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Ministry of Higher Education
Private Higher Education Institutes Directorate
Muslim Institute of Higher Education
Faculty of Stomatology



Curriculum and course contents for DMD Degree

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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 has been caused in different areas of country to generate and establish in state and private level tens higher and semi higher institutions and universities in the country. Beside other private institutions one of them is Muslim Institute of Higher Education which this higher education institution 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 and after all legal processes in 2014 in Ghazni City Capital of Islamic Civilization. In this higher education institution firstly only three faculties were activated – Stomatology, Economy and Law Faculty. That students have been getting their bachelor degrees in these faculties, after high demands of people faculty of medicine came into existence in this higher education institution.

Fortunately, Muslim Institute of Higher Education with its leadership's board and with its integrated young talented personnel developed and stood in the line of country's well-known academic institutions in short period of time.

Stomatology Faculty is one of the faculties in the frame of Muslim Higher Education that has been established in 2015 and started its practical activities. In this faculty during six educational years' new standard credit system with DMD level is taught to students, and for now 441 students are present in Stomatology 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 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 Stomatology's 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.

Short Introduction to Stomatology Faculty

Stomatology 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 Stomatology Faculty in 2015 in Muslim Higher Education Institute.

In Muslim Institute of Higher Education Stomatology 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 institutions and centers. Stomatology 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 DMD 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.

Stomatology Faculty's teaching curriculum has been revised with New Standard Credit System. Total course/ term of Stomatology Faculty lasts for six years, that one studying year has two semesters. In order, one semester has been consisted from sixteen weeks and one teaching hour lasts for 50 minutes. Of course, one practical teaching hour last for 100 minutes. During each semester the eighth week is allocated for 20% 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 Stomatology Faculty in Muslim Higher Education Institute:

1. 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.

2. Teaching Class

Muslim Institute of Higher Education has given enough classes to Stomatology 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.

3. Well-equipped Library and IT Center.

Muslim Institute of Higher Education has Well-equipped Library and IT Center which is having different cultural, social literature, law, economic and medical studying enough materials, beside these Medicine Faculty and Stomatology Faculty have 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.

4. 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, Micro Biology Classes, Biochemistry Classes, Pathology Classes, and for Scientific experiments. Also Medicine and Stomatology Faculties have its own anatomic modules for students' good comprehension.

5. Dental Treatment Clinic

Muslim Higher Education Institute's Stomatology Faculty has established a well-equipped Dental Treatment Clinic or OPD Clinic and it is equipped with all modern equipment and has five units, also experienced teachers are serving health care services freely for all citizens in this province. Beside, students of Medicine and Stomatology Faculties are standardly trained and shown the practical aspects of their studies. Furthermore, Nisar Kadri Hospital is in services for all students for more and more practices and experiments it has been saved twenty-four hours in a day for teachers and students to gain and achieved sufficient, academic and complete experience in their field.

Need Assessment

Doctorate (Professional) Of Dental Medicine (DMD) Program& Curriculum

The six-year DMD program and curriculum at MIHE-DMD (includes one-year internship) not only reflects a strong commitment to developing knowledge and skills in both oral science and oral health care, but also students find an education that builds excellence in dental medicine by encouraging individual interests and strengths to flourish and grow.

Every intern is obliged conduct a clinical research during the one year of internship program and present it at the end of the internship program. only after the presenting of the scientific research papers she/he is graduated the DMD degree, which has the privileges of a Bachelor degree.

Philosophy of Dental Education

The faculty of Dentistry's highest commitment is academic excellence and the development of the competent graduate:

1. In the art, science and practice of dentistry which are the foundation of our philosophy.
2. It is paramount that the educational environment be humanistic, and reflects values of integrity, honesty, respect, fairness, and cooperation.
3. It is equally important that faculty and staff develop, integrate, and facilitate effectively.
4. Active learning.

These efforts must result in graduated who possess and demonstrate knowledge and skills in the cognitive, psychomotor, and affective domains.

Practice of Medicine (POM)

The three components to the POM are Doctor- Patient – society (DPS). The clinical Apprenticeship program (CAP) includes problem0 Based Learning (PBL) and case based learning (CBL). These learning mythologies challenges students with 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 5 years, provides 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; 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

The faculty of dentistry is committed to the pursuit of excellence in dental sciences by being a leader in dental education, research and development and community services with an emphasis of serving the needs of Afghanistan

Mission

The educational mission of the faculty of dentistry is to graduate a scientifically knowledgeable, biologically oriented, technically competent, socially sensitive practitioner of dental medicine who adheres to the highest standards of professional conduct and ethics and who can function effectively as a member of the nation's health care delivery system. Our graduates must be competent in the prevention, diagnosis and care of patient with oral-facial conditions that affect overall health and patient well-being. A competent practitioner is one who is able to begin independent, unsupervised dental practice.

Education program

Competencies are learning experiences stated in term of what a student must be able to do to be considered competent by the profession after completion of the dental curriculum, and imply performance at a clinically acceptable level in each of the identified domains of dental practice. These competencies must be supported by a working knowledge of the basic biomedical and clinical sciences, by cognitive and psychomotor skills and be professional and ethical values.

Competencies must be relevant and important to the patient care responsibilities of the general dentist, directly linked to the oral health care needs of the public, realistic, and understandable be other health care professionals. Specific learning objectives are listed for each course as part of a course syllabus. Thus, this competency document provides a framework for the undergraduate curriculum, whereas, a course syllabus outlines the specific learning objectives and experiences of a particular course which ultimately contributes to the achievement of competency.

The basic and behavioral science foundation knowledge, skills, and values provide the general dentist a requisite knowledge based upon which sound clinical judgments are made. Specifically, the new dental graduate must be able to demonstrate an integrated knowledge of the biology, etiology and epidemiology of diseases and conditions affecting the oral cavity.

Basic and behavioral science knowledge and professionalism and the foundation upon which sound clinical judgments are made, patient care is a dynamic and interactive process that begins with an assessment of the patient and leads to the restoration of a state of oral health and function, and ultimately to the promotion and maintenance of oral health. We recognize, however, that the patient care process can deviate from this "model" for example, based on an appropriate assessment, the dentist may decide that no restorative care is needed and the patient will receive preventive and health maintenance care. Our competency-based curriculum

provides learning opportunities that support foundation knowledge, reinforce professional and ethical practice behaviors, and guide the development of sound clinical judgment and treatment skills.

Competencies are interdisciplinary, yet each department or division within a department is responsible for course work with specific behavioral objectives of clinical activities. Clinical departments or divisions assess most competencies, although some competencies are assessed within interdepartmental activities.

Active learning

Learning which focuses on student's individual responsibility to engage in continued learning, self-assessment in achieving and maintaining, and the pursuit of higher skill levels.

Competencies

Statements describing the needed to engage in the independent practice of dentistry. Competencies combine foundation knowledge, skills, understanding, and professional values which are performed independently in realistic settings.

Competency- Based Education

A planned sequence of student experiences designed to move students through the stage in the competency continuum. Different methods of instruction and evaluation are used as appropriate to each level of professional growth, and the entire sequence is coordinate to produce a competent beginning practitioner.

Competency- Based Evaluation

Use of evaluation techniques and decisions that match the stages along competency continuum. Novices are assessed with tests, beginners with simulation, and competent students with evaluation of direct patient care. Management of student is guided by assessing the correct educational qualification path for each student to decide which experiences are required to satisfy each competency. Educational of learning difficulties and remedial interventions are also part of the evaluation system.

Behavioral objectives

Specific statements of expected student behavior as a result of short or short-term educational experiences, such as a lecture. A course typically has many behavioral objectives, most of which are cognitive in nature, although they might alternatively be in the psychomotor or affective domains. Competencies may cross disciplines and always combine skill, understanding, and supporting values.

Best Practice

Evidence- based practice that integrates the best research evidence with clinical expertise and patient values.

Curriculum guidelines

Suggestion from special interest groups, usually disciplines or sub disciplines, about desired course topical coverage.

Evidence-based dentistry

The approach to oral health care that requires the judicious integration of systematic assessments of clinically relevant scientific evidence, relating to the patient's oral and medical condition and history, with the dentist's clinical expertise and the patient's treatment needs and preferences.

Foundation knowledge and skills

The necessary core body of cognitive basic and behavioral science and psychomotor skills for novices and beginners. These are what students must know and be able to do to benefit from the curriculum experiences designed to achieve competency.

Management

Direction of care so that care is provided in a judicious manner that encourage patient compliance.

Perform

To carry to completion a prescribed course of action.

Special needs

Any individual that exhibits a physical, psychological, social, medical or developmental challenge that requires modification of the standard methods of dental delivery.

1. Treatment

Recognize and treat accordingly or refer and follow-up situations beyond the competency of the dentist.

The management and care of a patient for the purpose of combating a disease of disorder.

Rationale of this curriculum

- The rationale behind the development of this curriculum is in response to:
- An explosion of knowledge in dentistry in the last ten years, leading to new philosophies, new techniques and on-going controversies.
- The previous curriculum was more designed to general medicine.
- Major change in the pattern of dental disease.
- An increasing proportion of the population retaining their teeth into middle and old age and requiring special consideration.
- Major advances in the field of teaching methodology and student learning.

Goals

The goals of faculty of Dentistry are:

- To educate competent general dentist.
- To provide quality dental care.
- To promote and sustain an atmosphere of mutual trust and respect for all patients, students, staff, and faculties.
- To provide life-long learning opportunities for dental professionals.
- To advance knowledge through research.
- To serve the profession, the university, the community and the nation.

Objectives

The objectives are dealt under three grading namely

- Knowledge
- Skills
- Attitude

Knowledge

The student should acquire the following during the period of training:

- Adequate knowledge of the scientific foundations of which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions and should be able to evaluate and analyze scientifically various established facts and data.
- Adequate knowledge of the development structure and function of the teeth, mouth and jaws and associated tissues both in health and disease and their relationship and effect of general- state of health and also the bearing of physical and social well-being of the patient.
- Adequate knowledge of clinical disciplines and methods, which provide a coherent picture of anomalies, lesions and diseases of the teeth, mouth and jaws and preventive, diagnostic and therapeutic aspects of dentistry.
- Adequate clinical experience required for general dental practice.
- Adequate knowledge of biological function and behavior of persons in health and sickness as well as the influence of the natural and social environment of the state of health so far as it affects dentistry.

Skills

Students will be competent in the following concepts and skills, and expected to be able to perform them independently when they begin unsupervised dental practice. These independent

skills are taught in the core curriculum. The competencies relate to the child, adolescent, adult, geriatric and special needs patients.

A graduate should be able to demonstrate the following skills necessary for practice of dentistry:

A. Independent skills

a. Domain I: professionalism

Apply standards of care in an ethical and medical-legal context to assure appropriate, informed consent, risk management, quality assurance and record keeping and delivered within the scope of the dentist's competence in a patient-centered environment that interfaces with diverse patient populations.

1. **Ethical standards:** apply ethical standards to professional practice.
2. **Legal standards:** apply legal standards to professional practice.

b. Domain II: health promotion and Maintenance

Educate patients and the community, based upon critical thinking and outcomes assessments, about the etiology of oral disease, promote preventive interventions and effectively work with patients to achieve and maintain a state of optimal oral health through evidence-based care.

1: communication and interpersonal skills: communicate effectively using behavioral principles and strategies with patients from diverse populations, applying culture sensitivity.

2: critical thinking: apply scientific principles and clinical expertise to critically evaluate literature when making decisions in the diagnosis and treatment of patients.

3: assessment of treatment outcomes: analyze the outcomes of patient care and previous treatment to improve oral health through application of best practice.

4: practice management: apply in human resource skills and the human and technologic resource necessary for developing, managing, evaluating and protecting a general dental practice.

5: patient management: apply behavioral and communicative management skills during the provision of patient care.

6: community involvement: participate in the protection, promotion and restoration of oral health of the community and to those beyond traditional practice setting.

c. Domain III: health assessment

Recognize system diseases, substance and patient abuse and evaluate the patient's medical and oral condition and plan treatment needs.

1: Examination of the patient: perform a comprehensive patient evaluation that collects patient history including medications, chief complaint(s), biological behavioral, cultural and

socioeconomic information needed to assess the patient's medical, oral and extra-oral conditions accordingly.

2: diagnosis: perform a differential, provisional of definitive diagnosis by interpreting and correlating findings from the patient history and interview, the clinical and radiographic examinations, and other diagnosis tests to accurately assess.

3: treatment planning: Develop properly sequenced alternative treatment plans as appropriate to achieve patient satisfaction and that considers the patient's medical history and all the diagnostic data; to discuss the diagnosis and treatment options to obtain informed consent; and to modify the accepted plan based upon regular evaluation, unexpected situations, of special patient needs.

4: Emergency treatment: prevent, recognize and manage dental and medical emergencies in the dental clinics.

d. Domain IV: Health rehabilitation

Using universal infection control guidelines perform procedures that manage oral diseases and restore the patient to optimal oral health or refer appropriately.

1: prescribe and/or apply clinical and/or home therapies for the management of dental caries and monitor their effect on the patient's oral health.

2: perform restorative and esthetic procedures that preserve tooth structure, prevent hard tissue disease, promote soft tissue health and replace missing teeth with prostheses.

3: Prevent diagnosis and manage periodontal diseases.

4: Manage conditions requiring surgical procedures of the hard and soft tissues, and to employ appropriate pharmacological agents to support the treatment and to manage the patient's anxiety and pain.

5: diagnosis and manage temporomandibular disorders.

6: diagnosis and manage limited developmental or acquired occlusal abnormalities.

7: prevent, diagnose, and manage pulpal and periradicular diseases.

Dependent skills

Student will be exposed to the following concepts and skills, but are not expected to be able to perform these skills independently.

1. Perform periodontal surgical procedures.
2. Observe placement of endosseous implants
3. order and interpret advanced laboratory and radiological evaluations
4. administer conscious sedation
5. provide limited orthodontic treatment

6. Treatment for complex or facial trauma and advanced intraoral infections
 7. Complex restorative and pulpal therapies for primary teeth
- a) Attitudes
- b) **A graduate should develop during the training period the following attitudes:**
- Willing to apply current knowledge of dentistry in the best interest of the patients and the community.
 - Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
 - Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.
 - Willingness to participate in the continuing education programs to update knowledge and professional skills from time to time.
 - To help and to participate in the implementation of national health programs.

General outline of DMD Degree Course

- The undergraduate course involves organization of teaching programs year-wise.
- The undergraduate dental course of three main components. The first component consists subjects common to medicine and dentistry like anatomy, physiology, biochemistry and behavioral science.
Leading to pharmacology, pathology, microbiology and then on to general medicine and general surgery, the second component runs concurrently with the first and deals with special aspects of oral and dental tissues, oral biology and oral pathology, Finally, the third component based on the foundations of the first two, deals with the clinical and technical aspects of dentistry as is required for general dental practice.
- The first component of the course is intended to provide initially, an appreciation of normal human structure, development, function and behavior, leading to understanding of the diseases, its prevention and treatment. The main objective is to provide the student a broad knowledge of the normal structures and functions of the body, the alterations which take place in diseases with particular reference to those conditions in which medical and dental co-operation is essential for proper management. At this stage, the student should also be made aware of the social and psychological aspects of patient care with special reference to the relationship between dentist and patient. The behavioral sciences including both sociology and psychology should be introduced at the initial stages of the training program, much before the students actually deal with the patients.
- The second component of dental undergraduate program includes instruction in the subjects dealing with dental and oral aspects to ensure a detailed knowledge of the structure and function of the dental and oral tissue. This enables the student to diagnose, prevent and treat the dental and oral diseases and disorders, which were not included in the first component. Students should be exposed to the basic aspects of forensic odontology at this stage of the course along with oral biology/oral pathology.

- The third component of the course comprising and technical aspects of dentistry actually prepares the student to undertake total oral and dental health care of the patients of all ages. The emphasis at this stage should be on the prevention of the various dental diseases and how to preserve natural teeth with their supporting structures. The importance of the various preventive methods needs to be stressed. The significance of diagnosis of various dental and oral problems needs to be emphasized along with treatment planning before actual treatment procedures are undertaken. In addition to acquiring the knowledge, the students need to gain acquiring the knowledge; the students need to gain adequate clinical hands- on- experience in extraction and other minor oral surgical procedures, all aspects of conservative dentistry, endodontic procedures and use of removable and fixed or orthodontic appliances.
- Familiarity with various radiological techniques, particularly intra- oral methods and proper interpretation of the radiographs, is an essential part of this component of training and has application in clinical diagnosis, forensic identification and age estimation. Towards the final stage of the clinical training, each student should be involved in comprehensive oral health care or holistic approach to enable him or her to plan and treat patients as a whole, instead of piece-meal treatment provided in each specialty.
- The aim of the undergraduate program is undoubtedly to produce a graduate, competent in general dental practice.
- The commitment towards the society as a whole need's to be stressed along with the knowledge and treatment skills gained. Instruction in public health dentistry is to emphasize the sociological aspects of health care particularly, oral health care, including the reasons for the variation in oral and dental needs of different sections of the society. It is important to know the influence of the social, behavioral, environmental and economic factors on oral and dental health. Students should be made aware of the national oral health policy and the importance of being a member of the Health care team delivering medical and oral health care particularly among rural population, students should also be encourage to participate in simple research project work.
- The undergraduate curriculum stresses the significance of infection and cross infection control in dental practice. Aspects like sources of infection, measures to be adopted both general and specific for control, particularly the HIV and hepatitis is incorporated in the curriculum so that the graduates are aware of its significance and follow it in their practice.
- The information technology and academic English language have touched every aspect of an individual's personal and professional life. The University hence recommends that all undergraduates acquire Academic English language proficiency and minimum computer proficiency, which will enable them to enhance their professional knowledge and skills.
- The undergraduate dental training program leading to DMD degree shall be a five - year duration in addition to rotating internship. During this period, the students shall be required to engage in full time study at dental faculty of MIHE.
- During the first five years of undergraduate course, the instruction in clinical subjects ate about more than three years.

Subject for DMD Degree

Basic Medical & dental subject: The basic medical and dental sciences comprise of:

Anatomy-Gross and Microscopic, physiology, Biochemistry, pharmacology, science of Dental Materials.

Subjects like behavioral sciences, which would be useful to develop communication skills. An introduction to public health Dentistry also will be useful to develop the concept of commitment to community. The laboratory skills like pre-clinical prosthodontics, crown and bridge, conservative dentistry and orthodontics is to be developed by the students.

At the end of this period, the student be in a position to understand and comprehend in general the development, structure and function of the human body in both health and disease.

The instruction in basic dental sciences should include theoretical and practical aspects of oral anatomy and physiology, to provide a detailed knowledge of the form and structure of teeth associated tissue and occlusal relationships. The study should also aim at development of a concept regarding physiological and biochemical processes relevant to oral cavity for better understanding of the changes that occur with the onset of disease in the oral cavity. The student be made aware of the importance of various dental tissues in forensic investigation.

Clinical, Medical and Dental subject:

The students should be introduced to clinics in the initial stage, preferably in the first year, as an observer to familiarize with clinical set-up and working during this, the student shall attend a dental hospital, general hospital, community camps and satellite clinics, in order to obtain instruction and experience in the practice of dentistry. The main objective of training in clinical dental subjects is to produce a graduate able and competent to recognize to diagnose various dental and oral diseases, to undertake general dental treatment, advice on the provision of specialized treatment available and finally advise the patient of prevention. The student should also understand the relationship between oral and system diseases.

- The general medicine and surgery training should provide sufficient knowledge of human disease to enable the student to understand its manifestations as relevant to the practice of dentistry. This requires clinical teaching on patients and shall be carried out in in-patient medical departments and clinics.

This clinical instruction should enable the student to understand and perhaps diagnose common systemic diseases, which have relevance to dental practice, by adopting a systematic approach of history taking and clinical examination. The student should also realize the significance of various general and special investigations in the diagnosis. The ability to recognize physical and mental, dealing with emergencies, effective communication with patients, and inter professional colleagues also become important aspects of this training.

- ☐ All dental students should receive instruction in first aid and principle of cardiopulmonary resuscitation. The students should also spend time in an accident and emergency department of a Medical hospital.
- ☐ The purpose of the clinical training is to provide sufficient practical skill in all aspects of clinical dentistry. The instruction should also include patient management skills, treatment of patients of all ages with special reference to children (pediatrics), very elderly (geriatrics), medically compromised and disabled patients.
- ☐ During the three years of clinical course, the students should receive thorough instruction, which involves history taking, diagnosis and treatment planning in all aspects of dentistry and should be competent on graduation to carry out all routine general procedures.
- ☐ In oral & maxillofacial surgery, instruction should include the knowledge of various maxillofacial problems like injuries, infections and deformities of the jaws and associated structures. The clinical experience should include those procedures commonly undertaken in general practice like extraction of teeth, minor oral surgical procedure etc.
- ☐ In conservative dentistry and endodontic, prosthodontics and crown & bridge and periodontology students should be competent on graduation to carry out routine treatments like restorations of various kinds, endodontic procedures, removable prosthodontics and finally various kinds of periodontal therapy.
- ☐ In orthodontics & dentofacial orthopedics, students should carry out simple appliance therapy including myofunctional appliances for patients. Students should also be able to appreciate the role of dentofacial growth in the development and treatment of malocclusion. In addition, students should be aware of their limitations of graduation, need to refer patients for consultant opinion and/or treatment and the need for postgraduate and continuous education programs.
- ☐ In pediatric & preventive Dentistry, the students should concentrate on effective management of the behavior of the child patient to instill a positive attitude, of efficacy of preventive measures and clinical management, including the treatment needs particularly for children with disabilities.
- ☐ In oral medicine and radiology, the student should receive instruction in various common lesions, occurring in the oral cavity and its diagnosis with particular reference to oral cancer. All students should receive instructions and gain practical experience in taking various types of intra and extra oral radiographs and its processing and interpretations they should be aware of the hazards of radiation and proper protective measures from radiation for the patient, operator and other staff.
- ☐ The successful control and management of pain is an integral part of dental practice.
- ☐ Upon graduation, the students should be competent to administer all forms of local anesthesia. The value of behavioral methods of anxiety management should be emphasized. The students should also have the practical experience in the administration of intra muscular and intra venous injections. Knowledge of pain mechanism and strategies to control post-operative pain is essential for practice of dentistry.
- ☐ Instruction should be given in dental jurisprudence, legal and ethical obligations of dental practitioners.

- Infection and cross infection control assume significance in dental practice. The students should be made aware of the potential risk of transmission in the dental surgery, various infectious diseases particularly HIV and hepatitis. The students should be aware of their professional responsibility for the protection of the patients. Themselves, their staff, and the requirements of the health and safety regulations.
- The subjects of esthetic dentistry, oral implant ology, behavioral sciences and forensic odontology have assumed great significance. Hence, these four specialties are incorporated into the undergraduate curriculum. The departments of prosthodontics and crown & bridge and conservative dentistry & endodontic shall carry out the instruction and clinical training in esthetic dentistry.
- Similarly, the departments of oral & maxillofacial surgery, prosthodontics and crown & bridge and periodontology shall do the instruction and clinical training in oral implant ology. The instruction in behavioral sciences should inally commence before the students come in contact with the patients.
- Forensic odontology will be a part of oral pathology & oral Microbiology and oral medicine and radiology.

Goals of DMD Curriculum

At the completion of the undergraduate training program, the graduates shall be competent in the following:

- Apply knowledge & skills in day-to-day practice.
- Apply principles of ethics
- Analyze the outcome of treatment.
- Evaluate the scientific literature and information of decide the treatment.
- Participate and involve in professional bodies.
- Be-capable of self-assessment and be willing to update the knowledge & skills from time to time.
- Inclined to do simple research projects.
- Acquire minimum computer proficiency to enhance knowledge and skills.
- Be aware of one's limitations and know when the refer patients to specialists.
- Be familiar with basic forensic odontology techniques and manage geriatric dental problems.

Practice management

- Evaluate practice location, population dynamics & reimbursement mechanism.
- Able to communicate freely, orally and in writing with all concerned.
- Maintain records.
- Implement & monitor infection control and environmental safety programs.
- Practice within the scope of one's competence communication & community resources.
- Assess patient's goals, values and concerns to establish rapport and guide patient care.
- Co-ordinate & supervise the activities of allied dental health personnel.

- ☐ Participate in improving the oral health of the individual through community activities.

Patient care – diagnosis

- ☐ Obtaining patient's history in a methodical way.
- ☐ Performing thorough clinical examination.
- ☐ Selection and interpretation of clinical, radiological and other diagnostic information.
- ☐ Obtaining appropriate consultation.
- ☐ Arriving at provisional, differential and final diagnosis.

Patient care – treatment planning

- ☐ Integrate multiple disciplines into an individual comprehensive sequence.
- ☐ Using diagnostic, treatment plan and prognostic information.
- ☐ Be able to order appropriate investigations.

B. Patient care – treatment

- ☐ Recognition and initial management of medical emergencies that may occur during dental treatment.
- ☐ Perform basic cardiac life support.
- ☐ Management of pain including post-operative
- ☐ Administration of all forms of local anesthesia.
- ☐ Administration of intra muscular and venous injections.
- ☐ Prescription of drugs, pre-operative, prophylactic and therapeutic requirements.
- ☐ Uncomplicated extractions of teeth
- ☐ Trans-alveolar extraction and removal of simple impacted teeth.
- ☐ Minor oral surgical procedures.
- ☐ Management of ore-facial infections.
- ☐ Simple orthodontic appliance therapy.
- ☐ Taking, processing and interpretation of various types of intra oral radiographs.
- ☐ Various kinds of restorative procedures using different materials available.
- ☐ Simple endodontic procedures.
- ☐ Removable and fixed prosthodontics.
- ☐ Various kinds of periodontal therapy.

Competencies expected- specialties

Oral medicine

At the completion of the undergraduate training program the graduate should:

- ☐ Be able to identify the common dental problems like dental caries and periodontal disease and their sequel.
- ☐ Be able to differentiate the normal variations and oral mucosal lesions.
- ☐ Be able to identify pre-cancerous and cancerous lesions of the oral cavity and refer to the concerned specialty for their management.

- ☐ Have an adequate knowledge about common laboratory investigations and interpretation of their results.
- ☐ Have adequate knowledge about medical complications that can arise while treating systemically compromised patients and take prior precautions/ consent from the concerned medical specialist.
- ☐ To formulate a clinical diagnosis, order investigations, seek expert consultations to come to a final diagnosis and chart out a proper treatment plan for patients with oral lesions.

Oral & Maxillofacial surgery

At the completion of the undergraduate training program, the graduate should:

- ☐ Be able to apply the knowledge gained in the basic medical and clinical subjects in the management of patients with surgical problems.
- ☐ Be able to diagnose, manage and treat patients with basic oral surgical problem.
- ☐ Have a broad knowledge of maxillofacial surgery and oral implantology.
- ☐ Be familiar with legal, ethical and moral issues pertaining to the patient care and communication skills.
- ☐ Have acquired the skill to examine any patient with an oral surgical problem in an orderly manner.
- ☐ Understand and practice the basic principle of asepsis and sterilization.
- ☐ Be competent in the extraction of the teeth under both local and general anesthesia.
- ☐ Be competent to carry out certain minor oral surgical procedures, simple impaction, biopsy, etc.
- ☐ Be competent to assess, prevent and manage common complications that arise during and after minor oral surgery.
- ☐ Able to provide primary care and manage medical emergencies in the dental office.
- ☐ Be familiar with the management of major oral surgical problems and principle involved in the in-patient management.

Periodontics

At the completion of the undergraduate training program, the graduate should:

- ☐ Be able to diagnose the patient's periodontal problem, plan and perform appropriate periodontal treatment.
- ☐ Be competent to educate and motivate the patient.
- ☐ Be competent to perform thorough oral prophylaxis, sub gingival scaling, root planning and minor periodontal surgical procedures.
- ☐ Give proper post treatments and do periodic recall and evaluation.
- ☐ Be familiar with concepts of osseointegration and basic surgical aspects of implantology.

Operative dentistry & endodontic

At the completion of the undergraduate training program the graduate should be able to:

- ☐ Diagnose all carious lesions.
- ☐ Perform class I and class II cavities, and their restoration with amalgam.
- ☐ Restore class V and class III cavities with glass ionomer cement.
- ☐ Diagnose and appropriately treat pulpally involved teeth (pulp capping procedures).
- ☐ Perform RCT for anterior teeth
- ☐ Vary out small composite restorations
- ☐ Understand the principles of esthetic dental procedures

Orthodontics

At the completion of the undergraduate training program, the graduate should be able to:

- ☐ Understand about normal growth and development of facial skeleton and dentition.
- ☐ Pinpoint aberrations in growth process both dental and skeletal and plan necessary treatment.
- ☐ Diagnose the various malocclusion categories.
- ☐ Motivate and explain to the patient and parent/guardian about necessity of treatment.
- ☐ Plan and execute preventive orthodontics
- ☐ Plan and execute interment orthodontics
- ☐ Manage treatment of simple malocclusion such as anterior spacing using removable appliances.
- ☐ Handle delivery and activation of removable orthodontic/myofascial appliances.
- ☐ Diagnose and appropriately refer patients with complex malocclusion to the specialist.

Prosthodontics

At the completion of the undergraduate training program the graduate should:

- ☐ Be able to understand and use various dental materials.
- ☐ Be competent to carry out treatment of conventional complete and partial removable dentures and full veneer crowns.
- ☐ Be able to carry out treatment of routine prosthodontics procedures.
- ☐ Be familiar with the concepts of osseointegration and the value of implant-supported prosthodontics procedures.
- ☐ Be able to diagnose and appropriately refer patients requiring complex treatment procedures of the specialist.
- ☐ Be able to diagnose and appropriately refer patients requiring complex treatment procedures to the specialist.

Community & preventive dentistry

At the completion of the undergraduate training program the graduate should be able to:

- ☐ Apply the principles of health promotion and disease prevention.
- ☐ Have knowledge of the organization and provision of health care in community and in the hospital service.
- ☐ Have knowledge of the prevalence of common dental conditions in Afghanistan.
- ☐ Have knowledge of community based preventive measures.
- ☐ Have knowledge of the social, culture and environmental factors, which contribute to health of illness.
- ☐ Be able to administer hygiene instructions.
- ☐ Be able to educate patients concerning the etiology and prevention of oral disease and encourage them to assure responsibility for their oral health.

Pediatric & preventive dentistry

At the completion of the undergraduate training program the graduate should be able to:

- ☐ Instill a positive attitude and behavior in children towards oral health and understand the principles of prevention and preventive dentistry right from birth to adolescence.
- ☐ Guide and counsel the parents/guardian in regards to various treatment modalities including different facets of preventive dentistry (fluoride therapy, sealant therapy in children).
- ☐ Treat dental diseases occurring in child patient.
- ☐ Manage the physically and mentally challenged/disabled children effectively and efficiently, tailored to the needs of individual requirement and conditions.

Credit hours' guidelines

Introduction

Credit hour is the unit by which an institution measures its course work. The number of credit hours assigned to a course quantitatively reflects the outcomes 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 14-17 week's calendar (16 weeks in MIHE). Future, a class hour varies from 45 to 60 minutes (50 minutes in MIHE) in various institutions. Many of the definition refer to weekly student class hours (WSCH).

Credit guidelines

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

Lecture

Normally, one credit hour is associated with a class meeting for 50 minutes per week for an entire semester. (16 weeks) of the equivalent 800 semesters, excluding final exams.

Laboratory skills

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

Clerkship (Bedside practice)

One credit hour for clerkship minimally requires 150 minutes per week and 2400 minutes over the semester.

Evaluation of the Curriculum

Ongoing evaluation of all elements of the curriculum is essential to maintain continuous improvement of the curriculum. Students, faculty and staff perform evaluation of the curriculum.

The process is coordinated by the staff of the office of medical education and is performed by the evaluation committee. The evaluation committee is responsible for the assessment of all required courses and clerkships. The evaluation committee reports to the educational policy committee, which has overall responsibility for management of the curriculum. The evaluation committee conducts continuous assessment of preclinical courses, clinical courses and clerkships.

For each course and clerkship, students complete an evaluation of the course/clerkship in addition to faculty evaluations for lecturers, small group facilitators, and site preceptors for clinical experiences. These data are provided to course faculty, course/clerkship directors, and department chairs.

The evaluation committee meets monthly. The committee determines which courses or clerkships to evaluate and what data are needed, including but not limited to:

- ☐ Course or clerkship syllabus
- ☐ Student evaluation of a course or clerkship
- ☐ Evaluation and grading methods
- ☐ Student performance in a course or clerkship
- ☐ Interview with faculty and staff involved with the course/clerkship
- ☐ Annual course/clerkship report (The course/clerkship director must submit a response to a series of course assessment questions within 2 months of the end of the course).

The final report is distributed to the course director and to the educational policy committee-EPC at its regular monthly meeting. The committee accepts the findings and recommendations of the evaluation committee or asks for a response from the course/clerkship director. After resolution of all outstanding issues, the amended report is approved by the EPC and sent to the course director for implementation of the recommendations.

The educational policy committee monitors the curriculum by examining course, clerkship and component assessments provided by the evaluation committee. Clinical skills are measured throughout the yearly components. Clinical skill measurement culminates in a comprehensive assessment at the end of clinical courses.

Examination Regulations

Attendance

75% of 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, practical, health facilities (primary, secondary and tertiary) postings and bedside clinics, etc.

Internal assessment

- ☐ It shall be based on day-to-day assessment, evaluation of students' assignment, preparation for seminar, clinical case presentation etc.
- ☐ Regular periodical examinations shall be conducted throughout the course.
- ☐ Day-to-day records should be given importance during internal assessment.

Some examples of internal assessment are as follows:

- ☐ Preparation of subject for student's seminar.

- ☐ Preparation of a clinical case for discussion
- ☐ Clinical case study/problem solving exercise
- ☐ Proficiency in carrying out a practical or a skill in small research project
- ☐ Multiple choice questions (MCQ) test after completions of a system course.
- ☐ Each item tested shall be objectively assessed and recorded.
- ☐ Some of the items can be assigned as home work/vacation work.

University examinations

- A. **Knowledge papers;** will be prepared by the examiners as prescribed. Nature of questions will be short answer type/objective type and marks for each part indicated separately.
- B. **Practical/clinical;** will be conducted in the laboratories of hospital wards.

Objectives will be to assess proficiency in skills, conduct of experiment, interpretation of data logical/conclusion. Clinical cases should preferably include common diseases not esoteric syndromes or rare disorder. Emphasis should be on candidate's capability in eliciting physical and their signs and their interpretation.

- C. **Viva/oral;** includes evaluation of management approach and handling of emergencies students skills in interpretation of common investing data, x-ray etc.

The examinations are 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 an objective basis.

Question papers should preferably be of short structure/objective type.

- D. **Clinical cases/practical;** will take into account common diseases which the students are likely to come in contact in practice.
- E. **Rare cases/ obscure syndrome;** long cases shall not be put for final examination. There should one main examination in each semester.

