Substance withdrawal and their diagnostic criteria. Terminologies , other terminology ,Neuropharmacology, Etiology, psychopathology, Treatment. |
| ٣ | ١ | ١ | Opioid-related Disorders | Comparative Nosology , Introduction , Nosology Etiology, Diagnosis and Clinical Features , treatment |
| ٤ | ١ | ١ | Opioid-Related Disorders | Pathology and laboratory Examination , Differential Diagnosis , Course and prognosis , toxicity , Morbidity, Medical Complication. |
| ٥ | ١ | ١ | Opioid-Related Disorders | Treatment(Treatment of Intoxication , Dependence) , Medications (Opioid medication and Nonopioid Harm reduction and treatment , maintenance medications for opioid Dependence |
| ٦ | ١ | ١ | Opioid-Related Disorders | Differential Diagnosis, pharmacological and Nonpharmacological treatments , Outpatient Drug-free program , psychotherapies, Treatment of Special populations , Opioid Dependence with other substance abuse. |
| ٧ | ١ | ١ | Cannabis-Related Disorders | History , Cannabis preparations, methods of use , Nosology , Epidemiology, pharmacology, Correlates of Cannabis use , pharmacology of Cannabis. |
| ٨ | ١ | ١ | Cannabis-Related Disorders | Diagnostic and clinical features , Adverse effects of cannabis use , Laboratory Examination , Treatment Therapeutic Effects of Cannabis, |
| ٩ | ١ | ١ | Sedatives , hypnotics , Anxiolytics-Related Disorders | Definition , Determining Abuse Liability, Etiology , Epidemiology, Diagnosis and Clinical Features (Intoxication , withdrawal, Delirium , persisting Disorders, other Disorders. |
| ١٠ | ١ | ١ | Sedatives , hypnotics , Anxiolytics-Related Disorders | Patterns of Abuse (Oral , Intravenous) , Overdose Dependence and withdrawal , Treatment(withdrawal, Detoxification from Multiple Drugs of Abuse, psychological Treatments |

| | | | | |
|----|---|---|-----------------------------------|--|
| ١١ | ١ | ١ | Amphetamine-Related Disorders | Kinds for use , Epidemiology, Diagnosis , Intoxication , Delirium, Clinical Features , Treatment and Rehabilitation |
| ١٢ | ١ | ١ | Nocotine-Related Disorder | Definition , History and Comparative Nosology , Epidemiology , Etiology , Diagnostic and Clinical Features , Course and prognosis , Treatment(psychosocial, pharmacological , Replacement) |
| ١٣ | ١ | ١ | Nocotine-Related Disorder | Nonnicotonic medications , Combined psychosocial and pharmacological Therapy, Smoking Cessation Treatment in Special populations , prevention and policy intervention |
| ١٤ | ١ | ١ | Alcohol-Related disorder | Definition and Nosology , Epidemiology, pharmacology and Effects on the Body, Etiology , Diagnosis and Clinical Features identification in Clinical Settings , Differential Diagnosis, |
| ١٥ | ١ | ١ | Alcohol-Related disorder | Course and prognosis , withdrawal , Severe withdrawal , protected withdrawal , Rehabilitation , Counseling, Medication, Self-help Groups |
| ١٦ | ١ | ١ | Other Substance-Related Disorders | Caffeine , Epidemiology , pathology, Etiology , Clinical Features, Dependence , Diagnosis, Treatment, Intoxication , withdrawal. |

Textbooks & Reference books Recommended (last editions)

Afghanistan National Drug Use Survey, ٢٠١٥

Format Paperback | ١٦٤ pages, Dimensions ٢١٦ x ٢٧٩ x ١١mm | ٥٤٠g, Publication date ٢٢ Dec ٢٠١٥, Publisher Createspace Independent Publishing Platform, Language English ISBN١٠ ١٥٢٢٨٨٦٧٦١, ISBN١٣ ٩٧٨١٥٢٢٨٨٦٧٦

Kaplan & Sadock's Synopsis of psychiatry

Format Paperback | ٣٣٦ pages, Dimensions ١٢٧ x ٢٠٣ x ٢٠,٣٢mm | ٣٦٣g, Publication date ٢٧ Dec ٢٠١٣, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement ٦th edition, Illustrations note ١ ISBN١٠ ١٤٥١١٩٢٢٥٨, ISBN١٣ ٩٧٨١٤٥١١٩٢٢٥٤, Bestsellers rank ١,٧٠٦,٤٣

Ladewig D, Basic and Clinical Science of Substance Related Disorders.