Techniques of Assessment and Evaluation

- ☐ Multiple choice questions (MCQs)
- ☐ Extended matching questions (EMQ)
- ☐ Short answer questions (SAQ)
- ☐ Mini-cases (MC)
- ☐ PBL tutorial performance assessment (PBL-TPA)
- ☐ Objectives structured clinical examinations (OSCE)
- ☐ Traditional clinical examinations
- ☐ Clinical skills learning assessment (CSLA)
- ☐ Bedside session assessment (Logbook)

- ☐ Visits/case Report assessment

Examination & Marks Distribution

Semester examinations timetable

- ☐ 1st End-semester: held on 6th July (15th saratan)
- ☐ Second End-semester: 20th December (1th jaddi)

Distribution of marks

Subjects with practical

1. Midterm Exam: Viva & practical; 100 Marks includes:
Practical 40 marks
2. Semester final exam (written paper): 60 Marks

Total; 100 Marks (100% of semester total mark)

Subjects without practical

Semester Final Exam (Written paper): 100 marks

SUBJECTS CODES & CREDITS

No.	Subject	Semester	Credits			Kind of subject	Course code
			Knowledge	Skills	Total		
1	Islamic studies	1	1		8	universities Inclusive	DMD01 01
		2	1				DMD02 01
		3	1				DMD03 01
		5	1				DMD04 01
		6	1				DMD05 01
		7	1				DMD06 01
							DMD07 01
		8	1				DMD08 01
2	Environment	1	2		2	universities inclusive	MED01 02
3	Contemporary history of Afghanistan	1	2		2	universities inclusive	MED01 03
4	English language	1		5	10	university inclusive	DMD01 04
		2		5			DMD02 04
5	Information communication technology	2		2	4	university inclusive	DMD01 05
		2		2			DMD02 05
6	Molecular cell biology	1	2	1	6	Basic Subjects	DMD01 06
		2	2	1			DMD02 06
7	Medical genetics	1	1	1	2	Basic Subjects	DMD01 07
8	Biophysics	1	1	1	2	Basic Subjects	DMD01 08
9	Medical physics	2	1	1	2		DMD02 09
10	Medical chemistry	1	1		3	Basic Subjects	DMD01 10

			2	1	1			DMD02 10
11	Gross Anatomy		2	1	1	8	Basic Subjects	DMD02 11
	Head and neck anatomy		2	1	1			DMD03 11
			3	2	2			DMD04 11
12	Microscopic anatomy(histology) oral histology		1	1	1	6	Basic Subjects	DMD01 12
			2	1	1			DMD02 12
			3	1	1			DMD03 12
13	General embryology system & oral embryology		2	1		2	Basic Subjects	DMD02 13
			3	1				DMD03 13
14	Medical physiology oral physiology		3	2	1	8	Basic Subjects	DMD03 14
			4	2	1			DMD04 14
			5	1	1			DMD05 14
15	Medical biochemistry & nutrition		3	2	1	6	Basic Subjects	DMD03 15
			4	2	1			DMD04 15
16	Pathology	General	3	2	1	7	Basic Subjects	DMD03 16
		Systemic	4	1	1			DMD04 16
		Oral	5	1	1			DMD05 16
17	Microbiology parasitology & Virology		3	2	1	6	Professional Subjects and skills	DMD03 17
			4	1	1			DMD04 17
18	Dental materials		4	1	1	2	Basic Subjects	DMD04 18

19	Medical ethics		4	1		1	Professional Subjects	DMD04 19
20	Medical immunology		4	1		1	Basic Subjects	DMD04 20
21	Prosthodontics		4	1	1	14	Professional Subjects and skills	DMD04 21
			5	1	1			DMD05 21
			6	1	1			DMD06 21
			7	1	1			DMD07 21
			8	1	1			DMD08 21
			9	1	1			DMD09 21
			10	1	1			DMD10 21
22	Clinical pharmacology Dental pharmacology		5	1	1	4	Basic Subjects	DMD05 22
			6	1	1			DMD06 22
23	Internal medicine		5	1	1	6	Professional Subjects and skills	DMD05 23
			6	1	1			DMD06 23
			7	1	1			DMD07 23
24	Surgery		5	1	1	6	Professional Subjects and skills	DMD05 24
			6	1	1			DMD06 24
			7	1	1			DMD07 24
25	Public health	Basic of public health	5	1		5	Professional Subjects	DMD05 25
		Environmental & occupational Health	6	1				DMD06 25

		Behavioral science & health education	7	1				DMD07 25
		Epidemiology	10	1				DMD10 25
		Biostatics	10	1				DMD10 25
26	Operative Dentistry & endodontic		5	1	1	12	Professional Subjects and skills	DMD05 26
			6	1	1			DMD06 26
			7	1	1			DMD07 26
			8	1	1			DMD08 26
			9	1	1			DMD09 26
			10	1	1			DMD10 26
27	Neurology & psychiatry		6	1	1	2	Professional Subjects and skills	DMD06 27
28	Oral & maxillofacial surgery		5	1	1	10	Professional Subjects and skills	DMD05 28
			6	1	1			DMD06 28
			7	1	1			DMD07 28
			8	1	1			DMD08 28
			9	1	1			DMD09 28
29	Anesthesiology		6	1	1	2	Professional Subjects and skills	DMD06 29
30	ENT		7	1	1	2	Professional Subjects and skills	DMD07 30
31	Pediatric & preventive Dentistry		7	1	1	6	Professional Subjects and skills	DMD07 31

		8	1	1			DMD08 31
		9	1	1			DMD09 31
32	Forensic Dentistry & toxicology	7	1	1	2	Professional Subjects	DMD07 32
33	Oral medicine	8	1	1	6	Professional Subjects and skills	DMD08 33
		9	1	1			DMD09 33
		10	1	1			DMD10 33
34	General radiology oral radiology	8	1	1	4	Professional Subjects and skills	DMD08 34
		9	1	1			DMD09 34
35	Periodontics	8	1	1	8	Professional Subjects and skills	DMD08 033
		9	1	1			DMD09 033
		10	1	1			DMD10 033
36	Orthodontics	8	1	1	6	Professional Subjects and skills	DMD08 36
		9	1	1			DMD09 36
		10	1	1			DMD10 36
37	Infection diseases & TB	8	1	1	2	Professional Subjects and skills	DMD08 37
38	Ophthalmology	9	1	1	2	Professional Subjects and skills	DMD09 38
39	Neurosurgery	10	1	1	2	Professional Subjects and skills	DMD09 39
40	Facial plastic	10	1	1	2	Professional Subjects and skills	DMD10 40
41	Community & preventive Dentistry	10	1	1	2	Professional Subjects and skills	DMD10 41
42	Research Method		2	16	16	Professional Subjects	DMD05 42

SUBJECTS & MESTERS

ACADEMIC YEAR I				FIRST SEMESTER				
No.	Course Title	Code No.	Credits	Semester hours				
				Knowledge	Clerkship	Lab	Small group tutorial	Total
1	Islamic Studeis ¹	DMD01 01	1	16				16
2	Contemporary history of Afghanistan	MED01 03	2	32				32
3	English language ¹	DMD01 04	5	80				80
4	Information communication technology ¹ (ICT)	DMD01 05	2	16		32		48
5	Molecular cell biology ¹	DMD01 06	3	32		32		64
6	Medical genetics	DMD01 07	2	16		32		48
7	Biophysics ¹	DMD01 08	2	16		32		48
8	Medical chemistry ¹	DMD01 10	2	16		32		64
9	Microscopic anatomy ¹ (Histology) ¹	DMD01 12	2	16		32		48
TOTAL SEMESTER CREDITS AND HOURS			21	240		192		448

ACADEMIC YEAR I				SECOND SEMESTER				
No.	Course Title	Code No.	Credits	Semester hours				
				knowledge	Clerkship	Lab	Small group tutorial	Total
1	ISLAMIC STUDIES ²	DMD02 01	1	16				16
2	Molecular cell biology ²	DMD02 06	3	32		32		64
3	Information communication technology ² (ICT)	DMD02 05	2	16		32		48
4	English language ²	DMD02 04	5	80				80
5	Medical Pysics ²	DMD02 09	2	16		32		64
6	General embryology ¹	DMD02 13	2	32				32
7	Microscopic anatomy ¹ (Histology) ¹	DMD02 12	2	16		32		48
8	Gross anatomy ¹	DMD02 11	2	16		32		48
9	Medical chemistry ²	DMD02 10	2	16		32		48
TOTAL SEMESTER CREDITS AND HOURS			21	240		192		448

ACADEMIC YEAR II				FIRST SEMESTER				
No.	Course Title	Code No.	Credits	Semester hours				
				Knowledge	Clerkship	Lab	Small group tutorial	Total
1	Islamic studies ³	DMD03 01	1	16				16
2	Gross anatomy ²	DMD03 11	2	16		32		48
3	Oral histology ³	DMD03 12	2	16		32		48
4	Oral embryology ²	DMD03 13	2	32				32
5	Medical physiology ¹	DMD03 14	3	32		32		64
6	Medical biochemistry ¹	DMD03 15	3	32		32		64
7	General pathology ¹	DMD03 16	3	32		32		64
8	General microbiology ¹	DMD03 17	3	32		32		64
9	Environment	MED03 02	2	32				32
TOTAL SEMESTER CREDITS AND HOURS			21	240		192		432

ACADEMIC YEAR II				SECOND SEMESTER				
No.	Course Title	Code No.	Credits	Semester hours				
				knowledge	Clerkship	Lab	Small group tutorial	total
1	Islamic studies ⁴	DMD04 01	1	16				16
2	Head and neck anatomy ³	DMD04 11	3	32		32		64
3	Physiology ²	DMD04 14	3	32		32		64
4	Medical biochemistry& nutrition ²	DMD04 15	3	32		32		64
5	Systemic pathology ²	DMD04 16	2	16		32		48
6	Microbiology ² (oral, virology & parasitology)	DMD04 17	3	32		32		64
7	Dental materials	DMD04 18	2	16		32		48
9	Immunology	DMD04 20	2	16		32		48
10	Prosthodontics ¹	DMD04 21	2	16	48			64
TOTAL SEMESTER CREDITS AND HO0URS			21	208	48	224		480

ACADEMIC YEAR III				FIRST SEMESTER				
No.	Course Title	Code No.	Credits	Semester hours				
				Knowledge	Clerkship	Lab	Small group tutorial	Total
1	Islamic studies ⁵	DMD05 01	1	16				16
2	Oral Physiology ³	DMD05 14	2	16		32		48
3	Oral pathology ³	DMD05 16	2	16		32		32
4	Prosthodontics ²	DMD05 21	2	16	48			64
5	General pharmacology ¹	DMD05 22	2	16		32		48
6	Internal medicine ¹	DMD05 23	2	16	48			64
7	General surgery ¹	DMD05 24	2	16	48			64
8	Public health ¹ (basic of public health)	DMD05 25	1	16				16
9	Operative Dentistry ¹	DMD05 26	2	16	48			64
10	Oral & Maxillofacial surgery ¹	DMD05 28	2	16	48			64
11	Research Method	DMD05 42	2	16	48			64
12	Medical ethics	DMD05 19	1	16				16
TOTAL SEMESTER CREDITS AND HOURS			20	192	288	96		560

ACADEMIC YEAR III				SECOND SEMESTER				
No.	Course Title	Code No.	Credits	Semester hours				
				knowledge	Clerkship	Lab	Small group tutorial	total
1	Islamic studies ⁶	DMD06 01	1	16				16
2	Prosthodontics ³	DMD06 21	2	16	48			64
3	Dental pharmacology ²	DMD06 22	2	16		32		48
4	Internal medicine ²	DMD06 23	2	16	48			64
5	General surgery ²	DMD06 24	2	16	48			64
6	Public health ² (basic of public health)	DMD06 25	1	16				16
7	Operative Dentistry ²	DMD06 26	2	16	48			64
8	Neurology and psychiatry	DMD06 27	2	16	48			64
9	Maxillofacial surgery ²	DMD06 28	2	16	48			64
10	Anesthesia	DMD06 29	2	16	48			64
TOTAL SEMESTER CREDITS AND HOURS			18	160	336	32		528

ACADEMIC YEAR IV				FIRST SEMESTER				
No.	Course Title	Code No.	Credits	Semester hours				
				Knowledge	Clerkship	Lab	Small group tutorial	Total
1	Islamic studies ⁷	DMD07 01	1	16				16
2	Prosthodontics ⁴	DMD07 21	2	16	48			64
3	Internal medicine ³	DMD07 23	2	16	48			64
4	General surgery ³	DMD07 24	2	16	48			64
5	Public health ³ (basic of public health)	DMD07 25	1	16				16
6	Operative Dentistry ³	DMD07 26	2	16	48			64
7	Maxillofacial surgery ³	DMD07 28	2	16	48			64
8	ENT	DMD07 30	2	16	48			64
9	Pediatrics and preventive Dentistry ¹	DMD07 31	2	16	48			64
10	Forensic Dentistry	DMD07 32	2	16		32		48
TOTAL SEMESTER CREDITS AND HOURS			18	160	336	32		528

ACADEMIC YEAR IV				SECOND SEMESTER				
No.	Course Title	Code No.	Credits	Semester hours				
				knowledge	Clerkship	Lab	Small group tutorial	total
1	Islamic studies ⁸	DMD08 01	1	16				16
2	Prosthodontics ⁵	DMD08 21	2	16	48			64
3	Endodontics ¹	DMD08 26	2	16	48			64
4	Maxillofacial surgery ⁴	DMD08 28	2	16	48			64
5	Pediatrics and preventive Dentistry ²	DMD08 31	2	16	48			64
6	Oral medicine ¹	DMD08 33	2	16	48			64
7	General radiology ¹	DMD08 34	2	16		32		48
8	Periodontics ¹	DMD08 35	2	16	48			64
9	Orthodontics	DMD08 36	2	16	48			64
10	Infectious Disease & TB	DMD08 37	2	16	48			64
TOTAL SEMESTER CREDITS AND HOURS			19	160	384	32		576

ACADEMIC YEAR V				FIRST SEMESTER				
No.	Course Title	Code No.	Credits	Semester hours				
				Knowledge	Clerkship	Lab	Small group tutorial	Total
1	prosthodontics ⁶	DMD09 21	2	16	48			64
2	Endodontics ²	DMD09 26	2	16	48			64
3	Maxillofacial surgery ⁵	DMD09 28	2	16	48			64
4	Pediatrics and preventive Dentistry ³	DMD09 31	2	16	48			64
5	Oral medicine ²	DMD09 33	2	16	48			64
6	oral radiology ²	DMD09 34	2	16		32		48
7	Periodontics ²	DMD09 35	2	16	48			64
8	Orthodontics ²	DMD09 36	2	16	48			64
9	Ophthalmology	DMD09 38	2	16	48			64
TOTAL SEMESTER CREDITS AND HOURS			18	144	384	32		560

ACADEMIC YEAR V				SECOND SEMESTER				
No.	Course Title	Code No.	Credits	Semester hours				
				knowledge	Clerkship	Lab	Small group tutorial	total
1	Prosthodontics ⁷	DMD10 21	2	16	48			64
2	Endodontices ³	DMD10 26	2	16	48			64
3	Oral medicine ³	DMD10 33	2	16	48			64
4	Periodontics ³	DMD10 33	2	16	48			64
5	Orthodontices ³	DMD10 36	2	16	48			64
6	Public health ⁴ (Epidemiology)	DMD10 25	1	16				16
7	Public health ⁴ (biostatistics)	DMD10 25	1	16				16
8	Neurosurgery	DMD10 39	2	16	48			64
9	Facial plastic surgery	DMD10 40	2	16	48			64
10	Community & preventive Dentistry	DMD10 41	2	16	48			64
TOTAL SEMESTER CREDITS AND HOURS			18	160	384			544

SOURSE CONTENTS (SYLLABUS) DESCRIPTION

ISLAMIC STUDIES

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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:

This course is aimed at:

- ☐ To provide basic information about Islamic studies
- ☐ To enhance understanding of the Students regarding Islamic civilization
- ☐ To improve Students skill to perform prayers and other worships
- ☐ To enhance the skill of the Students for understanding of issues related fo faith and religious life

Course contents

ISLAMIC STUDIES (Module 1)							
Discipline				University Inclusive			
Department				Islamic studies			
Course Title				Basic concepts of Islamic knowledge			
Correquisites				None			
Course code				DMD01 01			
Academic year				1			
Semester		1		Spring			
Number of credits		1		Knowledge		1	
				Practical			
Weeks		Hours		Topics and Description			
		Knowledge	practical				
1	1		Basic concept of Islamic knowledge: general information, information about the Islamic culture				
2	1		Basic concept of Islamic knowledge: importance of knowledge in Islam, Quranic verses and hadith regarding education.				
3	1		Basic concept of Islamic knowledge: characteristics of Islamic law, Quran Verses and hadith regarding inventions and changes in human life.				
4	1		Memorization and translation of surah 95-114				
5	1		Daily duaa (prayers) according to hadith and Sunnah				
6	1		Daily duaa (prayers) according to hadith and Sunnah				
7	1		Daily duaa (prayers) according to hadith and Sunnah				

8	1		Basic concept of Islamic knowledge: characteristics of Islamic Law, Aim and objective of Islamic Law
9	1		Basic concept of Islamic knowledge: Aim and objective of Islamic Law
10	1		Basic concept of Islamic knowledge: social main deviations
11	1		Definition, importance and ruling of Hijab in Islam: general information
12	1		Definition, importance and ruling of Hijab in Islam; Value and importance
13	1		Definition, importance and ruling of Hijab in Islam: concept of Virtue
14	1		Definition, importance and ruling of Hijab in Islam: Quranic Verses and Hadith regarding Hijab
15	1		Definition, importance and ruling of the Hijab in Islam: Islamic rule regarding Make up
16	1		Definition, importance and ruling of the Hijab in Islam: conditions for Hijab

Textbooks and reference Books recommended (Last Editions)

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

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3214228684

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Format Paperback, Dimensions 150 x 220mm, Publication date 20 Aug 2019, Publisher Noor Publishing, Language Arabic, Edition Statement Aufl.ISBN10 6200068623

ISBN13 9786200068620

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ISLAMIC STUDIES (Module 2)				
Discipline			University Inclusive	
Department			Islamic studies	
Course Title			Faith	
Correquisites			None	
Course code			DMD 02 01	
Academic year			1	
Semester		2	Fall	
Number of credits		1	Knowledge	1
			Practical	
Weeks	Hours		Topics and Descriptions	
	Knowledge	Practical		
1	1		Faith: General Information regarding Tawheed	
2	1		Faith: Types of Tawheed, pillar of Tawheed	
3	1		Faith: conditions of Tawheed, advantage of Tawheed	
4	1		Faith: General information about sherk	
5	1		Faith: Types of sherk	
6	1		Faith: Islamic rules for sherk and Mushrek	
7	1		Faith: Tawasul (To solicit)	
8	1		Faith: belief in Qaza and Qadar, Allah’s prophets, books, as gels and day of judgments	

9	1		Tajweed
10	1		Tajweed
11	1		Tajweed
12	1		Memorization and translation of surah 85-94
13	1		Memorization and translation of surah 85-94
14	1		Memorization and translation of surah 85-94
15	1		Special Duaa (prayers) according to Hadith and sunnah
16	1		Special Duaa (prayers) according to Hadith and sunnah

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ISLAMIC STUDIES (MODULE 3)				
Discipline			University Inclusive	
Department			Islamic studies	
Course Title			Worships	
Correquisites			None	
Course code			DMD 03 01	
Academic year			II	
Semester		3	Spring	
Number of credits		1	Knowledge	1
			Practical	
Weeks	Hours		Topics and Descriptions	
	Knowledge	Practical		
1	1		Worships: General Information regarding worships (Ebadat)	
2	1		Worships: Types of worships (Ebadat)	
3	1		Worships: pillars of worships (Ebadat)	
4	1		Worships: worships conditions of worships (Ebadat)	
5	1		Worships: difference between Obedience & worship	
6	1		Worships: Target of worship	
7	1		Worships: worthy of worship	
8	1		Worships: outcome of worship	

9	1		Worships: The factors and Lithurgy of Worship
10	1		Worships: Bedaat (Inovation) in worship
11	1		Worships: General information about philosophy of Worships and philosophy of Salah
12	1		Worships: the prayer in summation (jamat), Eid Jenaza prayer
13	1		Memorization and translation of surah 78-84
14	1		Memorization and translation of surah 78-84
15	1		Special Duaa (prayers) according to Hadith and Sunnah
16	1		Special Duaa (prayers) according to Hadith and Sunnah

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ISLAMIC STUDIES (MODULE 4)				
Discipline			University Inclusive	
Department			Islamic studies	
Course Title			Political system in Islam	
Correquisites			None	
Course code			DMD 04 01	
Academic year			II	
Semester		4	Fall	
Number of credits		1	Knowledge	1
			Practical	
Weeks	Hours		Topics and Descriptions	
	Knowledge	Practical		
1	1		Political system in Islam	
2	1		Politics & Religion	
3	1		Definition of shariat	
4	1		General information related politics	
5	1		Individual political rights, counsal in Islam	
6	1		Characteristics of political Leaders, Needs for slection of the Leader	
7	1		General information related Dectatorete.	
8	1		Responsibilities of Islamic state	

9	1		Characteristics of Islamic governments
10	1		Islam and Democracy
11	1		Basic of Internal Diplomacy in Islam
12	1		Basic of Foreign Diplomacy in Islam
13	1		Memorization and translation of surah 61-84
14	1		Memorization and translation of surah 78-84
15	1		Special Duaa (prayers) according to Hadith and Sunnah
16	1		Special Duaa (prayers) according to Hadith and Sunnah

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ISLAMIC STUDIES (MODULE 5)				
Discipline			University Inclusive	
Department			Islamic studies	
Course Title			Islam and medical practice	
Correquisites			None	
Course code			DMD 05 01	
Academic year			III	
Semester		5	Spring	
Number of credits		1	Knowledge	1
			Practical	
Weeks	Hours		Topics and Descriptions	
	Knowledge	Practical		
1	1		Islam and medical practice	
2	1		General information about medicine	
3	1		Concept of Health and medicines in Islamic studies	
4	1		Definition of Health and sickness	
5	1		Importance of medicines in Islam	
6	1		Verses and Hadith related health	
7	1		Medicines in previous religions	
8	1		Hygiene in Islam	

9	1		Rules of prohibited things in Islam
10	1		Verses and Hadith related protective procedures
11	1		Individual and social hygiene
12	1		Harms and prohibition of narcotics and alcoholic beverage
13	1		Verses and Hadith related to alcoholic beverage prohibition
14	1		Neurotic protection
15	1		Orders of scholars related use of narcotics
16	1		Health benefits of fasting

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ISLAMIC STUDIES (MODULE 6)				
Discipline			University Inclusive	
Department			Islamic studies	
Course Title			Ulomul Quran	
Correquisites			None	
Course code			DMD 06 01	
Academic year			III	
Semester		6	Fall	
Number of credits		1	Knowledge	1
			Practical	
Weeks	Hours		Topics and Descriptions	
	Knowledge	Practical		
1	1		Uloom-ul-Quran: basid concept of quran	
2	1		Uloom-ul-Quran: History of Quran	
3	1		Difference between Quran and Qudsi hadith	
4	1		Revelation: general information	
5	1		Quran is Allah’s word	
6	1		Quran is Allah’s word	
7	1		Quran is science	
8	1		Quran is science	

9	1		Quran is science
10	1		Gradually Revelation of Quran
11	1		Disciplines or manners for Recitation of the Quran
12	1		Women's rights in Islam
13	1		Allah's right and Human rights in Islam
14	1		Concept of God in other religion
15	1		Islam and comparative religion
16	1		Paradise rewards and hell's punishments

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ISLAMIC STUDIES (MODULE 7)				
Discipline			University Inclusive	
Department			Islamic studies	
Course Title			Verses and seeratul Nabi (pbuh)	
Correquisites			None	
Course code			DMD 07 01	
Academic year			IV	
Semester		7	Spring	
Number of credits		1	Knowledge	1
			Practical	
Weeks	Hours		Topics and Descriptions	
	Knowledge	Practical		
1	1		Verses of surah Al-Baqra Related to Faith (Verse No. 284-286)	
2	1		Verses of surah Al-Hajrat related to adab Al-nabi (Verse No. 1-18)	
3	1		Verses of surah Al-Mumenoon related to characteristics of faithful (Verse No. 1-11)	
4	1		Verses of surah al-Furqan related to social Ethics (Verse No. 63-77)	
5	1		Verse of surah Al-Inam related to Ahkam (verse No. 152-154)	
6	1		Life of holy prophet Muhammad Bin Abdullah SAW (Before) prophetood)	
7	1		Life of Holyprophet (S.A.W) in Makkah	
8	1		Important lessions derived from the life of Holy prophet in Makkah.	

9	1		Life of Holy prophet (S.A.W) in Madina
10	1		Important events of Life Holy prophet Madina
11	1		Important lessons Derived from the life of Holy prophet in Madina
12	1		Basic concepts of Hadith
13	1		History of hadith
14	1		Kinds of hadith
15	1		Uloom-ul-hadith
16	1		Ethical value of Islam

Textbooks and reference Books recommended (Last Editions)

أبو عبد الرحمن عادل بن سعيد فتاوى العلامة ناصر الدين الألباني

Format Book | 672 pages. Publisher DKI, Publication City/Country Lebanon

Language Arabic, ISBN13 9782745328344

كامل محمد محمد عويضة في فقه النساء

Format Book | 504 pages, Publisher DKI, Publication City/Country Lebanon

Language Arabic, ISBN13 9782745106605

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

Format Paperback Item Weight 1.74 pounds Publisher InstantPublisher.com (March 18, 2032) Language: English Hardcover 772 pages ISBN-10 321422868X ISBN-13 978-3214228684

The Study Quran: A New Translation and Commentary

Format Paperback Item Weight 2.51 pounds Paperback : 2048 pages ISBN-13 978-0061125874, ISBN10 0061125873

في الاجتماع السياسي و التنمية و الاقتصاد و فقه الإصلاح

Publisher الشبكة العربية, Language Arabic, ISBN10 9953533326. ISBN13 9789953533322

الموارد الاقتصادية في النظام الاقتصادي الإسلامي

Publisher منتدى المعارف, Language Arabic, ISBN10 6144280545, ISBN13 9786144280546

حقوق الإنسان السياسية في الإسلام والنظم العالمية

Format Book | 432 pages, Publisher DKI Publication

City/Country Lebanon Language Arabic. ISBN13 9782745148520

ISLAMIC STUDIES (MODULE 8)				
Discipline			University Inclusive	
Department			Islamic studies	
Course Title			Islamic economic system	
Correquisites			None	
Course code			DMD 08 01	
Academic year			IV	
Semester		8	Fall	
Number of credits		1	Knowledge	1
			Practical	
Weeks	Hours		Topics and Descriptions	
	Knowledge	Practical		
1	1		Basic concepts of Islamic economic system	
2	1		Means of distribution of wealth in Islamic economics	
3	1		Islamic concept of riba	
4	1		Islamic ways of trade & commerce	
5	1		Zakat in Islam: zakat in money, gold and silver	
6	1		Zakat in Islam: who is in need for zakat and how to pay zakat	
7	1		Zakat in Islam	
8	1		Zakat in Islam	

9	1		Zakat in Islam
10	1		Basic concept of social system of Islam
11	1		Elements of family
12	1		Memorization and translation of surah Noor
13	1		Memorization and translation of surah Ahzab
14	1		Memorization and translation of surah yasin
15	1		Memorization and translation of surah hujerat
16	1		Special Duaa (prayers) according to Hadith and Sunnah

Textbooks and reference Books recommended (Last Editions)

حقوق الإنسان السياسية في الإسلام والنظم العالمية

Format Book | 432 pages, Publisher DKI Publication
City/Country Lebanon Language Arabic. ISBN13 9782745148520

كامل محمد عويضة في فقه النساء

Format Book | 504 pages, Publisher DKI, Publication City/Country Lebanon
Language Arabic,
ISBN13 9782745106605

أبو عبد الرحمن عادل بن سعيد فتاوى العلامة ناصر الدين الألباني

Format Book | 672 pages. Publisher DKI, Publication City/Country Lebanon
Language Arabic, ISBN13 9782745328344

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

Format Paperback Item Weight 1.74 pounds Publisher InstantPublisher.com (March 18, 2032)
Language: English Hardcover 772 pages ISBN-10 321422868X ISBN-13 978-3214228684

The Study Quran: A New Translation and Commentary

Format Paperback Item Weight 2.51 pounds Paperback : 2048 pages ISBN-13 978-0061125874, ISBN10 0061125873

في الاجتماع السياسي والتنمية والاقتصاد وفقه الاصلاح

Publisher الشبكة العربية, Language Arabic, ISBN10 9953533326. ISBN13 9789953533322

الموارد الاقتصادية في النظام الاقتصادي الاسلامي

Publisher منتدى المعارف Language Arabic, ISBN10 6144280545, ISBN13 9786144280546

ENVIRONMENT

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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.

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%

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			Environmental & social science & medical ethics	
Department			Environmental & health	
Subject			Environment	
Course code			DMD 03 02	
Class			I	
Semester		3	Fall	
Number of credits		2	Theory	2
			Practical	
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1	2		Concepts foundation of environment	Concepts foundation of environment
2	2		The importance of studying the environment	The importance of studying the environment

3	2		History	History of environment issues
4	2		Concepts of environment	Definition and general information of environment and division of environment
5	2		The relationship environment and science	The relationship between the environment and science
6	2		Risk factor of environment	Risk factor of environment chemical, biological, mechanical, psychosocial
7	2		Noise pollution	Noise pollution and its effects waste and sewages
8	2		Population growth	Population growth and its impact on the environment
9	2		Diversity of life	Diversity of life and its importance
10	2		Global warning	Global warning phenomenon greenhouse effect
11	2		Control measures	Personal protective measures, instruments sterilization, Ventilation, disposal of waste
12	2		Key principle in environment safety and health	Rights and duties; workers' rights, employers' responsibilities, governments' duties
13	2		Personal environment	Family planning program Children, young people, elderly
14	2		Air	Air pollutant, indoor and outdoor air pollution, general methods for control
15	2		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
16	2		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 | 2128 pages, Dimensions 108 x 181 x 72mm | 1,030g, Publication date 01 Jan 2032, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, ISBN10 0198766327, ISBN13 9780198766322, Bestsellers rank 109,41

Biological Monitoring of Chemical Exposure in the Workplace

Format Paperback | 312 pages, Dimensions 173 x 250mm, Publication date 01 Mar 1997 Publisher World Health Organization, Publication City/Country Geneva, Switzerland,

Illustrations note tables, ISBN10 9518021589, ISBN13 9789518021585

Cherileyn , Tellman environment Health and Hygien

Format Paperback | 496 pages, Dimensions 176 x 245 x 27.94mm | 890g, Publication date 01 Jun 2007, Publisher Francoism, Imprint Allen & Unwin Publication City/Country Australia Language English, ISBN10 174175058X, ISBN13 9781741750584, Bestsellers rank 448,81

David L, Goetsch. Occupational Safety and Health

Format Paperback | 732 pages, Dimensions 232 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 1292061995 ISBN13 9781292061993, Bestsellers rank 2,260,089

James F, Jekel , environment, biostatistics and preventive medicine

Format Paperback Dimensions 232 x 276mm, Publication date 18 May 2007, Publisher Saunders, Language English, Edition Statement 3rd ed.ISBN10 1455755575 ISBN13 9781455755578

BK Mahajan, methodes in biostatistics

Format Paperback | 488 pages, Dimensions 140 x 232mm, Publication date 28 Feb 2018 Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Edition Revised, Edition Statement 9th Revised edition, ISBN10 9352703103 ISBN13 9789352703104

CONTEMPORARY HISTORY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

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			DMD 01 03		
Class			I		
Semester		1	Fall		
Number of credits	2		Theory	2	
			Practical		
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	2		How gay established durani	How gay established durani government	
2	2		The reign of Ahmad Shah Abdali	The reign of Ahmad Shah Abdali 1747-1773	

3	2		The reign of Timor Shah	The reign of Timor Shah 1773-1793
4	2		A review of the eight years rule of the Shah	A review of the eight years rule of the Shah 1793-1804
5	2		Recognition of the first government of Shah Mahmood	Recognition of the first government of Shah Mahmood 1801-1804
6	2		Recognition of the first government of Shah Shuja	Recognition of the first government of Shag Shuja 1804-1809
7	2		Socio economic and political situation in the time Abdalian	Socio economic and political situation in the time Abdalian
8	2		The decline of the durani family	The decline of the durani family and the rise of the Barkzai to power
9	2		Announcement of the Emirate of Dust Mohammad Khan	Announcement of the Emirate of Dust Mohammad Khan
10	2		British occupation of Afghanistan	British occupation of Afghanistan 1839-1842
11	2		The reign of Sher Ali Khan 1863-1866	The reign of Sher Ali Khan 1863-1866 and reign of Afzal Khan and Azam Khan 1866-1868
12	2		The second reign of Sher Ali Khan	The second reign of Sher Ali Khan 1868-1878
13	2		The Second British occupation of Afghanistan	The Second British occupation of Afghanistan 1878-1880
14	2		Cultural and social situation of Afghanistan	Cultural and social situation of Afghanistan in the nineteenth century
15	2		The reign of Abdulrahman Khan	The reign of Abdulrahman Khan 1880-1901
16	2		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 1390

Ansari faroozi 1399 compact history of Afghanistan

Habibi Abdulhi 1373 constitution movements in Afghanistan

Reshtia Said Qasim 1377 Afghanistan in nineteenth century

Ghobar Mir Ghulam Mohammad 1390 Afghanistan in Rout of history

MOLECULAR CELL BIOLOGY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Course description

The cell biology course provides a basic understanding of the structure and function of cellular organelles and components, and the functional of the cell with its microenvironment

The course stresses a novel approach to 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 extracellular 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 dictates cell function, classes are centered as a tool to achieve knowledge.

Learning objectives

The educational learning objectives are largely derived from the American college of medical cell biology recommendations about undergraduate education in medical genetics and the curriculum in genetics recommended by the association of professors of Human and medical cell biology

At the end course should be able to:

- ☐ 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 analyses techniques.
- ☐ Discuss the various macromolecular components of cells and their functions.
- ☐ Describe the structure and function of biological energy transduction from oxidation of metabolites to syntheses of ATP.
- ☐ Explain various levels of gene regulation and protein function including signal 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 or losses in cell function. These can include responses to environmental or physiological changes, or alterations of cell function brought about by mutation.

Course contents

MOLECULAR CELL BIOLOGY (MODULE 1)					
Discipline			Basic Subjects		
Department			Molecular biology and Medical genetic		
Course title			Molecular cell biology		
Pre-requisite			None		
Course code			DMD 01 06		
Academic year			I		
Semester		1	Spring		
Number of credits		3	Knowledge		2
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Background	History and background, evolutionary classification of the cell	
	1		Organization of cell	The prokaryotic, Morphological organization of the prokaryotic cell, prokaryotic cells are structurally simpler than Eukaryotic structure of the plasma membrane, chemical composition of the plasma-membrane Multiplication of the cell, the genetic Material of the prokaryotic cell.	
2	2	1	Eukaryotic cell structure	Why the cell id considered the basic unit of life, implication of the cell theory, Eukaryotic cell structure, Membrane divide the cell into compartment.	
3	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 of SER.	
	1		Ribosome	Function of ribosome (protein synthesis), structure and subunits of ribosome, disorders and ribosomal diseases, shwachman-diamond syndrome, dyskerarosis congenital, diamond-blackfan anemia, cartilage hair hypoplasia.	
5	2	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 of SER.
6	1	1	Lysosome	Structure and function of lysosome, enzyme, primary lysosome, digestive Vacuole, residual body, Autophagy, membrane and PH lysosomal storage disorder, glycogen type II, tay-sachs diseases.
	1		Peroxisome	Morphology, function, shape and size, disorders with peroxisome, Adrenal eukodystrophy
7	2	1	Mitochondria	Morphology, and function of mitochondria, shape, size, distribution, number 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 pimentos, the chloroplast.
8	1	1	Cytoskeleton	Eukaryotic cells contain cytoskeleton, microtubule, structure, function, size & chemical composition, microtubule Associated protein (kinesin, b=dynein & dynectin)
	1			Cilia & flagellum (function, size, chemical composition) microfilaments, intermediate filament
9	2	1	Glycocalyx	Chemical composition, membrane receptors for extra cellular matrix (integrin protein)
10	2	1	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 vesicles, 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.
11	2	1	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).
12	1	1	Carrier mediated transport	Active and passive transports, facilitated Diffusion, carrier mediated transport, co transport systems.
	1		Exocytosis/endo cytosis	Large particles transport through the cell membrane, exocytosis, endocytosis, and phagocytosis and pinocytosis receptor mediated endocytosis.
13	2	1	Contacts between cells	Cellular junctions, Anchoring junction (epithelial sheet) desmosomes, adhering junction, tight junction, gap junction and plasmadesmata.
14	2	1	Chemistry of life	Organic componenet of the cell, carbon atoms fot and exormous variety of structure, the Isomers (structural,

				geometric & enantiomers), carbohydrates, monosaccharides, disaccharides, polysaccharides
15	2	1	Chemistry of life	Proteins the most versatile cellular components, protein synthesis, chain initiation, chain elongation, chain termination, amino acids, structure, classification, kinds, biological buffers, peptide organization (proteins), primary, secondary, tertiary and quaternary structure of protein.
16	2	1	Chemistry of life	Lipids, triacylglycerol, phospholipid, carotenoids, steroids

Textbooks and reference Books recommended (Last Editions)

Medical cell biology Steven R Goodman

Format Hardback | 336 pages, Dimensions 232 x 276 x 21.84mm | 1,247g, 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. 450 illustrations (150 in full color), ISBN10 0123704588 ISBN13 9780123704580, Bestsellers rank 1,189,63

Molecular cell biology Harvey Lodish Arnold berk

Format Hardback | 1280 pages, Dimensions 232 x 276 x 45mm | 2,625g, Publication date 25 Jun 2032, Publisher W.H.Freeman & Co Ltd, Publication City/Country New York, United States Language English, Edition Revised, Edition Statement 8th Revised edition, Illustrations note 1280 p., ISBN10 1464187444, ISBN13 9781464187445, Bestsellers rank 65,200

The cell A Molecular approach Geoffrey M Cooper

Format Hardback | 500 pages, Dimensions 210 x 297 x 40mm | 2,199, Publication date 11 Dec 2015, Publisher Sinauer Associates Inc ,U.S., Publication City/Country Sunderland, United States, Language English, Edition Revised, Edition Statement 1st ed. 2015, Illustrations note 500 p.ISBN10 3205355631, ISBN13 9783205355634, Bestsellers rank 827,897

Essential Cell Biology Bruce Albert Dennis Brey

Format Paperback | 864 pages, Dimensions 232 x 279 x 32mm | 1,732g, 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 0815344554, ISBN13 9780815344551, Bestsellers rank 67,662

Loose-Leaf Version for Molecular Cell Biology & Launchpad for Molecular Cell Biology (6 Month Access

Format Mixed media product | 1170 pages, Dimensions 213 x 277 x 41mm | 2,359g, Publication date 30 Jun 2032, Publisher W. H. Freeman, Language English, Edition Statement 8th ed. ISBN10 131906776X, ISBN13 9781319067762, Bestsellers rank 2,258,81

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

Format Paperback | 152 pages, Dimensions 152 x 229 x 9mm | 231g, Publication date 30 Jul 2018, Publisher Scholars' Press, Publication City/Country United State, Language English,

MOLECULAR CELL BIOLOGY (MODULE 2)				
Discipline		Basic Subjects		
Department		Molecular biology and Medical genetic		
Course title		Molecular cell biology		
Pre-requisite		None		
Course code		DEM 02 06		
Academic year		I		
Semester	2	Fall		
Number of credits	3	Knowledge	2	
		Practical	1	
Weeks	Hours		Topics	Descriptions
	Knowledge	practical		
1	1	1	Chemistry of life	Non-organic component of the cell, the water, the p^H scales, other non-organic component of the cell.
	1		Nucleic acids	Structure, function, kind, DNA, RNA (mRNA, tRNA, rRNA),
2	2	1	Nucleotides	Structure, nitrogen base (Adnin, Thymine, cytosine, guanine & uracil),energy transferring, cellular function, cyclic AMP.
3	2	1	Enzyme	Enzyme and cell metabolism, method of study localization of enzymes, function of enzymes inhibition of enzyme activity, reversible inhibition, Irreversible inhibition.
4	1	1	Energy	The bioenergetics, free energy, open systems, steady state, thermodynamic Laws
	1		Non-organic component eukaryotic and prokaryotic cells	The water, the constant of equilibrium, the PH scales.
5	2	1	The genetic Material in eukaryotic and prokaryotic cells	The DNA structure (crick and Watson model) replication of DNA, replication is semiconservative.
6	2	1		Replication in prokaryotic cells, error in replication, how gene works, the function of genes, the genetic code.
7	2	1	The Gane	Gene expression, transcription, translation, the role of ribosomal RNA>
8	2	1		Prokaryotic regulation, structure genes, the trp operon the lac operon

9	2	1	Eukaryotic regulation	Transcriptional control, posttranscriptional control translational control, posttranslational control.
10	2	1	Genetic engineering	Historical background, the recombinant DNA (rDNA) the rDNA methods grew out of research in microbial genetics, the restriction enzyme (molecular scissors) the method of forming rDNA.
11	2	1	Biotechnology	Classic biotechnology, product of classic biotech, molecular biotechnology, red biotech, green biotech, blue biotech.
12	2	1	The product of biotech	The E-coil Bacteria in biotech DNA cloning transgenic Bacteria, the growth hormone, and protein dissolves blood clots in heart therapy, organs for transplant, xenotransplantation.
13	2	1	The stem cells	Embryonic stem cell, adult stem cell, transcription factors antigens.
14	2	1	Differentiation of stem cells	Differentiation of hematopoietic stem cell, red blood cells, B lymphocytes. T lymphocytes, natural killer cells. Neutrophils, eosinophils, monocyte, microphages.
15	2	1	Gene Gene therapy	Gene structure and function, gene is the basic structural unit of heredity, genome, the genetic code, genes specify enzymes, genes specify polypeptide, the sickle cell anemia.
16	2	1	Gene therapy	The goal of gene therapy, gene therapy & genetic diseases, identifying defected gene and replacing with normal gene, switching on/off genes, How gene therapy work, types of gene therapy, grm line, gene therapy Somatic DNA, risk with gene therapy, other problems.

Textbooks and reference Books recommended (Last Editions)

Medical cell biology Steven R Goodman

Format Hardback | 336 pages, Dimensions 232 x 276 x 21.84mm | 1,247g, 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. 450 illustrations (150 in full color), ISBN10 0123704588 ISBN13 9780123704580, Bestsellers rank 1,189,63

Molecular cell biology Harvey Lodish Arnold berk

Format Hardback | 1280 pages, Dimensions 232 x 276 x 45mm | 2,625g, Publication date 25 Jun 2032, Publisher W.H.Freeman & Co Ltd, Publication City/Country New York, United States Language English, Edition Revised, Edition Statement 8th Revised edition, Illustrations note 1280 p., ISBN10 1464187444, ISBN13 9781464187445, Bestsellers rank 65,200

The cell A Molecular approach Geoffrey M Cooper

Format Hardback | 500 pages, Dimensions 210 x 297 x 40mm | 2,199, Publication date 11

Dec 2015, Publisher Sinecure Associates Inc.,U.S., Publication City/Country Sunderland, United States, Language English, Edition Revised, Edition Statement 1st ed. 2015, Illustrations note 500 p.ISBN10 3205355631, ISBN13 9783205355634, Bestsellers rank 827,897

Essential Cell Biology Bruce Albert Dennis Brey

Format Paperback | 864 pages, Dimensions 232 x 279 x 32mm | 1,732g, 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 0815344554, ISBN13 9780815344551, Bestsellers rank 67,662

Loose-Leaf Version for Molecular Cell Biology & Launchpad for Molecular Cell Biology (6 Month Access

Format Mixed media product | 1170 pages, Dimensions 213 x 277 x 41mm | 2,359g, Publication date 30 Jun 2032, Publisher W. H. Freeman, Language English, Edition Statement 8th ed. ISBN10 131906776X, ISBN13 9781319067762, Bestsellers rank 2,258,81

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

Format Paperback | 152 pages, Dimensions 152 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 25% with reasonable excuse.
- ☐ More than 25% 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.
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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.
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- ☐ 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

Medical genetics is a rapidly advancing field of medicine, it is now recognized that genetic mechanisms play a fundamental role in the pathogenesis and treatment of diseases and in the maintenance of health. This course is designed to provide an overview of human genetic concepts and clinical disorders 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. It surveys many clinical areas including cytogenetic, molecular genetics,

biochemical genetics, 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 recommendations about undergraduate education in medical genetics and the curriculum in genetics recommended by the association of professors of Human and medical genetics.

At the end course should be able to:

- ☐ Describe the organization of the genome and regulation of gene expression as it related to medical genetic disorders and diagnosis.
- ☐ Describe the types and extent of genetic of genetic variation seen in the human genome and explain how these variations affect disease states and diversity of normal variation.
- ☐ Obtain a family history, 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 genetic risk based on carrier frequency with in a population.
- ☐ Explain and Identify non-mendelian mechanisms such as: reduced penetrance, variable expressivity, uniparental disomy, epigenetics, mosaicism imprinting and 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 genetic disorders and cancer genetics.
- ☐ Identify the effects of teratogens and in utero infections and Identify patterns of morphology.
- ☐ Interpret results of cytogenetic, molecular and biochemical genetics tests to aid in diagnosis of genetic diseases.
- ☐ Assess and appraise the importance, usefulness and limitation of genetic tests including: cytogenetic testing, molecular testing, pre-natal testing, genome scanning, newborn screen and biochemical genetics testing determine which test(s) are most appropriate for a given clinical scenario.
- ☐ Use knowledge of genetics and genetic evaluation of patients to determine treatment options for genetic disorders.
- ☐ Explain the clinical, ethical and social implications of genetic diagnosis, family health, prediction, and personalized medicine.
- ☐ Discriminate between appropriate ways of communicating genetic information.
- ☐ Identify those approaches that recognize the importance of patient autonomy and privacy issues.
- ☐ Demonstrate respect for patients' religious, ethnic and cultural beliefs in counseling situation

MEDICAL GENETICS					
Discipline			Basic Subjects		
Department			Molecular biology and Medical genetic		
Course title			Medical genetics		
Pre-requisite			Molecular cell biology		
Course code			DEM 01 04		
Academic year			II		
Semester		1	Spring		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	practical			
1	1	1	Background	Historical background and role of genetics in medicine.	
2	1	1	Definition of the relative terms	Homozygous parents, heterozygous parents sex determination, the genotype of parents,	
3	2	1	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.	
4	1	1	Monohybrid di-hybrid and poly hybrids cross	Study of the inheritance to the second filial generation (f2) of two unlinked traits suing the punnett square technique. Definition of linkage hetero zygote crossed with a di-hybrid recessive organism.	
5	1	1	Drosophila melanogaster	Attractive and marvelous traits of drosophila in genetic researches.	
6	2	1	The origin of medical genetics	Single gene disorders, chromosomal disorders, multiple gen disorders.	
7	1	1	Cellular and molecular base of genetics	The cell, DNA (the genetic material), structure, replication structure of chromosome.	

8	1	1	The Gene	The structure of nucleus genes, pseudo genes, exogenous DNA, Junk DNA, satellite DNA, minisatellite DNA Hyper variable minisatellite
9	1	1	Mutation	Types of mutation, substitution, insertion, deletion.
10	1	1	Chromosome	Morphology, types of chromosome (view point of Location of centromere/length), sex chromosomes, somatic chromosome.
11	1	1	Cell division	The cell cycle, check points and P53 role, Cdc and cyclin proteins, Mitosis (prophase, metaphase, anaphase and telophase)
12	1	1	Meiosis	Meiosis 1 and meiosis2, prophase1, 32, metaphase 1, 2 anaphase 1,1 telophase 1,2.
13	1	1	Twins	Types of twins, fraternal, identical, IVF (In Vitro Fertilization).
14	1	1	Twins	Conjoined Twins, the result of multifactorial traits with twins.
15	1	1	Gene reciprocity	Epistatic gene, complementary genes, polymeric gene
16	1	1		Multiple gene inheritance, the blood groups, Rh factor lethal gene, modifier gene.

Textbooks & Reference Books Recommended (Last Edition)

Medical Genetics leyn B jorde phd

Format Paperback | 352 pages, Dimensions 219 x 276 x 15.24mm | 1,032.05g, Publication date 01 Jan 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 6th Revised edition, Illustrations note Approx. 291 illustrations (255 in full color), ISBN10 0323597378, ISBN13 9780323597371, Bestsellers rank 635,860

Essentials of medical Genetics for health professionals laura M, Maunder Mac Clary

Format Paperback Item Weight.14 ounces, 236 pages, ISBN-10, 0763759600, ISBN-13, 978-0763759605, Product Dimensions: 7.5 x 0.53 x 9.25 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 Pritchard

Format Paperback | 232 pages, Dimensions 214 x 277 x 13mm | 622g, Publication date 23 Sep 2013, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 3rd Edition, ISBN10 0470656549, ISBN13 9780470656549 Bestsellers rank 318,076

Emery's Elements of Medical Genetics Sine Ellard PhD

Format Mixed media product | 432 pages, Dimensions 232 x 280 x 19.05mm | 1,350g, Publication date 01 Jan 2005, 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.

COMPUTER SKILLS

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- ☐ Final semester exam 60%
- ☐ Total 100%

COMPUTER SKILLS

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

- ☐ Improve and encourage computer literacy for all.
- ☐ Introduce the main concept of:
 - Information communication technology
 - Hardware
 - Software
 - Data storage and memory
- ☐ Encourage the Students to demonstrate knowledge and competence in using the common functions of a personal and it's operation system.
- ☐ Basic operations, formatting, installation, editing documents, proofing and printing.
- ☐ Web Navigation, web searching, downloading, message; security issues.

COMPUTER SKILLS (Module 1)				
Discipline			University Inclusive	
Department			Computer science	
Course title			ICDL module 1 & 2 (concepts of information and communication technology, using the computer and managing Files)	
Co-requisite			None	
Course code			DMD 01 05	
Academic year			I	
Semester		1	Spring	
Number of credits		2	Knowledge	1
			Practical	1
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1		2	Concepts and hardware	Concepts Personal computer (Laptop & palmtop computers, future of handheld portable digital device, PDA, Mobile phones, Media players, smart phones), parts of computer (The CPU, Memory, ROM, BIOS, Disks)
2		2	Input/output ports and computer performance	Input/output ports: USB port, serial port, parallel port, Network port, Fire Wire port, computer performance, factors affecting performance (CPU Clock speed, RAM size, Hard disk, Free hard disk space, Fragmentation, De-fragmenting files, Multitasking considerations, CPU speed).
3		2	Memory and storage	Memory; RAM, ROM, ROM-BIOS, Video (Graphic) Memory, measurement of storage Media; internal Hard Disk, CDs DVDs, recordable CDs and DVDs, USB flash drive, Memory cards, Network Drives & online File storage, Floppy Disks.
4		2	Input devices	Input Devices, Keyboard, Mouse, scanners, Tracker balls, Touch pads, Joysticks, webcams, Digital camera and microphones
5		2	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 printer, input and output devices.

6		2	Software	Operating system, example of software application are: word processing application, spreadsheets application, databases application, photo editing application, computer game
7		2	Software	Difference between operating system and application software, accessibility options, Voice recognition software, screen reader software, screen magnifier software, on-screen keyboard.
8		2	Networks and Data Transfer	Network: network types (LAN, WAN, WAN, client/server network, internet, WWW, internet, extranet), DATA Transfer: Downloading from and uploading to a network, broadband versus Dial-up internet connection service, internet connection options, features of internet connection.
9		2	ICT in Everyday Life	ICT in electronic World, ICT in communication, ICT in virtual communities ICT in health, ICT in environment.
10		2	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 o antivirus software).
11		2	Legal issue and site licenses	Legal issue: copyright, copyright Issue when copyright files, site Licenses, End-user license agreement, types of software license agreement, shareware, freeware, open source software, open source software; data protection, data protection and privacy, Data protection Legislation.
12		2	Starting to use the computer and setting up the computer	Starting to use the computer: shutting down the computer restarting the computer, shutting down the a non-responding application, help within start menu, searching for help setting up the computer: viewing Basic computer information at start up, viewing system properties, changing the data and time, configuration the volume setting, customizing the desktop theme, adding a keyboard language, installing a software application.
13		2	Using icons and using windows	Using icons: desktop icons, the recycle bin customizing your desktop icons (Deleting, opening, creating, copying, moving, selecting desktop icons),using windows: title bar , menu minimize, restore and close buttons, switching between program.
14		2	Managing files and data storage device	Managing files, driver, folders and files, the windows explorer Viewing the contents of a folder, opening all folders on a desk, switching between drives, data storage devices,.

				Hard disk, CD/DVD, USB flash, Network Drives, disk storage capacity), off-site storage for your backups, benefits of online file storage.
15		2	File & folder and working with files	File and folder: recognizing common file types, common file type, creating a new folder, renaming folder within the windows explorer, viewing file, determining file type, starting with WordPad (entering text in WordPad, saving WordPad file, creating new document, opening an existing file) selecting, copying, & moving files, deleting and restoring deleted files and folder, emptying the recycling, searching for files and folder)
16		2	Utilities and printing your document	Utilities: print screen facilities for capturing the screen, file compression, antivirus Issue (computer Virus, how virus infect computer, need for virus checking, running A virus checker updating your virus checking software), printing your document, printer, installing a new printer driver, printing to a file, controlling print jobs using the print manager).

Textbooks & Reference Books Recommended (Last Edition)

Nell Dale & John Levis. Computer Science Illuminated.

Format Hardback | 745 pages, Dimensions 185.42 x 228.6 x 25.4mm | 936g, Publication date 31 Jan 2019, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Revised, Edition Statement 7th Revised edition ISBN10 1284155617, ISBN13 9781284155617, Bestsellers rank 331,221

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 1337685933, ISBN13 9781337685931

William Stallings. Computer Organization and Architecture.

Format Mixed media product | 864 pages, Dimensions 180 x 230 x 40mm | 1,218g, Publication date 20 Apr 2015, Publisher Pearson Education Limited, Publication City/Country Harlow, United Kingdom, Language English, Edition Statement 10th edition, ISBN10 1292096853 ISBN13 9781292096858, Bestsellers rank 971,641

Seema Bhavnagar . 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 812033518X, ISBN13 978812033518

Angela B.Shiflet & George W.Shiflet.Introduction to Computer Science .

Format Hardback | 856 pages, Dimensions 178 x 254 x 53.34mm | 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 0691320732, ISBN13 9780691320719 Bestsellers rank 1,688,87

COMPUTER SKILLS (Module 2)				
Discipline		University Inclusive		
Department		Computer science		
Course title		ICDL module 3 & 4 (word processing, web browsing and communication)		
Co-requisite		None		
Course code		DMD 01 05		
Academic year		I		
Semester	2	Fall		
Number of credits	2	Knowledge	1	
		Practical	1	
Weeks	Hours		Topics	Descriptions
	Knowledge	practical		
1		2	The Microsoft Word 2007 screen	Working with documents, starting Microsoft word 2007, the Microsoft word 2007 screen, the level of command organization the office button, ribbon tabs, Minimizing the ribbon switching between tabs using the mouse, groups dial box launcher.
2		2	Starting to use Microsoft word 2007	Using the default Microsoft word 2007 documents, saving Microsoft word documents, 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 documents using different templates, switching between word Views.
3		2	Manipulating text and the clipboard	Manipulating text, select, then format, inserting text, inserting, deleting, undo and redo, inserting and overtype mode, copying text within a document, moving text within document. The clipboard, using the clipboard, the office clipboard, removing item from clipboard
4		2	Formatting	Text formatting: changing the font size or font type, formatting text as bold, italic or underline, applying subscript of superscript formatting, applying colors to selected text, applying different background colors to selected text changing the text case, setting hyphenation options.

5		2	Paragraph formatting	Paragraph formatting, paragraph marks, creating a paragraph, deleting a paragraph, merging paragraphs, Aligning text within a document, modifying paragraph spacing, applying a different bullet or numbering style to a list, adding border and shading finding and replace text.
6		2	Page formatting	Page formatting what is page formatting. Page orientation and paper size, changing the page size, page margins. Inserting page break, deleting page break, header and footer, page Numbering, header and footer fields, cover pages.
7		2	Style and objects	style applying character styles applying paragraph styles copying formatting using the format painter, table creation: creating table using the insert table button, entering data into a table, selecting elements within a table, using the table drop down menu.
8		2	Table formatting	Table formatting, specifying row height, specifying column height specifying column width modifying a cell border line style, specifying a border style (width, color) applying shading to cells within a table.
9		2	Graphical objects and multiple documents	Graphical objects, inserting clip art, inserting a picture from a picture file, inserting a chart in to a document, inserting Auto shape resizing a graphic within a document and deleting a graphic. Using multiple documents, tiling or cascading document son your screen, comparing document side by side, copying or moving selected items between documentaries.
10		2	Mail merging documents	Mail merging, what you need to learn about mail merging what in mail merging, creating and printing mail merged letters, creating and printing mail merged address labels, creating a mail list to be used within a mail merge, merging a mailing list to produce labels.
11		2	Customization and proofing	Setting and customizing Microsoft word options, setting the user name, setting the default opening, proofing, the important of proofing, spelling checking a document, add words to the built in custom dictionary, removing word a word from spell checking dictionary.
12		2	Preparing to print documents	Setting up documents, document formatting options, setting the paper size, setting the page orientation, setting margins using the page set-up command inserting and deleting a hard page break creating a header of footer, using the header and footer toolbar What are word field, using the header and footer, numbering pages within a document.

13		2	Checking and printing documents	Spell checking your documents, adding a word to the custom dictionary, manually checking your work, specifying what to print, specifying what to print, specifying the number of copies required and printing a document, printing using the default printer.
14		2	Using internet explorer	Opening the Microsoft internet explorer program, navigation through web site, switching between tabs, refreshing web page, copying a picture from a web site, saving a web page, downloading file from a web page.
15		2	Using the web	Searching the web, search engine web sites, using keyword and phrases, searching by date, searching by file format, online encyclopedia, online from a web page.
16		2	Email management	Manage your Emails: organizing your email, sending messages receiving an email, setting message sensitivity, attaching file to a message, deleting as attached file from outgoing message, restoring a message from the deleted items folder.

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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,

ENGLISH LANGUAGE

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- ☐ Total 100%

First semester

By the end of this course, Students should be able to:

- ☐ Enhance their language skills of speaker, reading, listening and writing;
- ☐ 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 a 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/her 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 sources.
- ☐ Enhancing their language skills of speaking, reading, listening and writings perfectly;
- ☐ Knowledge medical terms derived from Greek or Latin and a number of most common abbreviations, such as AIDS etc.;
- ☐ In addition, 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 writings, in this semester we focus more and more on medical English than general English.

ENGLISH LANGUAGE (Module 1)					
Discipline			University Inclusive		
Department			English department		
Subject			General English/interchange two		
Course code			DMD 01 05		
Class			I		
Semester		1	Spring		
Number of credits		5	Knowledge		5
			Practical		
Weeks	Hours		Topics	Descriptions	
	Knowledge	practical			
1		5	Unit one people; child hood; memories	Speaking: talking about yourself, asking about someone’s childhood Reading: reading about a career Writing: writing a short paragraph about your childhood Listening: Listening to the people talking about their past Grammar: past tense; used to for habitual activities in the past	
2		5	Unit two transportation; Transportation Problems; city services	Speaking: talking about transportation and transportation problems Reading: reading about new transportation Writing: writing a letter to the editor Listening: ask for personal information Grammar: adverbs of quantity with count and non-count nouns	
3		5	Unit three Houses and apartments; lifestyle change; wishes	Speaking: describing positive and negative feature, making comparisons 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 apartments for rent Grammar: evaluations and comparisons with adjectives.	
4		5	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 descriptions of food Grammar: simple past vs. present perfect	

5		5	Unit five Travel; vacation; plans	Speaking: describing vacation plans 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
6		5	Unit six Complaints; Households chores; requests; excuses; apologies	Speaking: Making requests 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
7		5	Unit seven Technology; Instruction	Speaking: describing technology; giving instruction; giving suggestions Reading: reading about the life in the future Writing: writing a note giving instruction Listening: Listening to people discuss computers Grammar: infinitives and gerunds for uses and purposes.
8		5	Unit eight Holidays; festivals; Customs; celebration	Speaking: describing holidays, festivals, customs and special events Reading: reading about read about holidays and unusual customs Writing: writing a travel guide Listening: Listen someone talk about Halloween Grammar: relative clauses of time
9		5	Unit nine Life in the past, Present and future; Changes and contrasts; Consequences	Speaking: talking about change; comparing time periods; describing possibilities Reading: reading about the signs of being is love Writing: writing a description of a person Listening: listening to people talk about changes Grammar: time contrasts conditional sentence with <i>if</i> clauses
10		5	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: gerunds, short responses; clauses with because.
11		5	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 Listening: listening for information about a country Grammar: passive with by (simple past); passive without by (simple present).

12		5	Unit twelve Information about someone's past; recent, past events	Speaking: asking about someone's past, describing recent experiences 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
13		5	Unit thirteen Entertainment; Movies and books; reaction and opinions	Speaking: describing movies and books Reading: reading about author's career Writing: writing a movies review Listening: listening to opinions Grammar: participle as adjective; relative clauses
14		5	Unit fourteen Nonverbal communication gestures and meanings; signs; drawing conclusions	Speaking: interpreting body language; explaining gestures and meanings 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
15		5	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 clauses; past modals
16		5	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 voice mail message Grammar: reported speech General review: solve the problems of the Students/quizzes and test

Textbooks & Reference Books Recommended (Last Edition)

Grammar in context, by

Format Mixed media product | 240 pages, Dimensions 220 x 277 x 12mm | 721g, Publication date 01 Jan 2008, Publisher Macmillan Education, Publication City/Country London, United Kingdom, Language English, ISBN10 1405070544, ISBN13 9781405070546, Bestseller

English grammar and composition by Wren and Martin, 2006

Format Paperback | 140 pages, Dimensions 175 x 245 x 6mm | 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 | 175 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 0523282010, ISBN13 9780523282015, Bestsellers rank 90,69

English grammar by Betty Scamper, 5rd edition

Format Paperback | 288 pages, Dimensions 214 x 275 x 9mm | 510g, Publication date 29 Jan 2017, Publisher Pearson Education (US), Publication City/Country Upper Saddle River, United States, Language English, Edition Statement 5th edition, ISBN10 0134275446 ISBN13 9780134275444, Bestsellers rank 250,650

Essential grammar in use by Roy mound Murphy, 4rd edition, 2015

Format Paperback | 320 pages, Dimensions 197 x 264 x 15mm | 670g, Publication date 23 Sep 2015, 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 1107480558, ISBN13 9781107480551 Bestsellers rank 8,546

New inter change book one, by Jack C Richards, Students text book, 2001

Format Mixed media product | 152 pages, Dimensions 220 x 280 x 10mm | 399.17g, Publication date 30 Jan 2001, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, Edition Student

ENGLISH LANGUAGE (Module 2)					
Discipline			University Inclusive		
Department			English department		
Subject			ESP/ professional English in use		
Course code			DMD 02 05		
Class			I		
Semester		2	Fall		
Number of credits		5	Knowledge		5
			Practical		
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1		5	Health and illness parts of the body	Speaking: talking about health, sickness, recovery and name parts of the body Reading: reading the passage Listening: Listening to someone who is talking about the radiation of pain in his body Writing: homework assignment-write an advice for keeping fit	
2		5	Function of the body	Speaking: talk about their function of their organ/job of GPs Reading: read the passage Listening: Listen to the pronunciation of the new words Writing: write five questions about a patient who has diabetes	
3		5	Nurses Allied health professionals	Speaking: talk about the job of nurses and their grades Reading: read the passage silently Writing: write an article about the nurses responsibility Listening: listen to a nurse talks about her routine.	
4		5	Hospital primary care	Speaking: talk about the hospital and the difference word of a hospital Reading: read the relevant passage about hospital Listening: listen to a Doctor introducing a hospital	
5		5	Medical education The overseas Doctor	Speaking: talk about medical education in your country Reading: read the passages Listening: listen to the pronunciation of the new words Writing: write about the system of education in your country	

6		5	Signs and symptoms blood	Speaking: describe anemia Reading: read the passage Listening: listen to the pronunciation of the new words Writing: write a short article about a stress fracture
7		5	Bones childhood	Speaking: Look at the human skeleton and name them Reading: read the passage Listening: listen how the anatomical name of the bones are pronounced Writing: write a short article about a stress fracture
8		5	The endocrine system The eye	Speaking: talk about the glands and their function in the body Reading: read the passages Listening: listen to the passage about the abdomen Listen to people making invitation Writing: write a referral letter
9		5	The gastrointestinal system	Speaking: talk about digestive system Reading: read the passage about the abdomen Listening: people making invitation Writing: write a short article about human digestive system
10		5	Gynecology	Speaking: talk about reproductive system of women Reading: read the passages Listening: listen to pronunciation of the new words in the cassette Writing: writing a passage about women menstruation
11		5	The heart and circulation	Speaking: talk about heart and its function in the body Reading: read the passages on P 52 Listening: listen for a medical conversation about the heart Writing: write about hear failure
12		5	Infections mental illnesses	Speaking: talk about microorganism/about mental illnesses Reading: read the passages Listening: listen to the new words Writing: write about the cases of HIV in your country
13		5	The nervous system	Speaking: talk about sensory loss and motor loss Reading: read the passage about epileptic fit and syncope attack Listening: listen to the pronunciation of new words Writing: write about tendon reflex
14		5	Oncology	Speaking: talk about neoplasm Reading: read the passage silently and then aloud Listening: listen to medical conversation Writing: write about the treatment of tumors
15		5	Pregnancy and child birth	Speaking: what is lab our? Describe it.

				Reading: read the passage about lab our and lie presentation Listening: listen to the new words Writing: write a short article about the oldest and youngest age in your country
16		5	The respiratory	Speaking: talk about respiratory system Reading: read the passage 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)

English grammar and composition by Wren and Martin, 2006

Format Paperback | 140 pages, Dimensions 175 x 245 x 6mm | 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 | 175 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 0523282010, ISBN13 9780523282015, Bestsellers rank 90,69

English grammar by Betty Scamper, 5rd edition

Format Paperback | 288 pages, Dimensions 214 x 275 x 9mm | 510g, Publication date 29 Jan 2017, Publisher Pearson Education (US), Publication City/Country Upper Saddle River, United States, Language English, Edition Statement 5th edition, ISBN10 0134275446
 ISBN13 9780134275444, Bestsellers rank 250,650

Essential grammar in use by Roy mound Murphy, 4rd edition, 2015

Format Paperback | 320 pages, Dimensions 197 x 264 x 15mm | 670g, Publication date 23 Sep 2015, 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 1107480558, ISBN13 9781107480551 Bestsellers rank 8,546

New inter change book one, by Jack C Richards, Students text book, 2001

Format Mixed media product | 152 pages, Dimensions 220 x 280 x 10mm | 399.17g, Publication date 30 Jan 2001, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, Edition Student

MEDICAL PHYSICS

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Course description

- ☐ Develop basic understanding of medical physics 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 equation used to evaluate the motion of fluids
- ☐ To learn the fundamentals of the heat and thermoregulation in the body
- ☐ 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, waves and their interaction with body
- ☐ To explain the mechanism of laser production and its application in medicine
- ☐ To learn the mechanism of x-ray production, production of radiology images, the x-ray interaction with the body and to know different modalities of radiology
- ☐ To get acquainted with basic concepts of nuclear medicine and its spectrum of application
- ☐ To learn about radiology and its mechanism of the work in medicine
- ☐ To learn about radiology, effect of radiation on the body, how to protect patients and other individuals from unnecessary exposure
- ☐ To understand the basic fundamental of management and application of magnetism in the medicine, MRI physical concepts of medical endoscope
- ☐ Basic concepts in electrocoagulation

Skills

Introduction to practical course of medical physics, units of measurement, metric system, British system

Centrifuge: introduction: the use of centrifuge in medicine, sedimentation principle, centripetal acceleration, demonstration of centrifuge

Blood pressure: sphygmomanometer, physical aspects of measurement of blood pressure, demonstration and practical measurement of blood pressure

Thermometers and units used in health: centigrade, Fahrenheit, kelvin, conversion of health units

Microscope: type of microscopes physical aspects, Magnification factor, mechanism of the work

Defibrillator: electrical current of the heart, physical aspects of defibrillator, demonstration of defibrillator

Chest tube and water seal: physics of respiration, what is chest tube and water seal? Pathologies require chest tube, mechanism of chest tube work

Ultrasound machine: probes different parts of the machine, demonstration of the work of ultrasound machine

ECG machine: electrical activity of the heart, demonstration of the machine and mechanism of its work

Optometry: defects of vision, concave and convex lenses and glasses

Introduction to laser machine: Demonstration of the machine, mechanism of its work, wavelength and filters

X-ray machine: X-ray tube, Table, cassette, Film, analogue and digital X-ray

CT- scan machine: introduction to linear accelerator, treatment planning, dose fractionation, PTV, CTV

Introduction to radionuclides: calculation of half-life to radionuclides and decay, calculation of half-life, biological and physical half-life

MRI machine: table, gantry, intensity, T1 contrast, T2 contrast images, proton density, MRI protocols.

Course contents

MEDICAL PHYSICS					
Discipline			Basic Subjects		
Department			Physics		
Subject			Medical physics		
Course code			DMD 02 09		
Class			I		
Semester		2	Fall		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Basic concepts	Fundamental and derived SI units, Vectors & scalars, addition of vectors	
2	1	1	Mechanics of a particle and rigid body	Uniform rectilinear motion, uniform accelerated motions, free fall, Newton laws of motion, force, momentum, impulse of a force, weight, density, torque, statics and kinetic friction, uniform circulation.	
3	1	1	Work, energy , power	Work, power, efficiency, kinetic energy, potential energy of a body in field of gravity, elastic (normal stress, linear strain, hook’s law, modulus of elasticity),Newton principle of universal gravitation	
4	1	1	Oscillation and waves	Basic concepts of oscillation, pendulum, mass spring (period, frequency, phase velocity Energy), definition and production of waves, types of waves (Mechanical and electromagnetics), ways of waves propagation (transverse and longitudinal waves, travelling and standing waves.	
5	1	1	Waves and sound properties	Waves interference, dispersion, polarization, energy and intensity, production of sound, audible sound and ultrasound, intensity and level of sound intensity. Sound velocities, echo, sound penetration power.	

6	1	1	Mechanics of fluids	Ideal liquids, pressure, Archimedes, principle, force of buoyancy, viscosity, laminar and turbulent flow equation of continuity, Bernoulli's equation, surface tension capillary elevation and depression, Laplace's formula
7	1	1	Heat and heat temperature	Heat nature, temperature systems, heat transportation methodologies (conduction, convection and radiation), heat flow and heat distribution, heat capacity, specific heat capacity, ideal gas law, PV-diagrams, isothermal, isochoric, isobaric and adiabatic processes thermal expansion and construction of solids
8	1	1	Principle of thermodynamics	First law of thermodynamic, equation of thermal conductivity, second law of thermodynamics, thermal engines, thermos, freezer, (working cycle of the Carnot ideal engine), conservation of heat and energy.
9	1	1	Knowledge of electricity	Electric charge, conductors, coulombs law, dielectric constant, electric field, intensity, potential and potential difference (voltage), electric capacity of a parallel-plate Capacitors in parallel and in series, electric current Ohm's law, resistors, conductivity, temperature, coefficient of resistance, Kirchhoff's laws
10	1	1	Knowledge of electricity (+electrodynamics)	Resistors in parallel and in series, electrical power and heating effect, thermoelectric phenomenon, Faraday's law of electrolysis, Faraday's constant, N-type and P-type semiconductors, properties of P-N junction, principle of a transistor
11	1	1	Magnetism	Force acting between two magnetic, poles, magnetic field, magnetic flux and flux density, Oersted's discovery, magnetic field due to a straight wire of coil of solenoid, magnetic force exerted on a conductor carrying electrical current, magnetic force between two parallel conductors, magnetic on moving charged particles
12	1	1	Electromagnetism	Electromagnetic induction, Lenz's law electromotive induction (emf), self-inductance of a coil, Faraday law (production of alternating current AC, effective values of current and voltage, electric power of alternating current, impedance (capacitance, inductance) AC transformer and AC generator
13	1	1	Optics	Basic properties of light and optical media, speed of light reflection and refraction of light (Snell's law, critical angle), lenses, so-called lens-maker's equation, sign convention, dioptric power, converging and diverging lens, lens equation,

				linear magnification, mirror (imaging equation and magnification).
14	1	1	Optics (continue...)	Basic optical properties of human eye, microscope and its magnification, light spectrum, interference of light, polarized light, photometry (luminous, intensity, luminous flux, illumination).
15	1	1	Quantum and relativity physics	Unit "electron volt" excitation of atoms, de Broglie matter waves, principal quantum number, orbital quantum number, magnetic quantum number, Pauli's exclusion principle of X-ray production of relativity (general and special relativities)
16	1	1	Atomic and nuclear physics	Photoelectric effect, Compton scattering structure of nucleus, nuclides, isotopes, nuclear binding energy, principle of a nuclear reactor, alpha-decay, gamma-decay, neutron, radiation, fission of heavy nuclei, law of radiation decay, Becquerel, Geiger-Mueller counter.

Textbooks & Reference Books Recommended (Last Edition)

Suzanne Amador Kane; physics in modern Medicine,

Format Paperback | 432 pages, Dimensions 156 x 235 x 25.4mm | 658g, 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 232 x 279 x 50.8mm | 2,744g, Publication date 11 Jan 2013, Publisher Taylor & Francis Inc, Imprint CRC Press Inc, Publication City/Country Bosa Roca, United States, Language English, Illustrations note 483; 1 Tables, black and white; 1157 Illustrations, black and white, ISBN10 1439846529, ISBN13 9781439846520

William Bialek; Biophysics, Searching for principles,

Format Hardback | 640 pages, Dimensions 203 x 254 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 0691138915, ISBN13 9780691138932, Bestsellers rank 1,068,370

Irving P.Herman; physics of the Human Body

Format Hardback | 953 pages, Dimensions 155 x 235 x 57.66mm | 1,791g, Publication date 19 Jan 2032, Publisher Springer International Publishing AG, Publication City/Country Cham, Switzerland, Language English, Edition Revised, Edition Statement 2nd ed. 2032, Illustrations note 100 Tables, color; 606 Illustrations, black and white; XXIV, 953 p. 606 illus. ISBN10 3319239309, ISBN13 9783319239309, Bestsellers rank 526,797

Simon R.Cherry . physics in Nuclear Medicine.

Format Hardback | 544 pages, Dimensions 203 x 279 x 27.94mm | 1,542.21g, 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,

BIOPHYSIC

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- ☐ Mid semester exam 20%
- ☐ Final semester exam 60%
- ☐ Total 100%

BIOPHYSICS					
Discipline			Basic Subjects		
Department			Physics		
Subject			Biophysics		
Course code			DMD 01 08		
Class			I		
Semester		1	Spring		
Credits		2	Knowledge	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Introduction to biophysics	Units, structure of the atom, atomic models, photon, ionization and excitation...	
2	1	1	Measurement error (statistics)	Measurement quality, measurement error analysis, random and systematic errors, measurement accuracy, uncertainty in a measurement value, error models and measurement uncertainty estimating measurement uncertainty	
3	1	1	Descriptive statistics	Measurement of central tendency, mean, median, mode....	
4	1	1	Ultrasound	Production and properties of ultrasound, biological and chemical properties of ultrasound imaging?	
5	1	1	Medical and Dental applications of ultrasound	Image quality and artifacts, obstetrical ultrasound imaging, echocardiography, ultrasound images of the heart, rheology.	
6	1	1	Bioelectricity	Knowledge of electrical , production and properties of high frequency current, physiological effects of electricity).	
7	1	1	Medical and Dental applications of high frequency currents	Electrical surgery, thermotherapy, diagnostic equipment (electrocardiograph, electroencephalograph and electromyogram)	
8	1	1	Electromagnetic waves	Definition, electromagnetic spectrum, radio waves, micro waves, infra-red, visible light, ultraviolet, x-rays, Gamma rays, interaction of electromagnetic radiations with human body.	

9	1	1	Application of non-lionizing radiation in Dentistry and dosimetry	Non lionizing radiations, lionizing radiations, application of UV in Dentistry, absorbed dose, effective dose, equivalent dose, safety reports (NCRP, ICNIRP)
10	1	1	Laser	Production, properties of laser, type of lasers, clinical application of lasers in Dentistry, advantage and drawbacks of lasers for medicine, other medical application of lasers.
11	1	1	Physics of MRI	Introduction, the science of magnetism, Nuclear magnetism, NMR, contrast mechanisms for MRI, listening to spin echoes, how MRI maps the body, how safe in MRI?
12	1	1	Basics of Radiology	Electromagnetic induction, Lenz's law electro motive induction (emf), self-inductance of a coil, Faradic law (production of alternating current AC, effective values of current and voltage, electric power of alternating current, impedance (capacitance, inductance) AC transformer and AC generator
13	1	1	Ct-Scan (radiology application in Dentistry)	Computed tomography (CT), Hounsfield units, how images are created in CT-Scan, CT in Dentistry, advantages and drawbacks of CT.
14	1	1	Basics of Nuclear physics	Introduction: radioactivity and medicine. Nuclear physics basics, decay, half-lives (physical, biological), alpha, Beta and Gamma rays.
15	1	1	Application of nuclear physics in medicine	Gamma camera imaging, emission tomography with radionuclides: SPECT and PET, radiation in medical treatment, application labeled molecule in Dentistry and medicine.
16	1	1	Introduction to radiotherapy	Introduction, external beam radiotherapy, cobalt 60 machine linear accelerators, brachytherapy (LDR, HDR)

Textbooks & Reference Books Recommended (Last Edition)

Suzanne Amador Kane; physics in modern Medicine,

Format Paperback | 432 pages, Dimensions 156 x 235 x 25.4mm | 658g, 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 232 x 279 x 50.8mm | 2,744g, Publication date 11 Jan 2013, Publisher Taylor & Francis Inc, Imprint CRC Press Inc, Publication City/Country Bosa Roca, United States, Language English, Illustrations note 483; 1 Tables, black and white; 1157 Illustrations, black and white, ISBN10 1439846529, ISBN13 9781439846520

William Bialek; Biophysics, Searching for priciples,

Format Hardback | 640 pages, Dimensions 203 x 254 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 0691138915, ISBN13 9780691138932, Bestsellers rank 1,068,370

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Simon R.Cherry . physics in Nuclear Medicine.

Format Hardback | 544 pages, Dimensions 203 x 279 x 27.94mm | 1,542.21g, 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. 500 illustrations (350 in full color) ISBN10 1432051988, ISBN13 9781432051985, Bestsellers rank 290,531

INORGANIC AND ORGANIC CHEMISTRY

Attendance policy

- ☐ Regular student attendance at all.
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- ☐ More than 25% 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 20%
- ☐ Final semester exam 60%
- ☐ Total 100%

Course description

- ☐ Upon completion of inorganic & organic chemistry course, the Student should understand:
- ☐ The basic structures of atoms, ions, molecules and ways to quantitatively describe the properties of atoms and molecules in the various phases of pure matter and in, mixtures.

- ☐ The reactivity of atoms, ions, molecules and the various qualitative, quantitative methods for describing or depicting chemical reactions.
- ☐ 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 the three-dimensionality of molecules,
- ☐ To be able to interpret patterns of reactivity based on mechanistic reasoning,
- ☐ To be able to design syntheses of organic molecules of moderate complexity.

Course content

MEDICAL CHEMISTRY (MODULE 1)						
Discipline			Basic Subjects			
Department			Chemistry			
Course title			Non organic chemistry			
Co-requisites			None			
Course code			DMD 01 10			
Academic year			I			
Semester		1		spring		
Credits		2		Knowledge		1
				Practical		1
Weeks	Hours		Topics	Descriptions		
	Knowledge	Practical				
1	1	1	Introduction of medical chemistry	International (English) nomenclature Properties and biological importance of water		
2	1	1	Introduction to medical chemistry	Solutions, their properties (dissuasion and osmosis)		
3	1	1	Introduction to medical chemistry	Electrolytes in body liquids Solubility product.		
4	1	1	Acid Base reactions, Ph, Buffers	Acid base reactions		
5	1	1	Acid Base reactions, Ph, Buffers	PH of weak acids and bases, hydrolysis of salts		

6	1	1	Acid Base reactions, Ph, Buffers	Buffing system and colloid solutions.
7	1	1	Acid Base reactions, Ph, Buffers	Thermodynamics of living systems.
8	1	1	Acid Base reactions, Ph, Buffers	Energy and kinetics of chemical reactions.
9	1	1	Acid Base reactions, Ph, Buffers	Oxidation-reduction Reduction in living organisms.
10	1	1	Non-Metal Elements and their compound in Dental medicine	Nonmetallic elements and inorganic compounds of calcium and phosphorus
11	1	1	Non-Metal Elements and their compound in Dental medicine	Chemical structure of bones, teeth Dental ceramics, and its properties (fragility, strength, hardness, density, thermal conductivity, optical properties)
12	1	1	Non-Metal Elements and their compound in Dental medicine	Dental porcelain and cements
13	1	1	Metal and their alloys	Structure and properties of metals, hardening, recrystallization, cooling curves of metals and their alloys
14	1	1	Metal and their alloys	Crystallographic systems Noble metals and their alloys
15	1	1	Metal and their alloys	Crystallographic systems Noble metals and their alloys
16	1	1	Metal and their alloys	Crystalline structure of pure metals;

Textbooks & Reference Books Recommended (Last Edition)

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 6th ed. Illustrations note Illustrations, unspecified, ISBN10 1260475638, ISBN13 9781260475630

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 1,504,29

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 8131726975, ISBN13 9788131726976

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

Format Hardback | 960 pages, Dimensions 152 x 229 x 60.96mm | 2,064g, Publication

MEDICAL CHEMISTRY (MODULE 2)					
Discipline			Basic Subjects		
Department			Chemistry		
Course title			Organic chemistry		
Co-requisites			None		
Course code			DMD 02 10		
Academic year			I		
Semester		2	Fall		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Derivate of Hydrocarbons	General characteristic of organic compounds, types of isomeric medical and toxicological significance of halogenderivates, hydroxiderivates, aldehydes, ketones and chin ones.	
2	1	1	Derivate of Hydrocarbons	Carboxylic acids and their derivate significant organic nitrogen (S, P...)compounds, derivate of carbonic acid (urea and its derivate).	
3	1	1	Heterocycles	Five or six-membered ring heterocycles with 1 or more heteroatoms (including condensed rings).	
4	1	1	Heterocycles	Biochemically and medically important derivate of heterocyclic compounds (co-enzymes, vitamins, amino acids, purines, pyrimidines, carbohydrate, hormones, medicaments, dyes), Heterocyclic compounds as drugs.	
5	1	1	Polymerization and poly condensation	Polymerization, poly condensation and poly addition.	
6	1	1	Polymerization and poly condensation	Some macromolecules resulting from the poly condensation, their importance and use in the synthesis of synthetic materials used in Dentistry, Dental plastics, their composition and chemical importance.	

7	1	1	Impressions materials	Impressions materials, their chemical composition and importance, Modell plaster (production, setting plaster, mixing ratio, volume change of plaster, strength).
8	1	1	Impressions materials	Modeling materials (wax), molding materials (thermal) expansion, thermal inversion, refractoriness, porosity, volume changes).
9	1	1	Saccharides	Saccharides, relationship of structure and biological properties of saccharides monosaccharides and their derivative (uronic acids, glycosides, monosaccharides, oligosaccharides).
10	1	1	Saccharides	Disaccharides and polysaccharides (peptidoglycans, proteoglycans, glycoproteins), configuration, biological properties complex saccharides and their importance.
11	1	1	Lipids and steroids	Structure and classification of lipids, fatty acids, eicosanoids and their biomedical importance, derivative of fatty acids.
12	1	1	Lipids and steroids	Complex lipids- phospholipids, glycolipids, lipoproteins basic structure of steroids, classification of steroids (cholesterol, steroid hormones, bile acids)
13	1	1	Amino acids and peptides	Composition, classification and properties of amino acids derivative of amino acids and their biochemical importance.
14	1	1	Amino acids and peptides	Physico-chemical characteristic of peptides and their usage in biochemistry, biochemically important peptides (glutathione) method of isolation, purification and detection of peptides.
15	1		Nucleic acids	Nucleosides and nucleotides, biochemically important nucleotides with high energy of hydrolysis, DNA, structure, conformation, properties.
16	1		Nucleic acids	RNA, structure, function, classification, method of analysis of nucleic acids, usage in medicinal practice (restriction enzymes, PCR.)

Textbooks & reference books recommended (Last edition)

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 6th ed. Illustrations note Illustrations, unspecified, ISBN10 1260475638, ISBN13 9781260475630

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 1,504,29

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 8131726975, ISBN13 9788131726976

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

Format Hardback | 960 pages, Dimensions 152 x 229 x 60.96mm | 2,064g, 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 1466518146 ISBN13 9781466518148, Bestsellers rank 2,866,151

ANATOMY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Course description

The broad of teaching of undergraduate 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 presentations

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 connections and relationship between all parts of the body

Skills

- ☐ **Upper limb**; dissection: pectoral and scapular, axillary and shoulder region, arm, forearm
- ☐ **Prosecuted parts**: joints, palm 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 viscera, blood vessels and nerves
- ☐ Prosecuted parts: perineum including ischia-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
- ☐ Prosecuted 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 infra temporal fossa, cranial cavity, nose and oropharyngeal regions, ear, larynx and pharynx

a- Neuroanatomy

- ☐ Gross specimen of full brain, meninges, spinal cord, prosecuted specimens to demonstrate visual system, auditory and vesicular 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 markings of important organs
- ☐ Localize important pulsation and the structure against which pressure can be applied in case of bleeding from a 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:

1. Didactic lectures

Discussing the topic in detail in one hour lecture time.