Format Hardback | ٦٨ pages, Publication date ٠٣ Aug ١٩٩٩, Publisher S Karger Ag, Publication City/Country Basel, Switzerland, Language English, Illustrations note ١٣ fig., ٨ tab. ISBN١٠ ٣٨٠٥٥٦٨٧٠٣, ISBN١٣ ٩٧٨٣٨٠٥٥٦٨٧٠٨

David Mee-Lee , ASAM patient placement Criteria for the treatment of substance-Related Disorders, ٢nd edition , American Society of Addiction Medicine.

Format Mixed media product | ١٣٢ pages, Publication date ١٥ Sep ٢٠٠٧, Publisher Hazelden Information & Educational Services, Publication City/Country Minneapolis, United States ISBN١٠ ١٥٩٢٨٥٤٥٤٠, ISBN١٣ ٩٧٨١٥٩٢٨٥٤٥٤٧

Joyce H, Lowinson, pedro Ruiz , Robert B Millman , Substance Abuse, a comprehensive textbook , Philadelphia , Lippincott Williams & Wilkins.

Format Hardback | ١٢٠٠ pages, Dimensions ٢١٦ x ٢٨٠ x ٦٨,٥٨mm | ٣,٥٠٤g, Publication date ٢٨ Oct ٢٠٠٤, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement ٤th Revised edition Illustrations note ٣٨, ISBN١٠ ٠٧٨١٧٣٤٧٤٦, ISBN١٣ ٩٧٨٠٧٨١٧٣٤٧٤٥

RESEARCH

Attendance policy

- Regular student attendance at all.
- Theoretical and practical sessions is a must.
- Students can only attend up to ۲۵% with reasonable excuse.
- More than ۲۵% of absente is within result in disqualification from the final content exam

Factory rules

- Students homework is calculated from ۱۰ points
- Students factory scare is calculated in the sum of its final scores
- Plagiarism and copying the scientific research work of other deprive the factory score.
- If the homework is not completed for reasonable reasons the student will inform the teachers before the end of a certain period.

Delay policy

- Students homework exams and other classroom obligation do not have a second chance in case of delay. Students can inform the subject teacher about the problem in advance and get his approval.

Scoring policy

- How to evaluate and how to divide the scores in accordance with article ۱۹ of the credit bill is as follows.
- Evaluation and class function (weekly evaluation factory participation in group functions) ۲۰%
- Practical works (visits to historical sites Library and research functions) and authority of a master.
- Mid semester exam ۲۰%
- Final semester exam ۶۰%
- Total ۱۰۰%

At the end of the course, the Student should be able to:

God did not give such a life to man like other creature's bell to can think. In every living and nonliving being every human being thinks for her own happiness it also hopes to thinks about the progress of society in order to achieve the goal of research

RESEARCH

| Discipline | | Professional | | |
|-------------------|-----------|-------------------|------------------------|------------------------|
| Department | | Research & health | | |
| Subject | | Research | | |
| Course code | | MED ٠٦ ٠٦ | | |
| Class | | III | | |
| Semester | | ٦ | Fall | |
| Number of credits | | ٢ | Theory | |
| | | | ١ | |
| | | | Practical | |
| | | | ١ | |
| Weeks | Hours | | Topics | Descriptions |
| | Knowledge | Practical | | |
| ١ | ١ | ١ | Research History | Research History |
| ٢ | ١ | ١ | Definition of research | Definition of research |
| ٣ | ١ | ١ | Research goals | Research goals |
| ٤ | ١ | ١ | Type of research | Type of research |
| ٥ | ١ | ١ | Description research | Description research |
| ٦ | ١ | ١ | Exploratory research | Exploratory research |
| ٧ | ١ | ١ | Qualitative research | Qualitative research |
| ٨ | ١ | ١ | Quantitative research | Quantitative research |
| ٩ | ١ | ١ | Basic research | Basic research |
| ١٠ | ١ | ١ | Applied research | Applied research |
| ١١ | ١ | ١ | Nature research | Nature research |
| ١٢ | ١ | ١ | Primary research | Primary research |
| ١٣ | ١ | ١ | Secondary research | Secondary research |

| | | | | |
|----|---|---|-------------------------|--------------------------------|
| ۱۴ | ۱ | ۱ | Research design | Research design |
| ۱۵ | ۱ | ۱ | Type of research design | Type of research design |
| ۱۶ | ۱ | ۱ | Article | Article and monograph research |