☐ **Skills**

- ☐ Dissection is done by Students of the cadavers and in being assisted/supervised by a team of teachers. Some prospecting specimen/dissection are shown on ultra-scope, which is telecasted on TV monitors fitted in dissection Hall.
- ☐ Videos of some dissection 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 teachers 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 levels 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 because of lesions
- ☐ Demonstration: mainly the bones of the entire body, few dissected specimen 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

ANATOMY (MODULE 1)					
Discipline		Basic Subjects			
Department		Human anatomy			
Subject		Anatomy (Osteology, muscles and joints)			
Course code		DMD 02 11			
Class		1			
Semester	2		Spring		
Number of credits	2		Knowledge	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	General information	1, descriptive anatomical terms 2, Basic structures (skin, fascia and muscles) (joints, Ligaments, Bursa, synovial Sheets) Blood Vessels, Lymphatic system, Nervous system, Mucous Membranes, serous Membranes, Bones & Cartilages.	
2	1	1	Bones of the upper & lower limbs	PART ONE- THE HUMAN OSTEOLOGY Bones of the upper limb: Clavicle, scapula, Humorous, the radius, the ulna, the skeleton of the hand, bones of the lower limb: hip bone, the pelvis as a whole	
3	1	1	The vertebral column	The Femur, Patella, Tibia and Fibula, the skeleton of the Foot, the vertebral column: structure of a typical vertebra, atypical cervical vertebrae (atlas & axis), the sacrum & coccyx.	
4	1	1	The skull	The sternum & ribs, 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 from the lateral side.	
5	1	1	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:	

6	1	1	The back	<p>PART TWO-THE BACK</p> <p>Cutaneous nerves of the back, joints between vertebra in the back,</p> <p>Ligaments, Back musculature, superficial group of back muscles,</p> <p>Intermediate group of back muscles, deep group of back muscles, sub occipital muscles, Nerves of the back.</p>
7	1	1	The upper Limb	<p>PART THREE- THE UPPER LIMB</p> <p>Regions of the Upper limb: the pectoral region, the Axilla(axillary artery, vein and lymph nodes), Lymph nodes of the upper limb, the brachial plexus and its branches, the Mammary glands.</p>
8	1	1	The scapular region & the arm	<p>The scapular region: muscles & intramuscular spaces, Nerves of the scapular region, Arteries of the scapular region, The Arm, Compartments of the Arm, Contents of the Anterior Compartment of the Arm.</p>
9	1	1	The Arm	<p>Contents of the Posterior Compartment of the Arm, The Cubital Fossa The Forearm & Hand, General review of structures in front of the forearm & hand, Content of the anterior compartment of the forearm, Muscles and Fascia of the Wrist & Hand.</p>
10	1	1	The Wrist & Hand	<p>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, Content of the posterior compartment, Blood vessels of the posterior compartment.</p>
11	1	1	Nerves & Joints of the Upper Limb	<p>Nerves of the Free Upper Limb: median, and radial nerves, Joints of the Upper Limb, Sternoclavicular joint, Acromioclavicular joint, the Shoulder joint, The Elbow joint, Distal radio-ulnar joint, Wrist joint, carpal joints, Carpometacarpal joints, Metacarpus-phalangeal joints, and Interphalangeal joints.</p>
12	1	1	The lower limbs	<p>PART FOUR-THE LOWER EXTREMITY</p> <p>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.</p>
13	1	1	The Thigh	<p>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, profound femoral's artery & vein, obturator, artery & vein the back of thigh, general review, contents of the canal, femoral sheath.</p>

14	1	1	Popliteal fossa & back of the leg	Popliteal fossa, the front and lateral side of the leg: general review contents of the anterior compartment the leg, muscles & blood vessels back of the leg: general review, content of the posterior compartment of the leg, Muscles retinacula, synovial sheaths and arteries
15	1	1	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.
16	1	1	Lumbar & sacral plexus and joints of the lower limb	Of thigh, perforating cutaneous nerve, the sciatic nerve and pudendal nerves, joints of the lower limb, joints and ligaments of the pelvis, hip joint, knee joint, ankle joint, inter tarsal joints, taros-metatarsal joints, metatarsal-phalangeal joints, interphalangeal joints.

Textbooks & Reference Books Recommended (Last Edition)

Cunningham's manual of practical anatomy

Format Paperback | 432 pages, Dimensions 196 x 267 x 20mm | 1,038g, Publication date 07 Aug 2018, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Revised, Edition Statement 32th Revised edition, ISBN10 0198749384, ISBN13 9780198749387, Bestsellers rank 1,498,17

Clinical Anatomy for medical Student

Format Paperback | 270 pages, Dimensions 129 x 198 x 15.24mm | 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 337,154

Jean Baasy Neuroanatomy

Format Hardback | 475 pages, Dimensions 195.58 x 271.78 x 30.48mm | 1,769.01g, Publication date 29 Dec 2009, Publisher Springer Editions, Publication City/Country Paris, France Language French, Illustrations note Bibliography; Figures; Illustrations, color; Illustrations, black and white, ISBN10 2287595323, ISBN13 9782287595325

Atlas of Human Anatomy Frank H Netter MD Fifth Edition

Format Paperback | 672 pages, Dimensions 224 x 284 x 25.4mm | 1,995.81g, Publication date 01 Mar 2018, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 7th Revised edition, Illustrations note Approx. 535 illustrations (535 in full color) ISBN10 0323393225, ISBN13 9780323393225, Bestsellers rank 2,625

Gray's anatomy for Students

Format Paperback | 1180 pages, Dimensions 232 x 276 x 38.1mm | 2,381.36g, Publication date 12 Apr 2019, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 4th Revised edition, ISBN10 0323393047, ISBN13 9780323393041, Bestsellers rank 1,873

Cunningham's manual of practical anatomy

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ANATOMY (MODULE 2)					
Discipline			Basic Subjects		
Department			Human anatomy		
Subject			Anatomy (thorax, abdomen and pelvis)		
Course code			DMD 02 11		
Class			1		
Semester		3	Fall		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	The thoracic cavity joints of the thorax	PART TIVE-THE THORAX Some 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 structures in the mediastinum, joints of the thorax, intervertebral joints of the sternum, joints of ribs with vertebral column, joints between ribs, costal cartilages and sternum.	
2	1	1	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.	
3	1	1	The mediastinum and lungs	The thoracic cavity: the mediastinum, the pleurae, trachea & principle bronchi, the lungs, the bronchial tree, Broncho-pulmonary segments, pulmonary arteries & veins, bronchial arteries & veins, innervation & lymphatic drainage of the lungs.	
4	1	1	The middle mediastinum and heart	The middle mediastinum, pericardium, the heart: exterior of the heart, interior of the heart, cardiac chambers, valves of he heart, cardiac skeleton.	
5	1	1	Coronary vasculature cardiac innervation	Coronary vasculature, vein of the heart, coronary lymphatics, cardiac conduction system, cardiac innervations, pulmonary trunk & ascending aorta, superior mediastinum, contents.	

6	1	1	Superior mediastinum	Nerves of the superior mediastinum , thoracic duct, posterior mediastinum; esophagus, thoracic aorta, azygos system of veins, thoracic duct in the gut, skin & muscles of the abdominal walls, vertebral level LI, Major arteries & venous shunt in the abdomen, porto-caval anastomosis, prevertebral plexus & viscera supplied by it.
7	1	1	The abdomen	PART SIX-THE ABDOMEN General description, relationship to the other regions, key features, development of the gut, skin& venous shunt in the abdomen, porto-caval anastomoses, paravertebral plexus & viscera supplied by it.
8	1	1	Abdominal viscera	Regional anatomy, surface topography, abdominal wall: fascia & muscles, Flat muscles, transversals fascia, vertical muscles, extra peritoneal fascia & perineum, innervation, arterial supply & venous drainage, lymphatic drainage, groin, inguinal canal, inguinal hernia.
9	1	1	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
10	1	1	Blood supply of the abdomen	Superior mesenteric artery, inferior mesenteric, artery, venous drainage, lymphatic, innervation, sympathetic trunks, Parasympathetic innervations, enteric system, posterior abdominal region, posterior abdominal wall: bones
11	1	1	Posterior abdominal region and kidneys	Muscles, viscera, kidneys, ureters, suprarenal glands Vasculature, abdominal aorta, inferior vena cava, lymphatic system
12	1	1	The pelvis & perineum	Nervous system in the posterior abdominal region, surface anatomy PART SEVEN: THE PERINEUM General description, functions, component parts, relationship to the other regions, key features
13	1	1	Pelvis cavity and joints	Regional anatomy, pelvis, bones, joints orientation, true pelvis, pelvic inlet, pelvic wall, pelvic outlet, pelvic floor, perineal body
14	1	1	Pelvic viscera	Viscera, gastrointestinal system: rectum, anal canal, urinary system, ureters, bladder, urethra, reproductive system: in men: testes, epididymis, ducts deferens, seminal vesicle, prostate, bulb-urethral glands, in women: ovaries, broad ligament, uterus, uterine tubes, cervix, vagina, fascia, peritoneum
15	1	1	Pelvic viscera	Nerves: somatic plexuses, sacral & coccygeal plexuses: sacral plexus: sciatic nerve, pudenda nerve, other

				branches of the sacral plexus, coccygeal plexus, visceral plexuses, blood vessels: Arteries, veins, Lymphatics
16	1	1	Perineum	Perineum: borders & ceiling, ischia-anal fossae and their anterior recesses, anal triangle, urogenital triangle, structure in the superficial perineal pouch: erectile tissue: penis, clitoris, greater vestibular glands, muscles, superficial features of the extremal genititalia: in men, in women, superficial fascia of the urogenital triangle: somatic nerves, visceral nerves, blood vessels, veins, lymphatics.

Textbooks & Reference Books Recommended (Last Edition)

Gray's anatomy for Students

Format Paperback | 1180 pages, Dimensions 232 x 276 x 38.1mm | 2,381.36g, Publication date 12 Apr 2019, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 4th Revised edition, ISBN10 0323393047, ISBN13 9780323393041, Bestsellers rank 1,873

Cunningham's manual of practical anatomy

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Clinical Anatomy for medical Student HAROLD

Format Hardback | 550 pages, Dimensions 156 x 234 x 30mm | 939g, Publication date 10 Oct 2018, Publisher Franklin Classics, Language English, 11 Edition Illustrations note Illustrations, black and white, ISBN10 0342237632, ISBN13 9780342237630

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ANATOMY (MODULE 3)					
Discipline			Basic Subjects		
Department			Human anatomy		
Subject			Anatomy (head and neck)		
Course code			DMD 03 11		
Class			II		
Semester		4	Spring		
Number of credits		3	Knowledge		2
			Practical		2
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	2	1	The head and neck	PART EIGHT-THE HEAD AND NECK General description, regional anatomy: skull, cranial cavity meninges, brain & its blood supply: brain	
2	2	1	Cranial nerves	Blood supply of the brain, venous drainage, Dural venous sinuses, cranial nerves, types of fibers in peripheral nerves cranial nerve nuclei, Olfactory nerve, optical nerve oculomotor nerve, trochlea nerve, trigeminal nerve abdicant nerve, facial nerve, vestibule-cochlear nerve.	
3	3	1	Face	Glossopharyngeal nerve, vagus nerve, accessory nerve Hypoglossal nerve, face: muscles of the face: orbital, nasal & oral groups, other facial muscles, parotid gland, Innervation of drainage of the face.	
4	2	1	Scalp the orbits	Scalp: arteries, veins & lymphatic drainage of the scalp the orbits: the eyelids, lacrimal apparatus, fissures and foramina in the orbit, facial specializations, muscles of the orbit, vessels of the orbit	
5	2	1	The eyeball The ear	Nerves of the orbit, the eyeball: walls of the eyeball, anterior & posterior chambers, lens & vitreous humor, the ear external ear & tympanic membrane, middle ear, internal ear transmission of sound	
6	2	1	Temporal fossa Infratemporal fossa Pterygopalatine fossae	Introduction to the temporal & infra temporal fossae, temporomandibular joint, masseter muscle, temporal fossae infra temporal fossa: sphino mandibular nerve, chorda tympani & lesser petrosal nerve, maxillary artery, pterygoid plexus of veins, pterygopalatine fossa: Gateways.	

7	2	1	The neck	Contents of the pterygopalatine fossa, the neck: cervical fossa fascial compartments, superficial venous drainage, anterior triangle of the neck; muscles
8	2	1	The neck	vessels, nerves, posterior triangle of the neck; muscles, vessels nerves, root of the neck; blood vessels, nerves
9	2	1	Pharynx	Lymphatic: lymphatic in the neck, pharynx; skeletal framework, pharyngeal walls, nasopharynx, oropharynx laryngopharynx
10	2	1	Larynx The nasal cavities	Larynx: laryngeal cartilages, extrinsic ligaments, intrinsic ligament, laryngeal joints, laryngeal cavity, intrinsic muscles functions of the larynx, vessels & nerves, the nasal cavities
11	2	1	The nasal cavities	Skeletal framework, external nose, paranasal sinuses walls, roof & floor of the nasal cavity, anterior & posterior nares, gateways, blood vessels of the nasal cavities Innervation & lymphatic drainage
12	2	1	The oral cavity	The oral cavity: introduction, skeletal framework, walls of the oral cavity: the floor, the tongue, salivary glands.
13	2	1	The oral cavity	Parotid, submandibular & sublingual glands, vessels & nerves roof palate, soft palate: muscle, vessels & nerves of the palate The oral fissure & lips, oropharyngeal isthmus, teeth & gingivae, blood supply of the teeth
14	2	1	Endocrine glands of the head & neck	Blood supply of the gingiva, innervation of the teeth & gingiva PART NINE-ENDOCRINE GLANDS OF THE HEAD & NECK Carotid sinus & carotid body, Hypothesis cerebra, the pineal gland, thyroid & parathyroid glands, carotid body & carotid sinus
15	2	1	The central nervous system	Part ten-the central nervous system, introduction, grey & white matters, the spinal cord, spinal nerves & spinal segments Gross anatomy of the brainstem
16	2	1	Gross anatomy of the medulla, pons & midbrain	Gross anatomy of the medulla, pons & midbrain, gross anatomy of the cerebellum, gross anatomy of the cerebral hemispheres: external view of the cerebral hemispheres Basic points about some internal structure of a cerebral hemisphere, tracts of the spinal cord & brainstem, white matter of the cerebral hemispheres, ventricles of the brain The cerebrospinal fluid (CSF), & blood-brain barrier

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MICROANATOMY

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- ☐ More than 25% 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%

Skills

Routine and special stained slides of all the tissue and organs of body

Slide show to demonstrate filtration barrier kidney, alveolar septum, tight junction of capillaries and such relevant areas

General Histology

Four Primary Tissues

Epithelium microscopic characteristics, types function, distribution, basal lamina, cell junction's specialization of the cell surface and their structural details and functions; metaplasia

Connective tissue; fibers and their structural feature and functions, intercellular substance, Apophis ground substance, types of connective tissue: different types of compact and cancellous bone, their distribution and functions, ossification, blood supply of a long bone.

Muscle general features, detailed structure of skeleton muscle, and molecular mechanism of contraction, innervation of skeletal muscle, neuromuscular junction, morphological and His to chemical basis of classification into type I and II muscle fibers and their significance; structure and functional characteristics of cardiac and smooth muscle; innervation of cardiac and smooth muscle.

Nerves tissue; structural characteristics of a neuron, axon and dendrites, different type, synapse of neurons and their specific structural and functional features and distribution, axonal transport, synapse, morphological and functional characteristics of the central nervous system, regeneration in CNS with particular emphasis of stem cells sensory and autonomic ganglia, peripheral nerves, myelin and myelination, degeneration and regeneration in peripheral nerves.

Histology of various organs/ organ systems

Exocrine glands

Characteristics, simple and compound glands; types of secretions, mode of secretion, detailed structural features of a serous secreting cell and mucous secreting cell, serous and mucous acini, duct system, features of salivary glands, exocrine pancreas, sweat and sebaceous glands, mammary gland, bulbourethral gland etc.

Circulatory System

Structural features of heart; conducting and distributing arteries and arterioles; types of capillaries, their structural features and distribution and microcirculation, detailed structure of endothelium, structural characteristics of large and small veins and venules arteriovenous shunts, lymphatics

Respiratory System

Structural features of nose, nasopharynx, larynx, trachea, principal bronchi, lung including intrapulmonary bronchi, bronchioles, alveolar ducts, atria, alveoli, blood-barrier functions of different parts of respiratory system

Skin and nerve-end-organs

Thick, thin and hairy skin, cell renewal and pigmentation of skin, skin appendages, healing of skin wounds, sensory receptors of skin, function of skin.

Immune system and lymphoid organs

Lymphocytes, their subtypes and functions. Humoral and cell mediated immunity. Thymus, lymph nodes spleen, tonsil and other mucous associated lymphoid follicles.

Digestive system (GIT)

General organization oral cavity, lip, cheek, tongue, taste buds, associated salivary glands. Layers of tubular digestive tract, esophagus, stomach, small intestine, gastroesophageal junction gastroduodenal junction, large intestine, anal canal and rectal junction. Liver, internal organization of liver, liver lobule, liver acinus, significance of zonation in liver acinus. Liver sinusoids, detailed structure of hepatocyte, bile canaliculi, bile duct and pancreas.

Endocrine glands

Thyroid, parathyroid, Islets of Langerhans gland, adrenal cortex and medulla, their structural details, functional mechanisms, epiphysis cerebra, cell types secretion and their functions, hypothalamic portal circulation. Common endocrine disorders

Urinary system

Detailed microscopic structure of kidney, cortex, medulla, pyramids, medullary rays, cortical columns, glomerulus, nephron, glomerular filtration juxtaglomerular apparatus, its structural features and functions, renal interstitial, collecting ducts, renal sinus, minor and major calyces, microcirculation of kidney, histophysiology of the kidney, renal pelvis and ureters, urinary bladder and urethra.

Female reproductive system

Ovary, ovarian stroma, primary and secondary graafian follicles, function of various constituents and structural details of graafian follicles, atretic follicles, corpus luteum and its functions, corpus albicans. Oviducts, uterus, cyclic change in uterine, endometrium, fertilization, vagina, female external genitalia and mammary glands.

Male reproductive system

Testes, spermatogenesis, spermatozoa, cycle of seminiferous epithelium, sertoli cells, interstitial tissue leading cells, histophysiology of testes, epididymis, vas deferens, prostate, seminal vesicles, penis.

Course content

HISTOLOGY (MODULE 1)				
Discipline		Basic Subjects		
Department		Histology		
Subject		General histology		
Course code		DMD 01 12		
Class		I		
Semester	1	Spring		
Number of credits	2	Knowledge	1	
		Practical	1	
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1	1	1	Definition and methods	Cytology, general histology systemic histology, tissue preparation, sectioning methods, smears methods, special methods, and microscopy.
2	1	1	Components of the body	Cells, intercellular substances, tissue fluid
3	1	1	Cells structure	Cytoplasm, nucleus, cell cycle, cell fluid
4	1	1	Epithelium and glands	Epithelial membranes, modification of the epithelium, classification, functions, exocrine glands, endocrine glands, clinical considerations
5	1	1	Connective tissue	Classification, extracellular matrix, connective tissue fibers, amorphous ground substances, connective tissue cells
6	1	1	Connective tissue	Proper connective tissue, special connective tissue, clinical considerations
7	1	1	Cartilage	Perichondrium, growth of cartilage, Nutrition, Degeneration, kinds of cartilage
8	1	1	Bone	Bone cells, intercellular substance, periosteum, endosteum
9	1	1	Bone	Osteogenesis, bone growth, nutrition, clinical considerations
10	1	1	Blood and hemiparesis	Formed elements of the blood, erythrocytes, leukocytes, platelets, plasma

11	1	1	Blood and hemopoiesis	Hemopoiesis, erythrocyte series, granulocytic series, monocytes series, lymphocytic series, thrombolytic series, clinical considerations
12	1	1	Muscle	Skeletal muscles microscopic structure, types of muscle, fibers, innervations, muscle contraction
13	1	1	Muscle	Cardiac muscle, smooth muscle, clinical considerations
14	1	1	Nervous tissue	Nerves and supporting cells, cells body, cell processes, types of neuron
15	1	1	Nervous tissue	Neuroglia, blood brain barrier, nerve endings, synapse, sensory nerve ending, motor nerve endings, Histophysiology of the nerve cells
16	1	1	Nervous system	Structure, spinal cord, cerebellum, cerebrum, choroid plexus, dorsal root ganglion, peripheral nerve, clinical considerations

Textbooks & Reference Books Recommended (Last Edition)

Human histology alan steven

Format Mixed media product | 464 pages, Dimensions 232 x 280 x 22.35mm | 1,365g, Publication date 30 Nov 2004, Publisher Elsevier - Health Sciences Division, Imprint Mosby Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note 875 ills.ISBN10 0323036635 ISBN13 9780323036634, Bestsellers rank 318,527

Karuses essential human histology for medical Student Kraus Williams

Format Paperback | 320 pages, Dimensions 189 x 246 x 17mm | 572g, Publication date 11 Jul 2005, Publisher Universal Publishers, Publication City/Country Florida, Language English, Illustrations note black & white illustrations, ISBN10 1581124686, ISBN13 9781581124682 Bestsellers rank 1,971,347

Histology a text and atlas Michael H Ross

Format Paperback | 928 pages, Dimensions 213 x 277 x 33.02mm | 2,043g, Publication date 01 Oct 2010, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement 6th revised international , Illustrations note Illustrations (chiefly col.) ISBN10 1451101503, ISBN13 9781451101508, Bestsellers rank 212,252

Clinical and functional histology for medical Students rechar S Snells

Format Hardback | 827 pages, Dimensions 180 x 240 x 44.45mm | 2,017g, Publication date 01 Jan 1984, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Illustrations note Illustrations some col.), ISBN10 0332802326 ISBN13 978033280

Atlas of Histology with Functional and Clinical Correlations

Format Paperback | 496 pages, Dimensions 213 x 276 x 20.32mm | 1,111g, Publication date 17 Dec 2010, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Illustrations note w. 1397 figs.ISBN10 0781797594 ISBN13 9780781797597, Bestsellers rank 571,252

HISTOLOGY (MODULE 2)					
Discipline			Basic Subjects		
Department			Histology		
Subject			General histology		
Course code			DMD 02 12		
Class			I		
Semester		2	Fall		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Introduction	Definition, general information about structure of the organs, parenchyma, stroma, Hollow and solid organ moist membranes	
2	1	1	Circulatory system	Heart, arteries, veins, capillaries, lymphatic avascular system, clinical considerations	
3	1	1	Lymphoid tissue	Diffused lymphatic tissue, lymphoid organs, lymph nodes, tonsils spleen, thymus, burse, clinical considerations	
4	1	1	Endocrine system	Pituitary gland, thyroid glands, parathyroid glands, suprarenal glands pineal body, clinical considerations	
5	1	1	Integumentary system	Skin, epidermis, dermis, derivatives of skin, hair, nail, sebaceous glands, sweat glands, arrestor pile muscle, clinical considerations	
6	1	1	Respiratory system	Conducting portion, nasal cavity, nasopharynx, larynx, trachea, extra pulmonary, bronchi intra pulmonary bronchi, respiratory portion, clinical considerations	
7	1	1	Digestive system	Brief description of the oral cavity and associated structures, salivary glands, muscle membrane, lips, tongue and teeth	
8	1	1	Digestive system	Gastrointestinal tract, esophagus and stomach, detailed microscopic study, clinical consideration	
9	1	1	Digestive system	Small intestine, large intestine, anatomical parts and detailed microscopic study, clinical considerations	

10	1	1	Digestive system (appendages)	Liver, gallbladder, pancreas, Liver structure, classical lobules, central vein, hepatocytes, sinusoids, portal area, portal lobules,, Liver acinus, biliary passage
11	1	1	Digestive system (appendages)	gallbladder, pancreas exocrine pancreas, endocrine pancreas, derailed histological study and clinical considerations
12	1	1	Urinary system	Kidney, urine ferrous tubules, extra renal excretion passage, clinical consideration
13	1	1	Female reproductive system	Ovary, genital sudts, oviduct, uterus, vagina, external genitalia, mammary glands, clinical consideration
14	1	1	Male reproductive system	Testis, the male genital ducts, accessory glands, penis, clinical considerations
15	1	1	Organs of special senses (the eye)	Visual organ, wall of the eye, refractive media, optic nerve, accessory structure of the eye, clinical considerations
16	1	1	The vestibule cochlear apparatus	External ear, internal ear, par vestibular clinical considerations

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Human histology alan steven

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HISTOLOGY (MODULE 3)					
Discipline			Basic Subjects		
Department			Histology		
Subject			Oral histology		
Course code			DMD 03 12		
Class			II		
Semester		3	Spring		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	The oral cavity	Detailed introduction and Histogenesis of the oral cavity, associated structures and supporting tissue	
2	1	1	Oral mucosal membrane	General introduction and definition types of epithelium, Histology of keratinized epithelium	
3	1	1	Oral mucosal membrane	Histological aspects of buccal mucosa gingiva, palate, floor of the mouth tongue, lingual papillae, taste buds and clinical considerations	
4	1	1	Maxilla and mandible	General introduction, anatomy of maxilla d mandible, alveolar process, detailed microscopic study and clinical considerations	
5	1	1	Teeth	General introduction, embryological origin, anatomy, classification of deciduous and permanent teeth, physical and chemical composition	
6	1	1	Development of teeth	Development and his to physiological stages of teeth, development of root	

7	1	1	dentin	Introduction, structures, dentine genesis, type of dentin, function and clinical considerations
8	1	1	Enamel	Introduction, physical and chemical properties, structure (enamel rods, lamellae, tufts, spindles, dentin enamel junctions, analog genesis and life cycle of female blast
9	1	1	Plup	Development, anatomy and structure, detailed histological study, functions and clinical consideration
10	1	1	Cementum	Introduction, physical and chemical properties, cement genesis, structures, detailed microscopic study, types of cement, cement enamel junctions and functions
11	1	1	Periodontal ligament	Introduction, detailed microscopic study of the cells and fibers, functions, clinical considerations
12	1	1		Classification, anatomy of major and minor salivary glands, detailed microscopic study of the major and minor salivary glands, saliva (composition, formation and functions) clinical considerations
13	1	1	Temporomandibular joint	Anatomy, bones and cartilages, detailed histological study, clinical consideration
14	1	1	Maxillary sinus	Definition, anatomy and detailed histological study, functions and clinical considerations
15	1	1	Eruption and shedding	Theories of eruption, pre-eruption, eruptive and post eruptive tooth movement, histology of shedding, mechanism of resorption and shedding, clinical consideration
16	1	1	Muscle of mastication	General introduction, anatomy, embryological origin, detailed histological study and clinical consideration

Histology Reference Books

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Edition Statement 3rd Revised edition, Illustrations note 875 ills.ISBN10 0323036635
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Medical embryology

Attendance policy

- ☐ Regular student attendance at all.
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- ☐ 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 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 on library reserve

Knowledge

- ☐ To understand the basic principles of embryologic including genetic inheritance and stages involved in development of the organs and systems from the time of conception till birth
- ☐ The Student should recognize the critical stage of normal development and the effects of common teratogens, genetic mutations 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.

A. General Embryology

Definition of embryology: gestation period: definition of gamete sperm, Ovum; gametogenesis migration of primordial germ cells gonadal ridge; spermatogenesis; structure of sperm Oogenesis; structure of Ovum, growth of ovarian follicles, ovarian and uterine cycles.

Sperm: in the male genital tract; sperm in the female genital tract, activation and capacitation of sperm in the female genital tract.

First week of development: definition and normal site and process of fertilization, formation of zygote cleavage division; formation of morula and blastocyst.

Second week of development: differentiation of embryo blast and trophoblast; changes in the embryoblast formation of bilaminar germ disc; changes in the trophoblast; formation of cytotrophoblast, syncytiotrophoblast, amniotic membrane, yolk sac, extra embryonic mesoderm and extra embryonic celom commencing stalk; formation of chorion, amniotic cavity, primary yolk sac cavity appearance of precordial plate.

Implantation; formation of decidua, types of implantation and abnormal sites of implantations.

Third week of development: appearance of primitive streak and primitive node; formation of intraembryonic mesoderm resulting in trilaminar germ disc; gastrulation formation of notochord, Broncho pharyngeal and cloacal membranes, paraxial, intermediate and lateral plate mesoderm, secondary yolk sac. Intraembryonic cleome and allantois diverticulum; derivatives of ectoderm, mesoderm and endoderm.

Fourth to Eighth week of development (Embryonic period): formation of somite's, neural tube, subdivisions of gut into foregut, midgut and hindgut.

Maturation of tissue, organs, and rapid growth of body.

Estimation of age

Placenta

Formation of placenta and chorionic villi, decidua, basalis; features and functions of placenta; placental circulation; abnormalities; placental barrier; placentae, types of placenta.

Umbilical cord

Formation of umbilical cord; feature of umbilical cord.

Amniotic cavity

- ☐ Amniotic cavity and membrane; amniotic fluid-functions, expansions of amniotic cavity and fusion with chorion; decidua capsularis with parietals, obliteration of chorionic and uterine cavities; function of fused fetal membrane to dilate cervical canal.
- ☐ Abnormalities; obliteration of chorionic and uterine cavities; abnormalities of chorion.
- ☐ Formation of twins and types of twins.

Teratology

- ☐ Genetically and environmental factors as causative factors for congenital malformations.
- ☐ Mode of actions of teratogens and critical periods.

B. Systemic Embryology

- ☐ Development of the individual organs of digestive system; genital system, urinary system, respiratory system, cardiovascular system. Nervous system, special sensory organs, endocrine glands and mammary gland.
- ☐ Developmental abnormalities of individual organs/systems. Pathogenesis of the anomalies.
- ☐ Histogenesis of various organs
- ☐ Development of skeletal system, muscular system.
- ☐ Development of face, the pharyngeal arches, and the associated congenital anomalies.

Course content

EMBRYOLOGY (MODULE 1)				
Discipline			Basic Subjects	
Department			Histology (embryology)	
Subject			Medical embryology (general embryology)	
Co-requisites			Biology, Anatomy and histology.	
Course code			DMD 02 13	
Class			I	
Semester		2	Fall	
Number of credits		1	Knowledge	1
			Practical	
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1	1		Introduction	Definition, history, parts of embryology, Location of embryology.
2	1		Reproductive system	The female genital system, the male genital system.
3	1		Progenies	Gametes, gametogenesis, ovarian cycle, clinical correlates.
4	1		Development	Parental live, postnatal live.
5	1		First week of development	Cleavage, Development in days 3 rd & 4 th , development in days 6 th , development in days 7 th , clinical correlates.
6	1		Second week of development	Development in days 8 th , development in days 9 th , development in days 11 th , development in days 13 th , clinical correlates.
7	1		Third week of development	Gastrulation, the primitive cardiovascular system, notochord formation, al antoises, development of germ disc, clinical or relates, neurolation, development of somite’s of development of trophoblasts
8	1		Third week of development	Gastrulation, the primitive cardiovascular system, notochord formation, allantoises, development of somite’s, development of intraembryonic coelom, development of trophoblasts

9	1		Embryonic period	Organogenesis (third to Eight weeks), Differentiation of ectoderm, differentiation of somite's, clinical correlates, brief organogenesis, clinical correlates.
10	1		Fetal period	Differentiation of fetus, clinical correlates, monthly, change time of birth
11	1		Fetal period	Fourth, weekly development of fetal period, clinical correlates, premature & post mature babies.
12	1		Extra embryonic Membrane formation	Extra embryonic membrane placenta, amnion, chorion, clinical correlates
13	1		Extra embryonic Membrane formation	Fatal membrane in twins, clinical correlates
14	1		Parturition	Postnatal period, (feto neonatal circulation)
15	1		Extra normal change in prenatal period	Teratology, definition, essential of teratology, kinds of teratology, revaluation in prenatal, period, clinical correlates.
16	1		Effect on embryogenesis	Genetics and human development, molecular biology of human development, in fertilization, prenatal diagnosis

Textbooks & Reference Books Recommended (Last Edition)

Embryos, Genes and Birth Defects Patrizia Ferretti Second Edition

Format Hardback | 562 pages, Dimensions 170 x 251 x 36mm | 1,056g, Publication date 11 Jul 2006, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 2nd Edition, ISBN10 0470090103, ISBN13 978047009010

The Developing Human Keith L. More

Format Paperback | 522 pages, Dimensions 232 x 276 x 25.4mm | 1,428.82g, Publication date 25 Mar 2019, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 11th Revised edition, Illustrations note Approx. 1400 illustrations (1400 in full color) ISBN10 0323611540, ISBN13 9780323611541, Bestsellers rank 92,603

Embryology for medical Students sant

Format Paperback | 340 pages, Dimensions 140 x 210mm | 465g, Publication date 30 Dec 2008 Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition Statement 2nd Revised edition, ISBN10 8184483678, ISBN13 978818448367

Basic comepts in embryology lauren Sweeney

Format Paperback | 80 pages, Dimensions 210 x 280 x 6mm | 230g, Publication date 30 Oct 2003, Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Education / Australia Publication City/Country Australia, ISBN10 7777773461, ISBN13 9787777773467, Bestsellers rank 1,395,10

Clinical Embryology for Medical Students and Postgraduate Doctor

Format Paperback | 184 pages, Dimensions 152 x 229 x 11mm | 277g, Publication date 17 Jun 2014, Publisher LAP Lambert Academic Publishing, Publication City/Country United

EMBRYOLOGY (MODULE 2)				
Discipline			Basic Subjects	
Department			Histology (embryology)	
Subject			Medical embryology (systemic embryology)	
Co-requisites			Biology, histology & general embryology	
Course code			DMD 03 13	
Class			II	
Semester		3	Spring	
Number of credits		1	Knowledge	1
			Practical	
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1	1		Development	Development of prenatal life
2	1		Head & neck	Pharyngeal archs, pharyngeal pouchs, development of mouth and teeth, development of salivary glands, development of face, development of palate, development of masal cavity development of nose, development of nose.
3				
4	1		Digestive system	Introduction, fore gut, Mid gut, Hind gut, development the esophagus, development of the stomach, development of duodenum, development of the lever, development of gall bladder, development of pancreas, clinical correlates.
5	1		Genital system	Development of the genital system
6	1		Urinary system	Development of the urinary system
7	1		Respiratory system	Development of the respiratory system
8	1		Cardiovascular system	Development of the respiratory system
9	1		Nervous system	Development of the nervous system

10	1		Special sensory system	Development of the special system
11	1		Endocrine glands	Development of the endocrine system
12	1		Mammary gland	Development of the mammary system
13	1		abnormalities	Development of the abnormalities of individual organ/systems
14	1		organs	Histogenesis of various organs
15				
16	1		pathogenesis	Pathogenesis of the anomalies

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Medical physiology

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- ☐ 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 board goal of the teaching of undergraduate Students in physiology in providing a comprehensive knowledge of the normal of the functions of the organ systems of the body and their interactions to facilitate understanding of the physiological basis of health and changes in disease

A. Knowledge

At the end, a medical Student in physiology should be able to:

- ☐ Explain the normal functioning of all the organ systems of the body and their interactions.
- ☐ Narrate the contribution 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 that he/she has performed and observed in the laboratory.

Details of skills

a. Human physiology

- ☐ Use and care of microscope and microscopic examination of blood
- ☐ PVC, ESR, osmotic fragility
- ☐ Hemoglobin estimation and blood indices
- ☐ RBC count
- ☐ Examination of peripheral blood smears
- ☐ 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 pulse only
- ☐ Respiratory movements demonstration
- ☐ General examination
- ☐ Examination of respiratory system
- ☐ Examination of CVS
- ☐ Examination of higher functions and sensory system
- ☐ Examination of motor system
- ☐ Examination of reflexes
- ☐ Examination of cranial nerves

b. Experimental physiology

- ☐ Muscle sense preparation, mounting, effects of different types of stimuli
- ☐ Simple muscle twitch
- ☐ Wt to successive stimuli, repetitive stimuli and fatigue
- ☐ Genesis of tetanus and Starling's law of muscle (demonstration)

- ☐ Effects of load and afterload on muscle contraction
- ☐ Effects of variations of temperature on muscle contraction
- ☐ Velocity of nerve impulse (demonstration)
- ☐ Normal cardiogram of frog's heart and effects of heat and cold.
- ☐ Effects of temperature on frog's heart
- ☐ Refractory period of frog's heart
- ☐ Properties of cardiac muscle-all or none law, summation of sub minimal stimuli (demonstration)
- ☐ Effects 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

- ☐ Heart perfusion (videos)
- ☐ Intestinal movements (Videos)
- ☐ Electrocardiogram (ECG)
- ☐ Audiometry
- ☐ Spirometry

Course content

PHYSIOLOGY (MODULE 1)					
Discipline			Basic Subjects		
Department			Physiology		
Subject			Cell, blood & immunity, respiration, GI tract & endocrine		
Course code			DMD 03 14		
Class			II		
Semester		3	Spring		
Number of credits		3	Knowledge		2
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	2	1	Neurons & membrane potentials, synapse & neurotransmitters	Structure of a neuron, classification, membrane porential and action porential, synapse and synaptic transmission, neurotransmitters	
2	2	1	Muscle cells and muscle contraction	Brief anatomy and physiology, composition, steps of contraction, energetic event of muscle contraction Smooth muscles	
3	2	1	Introduction of blood physiology, plasma protein, RBC & Hemoglobin	Blood unction, composition, plasma protein types, and functions RBC. Morphology, composition and functions, properties, Hemoglobin, Iron metabolism, anemia, effect of anemia on blood circulation	
4	2	1	White blood cells	Classification, morphology, lifespan, properties and functions- Neutrophil, eosinophil, basophil, monocyte, lymphocyte	
5	2	1	T & B lymphocytes antibodies, immunization and allergy	Process of T & B lymphocytes, Antibodies, active and passive immunization, allergy	

6	2	1	Type of T-cells active and passive immunity	Types of T-cells, lymphokines, AIDS, immunologic tolerance, active and passive immunity
7	2	1	Hemostasis, coagulation and Anticoagulants	Mechanism of hemostasis, properties of platelets, blood coagulation, anticoagulants, effect of plasmin
8	2	1	Agglutinations, Rh, factors & blood transfusion	Agglutinogen, Agglutinins, agglutination, blood typing, Rh, factor, transfusion and transfusion reaction
9	2	1	Review of anatomy of respiratory tract organ	Respiratory system organs, function of the respiratory tract
10	2	1	Pulmonary function test	Pulmonary function test, intra plural pressure, intra alveolar pressure, pulmonary volume and capacities, O ₂ and CO ₂ exchange
11	2	1	Volume and capacities, respiratory centers	Pulmonary circulation, neural mechanism, respiratory center in the brain stem, unity of respiratory center action, central and peripheral chemoreceptors, periodic breathing, voluntary hyperventilation
12	1		Anatomy physiology of gastrointestinal tract	GI organ 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
13	2	1	Secretion, digestion and absorption	Gastric, pancreatic, small and large intestine secretions, digestion of various food by hydrolysis, absorption of nutrients material in the GIT and their mechanism
14	2	1	The pituitary gland hormones	Synthesis and secretion and transport of the hormones, pituitary gland secretions, growth hormones
15	2	1	Thyroid and adrenocortical hormones	Thyroid hormones and their effects, adrenocortical hormones and their effects, glucocorticoids
16	2	1	Insulin and glucagon	Insulin and its metabolic effect, insulin and the brain control of insulin, secretion, glucagon and its effect

Textbooks & Reference Books Recommended (Last Edition)

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

Format Mixed media product | 1152 pages, Dimensions 211 x 276 x 44.45mm | 2,517.44g
 Publication date 13 Jul 2005, Publisher Elsevier Health Sciences, Imprint W B Saunders Co
 Ltd Publication City/Country London, United Kingdom, Language English, Edition Revised,
 Edition Statement 11th Revised edition, Illustrations note col. Illustrations,
 ISBN10 0723202401 ISBN13 9780723202400, Bestsellers rank 126,978

Review of medical Physiology W.F Ganong

Format Paperback, Publication date 10 Nov 2032, Publisher Tata McGraw-Hill Education
 India Imprint India Professional, Publication City/Country India, Edition Revised, Edition
 Statement 25th Revised edition, ISBN10 9339223284, ISBN13 9789339223281

Essentials of Medical Physiology sembulingam

Format Paperback | 960 pages, Dimensions 232 x 279 x 45.72mm | 1,200g, Publication date 31 Jul 2032, 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 9385999117 ISBN13 9789385999132

Guyton & Hall Textbook of Medical Physiology, John E. Hall. ,

Format Hardback | 1152 pages, Dimensions 222 x 281 x 38.1mm | 25,599.39g, Publication date 01 Aug 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition RevisedEdition Statement 14th Revised edition, Illustrations note Approx. 1100 illustrations (1100 in full color) ISBN10 0323597122, ISBN13 9780323597128, Bestsellers rank 91,23

Clinical Exercise Physiology

Format Hardback | 776 pages, Dimensions 226.06 x 314.96 x 35.56mm | 1,996g, Publication date 05 Jul 2018, Publisher Human Kinetics Publishers, Publication City/Country Champaign, United States, Language English, Edition Statement Fourth Edition, Illustrations note 33 Halftones, black and white; 59 Illustrations, black and white, ISBN10 1492546453, ISBN13 9781492546450 Bestsellers rank 223,017

ACSM's Clinical Exercise Physiology

Format Hardback | 600 pages, Dimensions 213 x 276 x 38.1mm | 2,223g, Publication date 25 Mar 2019. Publisher Lippincott Williams and Wilkins. Publication City/Country Philadelphia, United States, Language English, ISBN10 1496387805, ISBN13 9781496387806, Bestsellers rank 61,86

PHYSIOLOGY (MODULE 2)					
Discipline			Basic Subjects		
Department			Physiology		
Subject			Cardiovascular, kidney & reproductive system, sense organs & CNS		
Course code			DMD 04 14		
Class			II		
Semester		4	Fall		
Number of credits		3	Knowledge		2
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	2	1	Functional anatomy of heart and blood vessel properties of cardiac muscle	Heart chambers, valves, great vessels, systemic and pulmonary circulations, function of different parts of the heart, physiology of the cardiac cells, cardiac cycle, cardiac automatism	
2	2	1	Homodynamic of the heard Heart sounds, cardiac automatism, ECG	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, general information related ECG	
3	2	1	Overview of the circulation blood pressure, local circulation Lymphatic system	Overview of the circulation, blood volume in different part of circulation, arterial pressure, blood pressure and vessels motilities, capillary circulation, vein circulation, pulmonary and coroner circulations, lymphatic system, cardio-vascular adjustments, effects of exercise, effect of gravity (+ Ve and –Ve) weightlessness on the heart	
4	2	1	Reabsorption in the tubules, function of the glomeruli	Anatomy physiology of the urinary system, function of the kidney, GFR, reabsorption in the tubules, tubular load, tubular transport maximum(TM) and threshold for Tm. Plasma clearance.	
5	2	1	Body fluid and osmolality, role of the kidney in control of body fluids, excretion by the kidney control of hydrogen level	Body fluids, Role of the kidney 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	

6	2	1	Control of acid-base by the kidney, physiology of the other part of the urinary tract micturition	Excretion of hydrogen, buffer system of the tubular fluid, control of acid-base by the kidney, physiology of the other part of the urinary tract, micturition
7	2	1	Male & female sexual organs and their hormones	Review of Anatomy physiology, spermatogenesis, seminal vesicle & prostate, function of the testosterone, female hormonal system, and monthly ovarian cycle
8	2	1	Physiology of the pregnancy. Parturition, lactation, contraception	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	2	1	Functional anatomy of the eye, basic optics, receptor and neural function of the retina	Brief anatomic/histological structure of the eye, and brief function of different structure of the eye, optic physics, eye fluids and their function. Layer of the retina, rods and cone, mechanism of stimulation of the rods and cones, color version
10	2	1	Visual pathways and visual cortex. Perimeter, eye movement and their control	Anatomy physiology of the Ear, tympanic membrane, auricle and auditory canal, middle ear ossicular system. Eustachian tube and its function. Internal ear, cochlea, auditory pathway and auditory cortex
11	2	1	anatomy physiology of the Ear. External, middle and internal ear	Anatomy physiology of the Ear, tympanic membrane, auricle and auditory canal, middle ear, middle ear ossicular system, Eustachian tube and its function. Internal ear ,choc lea, auditory pathway and auditory cortex
12	2	1	Vestibular system physiology	Utricle, saccule, semicircular canals, receptor of the vestibular system, vestibular pathway and centers in CNS
13	2	1	Physiology of the taste and smell sense. Skin and temperature regulation	Review of Anatomy physiology of the taste and smell organs. Receptors, pathways and cortex. Structure and function of skin, methods of heat conservation and loss in human body regulation of body temperature-role of skin, hypothalamus hyperthermia, fever, heat stroke, hypothermia, cold injuries (frost bite)
14	2	1	Organization of nervous system, cerebrum & corpus callusum hippocampus, amygdala, & basal ganglia, thalamus & hypothalamus,	General organization, functional anatomy of brain and spinal cord, coverings, white and grey mater. Cells of the nervous system, glia cella the synapse, neurotransmitters, myelin, function of the diencephalon (thalamus & hypothalamus), function of the reticular formation of the brain stem, function of the midbrain, function of the pons & medulla

			reticular formation midbrain , pons & medulla	
15	2	1	Cranial nerves, cerebellum & spinal Cord, cerebrospinal fluid, ventricles of the brain & brain metabolism	Function of the cranial nerves, cerebellum, spinal cord, CSF: quantity: pressure: formation of CSF, flow & absorption of CSF, ventricles of the brain
16	2	1	The autonomic nervous system Somatic sense motor nervous system, cerebellum and basal ganglia, memory & sleep	Sympathetic, parasympathetic & enteric nervous system, adrenergic & cholinergic receptors, enteric nervous system (ENS), types of somatic sensation receptors, somatosensory pathways & cortex, types of pain, adaptation of pain receptors: pain suppression (“analgesia”) system, thermal sensation motor function of the spinal cord, cortical and brain stem control of motor function, motor cortex, motor function of the brain, learning and memory, states of brain activities, sleep

Textbooks & Reference Books Recommended (Last Edition)

Review of medical Physiology W.F Ganong

Format Paperback, Publication date 10 Nov 2032, Publisher Tata McGraw-Hill Education India Imprint India Professional, Publication City/Country India, Edition Revised, Edition Statement 25th Revised edition, ISBN10 9339223284, ISBN13 9789339223281

ACSM's Clinical Exercise Physiology

Format Hardback | 600 pages, Dimensions 213 x 276 x 38.1mm | 2,223g, Publication date 25 Mar 2019. Publisher Lippincott Williams and Wilkins. Publication

City/Country Philadelphia, United States, Language English, ISBN10 1496387805, ISBN13 9781496387806, Bestsellers rank 61,86

, color; 324 Illustrations, unspecified, ISBN10 9385999117 ISBN13 9789385999132

Guyton & Hall Textbook of Medical Physiology, John E. Hall. ,

Format Hardback | 1152 pages, Dimensions 222 x 281 x 38.1mm | 25,599.39g, Publication date 01 Aug 2020, Publisher Elsevier - Health Sciences Division, Publication

City/Country Philadelphia, United States, Language English, Edition Revised Edition Statement 14th Revised edition, Illustrations note Approx. 1100 illustrations (1100 in full color) ISBN10 0323597122, ISBN13 9780323597128, Bestsellers rank 91,23

Clinical Exercise Physiology

Format Hardback | 776 pages, Dimensions 226.06 x 314.96 x 35.56mm | 1,996g, Publication date 05 Jul 2018, Publisher Human Kinetics Publishers, Publication

City/Country Champaign, United States, Language English, Edition Statement Fourth Edition, Illustrations note 33 Halftones, black and white; 59 Illustrations, black and white, ISBN10 1492546453, ISBN13 9781492546450 Bestsellers rank 223,017

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

Format Mixed media product | 1152 pages, Dimensions 211 x 276 x 44.45mm | 2,517.44g Publication date 13 Jul 2005, Publisher Elsevier Health Sciences, Imprint W B Saunders Co Ltd Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 11th Revised edition, Illustrations note col. Illustrations, ISBN10 0723202401 ISBN13 9780723202400, Bestsellers rank 126,97

PHYSIOLOGY (MODULE 3)					
Discipline			Basic Subjects		
Department			Physiology		
Subject			Oral cavity physiology		
Course code			DMD 05 14		
Class			III		
Semester		5	Spring		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Introduction	Physiology of oral cavity	
2	1	1	Salivary glands function of saliva	Compositions of the saliva, mechanism of secretion, control of secretion and function of the different materials in the saliva	
3	1	1			
4	1	1	Mucus secretion in the mouth and mucus	Mechanism of mucus secretion, control of and function of the mucus in the oral cavity	
5	1	1	Swallowing	First and second step of swallowing in the mouth, mechanism of the wallowing	
6	1	1	Taste sensation	Function of the taste, taste receptors and taste buds, papilla of the songue, mechanism of stimulation of the taste receptors, taste pathways and cortical centers	
7	1	1	Smell sensations and its functional relation with taste	Role of the sense in taste, olfactory, pathway and centers.	
8	1	1	Functions of the sinuses mandibular temporal articulations and its function.	Function of the sinuses	
9	1	1	Teeth function	Function of each part of the teeth	
10	1	1	Function of the different parts of the teeth	Enamel, dentin, cementum, plup, formation of the teeth	
11	1	1	Development of the permanent teeth	Development of the permanent teeth, mineral exchange in teeth. Role of florins, Dental abnormalities.	

12	1	1	Masticators muscles and facial expression	Types of the masticator muscles, innervations and functions of the masticator muscles, facial expression, its pathways and centers
13	1	1	Role of the oral cavity in the phonetic, speech pathways and cortical centers	Larynx, phonetic and speech, role of the teeth in the phonetics, pathways and cortical centers
14	1	1	Role of vitamin D in the teeth, PTH and calcitonin effect of calcium and phosphate	PTH, calcitonin and their roles in calcium and phosphate balance, role of vitamin D in the teeth and other bones
15	1	1	Cranial nerves function (V, VII, XI, X)	Function of the trigeminal nerves, facial and hypoglossal nerves, the vagus
16	1	1	Motor and sensory function of the oral cavity	Sensation of the lips and oral cavity, motor and sensory pathways of the oral cavity and cortical centers.

Textbooks & reference books recommended (last edition)

Guyton & Hall Textbook of Medical Physiology, John E. Hall. ,

Format Hardback | 1152 pages, Dimensions 222 x 281 x 38.1mm | 25,599.39g, Publication date 01 Aug 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised Edition Statement 14th Revised edition, Illustrations note Approx. 1100 illustrations (1100 in full color) ISBN10 0323597122, ISBN13 9780323597128, Bestsellers rank 91,23

Clinical Exercise Physiology

Format Hardback | 776 pages, Dimensions 226.06 x 314.96 x 35.56mm | 1,996g, Publication date 05 Jul 2018, Publisher Human Kinetics Publishers, Publication City/Country Champaign, United States, Language English, Edition Statement Fourth Edition, Illustrations note 33 Halftones, black and white; 59 Illustrations, black and white, ISBN10 1492546453, ISBN13 9781492546450 Bestsellers rank 223,

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

Format Mixed media product | 1152 pages, Dimensions 211 x 276 x 44.45mm | 2,517.44g Publication date 13 Jul 2005, Publisher Elsevier Health Sciences, Imprint W B Saunders Co Ltd Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 11th Revised edition, Illustrations note col. Illustrations, ISBN10 0723202401 ISBN13 9780723202400, Bestsellers rank 126,978

ACSM's Clinical Exercise Physiology

Format Hardback | 600 pages, Dimensions 213 x 276 x 38.1mm | 2,223g, Publication date 25 Mar 2019. Publisher Lippincott Williams and Wilkins. Publication City/Country Philadelphia, United States, Language English, ISBN10 1496387805, ISBN13 9781496387806, Bestsellers rank 61,86

Essentials of Medical Physiology sembulingam

Format Paperback | 960 pages, Dimensions 232 x 279 x 45.72mm | 1,200g, Publication date 31 Jul 2032, 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 9385999117 ISBN13 9789385999132

MEDICAL BIOCHEMISTRY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

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 difference in structure

are manifested into a variety of functional states, explores nucleic, macromolecular machines and their regulation on a molecular level, intrinsic nature of metabolism, fundamentals of carbohydrate and amino acid metabolism including a variety of disease state arising from genetic and environmental factors, lipid metabolism.

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
- ☐ Chemical basis of environmental health hazards, and biochemical basis of cancer and carcinogenesis, principles of metabolism and detoxification
- ☐ Principles of various conventional and specialized laboratory investigational and instrumentation, analysis and interpretation of a given data, the ability to suggest experiments to support the theoretical concepts and clinical diagnosis

b. Skills

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

- ☐ Make use of conventional technique/instruments to perform biochemical analysis relevant to clinical screening and diagnosis
- ☐ Demonstrate the skills of solving clinical problem and decision-making

a) AIMS AND SCOPE

The major aim is to provide a sound but crisp knowledge on the biochemical basis of the life processes relevant to the human system and to Dental/medical practice, the contents should be organized to build on the already existing information available to the Students in the pre-university stage and reorienting. A mere rehash should be avoided. The chemistry portion should strive towards providing information on the functional groups, hydrophobic and hydrophilic moieties and weak valence forces that organize macromolecules. Details on structure need not be emphasized. Discussion of metabolic processes should put emphasis on the overall change, interdependence and molecular turnover. While details of the steps may be given, the Student should not be expected to memorize them. An introduction to biochemical genetics and enzyme inhibitors at this stage, will provide a basis for the future study of medical subjects, and regulation of most of which are not in vogue, cataloguing genetic disorders under each head of metabolism is unnecessary. A few examples, which correlate genotype change to functional changes, should be adequate. At the end of the course, the Student should be able to acquire a useful core of information, which can be retained for a long time.

Teaching - Learning Methodology

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

Practical

- ☐ Laboratory instrumentation
- ☐ Protein fractionation, denaturation, separation of protein and amino acids and protein
- ☐ Color reactions of amino acid and protein
- ☐ Estimation of serum, glucose, total cholesterol and HDL cholesterol, uric acid, electrolytes and urea.
- ☐ Cerebrospinal fluid analyses
- ☐ Gastric juice analysis
- ☐ Urine analyses
- ☐ Amniotic fluid analyses
- ☐ Enzymes: amylase, lactate dehydrogenase and alkaline phosphatase
- ☐ Liver function tests
- ☐ Renal function tests
- ☐ Gel electrophoresis of DNA
- ☐ immune diffusion techniques, RIA and ELISA
- ☐ Case-oriented discussions (enzymes, metabolites, function tests)

Course content

MEDICAL BIOCHEMISTRY (MODULE 1)				
Discipline		Basic Subjects		
Department		Biochemistry		
Subject		Medical biochemistry		
Course code		DMD 03 15		
Class		II		
Semester	3		Spring	
Number of credits	3		Knowledge	2
			Practical	1
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1&2	2	1	Food & nutrition	Definition of food and nutrition Food factors Composition of human body
	2	1	Carbohydrates Cyclic structures of carbohydrates monosaccharides	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 structure, e[imer, aldose, ketose isomerism) Cyclic structures, mutarotation, anomeric carbon Introduction and description of the most important monosaccharides
3	2	1	Disaccharide's poly saccharides lipids	Introduction and description of disaccharides (maltose, lactose, sucrose...), introduction and descriptions of homophony saccharides (starch, glycogen, inulin, cellunose, dextrin) Heteropoly saccharides (hyaluronic acid, chondroitin sulfate, heparin) and (glycoproteins) introduction, classification, acid melting point, eicosanoids), glycerol.

4	2	1	Thyroids and terols: Simple lipids Compound lipids Amino acid and proteins:	Introduction, cholesterol, other sterols': 7dehydrocholesterol Introduction, neutral fats of triglycerides, waxes, introduction 1-phospholipides 9dephosphatidylglycerol, lecithin's, cephalins phosphatidic serine, phosphatidic inositol, Lysol phosphatides, plasminogen's, sphingomyelin) 2- glycolipids (cerebrosides, gangliosides) Introduction, classification and structure of amino acids, essential amino acids
5&6	2	1	Peptides bond proteins Nucleoprotein	[classification, structure, reactions of proteins (reaction with water, denaturation, reaction with loons], base purine; Pyrimidine, sugar, nucleotide, nucleoside nucleoside nucleic acid (DNA), RNA)
	2	1	Vitamins: Fat soluble vitamins water soluble vitamins	(Introduction, classification) fat soluble vitamins: (structure, forms, dietary source, daily requirement, absorption, storage and transport, functions of vit. A vit D and Vit. E Vit K.), water solbue vitamins: vit.C, vit. B1, vit2 vit. B5, vit. B6 Vit. Pp, vit H, vit B12, vit. Bc (structure, metabolism, source, metabolic role, deficiency of some vitamins, daily requirement).
7	2	1	Enzymes	Introduction, properties, factors affecting activity, mechanism of enzyme action, enzyme inhibition, regulation of enzymes activity, classification, role of metal enzymes activity, co enzyme, diagnostic value of enzyme levels.
8	2	1	The biochemistry of the gastrointestinal tract	Introduction, digestion and absorption in mouth, digestion and absorption in stomach, bile and role of it in digestion, digestion and absorption of carbohydrate, digestion and absorption of fats and cholesterol, digestion and absorption of protein.
9	2	1	Metabolism of carbohydrate: glycolysis Gluconeogenesis	Introduction, reaction regulation, enzyme and coenzymes of glycolysis reversion of glycolysis formation and fate of pyruvic acid, reactions, regulation
10	2	1	Citric acid cycle Electron trans port System and oxidative phosphorylation	Introduction, reaction regulation, enzyme and coenzymes Bioenergetics (calculation of ATP moles which produced in glycolysis and citric acid cycle from glucose), efficiency mechanisms of the control of glyucose combustion.
11	2	1	Pentose phosphate pathway	Introduction, regulation, metabolic significance introduction, reactions, regulation.

			Metabolism of glycogen (glycogenesis glycogen lysis)	
12	2	1	Metabolism of galactose metabolism of fructose	Regulation of glycogen metabolism, inherited disorders (glycogen storage diseases or GSDs), introduction, metabolic pathway, biosynthesis of lactose, introduction, metabolic pathway
13	2	1	Minerals	Definition, classification on the base of absorption and excretion general cause of mineral deficiency, macro elements sodium, potassium, chlorine, calcium, phosphorus magnesium & sulfur, iron, copper
14	2	1	Minerals water	Iodine, fluorine, zinc, brief description of manganese, cobalt, chromium, water (introduction, definition and description).
15	2	1	Nutrition	Method for preparing balance diet, role of nutrition in oral cavity, requirement of nutrient in pregnancy, infancy and adolescent
16	2	1	Malnutrition toxic compounds that affect oral cavity	Over nutrition and under nutrition, introduction and descriptions

Textbooks & Reference Books Recommended (Last Edition)

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

Format Paperback | 712 pages, Dimensions 222 x 281 x 30.48mm | 2,077.45g, Publication date 27 Feb 2018, Publisher Elsevier Health Sciences, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 5th Revised edition, Illustrations note Approx. 461 illustrations (461 in full color), ISBN10 0702072990 ISBN13 9780702072994, Bestsellers rank 605,861

Principles of biochemistry. Lehinger

Format Hardback | 1158 pages, Dimensions 1.02 x 1.02 x 1.02mm | 2,870g, Publication date 20 Feb 2013, Publisher W.H.Freeman & Co Ltd, Publication City/Country New York, United States Language English, Edition Statement 6th ed. 2013, Illustrations note w. numerous col. figs. ISBN10 1464109621, ISBN13 9781464109621, Bestsellers rank 34,172

Harper's Biochemistry R.K Murray.

Format Paperback | 818 pages, Dimensions 221 x 272 x 28mm | 1,608g, Publication date 32 Mar 2012, Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Medical, Publication City/Country New York, United States, Language English, Edition Statement 29th edition Illustrations note 500 Illustrations, unspecified, ISBN10 007176576X, ISBN13 9780071765763 Bestsellers rank 474,028

Textbook of biochemistry with Clinical Correlation Ed.

Format Hardback | 1240 pages, Dimensions 221 x 286 x 52mm | 2,818g, Publication date 26 Jan 2010, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 7th Edition, ISBN10 0470281731,

ISBN13 9780470281734 Bestsellers rank 135,324

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 8th Revised edition, Illustrations note Approx. 640 illustrations (600 in full color) ISBN10 0323530443, ISBN13 9780323530446, Bestsellers rank 1,381,399

Marks basic Medical biochemistry.

Format Paperback | 1008 pages, Dimensions 213 x 276 x 35.56mm | 2,177g, Publication date 18 Jul 2017, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement Fifth, North American Edition, ISBN10 1496324811, ISBN13 9781496324818, Bestsellers rank 1,238,960

MEDICAL BIOCHEMISTRY (MODULE 2)					
Discipline			Basic Subjects		
Department			Biochemistry		
Subject			Medical biochemistry		
Course code			DMD 04 013		
Class			II		
Semester		4	Fall		
Number of credits		3	Theory	2	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Theory	Practical			
1&2	2	1	Metabolism of lipids oxidation of fatty acids, formation and utilization of ketone bodies	Introduction, activation of fatty acid, crinite and its role in F.A Beta oxidation (Bata oxidation of saturated F. As, beta oxidation of odd carbon f. As, beta oxidation of unsaturated F. As) ketoses or ketoacidosis.	
	2	1	Calculation of energy fatty acids Biosynthesis of fatty acids: Biosynthesis of triglycerides Biosynthesis of phospholipids	Calculation of energy of aftty acids combustion in the b ody, introduction, biosynthesis of saturated F.As. biosynthesis of unsaturated F.As, (biosynthesis of triacylglycerol), biosynthesis of glycerophospholipids (lecithin, phosphatidic serine, phosphatidly ethanolamine, cardiolipin, plasminogen)	
3	2	1	Biosynthesis and catabolism of sphingolipids Prostaglandins Prostacyclin and thromboxane Leukotriene (LTs)	Biosynthesis of sphingosine, biosynthesis and catabolism of (ceramide and sphingomyelin glucocerebroside, galactocerebrosides, sulfa tide, creamed lacto side, ceramide Tri hex side and ganglioside), (introduction, function, chemistry and structure)	
4	2	1	Control of fat metabolism, lipoproteins Metabolism of free fatty acids	Control of fat metabolism, role of lever in lipid metabolism. Plasma lipoproteins and their metabolism lipotropic factors, role of adipose tissue in fat metabolism, introduction, reactions of free fatty acids metabolism	

5&6	2	1	Metabolism of cholesterol	Introduction, biosynthesis, regulation, functions of cholesterol, transport of cholesterol, factors affecting plasma cholesterol level and fate of cholesterol
	2	1	Metabolism of proteins and amino acids	Introduction, nitrogen balance, dissimilation of amino acids of N-catabolism of amino acids, transamination, deamination (oxidative and non-oxidative)
7	2	1	Urea formation in Krebs;’ henseleit (urea) cycle	Biosynthesis, regulation of urea synthesis, clinical significance of urea, inherited disorders associated with urea cycle
8	2	1	Metabolism of amino acids	Glycine, creatine and creatinine, alanine, valine, leucine, isoleucine, serine, methionine, cysteine, glutamic acid, glutamine, aspartic acid, asparagine, arginine, lysine
9	2	1	Metabolism of pieces which have one purines	Ornithine, citrulline, histidine, tryptophan, proline, hydroxy proline, phenylalanine, tyrosine
10	2	1	Metabolism of pyrimidine Metabolism of purines	Biosynthesis and catabolism of pyrimidines, biosynthesis and catabolism of purines, uric acid metabolism and clinical disorders of purines and pyrimidines metabolism
11	2	1	DNA	Biosynthesis of DNA Biosynthesis of RNA (mRNA, tRNA, rRNA)
12	2	1	Proteins	Synthesis of protein mutation
13	2	1	The biochemistry of endocrine glands pituitary hormone pituitary tropic hormones	General mechanism of action of hormones Introduction, classification, factors regulation hormone action, general properties of hormones
14	2	1	Hormone of middle lobe of pituitary (Melanocyte stimulating hormones: hormones of posterior pituitary lobe (Vasopressin, oxytocin): thyroid gland hormones (thyroxin, tri-iodo threonine): parathyroid glands and their hormones: parathormone, calcitonin.	Introduction, hormones of the anterior pituitary(growth H. (chemistry functions, regulation of growth H. secretion, clinical importance), (regulation of secretion and functions) such as prolactin, gonadotropins, FSH and LH, thyrotrophic hormones (TSH) and adrenocorticotrophic hormone (ACTH) functions, clinical importance, regulation of secretion. Functions, clinical importance, abnormalities of pituitary function, introduction, metabolism, mechanism of action, actions, regulation, abnormalities, introduction, (chemistry, biosynthesis, metabolism, mechanism of action, actions, regulation, abnormalities of parathyroid function).
15	2	1	Pancreas and its hormones:	Introduction,(chemistry, biosynthesis, secretion, regulation, transport and metabolism,

			Insulin, glucagon adrenal glands and their hormones: Adrenal cortex and steroid hormones Glucocorticoids Mineral-corticoids and cortical sex hormones (androgens and extrogens);	mechanism of action, metabolic role and functions of insulin), (descriptions like insulin), somatostatin (chemistry and functions), Introduction [classification (glucocorticoids, minerals-corticoids, cortical sex hormones)], (biosynthesis, secretion and transport, mechanism of action, actions, regulation, abnormalities). Descriptions like glucocorticoids
16	2	1	Adrenal medullary hormones (epinephrine and nor epinephrine): gonadal hormones (androgens, female sex hormones (estrogens'), gestogens (progestational H.) relax in placental hormones Gastrointestinal hormones:	Introduction, metabolism, mechanism of action metabolic effects, abnormalities of clinical aspects, introduction, androgens (Male H.), female sex H. (description like above hormones), (Description like above hormones), (chemistry and action), (description like above hormones), introduction, secretin family and gastrin family

Textbooks And Reference Books Recommended (Last Edition)

Harper's Biochemistry R.K Murray.

Format Paperback | 818 pages, Dimensions 221 x 272 x 28mm | 1,608g, Publication date 32 Mar 2012, Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Medical, Publication City/Country New York, United States, Language English, Edition Statement 29th edition Illustrations note 500 Illustrations, unspecified, ISBN10 007176576X, ISBN13 9780071765763 Bestsellers rank 474,028

Textbook of biochemistry with Clinical Correlation Ed.

Format Hardback | 1240 pages, Dimensions 221 x 286 x 52mm | 2,818g, Publication date 26 Jan 2010, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 7th Edition, ISBN10 0470281731, ISBN13 9780470281734 Bestsellers rank 135,324

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 8th Revised edition, Illustrations note Approx. 640 illustrations (600 in full color) ISBN10 0323530443, ISBN13 9780323530446, Bestsellers rank 1,381,399

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Format Paperback | 1008 pages, Dimensions 213 x 276 x 35.56mm | 2,177g, Publication date 18 Jul 2017, Publisher Lippincott Williams and Wilkins, Publication

City/Country Philadelphia, United States, Language English, Edition Statement Fifth, North American Edition, ISBN10 1496324811, ISBN13 9781496324818, Bestsellers rank 1,238,960

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

Format Paperback | 712 pages, Dimensions 222 x 281 x 30.48mm | 2,077.45g, Publication date 27 Feb 2018, Publisher Elsevier Health Sciences, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 5th Revised edition, Illustrations note Approx. 461 illustrations (461 in full color), ISBN10 0702072990 ISBN13 9780702072994, Bestsellers rank 605,861

Principles of biochemistry. Lehinger

Format Hardback | 1158 pages, Dimensions 1.02 x 1.02 x 1.02mm | 2,870g, Publication date 20 Feb 2013, Publisher W.H.Freeman & Co Ltd, Publication City/Country New York, United States Language English, Edition Statement 6th ed. 2013, Illustrations note w. numerous col. figs. ISBN10 1464109621, ISBN13 9781464109621, Bestsellers rank 34,172

PATHOLOGY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

1. Course description

The broad goals of teaching undergraduates pathology are to import the knowledge skills and attitudes in the Student to understand the etiopathogenesis, morphology and pathological concepts related to various common diseases.

At the end of the course the Students should 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 mechanisms, the derangements of these mechanisms and the effects on human systems
- ☐ Understand the etiopathogenesis, the pathological effects and the clinical pathological correlation of common infectious and non-infectious diseases
- ☐ Understand the concept of neoplasia with reference to the etiology, gross and microscopic features, diagnosis and prognosis in different tissues and organs of the body
- ☐ Correlate normal and altered morphology (gross and microscopic) of the different organ system in 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 investigations 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

2. Knowledge

Department stresses of teaching basic fundamentals of the disease process and the applied aspects relevant to the clinical subject 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 of surgical operations are shown

B. Systemic pathology

The following tools are employed:

- ☐ Didactic lectures: discussing a particular topic for length in an one hour lecture
- ☐ Para clinical 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 that particular patient and relevant laboratory investigations are discussed by a 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

3. 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 a clinical faculty in the ward, discussing the clinical features in the patient which provides them a real-life experience of studying a disease as it presents in a patient.
- ☐ By a combination of above modalities/tools, Student learns applied aspects of the disease process.

PATHOLOGY (MODULE 1)					
Discipline			Basic Subjects		
Department			Pathology		
Subject			General pathology		
Course code			DMD 03 16		
Class			II		
Semester		3		Spring	
Number of credits		3		knowledge	2
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	2	1	Cell injury, cell death, and adaptation Overview of cell injury and cell death	Overview of cellular responses to stress and noxious stimuli cellular adaptation to stress, hyperplasia, atrophy, and metaplasia, causes of cell injury and morphology of cell and tissue injury	
			Mechanism of cell injury	Depletion of ATP, mitochondria damage, influx of calcium, accumulation of oxygen, derived free radicals, defects in membrane permeability, damage fo DNA and proteins, ischemia-reperfusion injury, and chemical (toxic) injury	
2	2	1	Apoptosis, autophagy and intracellular accumulation	Cause of apoptosis, mechanisms of apoptosis, example of apoptosis, patty change (steatosis), cholesterol, protein, glycogen, pigments	
			Pathologic calcification and cellular aging	Dystrophic and metastatic calcification, cellular aging	
3	2	1	Inflammation and repair acute inflammation	Overview of inflammation and tissue repair, stimuli for acute inflammation, recognition of microbes, necrotic cells and foreign substances and casculat change	
			Acute inflammation	Cellular events leukocytes recruitment and activation, leukocyte, induced tissue injury, defiant in leukocyte function outcomes of acute inflammation, serous inflammation, fibrinous inflammation, supportive (purulent) inflammation	
			Morphologic patters of acute inflammation		

				and abscess formation, and , ulcerative inflammation
4	2	1	Chemical mediators of inflammation	Cell-derived mediators, plasma protein-derived mediators anti-inflammation mechanisms
			chronic inflammation systemic effects of inflammation	Chronic inflammatory cells and mediators, granulomatous inflammation, fever, elevated of plasma level of acute-phase proteins, leukocytosis, other manifestation of the acute phase response and sepsis
5	2	1	Overview of 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 intention, healing by second intention, wound strength
6	2	1	Hemodynamic disorders	Hyperemia and congestion, edema, hemorrhage
			Hemostasis and thrombosis	Moral hemostasis, thrombosis, disseminated intravascular coagulation (DIC)
7	2	1	Embolism and infarction	Pulmonary thromboembolism, systemic thromboembolism, infarction
			Shock	Pathogenesis of septic shock, stage of shock
8	2	1	Diseases of the immune system	Innate and adaptive immunity, cells and tissue of the immune system, overview of normal immune responses
			Hypersensitivity reactions	Causes of hypersensitivity reactions, types of hypersensitivity reactions, immediate (type 1) hypersensitivity and antibody mediated diseases (type II hypersensitivity), immune complex diseases (type III hypersensitivity), T cell-mediated (type IV) hypersensitivity.
9	2	1	Autoimmune diseases systemic immune diseases and rejection of transplants	Immune tolerance, mechanism of autoimmunity, systemic lupus erythematosus, rheumatoid arthritis, sjorgen syndrome, systemic sclerosis, and inflammatory myopathies
			Immune deficiency diseases	Primary (congenital) immune deficiencies, secondary (acquired) immune deficiencies, acquired immunodeficiency syndrome (AIDS)
10	2	1	Neoplasia	Nomenclature, characteristics of benign and malignant neoplasms, epidemiology
			Carcinogenic agents	Genetic lesions in cancer, characteristics: A multistep process hallmarks of cancer
11	2	1	Etiology of cancer: Carcinogenic agents	Chemical carcinogens, radiation carcinogenesis, viral and microbial ontogenesis
			Hos defense against humors: tumor	Tumor antigens, antitumor effector mechanisms, tumor surveillance and immune evasion by tumors,

			immunity clinical aspects of neoplasia	effects of tumor on host, grading and staging of cancer, laboratory diagnosis of cancer
12	2	1	Genetic diseases mendelian disorders: Diseases caused by single gene defects	Nature of genetic abnormalities contributing to human disease transmission patterns of single-gene disorders, diseases caused by mutation in genes encoding structural, receptor, and enzyme protein and that regulate growth
13	2	1	Cytogenetic disorders	Cytogenetic disorders involving sex chromosomes.
			Single-gene disorders with atypical patterns of inheritance	Diseases caused by triplet repeat mutations, diseases caused by mutation in mitochondrial genes, diseases associated with alteration of imprinted regions of the genome
14	2	1	Environmental and nutritional diseases	Health effects of climate change, toxicity of chemical and physical agents environmental pollution, effects of tobacco, effects of alcohol
			Injury by therapeutic drugs and drugs of abuse	Injury by therapeutic drugs: adverse drug reactions, injury by nontherapeutic toxic agents (Drug abuse)
15	2	1	Injury by physical agents	Mechanical trauma, thermal injury, electrical injury, injury produced by ionizing radiation
			Nutritional diseases obesity Diet and systemic diseases diet and cancer	Malnutrition, protein-energy malnutrition, anorexia nervosa and bulimia, leptin, adipose tissue clinical consequence of obesity
16	2	1	General pathology of infectious diseases general pathology of infectious diseases	General principle of microbial pathogenesis, categories of infectious agents, special techniques for identifying infectious agents, new and emerging infectious diseases, agents of bioterrorism
			Transmission and dissemination of microbes How microorganisms cause disease spectrum of inflammatory responses to infection	Routes of entry microbes, spread and dissemination of microbes within the body. Release from the body and transmission of microbes, mechanisms of viral injury Mechanisms of bacterial injury, immune evasion by microbes supportive, mononuclear/granulomatous, 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 | 1392 pages, Dimensions 222 x 281 x 44.45mm | 30,399.31g, Publication date 01 Aug 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 10th Revised edition, Illustrations note Approx. 3200 illustrations (3200 in full color) ISBN10 032353113X, ISBN13 9780323531139, Bestsellers rank 94,012

Netter Elastrated Human pathology Maximillian L.Buja Md

Format Paperback | 560 pages, Dimensions 232 x 276 x 25.4mm | 1,610.25g, Publication date 24 Oct 2013, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Statement Updated edition Illustrations note Approx. 478 illustrations (478 in full color), ISBN10 0323220894 ISBN13 9780323220897, Bestsellers rank 570,098

Robbins basic pathology, Vinay Kumar3200 John F. Kennedy Blvd.

Format Hardback | 952 pages, Dimensions 222 x 281 x 38.1mm | 2,199.92g, Publication date 17 May 2017, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 10th Revised edition Illustrations note Approx. 1050 illustrations (1020 in full color), ISBN10 0323353177 ISBN13 9780323353175, Bestsellers rank 4,904 Gray's

Clinical Photographic Dissector of the Human Body

Format Spiral bound | 480 pages Dimensions 232 x 276 x 22.86mm | 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 0323544177 ISBN13 9780323544177, Bestsellers rank 791,510

BSAVA Manual of Canine and Feline Clinical Pathology

Format Paperback | 624 pages, Dimensions 210 x 294 x 34mm | 1,814g, Publication date 05 Jul 2016, Publisher British Small Animal Veterinary Association, Publication City/Country Quedgeley, Gloucs, United Kingdom, Language English Edition Statement 3rd Edition, ISBN10 1905319630, ISBN13 9781905319633, Bestsellers rank 42,17

PATHOLOGY (MODULE 2)					
Discipline			Basic Subjects		
Department			Pathology		
Subject			Systemic pathology		
Course code			DMD 04 16		
Class			II		
Semester		4	Fall		
Number of credits		2	knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Blood vessels, congenital anomalies, blood pressure regulation and hypertensive vascular disease	Epidemiology of hypertension, pathogenesis, morphology	
2	1	1	Vascular wall response to injury arteriosclerosis	Atherosclerosis, monckeberg medial sclerosis, arteriolosclerosis	
3	1	1	Tumors of blood vessel	Benign and malignant tumors	
4	1	1	Heart, overview of heart disease, heart failure	Left side heart failure, right side heart failure	
5	1	1	Congenital heart disease	Left-to-right shunts, right-to-left shunts	
6	1	1	Ischemic heart disease	Angina pectoris, myocardial infarction, chronic ischemic heart disease, and sudden cardiac death	
7	1	1	Valvular heart disease	Degenerative valve disease, rheumatic vacuolar disease, infective endocarditis	
8	1	1	Hematopoietic and lymphoid systems, red cells disorders	Anemia of blood loss, hemolytic anemias	

9	1	1	Red cells disorders	Anemia of diminished erythropoiesis
10	1	1	White cell disorders	Non-neoplastic disorders of white cells, neoplastic proliferations of white cells
11	1	1	Bleeding disorders	Disseminated intravascular coagulation, thrombocytopenia coagulation disorders
12	1	1	Lung Obstructive lung (airway) disorders	Atelectasis, acute respiratory distress syndrome, obstructive versus restrictive, asthma, and bronchiectasis
13	1	1	Pulmonary infections	Community acquired acute pneumonias, community acquired atypical pneumonias, hospital acquired pneumonias aspiration pneumonia and lung abscess, chronic pneumonia fungal infections
14	1	1	Lesions of the upper respiratory tract	Acute infection, nasopharyngeal carcinoma, laryngeal tumors
15	1	1	Gastrointestinal tract: stomach	Inflammatory disease of the stomach, neoplastic disease of the stomach
16	1	1	Liver, gallbladder, and biliary tract	Clinical syndromes, jaundice and cholestasis, hepatic encephalopathy

Textbooks & Reference Books Recommended (Last Edition)

Netter Elastrated Human pathology Maximillian L.Buja MD

Format Paperback | 560 pages, Dimensions 232 x 276 x 25.4mm | 1,610.25g, Publication date 24 Oct 2013, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Statement Updated edition Illustrations note Approx. 478 illustrations (478 in full color), ISBN10 0323220894 ISBN13 9780323220897, Bestsellers rank 570,098

Basic pathology, Vinay Kumar3200 John F. Kennedy Blvd.