Textbooks & reference books recommended (last edition)

Daniel , Wayne Research , foundation for analysis in the health sciences

Format Paperback | ۷۲۰ pages, Dimensions ۲۰۰ x ۲۵۱ x ۲۵mm | ۱,۲۲۴g, Publication date ۱۳ Nov ۲۰۱۸, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement ۱۱th Edition, ISBN۱۰ ۱۱۱۹۲۸۲۳۷۳, ISBN۱۳ ۹۷۸۱۱۱۹۲۸۲۳۷۲

James F, Jekel , Research, biostatistics and preventive medicine

Format Paperback Dimensions ۲۳۲ x ۲۷۶mm, Publication date ۱۸ May ۲۰۰۷, Publisher Saunders, Language English, Edition Statement ۳rd ed. ISBN۱۰ ۱۴۵۵۷۵۵۵۷۵ ISBN۱۳ ۹۷۸۱۴۵۵۷۵۵۵۷۵

BK Mahajan, methods in biostatistics

Format Paperback | ۴۸۸ pages, Dimensions ۱۴۰ x ۲۳۲mm, Publication date ۲۸ Feb ۲۰۱۸ Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Edition Revised, Edition Statement ۹th Revised edition, ISBN۱۰ ۹۳۵۲۷۰۳۱۰۳ ISBN۱۳ ۹۷۸۹۳۵۲۷۰۳۱۰۴

- موانع فرهنگی توسعه تحقیق در ایران ، طایفی ، علی ، چاپ اول ، انتشارات آزاد اندیشان ، تهران ، ۱۳۸۰
 مبانی نظری و عملی پژوهش در علوم انسانی و اجتماعی ، دلاور ، علی ، انتشارات رشد ، چاپ دهم ، پانیز ۹۱
 راهنمای تدوین طرح تحقیق) پروپوزال نویسی (، رضا صفری شالی، نشر موسسه فرهنگی هنری جامعه و فرهنگ، ۱۳۹۱
 روش تحقیق) پروپوزال و پایان نامه نویسی(، سیده سکینه ساداتی، سید عباس ساداتی، نشر توسعه علوم، ۱۳۸۵
 چگونه تحقیق کنیم ؟ ، جعفر یوسفیان ، نشر ندای شمس ، ۱۳۸۶)
 روش تحقیق ، عباسقلی خواجه نوری، نشر دانشگاه تهران ، ۱۳۸۹
 روش تحقیق ، خدارحم ، نشر سخن گستر ، ۱۳۸۶
 روش تحقیق ، حمیدرضا میرزایی ، نشر شایسته گستر ، ۱۳۸۸

A COMPREHENSIVE LIST OF SKILLS, RECOMMENDED AS DESIRABLE FOR MD DEGREE

١- Clinical evaluation

- a- To be able to take a proper and detailed history,
- b- To perform a complete and thorough physical examination and elicit clinical signs,
- c- To be able to properly use the Stethoscope, Blood pressure apparatus, otoscopy, thermometer, nasal speculum etc.;
- d- To be able to perform internal examination per rectum (PR), per vaginum (just for female students) etc.
- e- To arrive at a proper provisional clinical diagnoses.

٢- Bed side diagnostic tests.

- To do and interpret hemoglobin (HB), total count (TC), erythrocyte, sedimentation rate (ESR), blood smear for parasites, urine examination / albumin / sugar / Ketones / microscopy:
 - Stool exam for ova and cysts.
 - To do Grams stain and Ziehl-Neelsen stain for AFB.
 - To
 - To do and examine a wet film vaginal smear for Trichomonas.
 - To do a skin scraping and potassium hydroxide (KHO) stain for fungal infections.
- To perform and read Montoux test.

٣- Ability to carry-out Procedures

- a- To conduct CPR (cardiopulmonary resuscitation) and first aid in newborns, children and adults.
- b- To give subcutaneous (SC) / intramuscular (IM) / Intravenous (IV) injections and start Intravenous (IV) infusion.
- c- To pass a nasogastric tube and give gastric Lavage.
- d- To administer oxygen_ by mask / catheter.
- e- To administer enema.
- f- To pass a urinary catheter_ male and female.
- g- To insert rectal tube.
- h- To do pleural tap, and Lumber puncture.
- i- Insert intercostal tube to relieve tension pneumothorax.
- j- To relive cardiac tamponed.
- k- To control external hemorrhage.

٤- Anesthetic procedures

- a- Administer local anesthesia and nerve block.
- b- Be able to secure airway patency.
- c- Administer oxygen by Ambu_bag.