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Manual of Canine and Feline Clinical Pathology

Format Paperback | 624 pages, Dimensions 210 x 294 x 34mm | 1,814g, Publication date 05 Jul 2016, Publisher British Small Animal Veterinary Association, Publication City/Country Quedgeley, Gloucs, United Kingdom, Language English Edition Statement 3rd Edition, ISBN10 1905319630, ISBN13 9781905319633, Bestsellers rank 42,17

Robbins and Cotran pathologic Basis of Diseases, Leonard S. Lilly MD Raphael Rubin,

Format Hardback | 1392 pages, Dimensions 222 x 281 x 44.45mm | 30,399.31g, Publication date 01 Aug 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 10th Revised edition, Illustrations note Approx. 3200 illustrations (3200 in full color) ISBN10 032353113X, ISBN13 9780323531139, Bestsellers rank 94,012

PATHOLOGY (MODULE 3)					
Discipline			Basic Subjects		
Department			Pathology		
Subject			Oral pathology		
Course code			DMD 05 16		
Class			III		
Semester		5		Spring	
Number of credits		2		knowledge	1
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	General oral cavity and craniofacial anomalies	Anatomy, histology, physiology, pathology, and oral cavity lesions, agnatic, agenesis, micrognathia, micrognathia, facial hemi hypertrophy, and facial hemi atrophy	
2	1	1	Craniofacial anomalies and teeth anomalies	Cleidocraniai Diastasis, craniofacial diastasis and mandibulofacial Diastasis, scale of human teeth development, disorders of size: microdontia and microdontia, disorders of shape: germination, twining, fusion, concrescence, talons cusp, dilacerations, dens in dent, dens evagination, taurodontism, ectopic enamel, mulbatrry teeth and Hutchinson: teeth	
3	1	1	Teeth anomalies	Disorders of number: anodontia, hypodontia and supernumerary teeth, disorders of structure: enamel hypoplasia, mottled enamel and amylogenesis imperfect disorder of structure: dentin genesis imperfect, dentin dysplasia, odontodysplasia, eruption, embedded of impacted teeth, ankyloses, transposition, eruption sequent rum, ectopic, eruption, and post permanent dentine	
4	1	1	Dental cadies	Theories and etiology, classification, smooth surface caries, pit and fissure caries, root caries, recurrent caries and nursing carries, rampant caries, arrested caries, pre-eruptive caries, caries activity	

				tests, factors influencing caries, and control of caries
5	1	1	Benign tumors	Squamous papilla, maxima, chondroma, torus palatine, and torus mandibular, nevus, fibroma, lipoma, hemangioma (Deferent types), giant cell lesion and lymphangia
6	1	1	Benign tumors and pre-malignant tumors	Osteoma, osteoblastoma, osteoid Osteoma, neurofibroma, leiomyoma, rhabdomyoma, and congenital epulis Definition, classification, leukoplakia, erythroplakia, carcinoma in-situ, smokers patch, and erosive lichen planus
7	1	1	Malignant tumors	Squamous cell carcinoma, basal cell carcinoma, cerrucous srcinoma, transitional carcinoma, and malignant melanoma, spindle cell carcinoma, rhabdomyoma sarcoma, fibro sarcoma, chondrosarcoma, Kaposi sarcoma, and osteosarcoma
8	1	1	Odontogenic tumors and cyst of oral cavity	Classification, developmental stage, ameloblastoma, squamous odontogenic tumor, odontoma, and malignant tumors, dentin grouse cyst, radicular cyst, residual cyst, nasopalatine cyst, traumatic bone cyst, gingival cyst, and dermoid cyst
9	1	1	Periodontal pathology	Sating, calculus, dental plaque, gingivitis, necrotizing ulcerative gingivitis, and desquamate gingivitis adult periodontitis, rapidly progressive periodontitis, aggressive periodontitis (juvenile), and periodontal pocket
10	1	1	Salivary gland pathology	Mumps, sialadenosis, sialoadenities, siallorhea, sialolithiasis, and xerostomia, benign tumors: pleomorphic adenoma, Warthin's tumor, basal cell adenoma, canalicular adenoma, and oncocytoma
11	1	1	Salivary gland: malignant tumors	Aden cystic carcinoma, cynic cell carcinoma, adenoid cystic carcinoma, and mucoepidermoid carcinoma
12	1	1	Oral infection spread of oral infections	Bacterial viral and fungal infection: tuberculosis, diphtheria, syphilis, noma, herpes simplex virus, cat scratch disease, varicella zoster, candidiasis, oral manifestations of AIDS, for hand and mouth disease, and aphtosis, cellulitis, Ludwig, angina, maxillary sinusitis and intra cranial complications of Dental infection

13	1	1	Oral aspect of metabolic disease and pulp pathology	Oral aspect of avitaminosis: vit D, vit A, vit C, and vit B complex, oral aspect of disturbances In hormone: Metabolism, hyper and hypo thyroidism, hyper and hypo parathyroidism, and Addison's disease, pulpitis, pulp degeneration, pulp calcification, pulp necrosis, osteomyelitis, dry socket, periapical abscess, and periapical scar
14	1	1	Lip and tongue diseases	Cheilitis, double lip, cleft lip and cleft palate, and congenital lip pits, aglossia, mactoglossia, ankyloglossia, cleft tongue, fissured tongue, and median rhomboid glossitis
15	1	1	TMJ pathology and chemical and physical injuries	Osteoarthritis, coronoid hyperplasia, condylar hyperplasia, condylar hypoplasia, ankyloses, rheumatoid arthritis, TMJ dysfunction and subluxation, attrition, abrasion, erosion, abfraction, secondary and tertiary dentin, teeth resorption, hyper cementosis, bruxism, amalgam tattoo, and inflammatory hyperplasia
16	1	1	Syndromes of or facial region	Sjorgen-syndrome, prier Rabin syndrome, archer syndrome, mar fan syndrome, and elkerson Rosenthal syndrome

Textbooks & reference books recommended (last edition)

BSAVA Manual of Canine and Feline Clinical Pathology

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Cotran pathologic Basis of Diseases, Leonard S. Lilly MD Raphael Rubin,

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Format Paperback | 560 pages, Dimensions 232 x 276 x 25.4mm | 1,610.25g, Publication date 24 Oct 2013, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Statement Updated edition Illustrations note Approx. 478 illustrations (478 in full color), ISBN10 0323220894 ISBN13 9780323220897, Bestsellers rank 570,098

Robbins basic pathology, Vinay Kumar3200 John F. Kennedy Blvd.

Format Hardback | 952 pages, Dimensions 222 x 281 x 38.1mm | 2,199.92g, Publication date 17 May 2017, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 10th Revised edition Illustrations note Approx. 1050 illustrations (1020 in full color), ISBN10 0323353177 ISBN13 9780323353175, Bestsellers rank 4,904

DENTAL MATERIAL

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

a) Introduction:

The science of Dental material has undergone tremendous changes over the years. Continued research has led to new material systems and changing concepts in the Dental field. Interlinked with various specialized branches of chemistry, practically all engineering applied sciences and

biological characteristics, the science of Dental material emerged as basic sciences in itself with its own values and principles.

b) AIMS

Aim of the course is to present basic chemical and physical properties of Dental materials as they are related to its manipulation to give a sound educational background so that the practice of the Dentistry emerged from art to empirical status of science as more information through further research becomes available. It is also the aim of the course of Dental materials to provide with certain criteria of selection and which will enable to discriminate between facts and propaganda with regards to claims of manufactures

c) Objectives

- ☐ To understand the evaluation and development of science of Dental material
- ☐ Knowledge of physical and chemical properties and advantages and disadvantages of the material used in Dentistry
- ☐ Knowledge of biomechanical requirements of particular restorative material and its application & limitation
- ☐ Laying down standard or specifications of various material to guide to manufactures as well as to help professionals
- ☐ Search for newer and better materials, which may answer our requirements with greater satisfaction
- ☐ To understand and evaluate the claims made by manufactures of Dental materials

At the end of the course, the Student should have the knowledge about the composition, properties, manipulative techniques and their various commercial names. The Student should also acquire skills to select and use the materials appropriately for laboratory and clinical use

Course content

DENTAL MATERIAL					
Discipline			Professional Subjects and skills		
Department			Dental materials		
Subject			Dental materials		
Course code			DMD 04 18		
Class			II		
Semester		4		Fall	
Number of credits		2		Knowledge	1
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Dentistry and Dental material	Introduction: prevention, restoration, rehabilitation, classification	
2	1	1	Basic nature and properties of Dental material	Forms of matter, interatomic bonds, thermal expansion, crystal structure, non-crystal structure, stress and strain, diffusion surface tension, wetting	
3	1	1	Physical properties of Dental materials	Stress, strain, Poisson’s ratio, proportional limit, elastic limit, yield strength, modulus of elasticity, flexibility, strength, impact, fatigue, brittleness, hardness, rheology, color	
4	1	1	Biological consideration of Dental materials	Biological requirements of Dental materials, classification, physical factors affecting pulp health, thermal change galvanism, toxicity evaluation	
5	1	1	Tarnish and corrosion	Definitions, electromotive force series, types of corrosion, protection against corrosion	
6	1	1	Introduction to restorations, luting and pulp therapy	Types of restorations, luting, requirements of luting materials, pulp capping types, basis, liners and varnish	
7	1	1	Dental cements:	Introduction: classification, biological properties, silicate cement, zinc phosphate, cement, copper cements	

8	1	1	Zincpoly carboxylate cement, zinc oxide-eugenol cement Glass Ionomer cements & calcium hydroxide cement	Introduction, classification, properties, composition, modified zinc-oxide cement, protection of cement after setting
9	1	1	Dental amalgam	Introduction, applications, classification, Advantages/disadvantages, strength, technical considerations, shaping and finishing, mercury toxicity, precautions
10	1	1	Composite resins and bonding agents	Introduction, uses, types, indications, composition, polymerization, wear rates and life expectancy of composites, techniques of insertion, bonding, mode of action, indications for use of bond agents, bonding mechanisms, application method
11	1	1	Rigid impression materials	Introduction, advantage of using a cast of model desirable properties of an impression material, classification, impression compound, properties of impression compound
12	1	1	Zinc oxide eugenol impression paste & impression tray	introduction, composition, setting time, properties, manipulation, disinfection of tray, advantages, disadvantages, other zinc oxide pastes
13	1	1	Elastic impression material-ager and alginate	Introduction, types, hydrocolloids, types, composition, impression tray, techniques
14	1	1	Elastomeric impression materials	Introduction, types, uses, properties, polysulfide, composition, setting reactions, properties, silicone, rubber impression materials, types, composition and setting reactions
15	1	1	Polyether rubber impression material	Introduction, composition, properties, technical considerations, methods of making impressions
16	1	1	Model cast and die materials	Introduction, types, improved Dental stone, gypsum products & waxes in Dentistry

Textbooks And Reference Books Recommended (Last Edition)

Phillips' Science of Dental Materials12th Edition

Format Paperback Editors: Kenneth Anusavice Chiayi Shen H. Ralph Rawls Hardcover
ISBN: 9781437724189 Book ISBN 9781455748136 Book ISBN: 9780323242059

Imprint:

Saunders Published Date 27th September 2012 Page Count592: Product details
Format Paperback \\ 478 pages ISBN-10 0803238666 ISBN-13 978-0803238664 Item
Weight 2 pounds Publisher : Mosby; 6th Edition (January 1, 1980) Language English

Dental Radiography Principles and Techniques 5th Edition

Format Paperback Product details Item Weight 2.89 pounds Paperback 480 pages ISBN-10 0323297420 ISBN-13 : 978-0323297424 Product Dimensions : 8.5 x 1 x 10.8 inches
Publisher : Saunders; 5th Edition (March 14, 2032) Language: English

Clinical Aspects of Dental Materials: Theory, Practice, and Cases 4th Edition

Format Paperback 514 pages Item Weight : 2.65 pounds Product Dimensions 8.25 x 1 x 10.5 inches ISBN-10 9783209139650 ISBN-13 978-3209139650 Publisher Jones & Bartlett Learning; 4th Edition (February 13, 2012) Language English ASIN 3209139658

Clinical Aspects of Dental Materials (Paperback)

Format Paperback Page Count: 264 Introduction to Dental Materials 4th Edition

Author: Richard Van Noort Paperback ISBN: 9780723436591 eBook

ISBN: 9780723437819 Imprint: Mosby Ltd. Published Date: 9th March 2013

نوموړی مضمون کورس پالیسي او مفردات د ستوماتولوژۍ پوهنځي په () ګڼه (/ /) نېټه پروتوکول
کې ثبت او تایید شو

MICROBIOLOGY

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- ☐ Final semester exam 60%
- ☐ Total 100%

a. Course description

Goals the broad goals of the teaching of undergraduate Students in microbiology are to provide and understanding of the natural history of infectious disease in order to deal with the etiology, pathogenesis, laboratory diagnosis, treatment and control of infections in the community.

b. Knowledge

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

- ☐ State the infective microorganisms of the human body and describe the host parasite relationship
- ☐ List pathogenic microorganisms and describe the pathogenesis of the diseases produced by them
- ☐ Indicate the modes of transmission of pathogenic and opportunistic organisms and their source, including insect of transmission for transmission of infection
- ☐ Describe the mechanism of immunity to infection
- ☐ Acquire knowledge on 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

c. Skills

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

- ☐ Plan and interpret laboratory investigations for the diagnosis of infectious diseases and to correlate the clinical manifestations with etiological agents
- ☐ Identify the common infection agents 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 microbiological investigations

Skills

1. Direct demonstration of bacteria by staining

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

2. Enterobacteriaceae

- ☐ Common media and biochemical tests
- ☐ Culture characteristics of members 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
- ☐ Culture characteristics of shigella and its identification (incl. slide agglutination test)

4. Laboratory diagnosis of cholera

- ☐ Collection and transport of specimen
- ☐ Culture media and characteristics
- ☐ Identification (include; motility, oxidase and other tests)
- ☐ Bio typing and serotyping

5. Laboratory diagnosis of food poisoning

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

6. Laboratory diagnosis of upper respiratory infections

- ☐ Focus on laboratory diagnosis of streptococcus infection
- ☐ Albert's stain
- ☐ Media, identification and toxin of corynebacterium (demonstration)

7. Laboratory diagnosis of lower respiratory tract infections

- ☐ Focus on klebsiella and streptococcus pneumonia
- ☐ Viral respiratory infection (demonstration of diagnosis methods)

8. Laboratory diagnosis of UTI

- ☐ Collection, storage and transport of urine
- ☐ Significant bacteriuria and quantitative/semi quantitative methods of culture
- ☐ Media including CLED
- ☐ E.coli/klebsiella (revision)
- ☐ Focus on identification of proteus and pseudomonas- cultural characteristics like swarming, pigment production and tests like of and oxidase

9. Laboratory diagnosis of wound infections

- ☐ Focus on staphylococcus (culture/identification including tests like catalase and coagulase)

10. Laboratory diagnosis of anaerobic infections

- ☐ Demonstration of collection of samples for anaerobic culture
- ☐ Demonstration of media culture for clostridium smears showing sparing and non-sparing GPB, nagler's reaction etc. and cultures of GN anaerobes like B. melaninogenicus

11. Laboratory diagnosis of viral infections

- ☐ Collection and transport of samples

- ☐ Demonstration of egg inoculation technique, cell culture, cytopathic effect, plaque assay, serological tests (complement fixation, hem agglutination inhibition, neutralization, ELISA)

12.sterilization and disinfection

- ☐ Visit of media and sterilization room (demonstration of autoclave and hot air oven)

13.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

14.laboratory diagnosis of meningitis

- ☐ Collection and transport of CSF
- ☐ Other useful specimens
- ☐ Direct seat examination
- ☐ Culture media, growth characteristics and identification tests (focus: Neisseria, hemophilic and streptococcus pneumonia)
- ☐ Chronic meningitis: pathogens (demonstration e.g. India ink for Cryptococcus)
- ☐ Antigen detection

15.laboratory diagnosis of STD

- ☐ Collection and transport of specimens
- ☐ Direct demonstration

Course content

MICROBIOLOGY (module 1)					
Discipline			Basic Subjects		
Department			Microbiology		
Subject			Microbiology		
Course code			DMD 03 17		
Class			II		
Semester		3		Spring	
Number of credits		3		Knowledge	2
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1& 2	2	1	Morphology of micro organisms	Definition, basic types of microbes, differences between eukaryotes and prokaryotes, optic methods	
	2	1	Morphology of micro organisms	Structure of eukaryotic cells, structure of prokaryotic cells simple stain and other stain spheroblast and protoplast, L-from bacteria	
3	2	1	Morphology of micro organisms	Endospore, classification of bacteria and five Kingdome classifications	
4	2	1	Physiology of micro organisms	Biochemical structure of microbial cell, Media and its preparation, growth of micro-organism	
5&6	2	1	Physiology of micro organisms	Culture, characters of bacteria, respiration of microbes	
	2	1	physiology of micro organism	Isolation of microorganism in pure culture, microbes enzymes, antibi gram	
7	2	1	Microbial flora	Role resident flora, normal flora of the skin, tough and upper respiratory tract flora, intestinal, urethra, vaginal and eye flora	
8	2	1	Infections	Microbes, toxins, exotoxin and endo toxins, period of an infectious disease, clinical form of infections, distribution, severity of infection disease	
9	2	1	Immunology: Specific and non-Specific host defense mechanism.	Specific and Nonspecific host defense mechanism.	
10	2	1	Immunology: Genetic in immunity.	Genetic in immunity. Vaccination Antigens.	

11	2	1	Immunology: Antibodies	Antibodies, Cellular and Humeral immunity
12	2	1	Gram Positive Cocci Staphylococci	Morphology, culture, Growth, characteristics, Antigenic, structure, Toxins, Pathogenesis, Clinical Finding, Diagnostic lab, Test, Treatment Prevention and Control
13	2	1	Gram Positive Cocci Streptococci	Morphology, Culture, Growth, Characteristics, Antigenic, Structure, Toxins, Treatment, Epidemiology, Prevention and Control
14	2	1	Pneumococci	Morphology, culture, growth, characteristics, antigenic structure, toxins, pathogenesis, clinical finding, diagnostic lab test, treatment, epidemiology, prevention and control Neisseria- (Neisseria gonorrhea, Neisseria meningitides) Morphology, culture, growth, characteristic, antigenic structure, Toxins, pathogenesis, clinical flinging, diagnostic lab test, treatment, epidemiology, prevention and control
15	2	1	Gram negative enteric bacilli: (Escherichia coli), gram negative enteric bacilli	Morphology, culture, growth, characteristics, antigenic structure, toxins, gram negative enteric bacilli: (Escherichia coli) pathogenesis clinical finding, diagnostic lab test, treatment, epidemiology, prevention and control
16	2	1	Gram negative exric bacilli's: (salmonella, shigella), soft tissue infections, respiratory infections	Morphology, culture, growth, characteristics antigenic structure, toxins gram, negative enteric bacilli's (salmonella, shigella), pathogenesis, clinical finding, diagnostic lab test, treatment, epidemiology, prevention and control

Textbooks & reference books recommended (last edition)

Richard Harvey iiiustrated review of microbiology

Format Paperback | 448 pages, Dimensions 213 x 276 x 22.86mm | 1,134g, 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 3208317331, ISBN13 9783208317332, Bestsellers rank 736,968

Lymme S. Garcia clinical Microbiology provedures Handbook

Format Hardback | 2540 pages, Dimensions 232 x 279 x 251.46mm | 8,560g, 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 1555815278, ISBN13 9781555815271, Bestsellers rank 1,379,609

Waren livinson review of medical microbiology

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Christopher D Doern clinical microbiology

Format Paperback | 424 pages, Dimensions 108 x 191 x 22.86mm | 344g, Publication date 30 Apr 2018, Publisher American Society for Microbiology, Publication City/Country Washington DC, United States, Language English, Edition New edition, Edition Statement 4th New edition ISBN10 328367006X, ISBN13 9783283670063, Bestsellers rank 663,49

Jons Spicer clinical microbiology and infectious diaseses

Format Paperback | 264 pages, Dimensions 210 x 297 x 15.24mm | 884.51g, 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 | 864 pages, Dimensions 232 x 277 x 28mm | 1,701g, Publication date 25 Nov 2032, 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 866,926

Sherris medical Microbiology

Format Paperback | 1056 pages, Dimensions 232 x 277 x 38mm | 2,064g, Publication date 04 Jan 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 7th edition, Illustrations note 300 Illustrations, unspecified ISBN10 1259859800, ISBN13 9781259859809, Bestsellers rank 71,501

MICROBIOLOGY (Module 2)					
Discipline			Basic Subjects		
Department			Microbiology		
Subject			Microbiology		
Course code			DMD 04 17		
Class			II		
Semester		4		Fall	
Number of credits		3		Knowledge	2
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1& 2	2	1	Oral microbiology and important oral bacteria	Definition of terminologies, introduction of concept, gram positive organisms, treprococci, strep mutants, strep silicates strep salivarius, strep angiosus	
	2	1	Oral microbial flora and Dental Hygiene Dental hygiene Oral microbes in health and diseases	Role of resident flora, normal flora of mouth and upper respiratory tract flora, morphology, culture, clostridium: (C) tetany, CI perfringens, CI gas gangrene) pathogenesis, clinical finding, diagnostic lab test, treatment, Epidemiology, prevention and control	
3	2	1	Helicobacter (h. Pylori) clostridium:- (CI Tetany, CI perfringens, Gas ganfrene) Corynebacterium (C. Diphtheria)	Morphology, culture, Growth, Characteristics, Antigenic, structure, Toxins, Pathogenesis, Clinical finding, Diagnostic Lab, test, Treatment, Epidemiology, Prevention and Control	
4	2	1	Hemopohillus influenza) Bracelet and Mycobacterium TB	Morphology, culture, Growth, Characteristics, Antigenic, Structure, Toxins, Mycobacterium, pathogenesis, Clinical finding, Diagnostic Lab test, Treatment, Epidemiology, Prevention and Control	
5&6	2	1	Mycology:- (Surface meiosis, Skin mycosis)	Morphology, Culture, Growth, Characteristics, Antigenic, structure, Toxins, Mycology (Surface mycosis, Skin mycosis) Pathogenesis, Clinical Finding, Diagnostic Lab test, Treatment, Epidemiology, Prevention and Control	
	2	1	Virology:- (Adenovirus, Para Influenza and Herpes Virus)	Morphology, Culture, Growth, Characteristics, Antigenic, structure, Toxins, Pathogenesis, Virology:- (Adenovirus, (Para Influenza and	

				Herpes Virus):- Clinical Finding, Diagnostic Lab test, Treatment, Epidemiology, Prevention and Control
7	2	1	Virology:- (Mumps, Measles, Smallpox and Rubella virus, Mumps	Morphology, Culture, Growth, Characteristics, Antigenic, structure, Toxins, Virology:- (Mumps, Measles, Smallpox and Rubella virus):- Clinical Finding Diagnostic Lab test, Treatment, Epidemiology, Prevention and Control
8	2	1	Virology {Hepatitis, polio myelitis, Rabies and Retro virus (AIDS)	Morphology, Culture, Growth, Characteristics, Antigenic, structure, Toxins, Virology { Hepatitis, Polio myelitis, Rabies and Retro virus (ADIS)}:- Clinical Finding Diagnostic Lab test, Treatment, Epidemiology, Prevention and Control
9	2	1	Parasitology Classification of Parasite and Hosts	Classification of Parasites and hosts, Type of immunity and Other Immunologic Reactions, Nomenclature of Parasites and abstract study of Parasitology
10	2	1	Entamebea Histolytic	Endamebas Histolytic a:- History, Geographical distribution, Morphology, Reproduction, Life cycle, Pathogenesis, Clinical Finding, Intestinal and Extra intestinal Amebiasis, Lab, Diagnosis, Differential Diagnosis, Treatment, Prevention
11	2	1	Giardia labmlia, Trichomonas as vaginitis	History, geographical distribution, morphology, pathogenesis and clinical finding intestinal, culture of trichomonas, lab diagnosis, treatment, prevention
12	2	1	Leishmaniosis	Leishmaniosis: history, morphology, culture, life cycle, pathogenesis and clinical findings, lab diagnosis, treatment, prevention
13	2	1	Trypanosimiasis	Trypanosimiasis: history, morphology, life cycle, pathogenesis and clinical findings, lab diagnosis, treatment, prevention
14	2	1	Malaria	Malaria: history, geographical distribution, epidemiology, life cycle, pathogenesis, clinical findings, malaria in pregnancy, malaria in children, complication of malaria, lab diagnosis, treatment, prevention
15	2	1	Ascaris lumbricularis	Ascaris lumbricularis: history, morphology, life cycle, clinical findings, lab diagnosis, treatment, prevention
16	2	1	Tenia saginata, tenia solium, exhinococcus granulose and shistomiasis	History morphology, life cycle, clinical findings, lab diagnosis, treatment, prevention

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MEDICAL ETHICS & PROFESSIONALISM

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Course description

Medical ethics in a systematic effort to work within the ethos of medicine, which in has traditionally been service to a patient. There is a now a shift form the traditional individual

patient-doctor relationship and medical care, with the advances 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 professionals are confronted to many ethical problems. It is, therefore, necessary to be prepared to deal with the problems special attention is given to the role of the physician in keeping with its Course description to improve quality of education, Kabul medical university recommends to introduction of medical ethics and professionalism in the regular teaching of DMID course.

The learning objectives 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 decisions based on acceptable moral concepts and also tradition's practices.

Course content

MEDICAL ETHIC & PROFESSIONALISM					
Discipline			Professional Subjects		
Department			Forensic medicine		
Course title			Medical ethics & professionalism		
Co-requests			Behavioral science		
Course code			DMD 04 19		
Class			III		
Semester		5	Fall		
Number of credits		1	Knowledge		1
			Practical		
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	2		Principles of medical ethics	History of medical ethics, development of medical ethics, definition, values and references of ethics, definition of medical ethics, goals of medical ethics, key terms of medical ethics. Relation between doctor and Law, Who’s a medical doctor, medical doctor and law, medical doctor as forensic doctor, medical doctor as eye witness, ethical responsibility of medical Students.	
2					
3	3		Deontology (the study of professional ethics and duties)	Principles of deontology, deontology in surgery	
4				Deontology in gynecology, deontology in internal medicine	
5				Deontology in pediatrics Deontology in forensic medicine	
6	1		Responsibility of medical profession	Attitude of medical doctor The physician-patient relationships The physician-patient’s relative relationships The physician interrelationships Truth and confidentiality	
7	1		Medical mistakes and it’s incidence in medical profession	Medical mistakes Responsibility of physicians confess on their mistakes, difficulties in conception of mistakes profession’s incidents	

8	2		Malpractice and negligence	Definition of malpractices Inattentive, improvidence, unprofessionalism Medical malpractices, patient refusal from medical services, abusive behavior, patients abusive behavior
9				
10	2		Profession ethics	Contraception, abortion members, hymen repairing Organ donation, in vitro fertilization (IVF), artificial insemination by husband, photography for medical reasons
11				Treatment of family members and himself, over-investigating the patient, prescription of drugs, charging of fees, gifts receiving, advanced life directives euthanasia-passive and active suicide The ethical outlook, dignity of death body
12	1		Plagiarism	What is a plagiarism, why plagiarizing is bad? What is URKUND? always note the source, source references, check for yourself before URKUND does it
13	1		Unprofessional practices	Illegal medical practice, illegal research on human provision and sell of narcotics, sexual abusive
14	2		Professionalism	Respect for patients, reflection/self-awareness Responsibility-commitment to excellence/lifelong learning, teamwork, social responsibility
15				
16	1		Medical's oaths	Hypocrite's oath, Ibne-Maymon's oath Declaration of Geneva, MIHE oath

Textbooks & reference books recommended (last edition)

Medical Ethics: A Very Short Introduction

Format Paperback | 328 pages, Dimensions 113 x 176 x 9mm | 132g, Publication date 01 Feb 2019, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom
Edition Revised, Edition Statement 2nd Revised edition, Illustrations note 18 black and white images, ISBN10 0198815603, ISBN13 9780198815600, Bestsellers rank 97,858

Manual of Catholic Medical Ethics Cardinal W J

Format Hardback | 722 pages, Dimensions 140 x 232 x 44mm | 1,061g, Publication date 01 Aug 2014, Publisher Connor Court Publishing Pty Ltd, Language English, Illustrations note Illustrations, black and white, ISBN10 192513832X, ISBN13 9781925138320, Bestsellers rank 395,64

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

Professionals Format Paperback | 483 pages, Dimensions 146 x 222 x 25mm | 680g, Publication date 01 Nov 2009, Publisher William B Eerdmans Publishing Co, Publication City/Country Grand Rapids, United States, Language English, ISBN10 080286404X, ISBN13 9780802864048, Bestsellers rank 874,53

MEDICAL IMMUNOLOGY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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 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 and attempts to eliminate pathogens, and how selected pathogens evade it to cause disease

First, the genes 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, immunomodulatory, hypersensitivities, immunodeficiency, 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 resource material are suggested to encourage self-directed learning

Tutorials: problem based small group discussions, questions-answer sessions, 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

Course content

IMMUNOLOGY					
Discipline			Basic Subjects		
Department			Pathology		
Subject			Immunology		
Course code			DMD 04 20		
Class			II		
Semester		4	Fall		
Number of credits		1	Knowledge		1
			Practical		
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1		Introduction and overview	Introduction, innate and acquired, active, passive and adoptive immunity	
2	1		Immunogens and antigens	Primary and secondary response, antigenicity and antigen-binding site, major classes of antigen	
3	1		Antibody structure and function	Structure features and biologic properties of Ig G IgM, IgA, IgD, and IgE.	
4	1		Antigen-antibody interaction and immune assay	Primary and secondary interaction between antibody and antigen immunoassay and immune fluorescence	
5	1		Biology and activation of T and B cells	Early phases of B cell differentiation, T cell differentiation in the thymus, Activation of CD4 T cell function of CD8 cells B cell activation and function	
6	1		Role of major histocompatibility in histocompatibility in the immune response	Variability of MHC genes and products, structure and function of MHC molecules, diversity of MHC molecules	
7	1		Control mechanism in the immune response	Tolerance, induction of tolerance in mature T and B lymphocyte immunologically privileged sites	
8	1		Cytokines	General properties of cytokines functional categories of cytokines role of cytokines and cytokines receptors in disease, therapy uses of cytokines receptors in disease	

9	1		Complement	The activation pathway and their proteins, biological activities of complement, complement and disease
10	1		Hypersensitivity reaction (type I)	General characteristics of type I hypersensitivity, sensitization, activation and effector phases, clinical aspects of type I hypersensitivity, the protect role of IgE
11	1		Hypersensitivity reaction (type II and type III)	Type II cytotoxic reaction, type III immune complex reactions
12	1		Hypersensitivity reaction (type IV)	General characteristics, treatment of cell-mediated immunity
13	1		Autoimmunity	Autoimmunity and disease, criteria for autoimmune disease etiology of autoimmune disease, examples of autoimmune disease
14	1		Immunodeficiency	Immunodeficiency syndromes, primary immunodeficiency syndromes, secondary immunodeficiency syndromes
15	1		Tumor immunology	Tumors antigens, limitation of the effectiveness of the immune response, immunodiagnostic, immunotherapy
16	1		Resistance and immunization to infectious diseases	Host defense against the various classes of microbial pathogens mechanisms by which pathogens evade the immune response principles and objective of immunization, active and passive immunization

Textbooks & reference books recommended (last edition)

Basic Immunology Functions and Disorders of the Immune System

Format Paperback | 336 pages Dimensions 191 x 235 x 15.24mm | 748.43g, Publication date 17 Apr 2019, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 6th Revised edition Illustrations note Approx. 185 illustrations (185 in full color), ISBN10 0323549438 ISBN13 9780323549431, Bestsellers rank 102,533

How the Immune System Works

Format Paperback | 328 pages, Dimensions 218 x 279 x 8mm | 498g, Publication date 15 Apr 2019 Publisher John Wiley and Sons Ltd Imprint Wiley-Blackwell, Publication City/Country Hoboken, United States, Language English, Edition Statement 6th Edition, ISBN10 111954212X ISBN13 9781119542124, Bestsellers rank 31,04

Kuby Immunology

Format Paperback | 944 pages, Dimensions 155 x 235 x 32mm | 1,725g, Publication date 32 Aug 2018, Publisher W.H.Freeman & Co Ltd, Publication City/Country New York, United States Language English, Edition Revised, Edition Statement 8th ed. 2018, Illustrations note 944 p. ISBN10 1319114709, ISBN13 9781319114701, Bestsellers rank 81,661

Roitt's Essential Immunology

Format Paperback | 576 pages, Dimensions 232 x 273 x 28mm | 1,498g, Publication date 17 Jan 2017, Publisher John Wiley & Sons Inc, Publication City/Country New York, United

States Language English, Edition Statement 13th Edition, ISBN10 1118415779, ISBN13 9781118415771 Bestsellers rank 78,44

Immunology A Short Course

Format Paperback | 432 pages, Dimensions 217 x 276 x 20mm | 1,222g, Publication date 27 Apr 2015, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 7th Edition, ISBN10 111839691X, ISBN13 9781118396919 Bestsellers rank 26,926

Clinical Immunology

Format Paperback | 360 pages, Dimensions 196 x 246 x 15mm | 786g, Publication date 10 May 2032, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Revised, Edition Statement 2nd Revised edition, Illustrations note 85 line illustrations and 60 halftones, ISBN10 0199657653, ISBN13 9780199657650, Bestsellers rank 441,074

PROSTHODONTICS

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Course description

Prosthodontics in that of Dentistry pertaining to the restoration & maintenance of oral function, Comfort, appearance & health of the patient by the restoration of natural teeth and or replacement of missing teeth & craniofacial tissue with artificial substitutes

At the completion of this course, the Students will:

- ☐ Be able to understand and use various Dental materials and impression technics
- ☐ Be competent to carry out treatment of conventional complete and partial removable dentures and full veneer crowns
- ☐ Be able to carry out treatment of routine prosthodontics procedures
- ☐ Be able to diagnose and appropriately refer patients requiring complex treatment procedures to the specialist.

Course content

PROSTHODONTICS (Module 1)				
Discipline			Professional Subjects and skills	
Department			Prosthodontics	
Subject			Pre-prosthodontics	
Course code			DMD 04 21	
Class			II	
Semester		4	Fall	
Number of credits		2	Knowledge	1
			Practical	1
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1	1	1	Prosthodontics	History, definition, classification
2	1	1	Masticator system	Function of masticatory system, oral cavity, muscles related to prosthodontics
3	1	1	Masticator system	Characteristics of human face and temporomandibular joint
4	1	1	Mandibular movement	Relation of vertical and horizontal relation, factors that adjustment the mandibular movement

5	1	1	mandibular movement	mandibular movement in deferent planes, expression, sagittal plane, frontal plane, horizontal plane
6	1	1	Occlusion and teeth location	Definition, kind of occlusion, location of teeth in Dental Asch, location of anterior teeth, location of posterior teeth, occlusion line
7	1	1	Teeth bite	Tooth bite, antagonist, kinds of bite, panes and lines of occlusion
8	1	1	Clinical examination of prosthodontics patients	Subjective, and objective examination
9	1	1	Clinical examination of prosthodontics patients	Special examination, treatment plan in prosthodontics, preparation of mouth for prostheses
10	1	1	Impression and impression materials	Definition, classification, rigid and thermoplastic material
11	1	1	Impression and impression materials	Elastic, hydrocolloid, and poly sulfide, condensation silicon, vinyl polysiloxan and poly ether.
12	1	1	Impression and impression materials	Technique of impression, choose of material complication and disinfection
13	1	1	Materialogy	Material for modeling and Dentistry, metal use in Dentistry, artificial tooth and material for polishing
14	1	1	fundamental of fixed prosthesis	Definition and terminology, intracranial restoration, extra Ronal restoration, metal, full crown, non-metal full crown, combined full crown, partial crown, post crown, bridge
15	1	1	Fundamental of removable partial denture (RPD)	Introduction, terminology, classification, components of removable partial denture, diagnosing, treatment planning, preparation of mouth and impression in RPD, constriction of artificial teeth, initial placement, adjustment and servicing in of removable partial denture, reline rebase and repair and temporary removable partial denture.
16	1	1	Fundamental of complete denture	Definition, anatomy of oral cavity, complete denture anatomy, primary impression in complete denture, final impression in complete denture, relationships and movement of jaws, determine of vertical dimension of occlusion and records of center relation, selection of artificial teeth

Textbooks & reference books recommended (last edition)

Textbook of Prosthodontics

Format Paperback | 1550 pages, Dimensions 232 x 279 x 57.15mm | 1,600g, Publication date 31 Oct 2017, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition Statement 2nd

Revised edition, Illustrations note 45 Tables, unspecified; 1088 Halftones, color; 2063 Illustrations, unspecified, ISBN10 9351524442, ISBN13 9789351524441, Bestsellers rank 1,135,328

Clinical Cases in Prosthodontics

Format Paperback | 272 pages, Dimensions 214 x 280 x 20mm | 854g, Publication date 26 Oct 2010, Publisher Iowa State University Press, Publication City/Country United States Language English, Edition Statement 1. Auflage, ISBN10 0813832645, ISBN13 9780813832647 Bestsellers rank 750,54

Prosthodontics, An Issue of Dental Clinics of North America: Volume 63-2

Format Hardback, Dimensions 152.4 x 231.14 x 15.24mm | 480g, Publication date 28 Apr 2019 Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States Language English, ISBN10 0323682448, ISBN13 9780323682442, Bestsellers rank 2,617,612

Stewart's Clinical Removable Partial Prosthodontics

Format Hardback | 526 pages, Dimensions 215.9 x 285 x 38.1mm | 1,973.13g, Publication date 01 Jan 2003, Publisher Quintessence Publishing Co Inc., U.S., Publication City/Country United States Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note 123 colour and 1143 illustrations, ISBN10 0867154179, ISBN13 9780867154177

Prosthodontic Treatment for Edentulous Patients : Complete dentures and Implant-Supported Protheses

Format Hardback | 464 pages, Dimensions 222 x 281 x 22.86mm | 1,700.97g, Publication date 19 Mar 2012, Publisher Elsevier - Health Sciences Division Imprint Mosby, Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 13th Revised edition Illustrations note Approx. 959 illustrations (827 in full color), ISBN10 0323078443 ISBN13 9780323078443, Bestsellers rank 270,899

Prosthetic Treatment of the Edentulous Patient

Format Paperback | 286 pages, Dimensions 192 x 257 x 14mm | 632g, Publication date 26 Apr 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 5th Edition, ISBN10 1405192615, ISBN13 9781405192613, Bestsellers rank 504,524

Bates' Pocket Guide to Physical Examination and History Taking

Format Paperback | 432 pages, Dimensions 108 x 181 x 22mm | 318g, Publication date 01 Dec 2032, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement Eighth, International Edition, Illustrations note 475 ISBN10 1496353455, ISBN13 9781496353450, Bestsellers rank 6,826

PROSTHODONTICS (Module 2)				
Discipline			Professional Subjects and skills	
Department			Prosthodontics	
Subject			Fixed partial prosthodontics	
Course code			DMD 05 21	
Class			III	
Semester		5	Spring	
Number of credits		2	Knowledge	1
			Practical	1
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1	1	1	An introduction of fixed prosthodontics	Terminology, diagnosis history, TMI occlusal evaluation,, diagnosis cast, protection against infectious diseases
2	1	1	Fundamental of occlusion	Centric Relation, mandibular movement, organization of the occlusion, (unilateral balanced occlusion, bilateral balanced occlusion, mutually protected occlusion) effects of anatomic (determinants, molar disocclusion, condylar guidance, anterior guidance)
3	1	1	Articulators	Definition, arc on and non arc on articulators, the tooth transverse horizontal axis relationship, registration of condylar movement
4	1	1	Inter occlusal records	Centric relation record, maximum interception record, lateral inter occlusal record
5	1	1	Articulation of cast	Introduction, ship mix face bow and articulator, den or, Hanau face bow and articulator, (face bow record, mounting the maxillary cast, mounting the mandibular cast, setting condylar guidance, custom anterior guidance, mechanical anterior guidance)
6	1	1	Treatment planning for single tooth restoration	Introduction, intra coronal restorations, (class Ionomer, composite resin, simple and complex amalgam ,metal inlay, ceramic inlay, MOD only) extra coronal restorations (partial veneer crown, full metal crown, metal-ceramic crown, all-ceramic crown, ceramic veneer restoration)

7	1	1	Treatment planning for the replacement of missing teeth	Introduction, selection of the type of prosthesis, abutment evaluation, biomechanical consideration, special problems (pier abutment, tilted molar abutment, canine replacement fixed partial Denture, cantilever fixed partial Denture)
8	1	1	Fixed partial Denture configuration	Introduction; simple fixed partial Denture (one tooth), simple fixed partial Denture (two teeth), complex fixed partial Denture (two teeth) complex fixed partial Denture 9more than two teeth) pier abutment
9	1	1	Principles of tooth preparation	Preservation of tooth structure, retention and resistance, (taper, freedom of displacement, length, substitution of internal features.
10	1	1	Principles of tooth preparation	Structure durability (occlusion reduction, fundamental cusp bevel, axial reduction) marginal integrity (finish line configuration) Preservation of periodontium instrumentation
11	1	1	Preparation for full veneer crown	Introduction, full metal crown preparations, metal ceramic crowns, (anterior metal-ceramic crowns, posterior metal ceramic crowns) all ceramic crowns.
12	1	1	Preparation of partial veneer crowns	Introduction, maxillary posterior-three-quarter crowns, posterior partial veneer variations, anterior-three-quarter crowns, pin-modified-three-quarter crowns
13	1	1	Preparations for intracranial restoration	Introduction, proximal-occlusal inlays, metal inlays variation, MOD on lays
14	1	1	Preparation for extensively damaged teeth	Introduction, principle of substitution (box form grooves, pins) bases and core (bases, cores) modification for damaged vital teeth, orthodontics adjuncts to restoring damaged teeth (regaining interproximal space, extrusion of teeth)
15	1	1	Preparation for extensively damaged teeth	Restoration of exdodontically treated teeth (rationale, prefabricated dowel with amalgam or resin core, costume cast dowel core, canal preparation, resin pattern fabrication, finishing and cementation of the dowel core)
16	1	1	Preparation for periodontal weakened teeth	Introduction, preparation finish line 9location, furcation flutes) root resection (indication, contraindication, capacity of resected root, resection technique, tooth preparation and crown configuration) success and failure