٥- Surgical procedures

- a- To apply splints, bandages nad plaster of paris (POP) slabs.
- b- To do incision and drainage of abscesses.
- c- To perform the management and suturing of superficial wounds.
- d- To carry out minor surgical procedures, e.g. excision of small cysts and nodules.
- e- Circumcision, reduction of paraphimosis.
- f- Debridement of wound etc.
- g- To perform vasectomy
- h- To manage anal fissure
- i- Give injection for piles

٦- Obstetric procedures (only for female students)

- a- To perform thorough antenatal examination and identify high-risk pregnancies
- b- To conduct normal delivery
- c- To apply low forceps
- d- Perform and suture episiotomies
- e- To insert and remove IUD's
- f- Perform tubectomy

٧- Pediatrics

- a- To assess new born and recognize abnormalities and I.U. retardation
- b- To perform immunization
- c- To teach infant feeding to mothers

- d- To monitor growth by the use of “road to health chart”
- e- Recognize development / retardation
- f- To assess dehydration and prepare and administer Oral Rehydration Therapy (ORT)
- g- To recognize ARI clinically

٨- ENT Procedures

- a- To be able to remove foreign bodies
- b- To perform nasal packing for epistaxis
- c- To perform tracheostomy

٩- Ophthalmic Procedures

- a- To invert eyelids
- b- To give subconjunctival injection
- c- To perform epilation of eye-lashes
- d- To measure the refractive error and advise correctional glasses
- e- To perform nasolacrimal duct syringing for patency

١٠- Community health

- a- To be able to supervise and motivate, community and para-Professional 's co-operative efforts for the health care system
- b- To be able to carry on managerial-responsibilities e.g. management of stores, indenting, stock keeping and accounting
- c- Planning and management if health camps
- d- Implementation of national health programs
- e- To effect proper sanitation measures in the community e.g. disposal of hospital solid waste, chlorination of drinking water
- f- To identify and Institute control measures for epidemics including its proper data collection and reporting

١١- Forensic medicine including toxicology

- a- To be able to carry on proper medico legal examination and documents of injury and age reports.
- b- To be able to conduct examination for sexual offences and intoxication
- c- To be able to preserve relevant ancillary materials for medico legal examination
- d- To be able to identify important post-mortem finding in common unnatural deaths

١٢- Management of emergencies

- a- To manage acute anaphylactic shock
- b- To manage peripheral vascular failure and shock
- c- To manage acute pulmonary edema and left Ventricular failure (LVF)
- d- Emergency management of drowning
- e- Poisoning and seizures
- f- Emergency management of bronchial asthma and status asthmatic
- g- Emergency management of hyperpyrexia
- h- Emergency management of comatose patient regarding airway, positioning, prevention of aspiration and injuries
- i- Assess and administer emergency management o burns.

MD degree internship program Time table for ٤٨ weeks

| No | Recommended specialties | durations (weeks) | Interns by gender | | Comments |
|-------|-----------------------------------|----------------------|-------------------|--------|--|
| | | | Male | Female | |
| ١ | Internal medicine (٧ departments) | ١٥ | ١٥ | ١٥ | ١٥ weeks in each department |
| ٢ | Abdominal surgery | ٢ | ٢ | ٢ | |
| ٣ | Thoracic surgery | ٢ | ٢ | ٢ | |
| ٤ | Urology | ٢ | ٢ | ٢ | |
| ٥ | Neurosurgery | ٢ | ٢ | ٢ | |
| ٦ | Emergency surgery | ٣ | ٦ | ٣ | For male interns this practice is substituted for Emergency surgery ward |
| ٧ | Obstetrics and Gynecology | ٣ | None | ٣ | |
| ٨ | Ophthalmology | ٢ | ٢ | ٢ | |
| ٩ | Pediatrics | ٤ | ٤ | ٤ | |
| ١٠ | ENT | ٢ | ٢ | ٢ | |
| ١١ | Dermatology | ٢ | ٢ | ٢ | |
| ١٢ | Infectious diseases | ٤ | ٤ | ٤ | |
| ١٣ | Neurology and Psychiatry | ٣ | ٣ | ٣ | |
| ١٤ | Medical Imaging | ٢ | ٢ | ٢ | |
| Total | ١٤ Specialties | ٤٨ | ٤٨ | ٤٨ | ٢٤ weeks (٢٤ Credits) in each Semester |