Textbooks & reference books recommended (last edition)

Prosthetic Treatment of the Edentulous Patient

Format Paperback | 286 pages, Dimensions 192 x 257 x 14mm | 632g, Publication date 26 Apr 2011, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell (an imprint of John Wiley & Sons Ltd) Publication City/Country Chic ester, United Kingdom, Language English,

Edition Statement 5th Edition, ISBN10 1405192615, ISBN13 9781405192613, Bestsellers rank 504,524

Textbook of Prosthodontics

Format Paperback | 1550 pages, Dimensions 232 x 279 x 57.15mm | 1,600g, Publication date 31 Oct 2017, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition Statement 2nd Revised edition, Illustrations note 45 Tables, unspecified; 1088 Halftones, color; 2063 Illustrations, unspecified, ISBN10 9351524442, ISBN13 9789351524441, Bestsellers rank 1,135,328

Clinical Cases in Prosthodontics

Format Paperback | 272 pages, Dimensions 214 x 280 x 20mm | 854g, Publication date 26 Oct 2010, Publisher Iowa State University Press, Publication City/Country United States Language English, Edition Statement 1. Auflage, ISBN10 0813832645, ISBN13 9780813832647 Bestsellers rank 750,54

Prosthodontics, An Issue of Dental Clinics of North America: Volume 63-2

Format Hardback, Dimensions 152.4 x 231.14 x 15.24mm | 480g, Publication date 28 Apr 2019 Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States Language English, ISBN10 0323682448, ISBN13 9780323682442, Bestsellers rank 2,617,612

Stewart's Clinical Removable Partial Prosthodontics

Format Hardback | 526 pages, Dimensions 215.9 x 285 x 38.1mm | 1,973.13g, Publication date 01 Jan 2003, Publisher Quintessence Publishing Co Inc., U.S., Publication City/Country United States Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note 123 colour and 1143 illustrations, ISBN10 0867154179, ISBN13 9780867154177

Bates' Pocket Guide to Physical Examination and History Taking

Format Paperback | 432 pages, Dimensions 108 x 181 x 22mm | 318g, Publication date 01 Dec 2032, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement Eighth, International Edition, Illustrations note 475 ISBN10 1496353455, ISBN13 9781496353450, Bestsellers rank 6,826

PROSTHODONTICS (Module 3)					
Discipline			Professional Subjects and skills		
Department			Prosthodontics		
Subject			Fixed partial prosthodontics		
Course code			DMD 06 21		
Class			III		
Semester		6		Fall	
Number of credits		2		Knowledge	1
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knownled	Practical			
1	1	1	Provisional restoration	Introduction, types of provisional restoration, resins for provisional restoration, technique for custom provisional restoration, (over impression-fabricated provisional crown) template- fabricated provisional fixed partial Denture	
2	1	1	Provisional restoration	template- fabricated VLC provisional restoration, shell fabricated provisional restoration, over impression fabricated, bis acryl composite crown, technique for prefabricated provisional restoration	
3	1	1	Fluid control and soft tissue management	Introduction, fluid control, finish line exposure 9mechanical, chemiomechanical, rotary curettage, electro surgery, gingival sulcus enlargement, removal of edentulous Cuff, crown lengthening)	
4	1	1	Impression	Introduction, comparison of impression materials, reversible hydrocolloid, polysulfide, condensation silicone, polyvinyl siloxane, polyether urethane dimethacrylate, impression for pin-retained restoration, disinfection of impression	
5	1	1	Working cast and die	Introduction, working cast with A separated die, working cast with removable die.	
6	1	1	Wax patterns	Introduction, wax pattern fabrication axial contours, occlusal morphology, cusp marginal ridge arrangement, cusp fossa arrangement, marginal finishing	
7	1	1	The functionally generated oath technique	Introduction, functional core and wax pattern fabrication of functional tracing	

8	1	1	Investing and casting	Introduction, Dental casting alloys, investing materials, gypsum- bonded investment, sprue former attachment, investing procedure burnout, cleaning the casting, phosphate- bonded investment, casting gold-palladium and base metal alloys
9	1	1	Finishing and cementation	Introduction, abrasives and polishing materials, preliminary finishing of gold restoration, preliminary finishing of base metal restoration
10	1	1	Finishing and cementation	Cements ,bonding mechanisms, cement selection, cementation sequence
11	1	1	Esthetic consideration	Introduction, all ceramic crowns, porcelain laminate veneer, cementation and finishing of all ceramic restoration, crown and veneer, cementation
12	1	1	All ceramic restoration	Introduction, all ceramic crowns, porcelain laminate veneer, cementation and finishing of all ceramic restoration, crown and veneer, cementation
13	1	1	Metal ceramic restoration	Introduction, bonding mechanisms, alloys used, coping design, single coping wax pattern, porcelain addition, finishing and cementation
14	1	1	Pontic and edentulous ridge	Introduction, tissue contact, post inset ion hygiene, Pontiac design, the edentulous ridge, pontid fabrication
15	1	1	Soldering joints and other connectors	Introduction, gold alloys fixed partial Denture soldering, adding proximal contacts, repairing costing coids, breaking solder joints, armamentarium, soldering metal-ceramic alloys, preventer and post veneer metal-ceramic alloys soldering, no rigid connectors
16	1	1	Resin-bonded fixed partial Denture	Introduction, metal framework, resin cements, pros and cons, tooth preparation framework fabrication, master cast duplication, resin coping fabrication, wax pattern, investing and casting, delivery sequin

Textbooks & reference books recommended (last edition)

Bates' Pocket Guide to Physical Examination and History Taking

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Prosthetic Treatment of the Edentulous Patient

Format Paperback | 286 pages, Dimensions 192 x 257 x 14mm | 632g, Publication date 26 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 5th Edition, ISBN10 1405192615, ISBN13 9781405192613, Bestsellers rank 504,524

Textbook of Prosthodontics

Format Paperback | 1550 pages, Dimensions 232 x 279 x 57.15mm | 1,600g, Publication date 31 Oct 2017, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition Statement 2nd Revised edition, Illustrations note 45 Tables, unspecified; 1088 Halftones, color; 2063 Illustrations, unspecified, ISBN10 9351524442, ISBN13 9789351524441, Bestsellers rank 1,135,328

Clinical Cases in Prosthodontics

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Stewart's Clinical Removable Partial Prosthodontics

Format Hardback | 526 pages, Dimensions 215.9 x 285 x 38.1mm | 1,973.13g, Publication date 01 Jan 2003, Publisher Quintessence Publishing Co Inc.,U.S., Publication City/Country United States Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note 123 colour and 1143 illustrations, ISBN10 0867154179, ISBN13 9780867154177

PROSTHODONTICS (Module 4)					
Discipline			Professional Subjects and skills		
Department			Prosthodontics		
Subject			Partial removable prosthodontics		
Course code			DMD 07 21		
Class			IV		
Semester		7		Spring	
Number of credits		2		Knowledge	1
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Partially edentulous epidemiology, physiology and terminology	Tooth loss age, consequences of tooth loss, functional restoration with prostheses, mastication, food reduction, current R-P-D use, need for R-P-D, terminology	
2	1	1	Clasp-retainer partial Denture	Point of view, tooth supported, tooth and tissue supported six phase of partial Denture service, establishment and verification of occlusal relation and tooth arrangements, initial placement procedures, reasons, reasons o failure of clasp-retainer partial Denture, self-assessment aids	
3	1	1	Classification of partial edentulous arches	Requirements of an acceptable method of classification Kennedy classification, Applegate’s rules for applying the Kennedy classification, mauks, god fray and fried man’s classification, self-assessment aids	
4	1	1	Biomechanics of removable partial Denture	Biomechanics and design solution, biomechanical consideration, passible movement of partial Denture, self-assessment.	
5	1	1	Components of removable partial Denture (major connectors)	Major coccentors, location, mandibular major connector, maxillary major connector	
6	1	1	Components of removable partial Denture (minor connectors)	Minor connector, function, form and location, tissue stop, finishing line, reaction of tissue to metallic coverage, major connector in review, self-assessment	

7	1	1	Components of removable partial Denture (rest and rest seat)	Form of the occlusal rest seat, support of rests, lingual rests on canines and incisor teeth, incisal rest and rest seats, self-assessment
8	1	1	Components of removable Denture (direct retainers)	Direct retainer's role in prosthesis movement control, types of direct retainers, analysis of tooth contours for retentive clasp, criteria for selecting a given clasp design, basic principles of clasp design, reciprocal arm function
9	1	1	Components of removable partial Denture (direct retainers)	Types of clasp assemblies, clasp designed to accommodate functional movement, clasp designed without movement accommodation, other types of retainers, lingual retention in conjunction with internal rests, internal attachments self-assessments aids.
10	1	1	Components of removable partial Denture (indirect retainers)	Factors influencing effectiveness of indirect retainers, auxiliary function of indirect retainers, form of indirect retainers, modification areas, self-assessments
11	1	1	Denture base considerations	Functions of Denture base, tooth supported and distal extension partial Denture base, methods of attaching Denture base, ideal Denture base material, accuracy and permanence of form, comparative tissue response, thermal conductivity, weight and bulk
12	1	1	Denture base considerations	Methods of attaching artificial teeth, chemical bonding, need for relining, stress-breakers, self-assessment aids
13	1	1	Principles of removable partial Denture design	Difference in prosthesis support and the influence in design, differentiation between two main types of RPD, difference in support, impression registration, difference in clasp design, essential of partial Denture design, components of partial Denture design
14	1	1	Principles of removable partial Denture design	Direct retainer for distal extension partial Dentures, stabilizing components, additional consideration influencing design, self-assessments aids
15	1	1	Surveying	Description of Dental survey or purpose of survey, factor that determine path of placement and removal, guiding planes, retentive area, interference, esthetics
16	1	1	Surveying	Step by step procedures in surveying diagnostic cast, guiding planes, retentive area, interference, esthetics, final path of pavements, recording of relation of cast to survey or, surveying the master cast, self-assessment aids

Textbooks & reference books recommended (last edition)

Stewart's Clinical Removable Partial Prosthodontics

Format Hardback | 526 pages, Dimensions 215.9 x 285 x 38.1mm | 1,973.13g, Publication date 01 Jan 2003, Publisher Quintessence Publishing Co Inc., U.S., Publication City/Country United States Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note 123 colour and 1143 illustrations, ISBN10 0867154179, ISBN13 9780867154177

Bates' Pocket Guide to Physical Examination and History Taking

Format Paperback | 432 pages, Dimensions 108 x 181 x 22mm | 318g, Publication date 01 Dec 2032, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement Eighth, International Edition, Illustrations note 475 ISBN10 1496353455, ISBN13 9781496353450, Bestsellers rank 6,826

Prosthodontic Treatment for Edentulous Patients : Complete Dentures and Implant-Supported Protheses

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Prosthetic Treatment of the Edentulous Patient

Format Paperback | 286 pages, Dimensions 192 x 257 x 14mm | 632g, Publication date 26 Apr 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 5th Edition, ISBN10 1405192615, ISBN13 9781405192613, Bestsellers rank 504,524

Textbook of Prosthodontics

Format Paperback | 1550 pages, Dimensions 232 x 279 x 57.15mm | 1,600g, Publication date 31 Oct 2017, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition Statement 2nd Revised edition, Illustrations note 45 Tables, unspecified; 1088 Halftones, color; 2063 Illustrations, unspecified, ISBN10 9351524442, ISBN13 9789351524441, Bestsellers rank 1,135,328

Clinical Cases in Prosthodontics

Format Paperback | 272 pages, Dimensions 214 x 280 x 20mm | 854g, Publication date 26 Oct 2010, Publisher Iowa State University Press, Publication City/Country United States Language English, Edition Statement 1. Auflage, ISBN10 0813832645, ISBN13 9780813832647 Bestsellers rank 750,54

Prosthodontics, An Issue of Dental Clinics of North America: Volume 63-2

Format Hardback, Dimensions 152.4 x 231.14 x 15.24mm | 480g, Publication date 28 Apr 2019 Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States Language English, ISBN10 0323682448, ISBN13 9780323682442, Bestsellers rank 2,617,612

PROSTHODONTICS (Module 5)					
Discipline			Professional Subjects and skills		
Department			Prosthodontics		
Subject			Partial removable prosthodontics		
Course code			DMD 08 21		
Class			IV		
Semester		8	Fall		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Diagnosis and treatment planning	Purpose and uniqueness of treatment, patient interview, infection control, clinical examination, diagnosis cast, materials and methods for recording centric relation.	
2	1	1	Diagnosis and treatment planning	Diagnosis finding, interpretation of examination data, radiographic interpretation, periodontal consideration, caries activity, evaluation of the prosthesis foundation, teeth and residual ridge, surgical preparation, analysis of occlusal factors, orthodontic treatment, differential diagnosis, clinical factors related to metal alloys used for RPD framework, wrought wire: selection and quality control	
3	1	1	Preparation of mouth for removable partial Dentures	Oral surgical preparation, extractions, removal of residual roots, impacted teeth, cyst and odontogenic tumors, exostoses and tori, hyperplastic tissue, muscle attachment and farina etc.	
4	1	1	Preparation of mouth for removable partial Dentures	Periodontal preparation, initial disease control therapy, definitive periodontal surgery, advantages of periodontal therapy, self-assessment aids.	
5	1	1	Preparation of abutment teeth	Classification of abutment teeth, sequence of abutment preparation on sound teeth enamel or restoration, self-assessment aids	
6	1	1	Impression material and procedures for removable partial Denture	Rigged materials, thermoplastic, elastic materials, hydrocolloids, mercaptam rubber-base, polyether, silicone impression materials, impression of partially edentulous arch, arch, individual impression trays, self-assessments aids	

7	1	1	Support for the distal extension Denture base	Distal extension removable partial Denture, factors influence the support of distal extension base, contour and quality of the residual ridge, extension of residual ridge coverage by the Denture base, accuracy of the fit of a Denture base, design of a removable partial Denture framework, total occlusal load applied, self-assessment
8	1	1	Occlusal relationships for removable partial Dentures	Desirable occlusal contact relationships for removable partial Denture, methods for establishing occlusal relationships, self-assessments
9	1	1	Laboratory procedures	Duplicating a stone cast, duplicating procedure, waxing the removable partial Denture framework, attaching wrought-wire retainer arms by soldering, waxing metal bases, spring, investing burnout, casting and finishing of the removable partial Denture base, investing the removable partial Denture, precautions to be taken in remounting, polishing the Denture, self-assessment.
10	1	1	Laboratory procedures	Making a stone occlusal template from a functional occlusal record, waxing and investing the removable partial Denture before processing acrylic resin bases, waxing the removable partial Denture base, investing the removable partial Denture, precautions to be taken in remounting, polishing the Denture, self-assessments.
11	1	1	Work authorizations for removable partial Denture	Work authorizations, contact, function, characteristics, definitive instruction by work authorization, legal aspects of work authorizations, and delineation of responsibilities by work authorizations, self-assessments aids.
12	1	1	Initial placement, adjustment, and servicing of the removable partial Denture	Adjustments of bearing surface of Denture base, occlusal interference from Denture framework, adjustments of occlusion in harmony with natural and artificial dentition, instructions to the patient, follow up services, self-assessment aids.
13	1	1	Relining and rebasing the removable partial Denture	Relining tooth-supported Denture bases, relining distal extension Denture bases, methods of reestablishing occlusion on relined removable partial Denture, self-assessment aids
14	1	1	Repairs and addition to removable partial Denture	Broken clasp arms, fractured occlusal rests, distortion of other components-major and minor connectors, loss of tooth or teeth not involved in the support or retention of the restoration, loss of abutment tooth necessitating its replacement, other types of repairs, and repairs by the soldering, self-assessment.
15	1	1	Temporary removable partial Denture	Appearance, space maintenance; reestablishing occlusal relationships, conditioning teeth on residual ridges, interim restoration during

				treatment, conditioning the patient for wearing a prosthesis, clinical procedure for placement, self-assessment aids.
16	1	1	Removable partial Denture constriction in maxillofacial prosthetics	Maxillofacial prosthetics, maxillofacial classification, potential complications, definitive care, intraoral prosthesis design constriction, maxillary and mandibular defect, mandibular reconstruction-bone grafts, speech aid, palatal lift, palatal augmentation and mandibular prosthesis, self-assessment aids.

Textbooks & reference books recommended (last edition)

Clinical Cases in Prosthodontics

Format Paperback | 272 pages, Dimensions 214 x 280 x 20mm | 854g, Publication date 26 Oct 2010, Publisher Iowa State University Press, Publication City/Country United States Language English, Edition Statement 1. Auflage, ISBN10 0813832645, ISBN13 9780813832647 Bestsellers rank 750,54

Prosthodontics, An Issue of Dental Clinics of North America: Volume 63-2

Format Hardback, Dimensions 152.4 x 231.14 x 15.24mm | 480g, Publication date 28 Apr 2019 Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States Language English, ISBN10 0323682448, ISBN13 9780323682442, Bestsellers rank 2,617,612

Stewart's Clinical Removable Partial Prosthodontics

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Prosthodontic Treatment for Edentulous Patients Complete Dentures and Implant-Supported Prostheses

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Prosthetic Treatment of the Edentulous Patient

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Textbook of Prosthodontics

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PROSTHODONTICS (Module 6)					
Discipline			Professional Subjects and skills		
Department			Prosthodontics		
Subject			Complete Denture		
Course code			DMD 09 21		
Class			V		
Semester		9		Spring	
Number of credits		2		Knowledge	1
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Introduction	Definition, branches of prosthodontics, biomechanics of the edentulous state.	
2	1	1	Anatomy related to complete Denture	Bone of basal seat (maxilla and mandibular)	
3	1	1	Anatomy related to complete Denture	Intra oral anatomy (maxillary basal coverage and mandibular basal coverage)	
4	1	1	Anatomy related to complete Denture	Surface of the compete Denture, anatomy of maxillary Denture and anatomy of mandibular Denture.	
5	1	1	Anatomy related to complete Denture	Microscopic anatomy and histology of mouth and anatomy lower part of the face	
6	1	1	Anatomy related to complete Denture	Muscular anatomy relate to complete Denture	
7	1	1	Examination, diagnosis and treatment planning	Interview with patient- first interview, recording general information, psychology evaluation, chief complaints and assessment of patients expectation, medical history, medical consultation, current medication, Dental history,, extra oral, intra oral and radiographic examination, additional test and medical consultation, treatment plan, prognosis, consultation.	
8	1	1	Surgical and nonsurgical preparation of the mouth for complete Denture	Non-surgical methods, surgical methods, prosthetic surgery, preoperative examination, surgical procedures, procedures to improve the bony alveolar ridge, conclusion	
9	1	1	Impression of complete Denture	Definition, aims of impression	

10	1	1	Impression of complete Denture	Preliminary impression and primary cast
11	1	1	Impression of complete Denture	Individual tarry, border modeling, final impression, boxing, master cast, impression technique
12	1	1	Effective factors on movement of jaw relations	T.M.J, masalas and ligament, teeth and C.N S. anatomy
13	1	1	Movement of mandible	Record of sagittal plane, record of horizontal plane, record of frontal, axes of mandibular rotation
14	1	1	Jaw relation and record mechanism	Vertical relation, horizontal relation, orientation relation
15	1	1	Jaw relation and record mechanism	Record base, practical record of jaw relation
16	1	1	Tooth selection	Anterior and posterior tooth of maxilla and mandible

Textbooks & reference books recommended (last edition)

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Textbook of Prosthodontics

Format Paperback | 1550 pages, Dimensions 232 x 279 x 57.15mm | 1,600g, Publication date 31 Oct 2017, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition Statement 2nd Revised edition, Illustrations note 45 Tables, unspecified; 1088 Halftones, color; 2063 Illustrations, unspecified, ISBN10 9351524442, ISBN13 9789351524441, Bestsellers rank 1,135,328

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Stewart's Clinical Removable Partial Prosthodontics

Format Hardback | 526 pages, Dimensions 215.9 x 285 x 38.1mm | 1,973.13g, Publication date 01 Jan 2003, Publisher Quintessence Publishing Co Inc.,U.S., Publication City/Country United States Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note 123 colour and 1143 illustrations, ISBN10 0867154179, ISBN13 9780867154177

Bates' Pocket Guide to Physical Examination and History Taking

Format Paperback | 432 pages, Dimensions 108 x 181 x 22mm | 318g, Publication date 01 Dec 2032, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement Eighth, International Edition, Illustrations note 475 ISBN10 1496353455, ISBN13 9781496353450, Bestsellers rank 6,826

PROSTHODONTICS (Module 7)					
Discipline			Professional Subjects and skills		
Department			Prosthodontics		
Subject			Complete Denture		
Course code			DMD 10 21		
Class			V		
Semester		10		Fall	
Number of credits		2		Knowledge	1
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Articular	Definition, classification (simple, average, value, adjustable)	
2	1	1	Transfer the jaw relation to articulator	Preparation cast for mounting, transfer of cast to articulator	
3	1	1	Arrangement of artificial teeth	Principle of teeth setting, setting of maxillary anterior teeth, setting of maxillary posterior teeth, setting of mandible anterior teeth, setting of mandible posterior teeth	
4	1	1	Try in the artificial teeth	Try in procedure (centric relation, vertical, dimension, Medline, anterior and superior inferior position of maxillary and mandible anterior teeth, occlusion plane and spee curve, esthetic factors, labial relation of anterior teeth and profile, take opinion of patient)	
5	1	1	Record of non-centric relation	Primary occlusion record and manner of determining condyle direction current problems in primary recording, and its solutions, measuring Bennett angle on later records, incisal guidance, correction, of set teeth on bases of balancing occlusion	
6	1	1	Occlusion in complete Denture	Importance of occlusion, centric occlusion, non centric occlusion, effective factors in primary occlusion, interference of three factors in occlusion, compensating curve, effective factors in lateral occlusion	
7	1	1	Laboratory procedure	Form polishing surface of Denture, model age maxillary Denture, model age mandible Denture	

8	1	1	Laboratory procedure	Flasking, wax elimination, application of tin foil substitute, mixing the acrylic powder and liquid, acrylization, deflasking
9	1	1	Occlusal mistake after acrylization and its correction	Remounting in split cast water, remounting after new record, transferring face bow record to articulator, preparing new mounting cast, work procedure, revision of prostheses, new recording after completion of laboratory procedures, causes of occlusion mistakes
10	1	1	Submitting Denture to patients	Insert Denture in to the month, method of suing cream to show pressure area, how to keep Denture, Denture, Denture hygiene, month hygiene, diary of edentulous patient, use of Denture adhesive and home liner, first visit of patient after submitting Denture, next visit of patient
11	1	1	Relining, rebasing and repair	Relining (definition, indication, contraindication, relining material and techniques, rebasing (definition, indication, laboratory techniques) Denture repair 9type of Denture fractures, causes of fracture, contraindication, repair material, procedure, repairing fractured teeth)
12	1	1	Single Denture	Type, problem with the single complete Denture, diagnosis and treatment planning, tooth modification techniques, methods to obtain balanced occlusion, occlusion material for single complete Denture, cast metal Denture bases.
13	1	1	Over Denture	Definition, classification, indication, contraindication, advantage, disadvantage, treatment sequence for the over Denture, retention of on over Denture
14	1	1	Immediate Denture	Definition, type, indication, contraindications, advantages, disadvantage, examination and treatment planning, pretreatment records, treatment option, surgery and placement, post placement recall, follow up, conclusion
15	1	1	Implants, supported complete Dentures	Definition, classification of implants, general indication for implant prosthesis, contraindication, uses of implant, the sub periosteal implant, endodontic implant, endossous screw from or threaded implant, Osseo integration, mucosal seal, implant in compete Denture treatment
16	1	1	Maxillofacial prosthetics	Definition, scope for maxillofacial prosthodontics, classification of maxillofacial defects, classification of maxillofacial prostheses, material used for maxillofacial prosthesis, extra oral prostheses, intraoral prostheses, treatment prostheses, tissue implants, retention of prosthesis

Textbooks & reference books recommended (last edition)

Textbook of Prosthodontics

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Prosthetic Treatment of the Edentulous Patient

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CLINICAL PHARMACOLOGY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Course description

The broad goals of teaching pharmacology to undergraduate 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 bases of therapeutics.

A. knowledge

At the end of course the Student be able to:

- ☐ Understand pharmacokinetics and pharmacodynamics principles involved in the use of drugs;
- ☐ Understand and Identify the various 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 dose 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 & rational use of drugs;
- ☐ To 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 indications;
- ☐ 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, the Students should be able to:

- ☐ Prescribe drugs for common ailments;
- ☐ Identify adverse reactions and interactions of commonly used drugs;
- ☐ Interpret the data of 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 techniques;
- ☐ 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.)

- ☐ Advice 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 in terms of:
- ☐ Pharmacological actions of their ingredients
- ☐ Claims of pharmaceutical companies
- ☐ Economics of use
- ☐ Rational or irrational nature of fixed dose drug combinations

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(s)
- ☐ Understand the legal aspects of prescription
- ☐ Counsel patients for compliance
- ☐ Take adequate care to write prescription legibly (easy to read)
- ☐ Understand rationality of poly pharmacy
- ☐ Update themselves regarding recent advances in pharmacology

Course content

PHARMACOLOGY (Module 1)					
Discipline			Professional Subjects		
Department			Pharmacology		
Subject			Medical pharmacology		
Course code			DMD 05 16		
Class			III		
Semester		5	Spring		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Introduction of Pharmacology	1- History & role of pharmacology, in medicine 2- Definition 3- Mode of Drug Administration(Enteral, Parenteral, Local) 4- Pharmacokinetics(Absorption, Distribution, Metabolism, Excretion	
2	1	1	Introduction of Pharmacology	Introduction of Pharmacology, Pharmacodynamics(mechanism of action of drugs, Receptors, therapeutic index, synergism & Antagonism, factors modifying effects of drug)	
3	1	1	Introduction of Pharmacology	Introduction of Pharmacology 1- Adverse Drugs Reaction 2- Drugs interaction	
4	1	1	Autonomic Nervous System Pharmacology	I. Introduction- brief introduction of anatomy, physiology & biochemistry of Autonomic nervous system including ANS neurotransmitters, Receptors & effects of ANS on body organs II. Cholinergic Drugs :(1) introduction and classification of cholinergic drugs. (2)- Acetylcholine, Pilocarpine, Neostigmine II. Content for Presentation included: Pharmacokinetics & pharmacodynamics, Pharmacologic Effects, Clinical Usage, important side Effects, Contraindication.	
5	1	1	Autonomic System Pharmacology	I. Anti-Cholinergic Drug 1. Introduction & classification	

				<p>2. Atropine, Hyoscine</p> <p>II. Muscle Relaxant</p> <p>1. Introduction & classification</p> <p>2. Suxamethonium</p> <p>III Content for presentation include: Pharmacokinetics & pharmacodynamics, Pharmacologic Effects, Clinical Usage, important Side Effects, and Contraindications.</p>
6	1	1	Autonomic System Pharmacology	<p>I. Adrenergic drugs</p> <p>1.Introduction & classification</p> <p>2.Adrenaline, dopamine</p> <p>3.Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic, effects, clinical usage, important side effects, contraindications, cautions, & drug interaction, dose strength and dosage form</p>
7	1	1	Autonomic system pharmacology	<p>Anti-adrenergic drugs</p> <p>1. Introduction & classification</p> <p>2. Alpha blockers (prazosin) Beta blockers (propranolol, atenolol)</p> <p>3. Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindications, cautions & drug interaction, dose strength & dosage form</p>
8	1	1	CNS-pharmacology Pharmacology of sedative-hypnotics	<p>Introduction of CNS pharmacology</p> <p>1. Introduction & classification</p> <p>2. diazepam, alprazolam, midazolam</p> <p>3. benzodiazepine antagonists: flumazenil</p> <p>4. content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, contraindications, cautions & drug interaction, dose strength& dosage form</p>
9	1	1	CNS pharmacology general anesthetics	<p>1. General anesthetics: introduction &classification</p> <p>2. Halothane, sodium thiopental, ketamine</p> <p>3. Premedication</p> <p>6. content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindication, cautions & drug interaction, dose strength & dosage form</p>
10	1	1	Local anesthetics	<p>Local anesthetics:</p> <p>1. Introduction & classification</p> <p>2. Ester group: cocaine, procaine, benzocaine, tetra Caine</p> <p>3. Amide group; lignocaine, mepivacaine, bupivacaine, bupivacaine</p>

				4. Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindication, cautions & drug interaction, dose strength & dosage form
11	1	1	Analgesics Narcotic analgesics	Narcotic analgesics 1. Introduction & classification 2. Morphine, codeine, tramadol 3. Opiate antagonists 4. Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindication, cautions
12	1	1	Analgesics Non-steroidal anti- inflammatory Drugs (NSAIDs)	1. Introduction & classification 2. Acetyl salicylic acid 3. Ibuprofen, piroxicam, naproxen, diclofenac, indomethacin, celecoxib, valbecoxib, rofecoxib, nemisulide 4. Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindication, cautions & drug interaction, dose strength & dosage form
13	1	1	Non-steroidal anti- inflammatory drugs (NSAIDs) cont...	Paracetamol Drugs used in rheumatoid arthritis-gout and migraine 1. Introduction & classification 2. Gold salt, penicillamine, chloroquine, glucocorticoids colchicine, allopurinol – ergotamine, sumatriptam 3. Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindication, cautions & drug interaction, dose strength & dosage form
14	1	1	Autacoids	1. Introduction & classifications 2. Anti histaminic: Diphenhydramine, dimenhydramine, promethazine, chlorpheniramine, pheniramine, loratadine, cetirizine, fexofenadine drugs 3. Serotonin (5ht), agonist & antagonists: Cyproheptadine 4. Ergot alkaloids: ergometrine, ergotamine 5. Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindication, cautions & drug interaction, dose strength & dosage form

15	1	1	Respiratory system pharmacology	<ol style="list-style-type: none"> 1. Introduction & classification 2. Bronchodilators: salbutamol, aminophylline, theophylline, adrenaline, ipratropium, glucocorticoids (beclomethasone, hydrocortisone), sodium cromoglycate, montelukast 3. Antitussives: codeine, dextromethorphan 4. Mucolytics & expectorants: acetyl cysteine, ambroxol 5. Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindication, cautions & drug interaction, dose strength & dosage form
16	1	1	Gastro-intestinal system Pharmacology	<ol style="list-style-type: none"> 1. Introduction & classification 2. Antacids: al-hydroxide, Mg-hydroxide, sodium bicarbonate, Ca-carbonate 3. H₂-receptor blockers: ranitidine 4. PPI: omeprazole 5. Ulcer protentants & anticholinergics: sucralfate, pirenzepine 6. Content for presentation included: pharmacokinetics & pharmacodynamics, Pharmacologic effects, clinical usage, important side effects, contraindication, cautions & drug interaction, dose strength & dosage form

Textbooks & reference books recommended (last edition)

Dental Pharmacology

Format Paperback | 132 pages, Dimensions 232 x 280 x 7mm | 322g, Publication date 15 Mar 2020 Publisher National Learning Corp, Language English, ISBN10 173187040X ISBN13 9781731870407

Modern pharmacology with clinical applications, Chales R. Craig.

Format Paperback | 832 pages, Dimensions 232 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

General And Dental Pharmacology

Format Paperback | 128 pages, Dimensions 152 x 229 x 8mm | 200g, Publication date 12 May 2020, Publisher LAP Lambert Academic Publishing, Language English, Edition Statement Aufl. ISBN10 6202527307, ISBN13 9786202527309

Modern Dental Materia Medica, Pharmacology

Format Paperback | 404 pages, Dimensions 156 x 234 x 21mm | 562g, Publication date 24 Feb 2018, Publisher Palala Press, Language English, Illustrations note Illustrations, black and white ISBN10 1378584406, ISBN13 9781378584408

Basic and Clinical Pharmacology

Format Paperback | 1264 pages, Dimensions 213.36 x 274.32 x 43.18mm | 2,205g, Publication date 20 Jan 2018, Publisher McGraw-Hill Education, Publication

City/Country OH, United States Language English, Edition Statement 14th edition,
Illustrations note 300 Illustrations, unspecified ISBN10 1259641155,
ISBN13 9781259641152, Bestsellers rank 82,608

Study guide for Basic and Clinical Pharmacology

Format Paperback | 634 pages, Dimensions 205.74 x 274.32 x 40.64mm | 1,564.89g,
Publication date 22 Aug 2014, Publisher CRAM101, Publication City/Country United States,
Language English Illustrations note black & white illustrations, ISBN10 1497022932,
ISBN13 9781497022911 Bestsellers rank 2,693,23

PHARMACOLOGY (Module 2)					
Discipline			Professional Subjects		
Department			Pharmacology		
Subject			Medical pharmacology		
Course code			DMD 06 16		
Class			III		
Semester			6	Fall	
Number of credits			2	Knowledge	1
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Gastro-intestinal system pharmacology	I. Pharakinetic agent: metoclopramide, domperidone II. Anti-emetics: introduction & classification 1.Domperidone, metoclopramide 2.5HT antagonists: oridansetron 3.Antimoscarinecs: dimenhyrinate III. Laxatives: introduction & classification ispaghula husk, paraffin, lactulose, Mg-Hydroxide, bisacodyl IV. Drugs used in diarrhea (symptomatic): diphynoxylate, lope amide V. Content for Presentation included: Pharmacokinetics & pharmacodynamics, Pharmacologic Effects, Clinical Usage, important side Effects, Contraindication, dosage form	
2	1	1	Diuretics	1.Introduction & classification 2.Furosemide, hydrochlorothiazide, spironolactone, mannitol 3.Content for Presentation included: Pharmacokinetics & pharmacodynamics, Pharmacologic Effects, Clinical Usage important side Effects, Contraindication, dosage form	
3	1	1	Cardiovascular system Pharmacology	I. Drugs used in heart failure 1.Introduction & classification 2.Digoxin	

4	1	1	Anti-infective drugs	<p>I. Antihypertensive drugs</p> <ol style="list-style-type: none"> 1.Introduction & classification 2.Nitrates, amlodipine, atenolol <p>II. Antihypertensive drugs</p> <ol style="list-style-type: none"> 1.Introduction & classification 2.Methyl-dopa, amlodipine, captopril, losartan, atenolol, hydralazine, sodium nitroprusside 3.Content for Presentation included: Pharmacokinetics & pharmacodynamics, Pharmacologic Effects, Clinical Usage, , important side effects, contraindications, cautions, & drug interaction, dose strength and dosage form
5	1	1	Anti-infective drugs	<ol style="list-style-type: none"> 1.Introduction & classification of antibiotics 2.Factors affecting bacterial chemotherapy 3.Antimicrobial resistance 4.Selecting of appropriate antibiotics 5.Super infection 6.Antibiotic prophylaxis/chemoprophylaxis 7.Irrational use of antibiotics 8.Combination use of antibiotics
6	1	1	Anti-infective drugs (cont...)	<p>Sulfamides/ anti-infective beta-lactam antibiotics, cephalosporin's/other betalactams,</p> <ol style="list-style-type: none"> 1.Introduction & classification 2.Penicillin's, cephalosporin's 3.Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindications, cautions & drug interaction, dose strength & dosage form
7	1	1	Anti-infective drugs (cont...)	<p>Aminoglycosides, macrolides, tetracycline's & chloramphenicol</p> <ol style="list-style-type: none"> 1.Introduction & classification 2.Gentamicin, azithromycin, doxycycline, chloramphenicol 3.Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindications, cautions & drug interaction, dose strength & dosage form
8	1	1	Anti-infective drugs (cont....)	<p>Quinolones & other anti-infective drugs used for anaerobic infections</p> <ol style="list-style-type: none"> 1.Introduction & classification 2.Ciprofloxacin, levofloxacin, other anti-infective like clindamycin, lincomycine, vancomycin, polymexin, bacitracin, fostomycin 3.Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important

				side effects, contraindications, cautions & drug interaction, dose strength & dosage form
9	1	1	Anti-infective drugs (cont...)	<p>Urinary antiseptics, anti-fungal drugs & anti-TB drugs</p> <p>1.introduction & classification</p> <p>2.Nitrofurantoin, Nalidixic acid</p> <p>3.Amphotericin B, Griseofulvin ,Azoles,Nystatin</p> <p>4.Anti TB drugs brief information on Anti TB Drugs Like first line drugs and second line drugs and their names</p> <p>5.Content for Presentation included :</p> <p>Pharmacokinetics& pharmacodynamics, pharmacologic Effect, Clinical Usage, important Side Effects, Contraindication, Caution & Drug Interaction, dose Strength & Dosage form</p>
10	1	1	Anti-infective drugs (cont...)	<p>Anti-protozoal anti: anti-malarial</p> <p>1.Introduction & classification</p> <p>2.Chloroquine, quinine, pyrimaquine, prymethamine+sufadoxine</p> <p>3.Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindication, cautions & drugs interaction, dose strength & dosage form</p>
11	1	1	Anti-infective drugs (cont...)	<p>Anti-protozoal drugs (anti-amebic & anthelmintic)</p> <p>1.Introduction & classification</p> <p>2.Chloroquine, quinine, pyrimaquine, prymethamine+sufadoxine</p> <p>3.Albendazole, mebendazole, niccosemide</p> <p>4.Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindication, cautions & drugs interaction, dose strength & dosage form</p>
12	1	1	Anti-septic & disinfectants	<p>1.Introduction & classification</p> <p>2.Acids, alcohols, andehyds, surfactants, halogen's, phenols, oxidizing agents, dyes</p> <p>3.Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindication, cautions & drugs interaction, dose strength & dosage form</p>

13	1	1	Hormones pharmacology	1.Introduction & classification 2.Oxytocin, 2- levo-thyroxine & anti thyroid and iodine 3.Estrogens, progestin's & contraceptives 4.Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage,
14	1	1	Hormones pharmacology	Corticosteroids 1.Introduction & classification 2.Pharmacological effects 3.Hydrocortisone, dexamethasone, prednisolone 4.Insulin, & antidiabetic drugs 5.Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects, contraindication, cautions & drug interaction, dose strength & dosage form
15	1	1	Blood pharmacology	1. Introduction & classification 2.Hematinic: iron folic acid, vitamin B12 3.Drugs used in coagulopathy introduction and classification anti coagulants heparin & warfarin 4.Thrombolytic 5.Platelet aggregation inhibitors 6.Coagulants 7.Hypolipidemic drugs 8.Content for presentation included: pharmacokinetics & pharmacodynamics, pharmacologic effects, clinical usage, important side effects
16	1	1	1. Rational use of drugs & rational prescription 2. Dental pharmacology	1.Rational use of drugs & rational prescription 2.Dental pharmacology: introduction & classification (dentifrices, styptics, mouthwashes, astringents, disclosing agents, antitartar drugs, drugs used in Dental plaque, sialagogue & anti sialagogue, emergencies in Dental practices)

Textbooks & reference books recommended (last edition)

Format Paperback | 1264 pages, Dimensions 213.36 x 274.32 x 43.18mm | 2,205g,
 Publication date 20 Jan 2018, Publisher McGraw-Hill Education, Publication
 City/Country OH, United States Language English, Edition Statement 14th edition,
 Illustrations note 300 Illustrations, unspecified ISBN10 1259641155,
 ISBN13 9781259641152, Bestsellers rank 82,608

Study guide for Basic and Clinical Pharmacology

Format Paperback | 634 pages, Dimensions 205.74 x 274.32 x 40.64mm | 1,564.89g,
 Publication date 22 Aug 2014, Publisher Cram101, Publication City/Country United States,
 Language English Illustrations note black & white illustrations, ISBN10 1497022932,
 ISBN13 9781497022911 Bestsellers rank 2,693,232

Dental Pharmacology

Format Paperback | 132 pages, Dimensions 232 x 280 x 7mm | 322g, Publication date 15 Mar 2020 Publisher National Learning Corp, Language English, ISBN10 173187040X ISBN13 9781731870407

General And Dental Pharmacology

Format Paperback | 128 pages, Dimensions 152 x 229 x 8mm | 200g, Publication date 12 May 2020, Publisher LAP Lambert Academic Publishing, Language English, Edition Statement Aufl. ISBN10 6202527307, ISBN13 9786202527309

Modern Dental Materia Medica, Pharmacology

Format Paperback | 404 pages, Dimensions 156 x 234 x 21mm | 562g, Publication date 24 Feb 2018, Publisher Palala Press, Language English, Illustrations note Illustrations, black and white ISBN10 1378584406, ISBN13 9781378584408