B. log Books sample for internship Program in Medical Faculty

Rotation ١

Name of intern

Department: Medicine

Obligatory requirement

١-٣ urinary catheterization

| No | patient File number | date of Checking | Observations and under supervision | independently | Name and sign of Supervisor |
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٢-٨ Naso Gastric Tube insertion

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٣-١٠ ECG taking and Interpretation

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٤-٨ case of Dopamine Calculation for shock patients

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٥-١ • insertion of IV cannula

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٦-٢ DC Shocks (Optional)

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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Rotation II

Name of intern:

Department: Surgery

Obligatory Requirements

١-٨ Full Clercking patients

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٢-١ • Pre rectal Examination

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٣-١٢ Suturing case

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٤. ٦ minor Surgeries

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٥. ٥ cases of hernia examinations

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٦. Journal clubs, case studies / ٣ cases studies reviews

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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Rotation III

Name of Intern:

Department: pediatrics

Obligatory Requirements

١-٨ Full Clerking of patients

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٢ ١٠ intravenous needle insertions

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٣ ٥ Full examinations of new born

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٤ ٤ cases of calculation of intravenous fluid and drug doses

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٥. Journal clubs, case studies / ٣ cases studies reviews

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٦. ٥ lumber puncture (Optional)

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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Rotation IV

Name of Intern:

Department: OB/GYN (Only of Female interns)

Obligatory Requirements

١-١٠ Full Clerking of patients

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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٢. assisting ٤ normal vaginal Delivery cases

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
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| ٣ | | | | | | |
| ٤ | | | | | | |

٣. attending ξ Episiotomy cases

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
|----|---------------------|------------------|--------------|-------------------|---------------|-----------------------------|
| ١ | | | | | | |
| ٢ | | | | | | |
| ٣ | | | | | | |
| ٤ | | | | | | |

٤. attending ξ Cesarean Sections

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
|----|---------------------|------------------|--------------|-------------------|---------------|-----------------------------|
| ١ | | | | | | |
| ٢ | | | | | | |
| ٣ | | | | | | |
| ٤ | | | | | | |

٥. Journal clubs, case studies / ٣ cases studies reviews

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
|----|---------------------|------------------|--------------|-------------------|---------------|-----------------------------|
| ١ | | | | | | |
| ٢ | | | | | | |
| ٣ | | | | | | |

٦. one vacuum delivery of Found (Optional)

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
|----|---------------------|------------------|--------------|-------------------|---------------|-----------------------------|
| ١ | | | | | | |

٧. one forceps delivery of Found (Optional)

| No | patient File number | date of Checking | Observations | under supervision | independently | Name and sign of Supervisor |
|----|---------------------|------------------|--------------|-------------------|---------------|-----------------------------|
| ١ | | | | | | |

Lesson plane for Muslim Medical Faculty

Planning lessons has two purpose: first, the process of planning encourages deep thinking about the elements of a lesson; second the plan guides you while delivering instruction. During your field of experience your plane should contain the following elements.

Name of Department:

Name of Teacher:

Lesson title: _____ date: / /

Unit Title: _____

Subject: _____ grade level: _____ lesson Duration: _____

Sections A: Lesson Preparation

Rationale: why it is important for students to learn the contents of the lesson? Descriptions of learners, what factors must be considered in order to accommodate diversity of learners?

Objectives/ Learners outcomes: what knowledge, skills and dispositions are students expected to demonstrate as a result of the lesson?

Materials/ Resources/ Technology: what Materials/ Resources/ Technology are needed to support instructional procedures?

Section B: Introduction to lesson

Purpose: How Will you state the Purpose of the lesson?

Prior learning: hoe you will male connection to prior learning?

Motivation: How will you motivate students to engage in the learning activities you have planned?

Section C: Content/ Procedure/ Sequence

Content outline/ Instructional procedures / sequence of activities

Sections D: Closure

Summery of lessons how will you bring the lesion to close?

Assignment- What independent work will be assigned?

Section E: Assessment

Student Learnings – How will you evaluate student’s outcomes/ cite planned data collection described above as well as other methods

Lesson implementation- was the lesson successful?

Use the data that you collected to substantiate your conclusion in this lesson as well as additional comments and observations.

Self-assessments and reflection- how you will evaluate your performance?

REFERENCES

١. World federation for medical education, WFME Global standards for Quality improvement, ٢٠١٢ revision, WFME office, university of Copenhagen, Demark ٢٠١٢.
٢. George Washington University, Washington DC, The school of Medicine & Health sciences, ross hall, ٢٣٠٠ Eye street, NW, Washington, DC ٢٠٠٣٧
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٣. Howard university, Collage of Madicine, Overview of M.D. Program, ٥٢٠ W street, NW, Washington, DC ٢٠٠٥٩, phone: ٢٠٢-٨٠٦-٦٢٧٠ – Fax: ٢٠٢-٨٠٦-٧٩٣٤.
٤. All India Institute of Medical sciences, MBBS curriculum, ٣rd July ٢٠٠٥. All India Institute of Medical sciences
٥. Curriculum of MBBS (revised ٢٠١١), Pakistan Medical and Dental council and higher education commission Islamabad.
٦. Stanford University, school of Medicine, academic year ٢٠١٢-٢٠١٣, MD program handbook: policies and procedures.
٧. The University of Chicago, pritzker school of Medicine, academic guideline, ٢٠١٢.
٨. School of Medicine Imperial College Curriculum design and development, centre for Educational Development.
٩. Kern, D., Thomas, P., Howard, D., and bass E. (١٩٩٨). Curriculum development for medical education: a six-step approach. Baltimore and London: the Johns Hopkins University press.
١٠. Curricular Trends in Malaysian Medical schools.
١١. Kerala University of Health sciences, Kerala regulations, curriculum and syllabus of graduate medical course.
١٢. Jordan University of science and technology, faculty of medicine, curriculum for MD degree.
١٣. Georgetown University school of medicine, Molecular and Human genetics, <http://som.georgetown.edu/medicaleduvation/curriculum/MHG/>
١٤. University of Cincinnati-college of Medicine, ٢٠١٣-٢٠١٤ Elective syllabus, Neurosurgery.
١٥. Saint Louis University, school of Medicine, the division of infectious diseases.
١٦. Drexel university, College of Medicine, molecular Cell Biology and genetics, graduate studies/corecurriculum/springsemester.aspx[١٠/٥/٢٠١٣ ١١:٤٢:٤٩ AM]
١٧. Cairo University, faculty of medicine, department of medical parasitology, ccurriculum and syllabus ٢٠١٠.
١٨. University of Wiscousinno of Medicine and public health, department of urology, core-curriculum of urology for medical school. <http://www.urology.wisc.edu/education-training/urology-clerkship/>.
١٩. Tehran Medical university curriculum of faculty of medicine.
٢٠. Graffam, B. active learning in medical education: strategies for beginning implemenatation. Medical teacher, ٢٩(١), ٣٨-٤٢. ٢١-University of Kentucky College of Medicine curricular recision overview ٢٠١٢. ٢٢-All iIndia Institute of Medical science, curriculum and syllabus of faculty of medicine ٢٠١٣.
٢١. Standards for accreditation of medical Education programs, leading to the M.D. Degree, ٢٠١١.

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دیپارتمنت د علمی ناستی پریکړه

ددیپارتمنت د ناستی پریکړه په () تر سره شوی ده داړوند دیپارتمنت د غړو د ناستی په ترڅ کی د کریکولم بیلابیلی برخی دکمی اوکیفی اړخ په پوره اړخ په پوره غور اومسلکی توگه و ارزوی دقناعت اوتائید وړ وگنل شو.

په درنښت

آمر دیپارتمنت

داکتر نجیب الرحمن (غفورزی)

دطب پوهنځي دعلمي ناستې پریکړه

پوهنځي دناستي پریکړه په () تاریخ اوشمیره او پروتوکول
() ترسره شوی ده دپوهنځي دعلمي شورا ناسته کی دبیاکتنې او غور په موخه دکریکولم موضوعات
وړاندی اومطرح شول، دیادي شورا غړو تر ارزونې اوکتنې وروسته دکریکولم محتوا دتائید وړ وگڼله.

په درنښت

طب پوهنځي رئیس

ډاکټر نورالله (زمريانی)

مؤسسي دعلمي ناستې پریکړه

دمؤسسي دعلمي ناستې پریکړه په () تاریخ اوشمیره دپروتوکول
() ترسره شوي ده دکریکولم موضوعات له کمی اوکيفي اړخه د مربوطه دپيارتمنت او اړونده پوهنځي دعلمي
شورا تر تائید وروسته دمؤسسي دعلمي شورا دناستي په ترڅ کې ترهر اړخیز غور، برسي، زیاتونو اوسمنونو وروسته
دتائید وړ وباله.

په درنښت

پوهنتون رئیس

ډاکټر خیرالدین (نثار)