Basic and Clinical Pharmacology, Bertman G Katzung. Thirteen Edition

Format Paperback | 1328 pages, Publication date 04 Dec 2020, Publisher McGraw-Hill Education / Medical, Language English, Edition Statement 15th ed. Illustrations note Illustrations, unspecified, ISBN10 126045231X, ISBN13 9781260452310, Bestsellers rank 72,79

Pharmacology, Lippincott. Sixth Edition

Format Paperback | 576 pages, Dimensions 213 x 276 x 20.32mm | 1,361g, 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 1,962,49

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

Format Hardback | 848 pages, Dimensions 196.85 x 260.35 x 50.8mm | 1,905.09g, 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 158603880X, ISBN13 9781586038809

INTERNAL MEDICINE

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Course description

The goal 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

a. Knowledge

At the end of the training, each Student must be able to:

- ☐ Understand the various manifestations of diseases;
- ☐ Understand the basic principle of history taking and clinical examinations;
- ☐ Elicit a detailed history; perform a thorough physical examination including mental status;
- ☐ 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 investigations;
- ☐ Professionally present and discuss the principals 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 asthmatics, tension pneumothorax, hemoptysis, gastro-intestinal bleeding diabetic coma

b. Clinical skills

- ☐ Students should be able to elicit the patient' chief complaint, history of presents illness, past medical history, social family, occupational histories and completes a review of systems;
- ☐ Perform a physical examination in a logical, organized and thorough 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 sequence;
- ☐ Participate in selecting the diagnostic studies with the greatest like LaHood of useful results;
- ☐ Electrolyte panel, general chemistry panel, electrocardiogram, chest X-ray, urinalysis
- ☐ Develop the skills of reading electrocardiograms, and basic X-ray
- ☐ Formulate an initial therapeutic plan
- ☐ Counsel patients about hoe to take their medications and what to expect when they take their medications, including beneficial outcomes and potential adverse effects

Course content

INTERNAL MEDICIN (Module 1)						
Discipline			Professional Subjects and skills			
Department			Cardiopulmonary diseases			
Subject			Basic biomedical sciences			
Course code			DMD 05 23			
Class			III			
Semester		5		Spring		
Number of credits		2		Knowledge		1
				Practical		1
Weeks	Hours		Topics	Descriptions		
	Knowledge	Practical				
1	1	1	History taking & physical examination	Identification, chief complaints, present illness, past history, family history, social, occupational history, physical examination: vital sign (temperature, respiratory rate, pulse examination (character of pulse), general physical examination (hair, head, eye, sinuses, oral cavity, neck)		
2	1	1	Review of system & systemic examination & some important symptom	Examination of RS CVS, GIS, UGS and extremities cough, sputum, hemoptysis, dyspnea (definition, etiology, types)		
3	1	1	Physical examination of respiratory system	Inspection (topographic lines of the chest, chest deformity), palpation of tracheas, palpation of vocal fremitus percussion: method of percussion, auscultation: normal breathing sound and added sounds (rhonchi, crackling and pleural rub)		
4	1	1	Physical examination of cardiovascular disease	Orthopnea, PND, chest pain, palpation, edema (definition & etiology), infection of pericardium, PMI, palpation: PMI. Thrill, heave, auscultation normal sound (S1, S2, S3 & S4) murmurs, systolic and diastolic		
5	1	1	ECG	Normal ECG, waves, intervals, segments, interpretation of ECG, rhythm, rate, axis (right and left axis deviation)		
6	1	1	Symptoms and physical examination of gastrointestinal system	Symptoms: dysphagia, abdominal pain, nausea and vomiting, diarrhea, hematemesis, melena, inspection and auscultation, abdominal palpation, palpation of the spleen, liver & gall bladder		

7	1	1	Symptom and sign in patient with blood disorder	General symptoms (fever, weight loss, weakness, specific symptoms in nervous system, eyes, ears, mouth, CVS, GI & genitourinary system) physical examination of skin, eyes oral cavity, lymph nodes, chest, spleen, liver, nervous system
8	1	1	Symptom of urinary tract semiology of endocrine & complain of patient with joint disorder	Pain of (urethral, bladder, prostatic, testicular, & renal) Dysuria, hematuria, Peoria, noctureia, frequency, oliguria, anuria, enuresis, urinary incontinence & poly urea a jor symptoms and signs of Addison disease, hyper & hypothyroidism, Cushing, syndrome and acromegaly symptoms and signs in patient with joint disorders joint (pain stiffens & locking) & history taken
9	1	1	Acute trachea bronchitis & chronic bronchitis	Acute trachea bronchitis, definition, etiology, symptoms & sins and treatment, chronic bronchitis: definition, predisposing, factors, clinical finding, diagnosis, treatment and prognosis
10	1	1	Bronchial asthma	Definition, etiology, clinical manifestation, deferential diagnosis and treatment, treatment of status asthmatics
11	1	1	Community acquired pneumonia hospital acquired pneumonia	Community, acquired, pneumonia: definition, etiology, clinic, and treatment, hospital acquired pneumonia , definition etiology, clinic and treatment
12	1	1	Bronchiectasis & lung abscess	Bronchiectasis: definition, etiology, clinic, differential diagnosis and treatment, lung abscess: etiology, clinic, differential diagnosis & treatment
13	1	1	Acute rheumatic fever	Etiology, clinic, lab exam, diagnosis, differential diagnosis treatment and prevention
14	1	1	Mitral stenosis and mitral insufficiency	Mitral stenosis: definition pathological changes, clinic, diagnosis and treatment, mitral insufficiency: definition, etiology, clinic, diagnosis and treatment
15	1	1	Aortic insufficiency and aortic stenosis	Aortic stenosis: definition, pathological changes ,clinic, diagnosis and treatment, metal insufficiency: definition, etiology, clinic, diagnosis and treatment
16	1	1	Infective endocarditis & sub-acute infective endocarditis	3. Etiology, predisposing factors, pathological changes, blood capture, diagnosis, treatment and prevention

Textbooks & reference books recommended (last edition)

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 0323640338, ISBN13 9780323640336m
Bestsellers rank 812,17

Oxford textbook of internal medicine , David A, Warrel ,Timothy M . Cox

Format Paperback | 928 pages, Dimensions 220 x 275 x 32mm | 1,996g, Publication date 12 Dec 2012, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Statement 5th Updated ed. ISBN10 0199652139 ISBN13 9780199652136, Bestsellers rank 1,497,051

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 2032, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 95 Illustrations, unspecified ISBN10 1259835847, ISBN13 9781259835841, Bestsellers rank 970,47

Harrisons' principles of internal medicine . J. Larry Jameson ,

Format Hardback | 4048 pages, Dimensions 226 x 285 x 109mm | 5,988g, Publication date 11 Dec 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 20th edition, ISBN10 1259644030, ISBN13 9781259644030, Bestsellers rank 71,722

INTERNAL MEDICIN (Module 2)				
Discipline			Professional Subjects and skills	
Department			Cardiovascular medicine	
Course title			CV,GI and kidney diseases	
Co-requisite			Physical diagnosis	
Course code			DMD 06 23	
Class			III	
Semester		6	Fall	
Number of credits		2	Knowledge	1
			Practical	1
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1	1	1	Ischemic heart disease (IHD)	Definition, etiology and pathophysiology (brief) effect of ischemia, stable angina pectoris, unstable angina pectoris, asymptomatic ischemia, clinical feature, diagnosis and treatment
2	1	1	Acute myocardial infraction (AMI)	NSTEMI, STEMI, definition, etiology, pathophysiology, clinical manifestation, diagnosis, name of complications, treatment
3	1	1	Hypertensive vascular disease	Definition, essential hypertension, secondary hypertension, effects of hypertension, clinical feature and diagnosis, treatment, drug classes with example
4	1	1	Congenital Heart disease in the adults	A cyanotic congenital heart disease with left to right shunt; ASD, VSD, PDA
5	1	1	Rhythm and conduction disturbances	Super ventricular arrhythmia, sinus tachycardia, sinus bradycardia, atrial fibrillation, PSVT, Ventricular arrhythmia ventricular premature beat, ventricular tachycardia
6	1	1	Heart failure	Definition, etiology, precipitating clinical feature, diagnosis causes, treatment of acute pulmonary edema
7	1	1	Shock	Definition, pathogenesis, organs response, specific form of shock, cardiogenic shock, septic shock, hypovolemic

8	1	1	Syncope, cardiovascular collapse, cardiac arrest and sudden cardiac death	Definition, etiology, clinical manifestation, diagnosis & treatment
9	1	1	Gastro esophageal reflux disease (GERD)	Definition, anti-reflux mechanism, clinical feature, diagnosis, DDX, complications and treatment
10	1	1	Gastritis and gastrolatry	Definition, classification, clinical feature diagnosis and treatment
11	1	1	Peptic ulcer disease	Definition, etiology, clinical feature, diagnosis, DDX, complications and treatment
12	1	1	Chronic hepatitis	Definition, etiology, ch. Hepatitis B and C, clinical feature, diagnosis and treatment
13	1	1	Liver cirrhosis	Definition, etiology, complications, clinical feature, treatment
14	1	1	Urinary tract infection	Acute pyelonephritis, acute cystitis and acute prostatitis definition, clinical feature, diagnosis, DDX, complication, treatment
15	1	1	Acute and chronic renal failure	Definition, clinical feature, diagnosis, DDX, complication and treatment
16	1	1	The major glonerolopathies	The major glomerulonephritis (just name of them), nephritic syndrome, definition, pathophysiology, clinical feature diagnosis, DDX, complication and treatment

Textbooks & reference books recommended (last edition)

Oxford textbook of internal medicine , David A, Warrel ,Timothy M . Cox

Format Paperback | 928 pages, Dimensions 220 x 275 x 32mm | 1,996g, Publication date 12 Dec 2012, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Statement 5th Updated ed. ISBN10 0199652139 ISBN13 9780199652136, Bestsellers rank 1,497,051

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 2032, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 95 Illustrations, unspecified ISBN10 1259835847, ISBN13 9781259835841, Bestsellers rank 970,47

Harrisons' principles of internal medicine . J. Larry Jameson ,

Format Hardback | 4048 pages, Dimensions 226 x 285 x 109mm | 5,988g, Publication date 11 Dec 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 20th edition, ISBN10 1259644030, ISBN13 9781259644030, 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 0323640338, ISBN13 9780323640336m Bestsellers rank 812,17

INTERNAL MEDICIN (Module 3)				
Discipline			Professional Subjects and skills	
Department			Hematology & endocrinology	
Subject			Hematology & endocrinology	
Course code			DMD 07 23	
Class			IV	
Semester		7	Spring	
Number of credits		2	Knowledge	1
			Practical	1
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1	1	1	Diabetes mellitus	Definition, classification, pathogenesis (type 1 and type 2), clinical features of DM, Lab investigation (urine exam, blood exam), differential diagnosis, treatment (diet exercise, hypoglycemic drugs, insulin: indications and complications of insulin therapy
2	1	1	Diabetes mellitus	Complications of DM: acute and chronic complications, chronic complications of DM (ocular complications, D nephropathy, D. Neuropathy, D. foot) DM. and surgery
3	1	1	Thyrotoxicosis	Definition, etiology, conical features, diagnosis and lab investigation, differential diagnosis, treatment
4	1	1	Cushing syndrome & Addison disease	Definition, etiology, , conical features, diagnosis and lab investigation, differential diagnosis, treatment
5	1	1	Hypopituitarism	Acromegaly: definition, pathogenesis, etiology, clinical features, lab investigation and differential diagnosis, treatment
6	1	1	Rheumatoid arthritis	Definition, pathology and pathogenesis, clinical features, lab, investigation, course prognosis, differential diagnosis, treatment
7	1	1	Metabolic bone disease/osteoporosis a7 osteomatacia	Osteoporosis: definition, pathogenesis and etiology, clinical features, diagnosis, differential diagnosis, Treatment, osteomalacia: definition, oathophysiology, etiology and pathogenesis, diagnosis and lab investigation. treatment

8	1	1	Anemia & iron deficiency anemia	Anemia: definition, signs and symptoms, approach to the patient with anemia, lab investigation, classification of anemia, iron deficiency anemia: definition, etiology, clinical features, lab investigation, diagnosis, differential diagnosis, treatment
9	1	1	Megaloblastic anemia	Definition, classification, lab investigation, autoimmune hemolytic anemia: pathogenesis, etiology, clinical findings, diagnosis, differential diagnosis, folic acid: etiology and pathogenesis, diagnosis and lab investigation, treatment
10	1	1	Hemolytic anemia	Definition, classification, lab investigation, autoimmune hemolytic anemia: pathogenesis, etiology, clinical findings diagnosis, lab investigation treatment, prognosis, cold agglutinin disease: clinical features, lab investigation, treatment
11	1	1	Bone marrow failure & neutropenia	Definition, classification, aplastic anemia: definition, epidemiology, etiology, pathogenesis, clinical findings, lab investigations, diagnosis, treatment, prognosis, treatment, prognosis, differential diagnosis, treatment
12	1	1	Leukemia	Definition, pathophysiology, acute lymphoblastic leukemia (ALL): definition, etiology, classification, clinical features, lab investigations, treatment, acute, myeloid leukemia (AML): incidence, etiology, classification, clinical features, lab investigations, prognosis, treatment, chronic myelocytic leukemia (CML): definition, etiology, clinical features, lab findings, diagnosis, treatment, chronic lymphocytic leukemia (CLL): etiology, epidemiology, clinical features, lab investigation, diagnosis, treatment
13	1	1	Hodgkin disease	Etiology, epidemiology, clinical features, pathological classification, diagnosis, differential diagnosis, treatment
14	1	1	Idiopathic thrombocytopenic purpura (ITP) & disseminated intravascular coagulation (DIC)	Idiopathic thrombocytopenic purpura (ITP): definition, etiology and pathogenesis, clinical features, lab investigations, differential diagnosis, treatment, disseminated intravascular coagulation (DIC): definition, etiology and pathogenesis, pathology, clinical features, lab features, acute DIC, chronic DIC, treatment
15	1	1	Acquired immunodeficiency syndrome (AIDS)	Definition, origin of HIV, etiology and pathogenesis, diagnosis, of HIV infection, lab features, course and prognosis, hematologic abnormalities, thrombocytopenia in HIV infection, treatment, prophylaxis

16	1	1	Vitamin B1 and vitamin C deficiency	Vitamin B1, definition, absorption and metabolism, sources, definition of vitamin B1 clinical features, diagnosis treatment, prevention, vitamin C deficiency; absorption, sources and requirements, symptoms and signs, diagnosis, treatment, toxicity
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Textbooks and reference books recommended (last edition)

Harrisons' principles of internal medicine . J. Larry Jameson ,

Format Hardback | 4048 pages, Dimensions 226 x 285 x 109mm | 5,988g, Publication date 11 Dec 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 20th edition, ISBN10 1259644030, ISBN13 9781259644030, 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 0323640338, ISBN13 9780323640336m Bestsellers rank 812,17

Oxford textbook of internal medicine , David A, Warrel ,Timothy M . Cox

Format Paperback | 928 pages, Dimensions 220 x 275 x 32mm | 1,996g, Publication date 12 Dec 2012, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Statement 5th Updated ed. ISBN10 0199652139 ISBN13 9780199652136, Bestsellers rank 1,497,051

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 2032, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 95 Illustrations, unspecified ISBN10 1259835847, ISBN13 9781259835841, Bestsellers rank 970,47

Greenspan's Basic and Clinical Endocrinology, Tenth Edition

Format Paperback | 944 pages, Dimensions 232 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 1259589285, ISBN13 9781259589287, Bestsellers rank 235,207

Firestein & Kelley's Textbook of Rheumatology, 2-Volume Set

Format Hardback | 2400 pages, Dimensions 232 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. 850 illustrations (150 in full color) ISBN10 0323639208 ISBN13 9780323639200, Bestsellers rank 627,085

Harrison's Cardiovascular Medicine 3/E

Format Paperback | 768 pages, Dimensions 213 x 269 x 31mm | 1,406g, Publication date 21 Nov 2032, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 3rd edition, Illustrations note 90 Illustrations, unspecified ISBN10 125983574X, ISBN13 9781259835742, Bestsellers rank 1,189,869

SURGERY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Course description

The surgical clerkship is designed to introduce Students to the theoretical and skills aspects of surgical patient care, emphasis is placed on the underlying pathophysiology, rather them technique aspects, Students are fully involved in the daily care of surgical patients and

participate in diagnostic and therapeutic decision making. This course experience includes didactic teaching sessions as well as small-group interactions.

a. Knowledge a

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

- ☐ Describe etiology, pathophysiology, principles of diagnosis and management of common surgical problems including emergencies, in adults and children;
- ☐ Define indications and methods for fluid and electrolyte replacement therapy including blood transfusion
- ☐ Define asepsis, disinfection, sterilization, and recommend judicious use of antibiotics;
- ☐ 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:

- ☐ Diagnose common acute and chronic surgical conditions;
- ☐ Plan various laboratory tests for surgical conditions and interpret the results;
- ☐ Identify and manage patients of hemorrhagic, septicemia and other types of shock
- ☐ Be able to maintain patent airway and resuscitate:
 - ☐ A critically, injured patient
 - ☐ A patient with cardio-respiratory failure
 - ☐ A drawing 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 preoperative, 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 as 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

□ **Advantage the cannula for a further distance**

- Withdraws the stiletto & advantage the cannula
- Fixes the cannula
- Connects the drip
- Suturing
- IV cannulation
- Surgical knot

Course content

SURGERY (MODULE 1)					
Discipline			Professional Subjects and skills		
Department			Surgery		
Subject			Principle of surgery		
Course code			DMD 05 24		
Class			III		
Semester		5	Spring		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	2	2	Principle to compete 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	
2					
3	2	2	Aseptic techniques (antiseptics & asepsis)	Antisepsis, definition, mechanical antiseptics, chemical antiseptics, physical antiseptics biological antiseptic antibiotics, asepsis, disinfection, sterilization techniques and methods (scrubbing up, gowning, gloving, preparation of surgical area, operative theatre, infection control in surgical ward & in the hospital	
4					
5	1	1	Dressing	Dressing; goals, purpose of wound dressings, types of dressings: primary dressings, secondary dressings, one layer dressings, skin closure dressing (island dressing); dry sterile dressing, three layer	

				dressings pressures dressing, stent dressing, bolster/ tie-over dressing, wet-to-dry dressings, wet-to-wet dressings, vacuum-assisted dressings changing the dressing, material to fix the dressing
6	2	2	Bleeding & transfusion	Definition; classification, clinic, body reaction to bleeding, treatment of bleeding, permanent hemostasis, methods, mechanical, thermal chemical, biological, transfusion: definition, blood groups compatibility transfusion root, indication & contraindications, transfusion definition, blood groups compatibility transfusion root, indication & contraindications, deferent forms of transfusion
7				
8	2	2	Shock	Definition, etiology, classification, hypovolemic shock: pathophysiology, immediate & continue, compensatory reaction septic shock: pathophysiology, diagnosis, treatment, neurogenic shock: pathophysiology, diagnosis treatment, cardiac compressive shock: pathophysiology, diagnosis treatment, cardiac compressive shock: pathophysiology, diagnosis treatment, cardiac obstructive shock, vasovagal shock, psychogenic shock, burn shock, anaphylactic shock
9				
10	1	1	Trauma	Definition, epidemiology, prophylaxis, mechanism & intensity of trauma death, due to trauma, management before reacting to the hospital triage, evaluation, traumatic patients care in the hospital primary survey: ABCDE, emergency thoracotomy, trauma severity score, resuscitation phases secondary survey & treatment priority, definitive care
11				
12	1	1	Wounds	Definition, pathophysiology, clinic, classification, acute wounds, open, close, complex, war wound: entertains & exit whole mechanism of missile wound, pathophysiology, and treatment D2PC, blast injury: mechanism, treatment special tissue injuries, chronic wound: ulcer, bed sore
13				
14	1	1	Surgical infection	Surgical infection, definition, pathogenesis, essential definition (like infection inflammation) principle for treatment, cellulites, clinic, treatment, lymphangitis, surgical infection, erysipelas, erysipelas iodo, abscess, hydra adenitis, carbuncle, furuncle, ohlegmon, anthrax, clostridia, infection, nosocomial infection

15	1	1	Born	Definition, etiology, determination of severity, depth & site of burn, inhalation injuries, co morbid factors, categorization pathophysiology of thermal burn, metabolic reaction, clinic, treatment, definitive treatment, fluid management Respiratory care nutrition & metabolic needs, wound care, complications, first bite: definition etiology, pathophysiology, clinic treatment, electric burn- etiology, pathophysiology, clinic treatment, chemical burn, etiology, pathophysiology clinic treatment, radiation burn: - immediate action of normal tissue, systemic reaction, prevention, treatment, late reaction treatment, late reaction to radiation
16				

Textbooks & reference books recommended (last edition)

Hamilton Bailey's Physical Signs in Surgery

Format Paperback Hardcover, 704 pages Item Weight, 4.3 pounds Product Dimensions 8.25 x 1.25 x 10.5 inches Publisher, CRC Press; 19th Edition (March 17, 2032) Language English, ISBN-10 1444329181, ISBN-13, 978-1444329188, Best Sellers Rank: #1,147,111 in Books

General Thoracic surgery, Thomas .WShields, Joseph Losicro.

Format Undefined | 2614 pages, Publication date 24 Apr 2015, Publisher LIPPINCOTT WILLIAMS & WILKINS, Publication City/Country United States, ISBN10 1451326737 ISBN13 9781451326736

Oxford Cardiothoracic surgery, Joana Chikwe, Emma Beddow.

Format Paperback | 808 pages, Dimensions 100 x 180 x 30mm | 422g, 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 0198565887, ISBN13 9780198565888, Bestsellers rank 913,391

Priciples of Neurosurgery, Robert G. Grossman, Christopher M Loftus

Format Hardback | 864 pages, Dimensions 232 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 536 halftones, 141 line illustrations, 109 tables, ISBN10 0397518404 ISBN13 9780397518401

Emergency Surgery, Adam Brooks, Bryon A. Cotton.

Format Paperback | 228 pages, Dimensions 214 x 276 x 13mm | 584g, Publication date 05 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 1405170255, ISBN13 9781405170253, Bestsellers

Short practice of Surgery – Bailey & Loves, Norman S. Williams.

Format Paperback : 133 pages, ISBN-13 : 978-1138033247, ISBN-10 9781138033247, Product Dimensions : 7.87 x 5.51 x 1.57 inches, Publisher CRC Press; 1st Edition (January 17, 2018). ASIN 113803324X, Language English

Schwartz Principle of Surgery

Format Paperback Print Length, 7402 pages, Publication Date : May 29, 2019, File Size 280038 KB, Publisher : McGraw-Hill Education / Medical, 11th Edition (May 29, 2019), Word Wise : Not Enabled, ASIN : B07QBB2QN6, Language: : English

SURGERY (MODULE 2)					
Discipline			Professional Subjects and skills		
Department			Abdominal Surgery		
Subject			Abdominal surgical disease		
Course code			DMD 06 24		
Class			III		
Semester		6	Fall		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	The stomach and duodenum	Perforated peptic ulcer, etiology, pathology, clinical features and treatment	
2	1	1	Pyloric stenosis and peptic ulcer bleeding	Classification, etiology, pathology, clinical feature and treatment	
3	1	1	The small intestine	Mackle’s diverticulum, and pathology, clinical features and treatment	
4	1	1	Intestinal obstructions	Definition, classification, etiology, anatomy pathology, clinical features	
5	1	1	the appendix vermiform	Acute appendicitis: etiology, pathology, pathology, clinical features diagnosis, DD and treatment	
6	2	2	The colon	Ulcerative colitis, ileocecal TB, diverticulitis and diverticulosis etiology, pathology, clinical features, complications and treatment	
7	1	1	The rectum and anal canal	Hemorrhoids, definition, classification, etiology course of hemorrhoid, clinical features, treatment and complications	
8	1	1	The rectum and anal canal	Anal fissure, the anorectal fistula and abscess incidence, etiology, classifications, clinical features, and management	
9	1	1	The liver	The pyogenic and amoebic abscess the liver hepatic etiology, pathology, clinical features and treatment	
10	1	1	the gall bladder	Gall stones of cholethiasis acute cholecystitis: etiology, pathology, clinical feature and treatment	
11	1	1	The pancreas	Acute and chronic pancreatitis: definition, etiology, pathology clinical feature and treatment	

12	1	1	The spleen	Rupture of spleen: etiology, pathology, clinical features and treatment
13	1	1	The peritoneum	Acute generalized and localized peritonitis: etiology, pathology clinical features and treatment
14	1	1	The hernia	Definition, etiology, composition of a hernia, classification of anatomy pathology
15	1	1	The hernia	Inguinal hernia and femoral hernia etiology, pathology, clinical features and treatment
16	1	1	Acute abdomen	Definition, etiology, pathophysiology, clinic, investigation, anatomy pathology, DD.

Textbooks & reference books recommended (last edition)

Short practice of Surgery – Bailey & Loves, Norman S. Williams.

Format Paperback : 133 pages, ISBN-13 : 978-1138033247, ISBN-10 9781138033247, Product Dimensions : 7.87 x 5.51 x 1.57 inches, Publisher CRC Press; 1st Edition (January 17, 2018). ASIN 113803324X, Language English

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General Thoracic surgery, Thomas .WShields, Joseph Losicro.

Format Undefined | 2614 pages, Publication date 24 Apr 2015, Publisher LIPPINCOTT WILLIAMS & WILKINS, Publication City/Country United States, ISBN10 1451326737 ISBN13 9781451326736

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Principles of Neurosurgery, Robert G. Grossman, Christopher M Loftus

Format Hardback | 864 pages, Dimensions 232 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 536 halftones, 141 line illustrations, 109 tables, ISBN10 0397518404 ISBN13 9780397518401

Emergency Surgery, Adam Brooks, Bryon A. Cotton.

Format Paperback | 228 pages, Dimensions 214 x 276 x 13mm | 584g, Publication date 05 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 1405170255, ISBN13 9781405170253, Bestsellers rank 1,543,541

SURGERY (MODULE 3)						
Discipline			Professional Subjects and skills			
Department			Thoracic and cardiovascular surgery			
Subject			Thoracic and cardiovascular diseases			
Course code			DMD 07 24			
Class			IV			
Semester		7		Spring		
Number of credits		2		Knowledge		1
				Practical		1
Weeks	Hours		Topics	Descriptions		
	Knowledge	Practical				
1	1	1	Thyroid diseases	Surgical anatomy, physiology, classification, history and physical examination, test of thyroid function, simple goiter		
2	1	1	Thyroid diseases	Thyrotoxicosis, symptoms and signs, treatment, thyroid tumors, thyroiditis		
3	1	1	Breast diseases	Surgical anatomy, physiology, symptoms, breast injury, acute and chronic infection & inflammation		
4	1	1	Breast diseases	Brest cyst, tumors, spread of breast tumors, clinical features, treatment		
5	1	1	Thoracic trauma	Thoracic injuries & trauma, rib fracture, sternum fracture, flail chest		
6	1	1	Thoracic trauma	Pneumothorax, hem thorax, cardiac tamponade mediastina emphysema, thoracotomy		
7	1	1	Diaphragmatic hernia	Hiatus hernia, clinical feature, treatment, treatment of reflux esophagitis		
8	1	1	Mediastinum	Mediastinitis, clinical features, treatment, cysts & tumors of mediastinum		
9	1	1	Esophageal diseases	Surgical anatomy and physiology, foreign bodies & injury of esophagus		
10	1	1	Esophageal diseases	Corrosive esophagitis, esophageal diverticula, achalasia, benign stricture & tumors of esophagus, treatment		

11	1	1	Lung & pleural diseases	Lung & pleural diseases, surgical anatomy, inhaled foreign bodies, lung abscess, bronchiectasis, lung cysts
12	1	1	Lung and pleural diseases	Lung TB. Broncho pleural fistula, pleural empyema, lung & bronchial tumors, clinical feature treatment
13	1	1	Heart diseases	Anatomy and physiology, physical examination, prosthetic valves, aortic valve diseases, mitral valve diseases, tricuspid stenosis and insufficiency, pulmonic valve disease.
14	1	1	Heart diseases	Coronary artery disease, congenital heart disease
15	1	1	Arterial diseases	Arterial stenosis, acute arterial occlusion due to embolism peripheral aneurysm, AV fistula, vasospastic condition and trauma
16	1	1	Venous diseases	Deep vein thrombosis superficial vein thrombosis, varicose vein, symptoms, treatment

Textbooks & reference books recommended (last edition)

General Thoracic surgery, Thomas .WShields, Joseph Losicro.

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PUBLIC HEALTH

Attendance policy

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- ☐ Students homework is calculated from 10 points
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- ☐ 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) 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%

Basic of public health

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

- ☐ Understand the basics concept of public health
- ☐ Understand the medicine progress in different periods of human history

- ☐ Understand health, germ theory of disease, lever of health care
- ☐ Describe and evaluate health deterrents
- ☐ Recognized health indicators which recommended by WHO and national health indicators
- ☐ Understand disease, risk factor, causation
- ☐ Understand primary health care and family medicine

Course content

BASIC Of Public Health					
Discipline			Professional Subjects		
Department			Health management & administration		
Subject			Basics of public health		
Course code			DMD 05 25		
Class			III		
Semester		5	Spring		
Number of credits		1	Theory	1	
			Practical		
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1		History of medicine	Brief introduction of medicine history in different periods of human life from history of medicine in antiquity and primitive and modern medicine	
2	1		Germ theory of disease	Definition of medicine, birth of preventive medicine, modern medicine, curative medicine, preventive medicine and community medicine	
3	1		Health and health determinants	Definition of health, introduction of scope of health, introduction of different determinants of health such as social and economic environment, physical environment, and person’s individual characteristics and behaviors	
4	1		Introduction of public health	Introduction of public health, purpose and scope of public health, components of public health, importance of public health	
5	1		Essential of public health	Monitoring health status, diagnose and investigate health problems, information, education and people empowerment, community mobilization,	

				development of policy and plans, health and safety, link people to needed personal health services, assure a competent public and personal health care workforce, evaluation, effectiveness, accessibility, and quality of health services and conducting research for new insights and innovative solution to health problems
6	1		Concepts of health and disease	Concepts of health, changing concept of health, biomedical concept, ecological concepts, sociological concept, holistic concept, definitions and dimensions of health
7	1		Concepts quality of life and standards of life	Introduction of quality of life, concepts of well-being, standards of life, level of living, physical quality of life index
8	1		Health & development	Concepts of development, health and development, importance of health to development, human development indexes; education index, human poverty index
9	1		Health indicators	Introduction of health indicators, morbidity rate, mortality rate, dead rate, crude death rate, life expectancy, national health services coverage indicators and WHO recommended health
10	1		Health indicators	Health care, Introduction of health care characteristics; appropriateness, comprehensiveness, accessibility, feasibility, affordability and adequacy, level of health care
11	1		Concepts of disease	Definition of disease, illness and sickness, theory of disease and introduction of differences between them, spectrum of disease
12	1		Concepts of causation	Concepts of causation, theory of disease, epidemiological triad, multi factorial causation, web of causation, natural history of disease
13	1		Risk factors	What is risk factor? Risk factors and health problems, high risk group people, risk behavior
14	1		Primary health care (PHC)	Definition types of primary health care, Alma Declaration principles of PHC, components of primary health care
15	1		Primary health care (PHC)	Definition types of primary health care, Alma Declaration principles of PHC, components of primary health care
16	1		Family medicine	Introduction of family medicine, principles of family medicine, general practice of family medicine, basics and foundation of family medicine

Textbooks & reference books recommended (last edition)

Sari , Edelstein , Nutrition in public health

Format Paperback | 488 pages, Dimensions 203.2 x 251.46 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 1284104699, ISBN13 9781284104691, Bestsellers rank 2,236,124

Cherileyn , Tellman occupational Health and Hygien

Format Paperback | 496 pages, Dimensions 176 x 245 x 27.94mm | 890g, Publication date 01 Jun 2007, Publisher Francoism, Imprint Allen & Unwin Publication City/Country Australia Language English, ISBN10 174175058X, ISBN13 9781741750584, Bestsellers rank 448,81

David L, Goetsch. Occupational Safety and Health

Format Paperback | 732 pages, Dimensions 232 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 1292061995 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 25mm | 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 232 x 276mm, Publication date 18 May 2007, Publisher Saunders, Language English, Edition Statement 3rd ed. ISBN10 1455755575 ISBN13 9781455755578

BK Mahajan, methodes in biostatistics

Format Paperback | 488 pages, Dimensions 140 x 232mm, Publication date 28 Feb 2018 Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India

Marry Jane Schneider , introduction to public health

Format Paperback | 595 pages, Dimensions 180 x 226 x 33mm | 980g, Publication date 01 Apr 2012, Publisher Jones and Bartlett Publishers, Inc, Publication City/Country Sudbury, United States, Language English, Edition Statement 3rd Revised ed. ISBN10 1449684777 ISBN13 9781449684778, Bestsellers rank 1,149,115

Frank,A Saloun and RueyHsieh. Health Economics

Format Hardback | 840 pages, Dimensions 203 x 229 x 35mm | 1,501.39g, 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 0262035111 ISBN13 9780262035118, Bestsellers rank 2,591,827

ENVIRONMENT& OCCUPATIONAL HEALTH

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

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

Course description

- ☐ 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, diagnoisi 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

ENVIRONMENT& OCCUPATIONAL HEALTH					
Discipline			Professional Subjects		
Department			Environmental & occupational health		
Subject			Environmental & occupational health		
Course code			DMD 06 25		
Class			III		
Semester		6	Fall		
Number of credits		1	Theory	1	
			Practical		
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1		Concepts of occupational health	Definition and general information of occupational health	
2	1		Type and source of occupational exposures	Physical, chemical, biological, mechanical, psychosocial	
3	1		Occupational hazards in Dentistry	Hazards from physical agents	
4	1		Occupational hazards in Dentistry	Hazards from chemical agents	
5	1		Occupational hazards in Dentistry	Hazards from biological agents	
6	1		Occupational hazards in Dentistry	Hazards from psychological agents	
7	1		Control measures	Routine precaution, immunization	
8	1		Control measures	Personal protective measures	
9	1		Control measures	Instruments sterilization	
10	1		Control measures	Ventilation, disposal of waste	
11	1		Key principle in occupational safety and health	Rights and duties; workers’ rights, employers’ responsibilities, governments’ duties	

12	1		Environmental health	Definitions and general information of environmental of environmental health
13	1		Personal environment	Children, young people, elderly
14	1		Air	Air pollutant, indoor and outdoor air pollution, general methods for control
15	1		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 handing food sanitation program
16	1		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 Occupational Health

Format Paperback | 2128 pages, Dimensions 108 x 181 x 72mm | 1,030g, Publication date 01 Jan 2032, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, ISBN10 0198766327, ISBN13 9780198766322, Bestsellers rank 109,41

Biological Monitoring of Chemical Exposure in the Workplace

Format Paperback | 312 pages, Dimensions 173 x 250mm, Publication date 01 Mar 1997 Publisher World Health Organization, Publication City/Country Geneva, Switzerland, Illustrations note tables, ISBN10 9518021589, ISBN13 9789518021585

Cherileyn , Tellman occupational Health and Hygien

Format Paperback | 496 pages, Dimensions 176 x 245 x 27.94mm | 890g, Publication date 01 Jun 2007, Publisher Francoism, Imprint Allen & Unwin Publication City/Country Australia Language English, ISBN10 174175058X, ISBN13 9781741750584, Bestsellers rank 448,81

David L, Goetsch. Occupational Safety and Health

Format Paperback | 732 pages, Dimensions 232 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 1292061995 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 25mm | 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 232 x 276mm, Publication date 18 May 2007, Publisher Saunders, Language English, Edition Statement 3rd ed. ISBN10 1455755575 ISBN13 9781455755578

BK Mahajan, methodes in biostatistics

Format Paperback | 488 pages, Dimensions 140 x 232mm, Publication date 28 Feb 2018 Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Edition Revised, Edition Statement 9th Revised edition, ISBN10 9352703103 ISBN13 9789352703104

BEHVIRAL SCIENCES & HEALTH EDUCATION

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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
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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 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

☐

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

- ☐ Understand the concept of behavioral sciences and health education/promotion
- ☐ Understand human behavioral and its application in patient care
- ☐ Use principles of ethics in common clinical situations and dilemmas
- ☐ Understand the concept of motivation, its impact on human behavior illness related behavior
- ☐ Identify different social and anthropological factors operating upon health and disease states
- ☐ Understand different types of emotions and their impact on health of the individual
- ☐ Define learning comprehend different types of learning conditioning state methods of effectiveness
- ☐ Learning and demonstrate application of learning in treatment
- ☐ Understand different cognitive processes, comprehend memory process, describe, describe short-term memory and differentiate with long-term memory
- ☐ Use principles of ethics in common clinical settings
- ☐ Deal with the common psychological reactions 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

Course content

BEHVIRAL SCIENCES & HEALTH EDUCATION					
Discipline			Professional Subjects		
Department			Environmental & occupational health		
Subject			Environmental & occupational health		
Course code			DMD 07 25		
Class			IV		
Semester		7		Spring	
Number of credits		1		Theory	1
				Practical	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1		Introduction to behavioral sciences	Traditional VS biolistic medicine, what are behavioral sciences? Bio psychosocial model of health care, non-pharmacological interventions)NPI) in clinical practice	
2	1		Introduction to behavioral sciences	Crisis introduction/disaster management, conflict resolution, breaking the news, empathy amongst medical Students	
3	1		Medical ethics Professionalism and doctor-patient relationship	Relevance of ethics in the life of doctor, scope of meaning of medical ethics, common medical omissions in medical practice, ethical dilemmas in a sector's life, rights & responsibilities of patients, doctor-patient relationship, professionalism in health care: how to access attitude?	
4	1		Use of principles of psychology in medical practice	Learning, metacognition, memory, perception	
5	1		Use of principles of psychology in medical practice	Thinking, emotions, motivation	
6	1		Use of principles of psychology in medical practice	Intelligence, personality, development, personality types	

7	1		Sociology and anthropology in health and disease	Culture, beliefs, values and norms, social structure, roles, family, shield rearing practices, death and dying, health belief models, social support, role of religion, treatment adherence, stigma, sick role, culturally relevant care and cultural sensitivity
8	1		Psychosocial aspects of health and disease	psychosocial aspect of health, psychosocial aspects of disease reaction of the patient to illness and hospitalization.
9	1		Psychosocial aspects of health and disease	Psychosocial issues in special hospital setting, common psychiatric disorders in general health setting, stress and its management, psycho trauma
10	1		Psychosocial aspects of health and disease	Psychosocial aspects of pain, psychosocial aspects of sleep and awareness, psychosocial aspect of aging, coping with death, psychosocial peculiarities of Dentistry
11	1		Health education/promotion	Definition of key terms, health, health education, health literacy, health promotion, life style, population risk continuum, prevention, primary health care, quality of life, and wellness, relationships between health education and health literacy
12	1		Health education and behavior	Changing concept, aims and objective, role of health care providers, approach to health education, model of health education, contents of health education
13	1		Principles of health education	Credibility, interest, participation, motivation, comprehension, reinforcement, learning by doing, known to unknown, setting on example, good human relation, feedback
14	1		Practice of health education	Individual aids, methods in health communication, individual approach, individual approach, group approach, mass approach, education of the general public
15	1		Communication for health education	The communication process, types of communication
16	1		Communication for health education	Barriers of communication, health communication, functions of health communication

Textbooks & reference books recommended (last edition)

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

Format Paperback | 578 pages, Dimensions 177 x 254 x 38.1mm | 1,251.91g, Publication date 08 Nov 2017, Publisher Hogrefe Publishing, Publication City/Country Toronto, Canada Language English, Edition Revised, Edition Statement 4th Revised edition, ISBN10 0889374864 ISBN13 9780889374867

Barbara fadem , behavioral science

Format Paperback | 384 pages, Dimensions 178 x 254 x 17mm | 726g, Publication date 01 May 2020, Publisher Wolters Kluwer Health, Publication City/Country United States, Language English, Edition Statement Eighth, International Edition, ISBN10 1975152395 ISBN13 9781975152390

David Howell behavioral science

Format Hardback | 649 pages, Dimensions 210 x 262 x 30mm | 1,383g, Publication date 22 Feb 2032, Publisher Cengage Learning, Inc, Imprint CENGAGE Learning Custom Publishing Publication City/Country Mason, OH, United States, Language English, Edition Statement 9th edition, ISBN10 1305652975, ISBN13 9781305652972, Bestsellers rank 448,534

EPIDEMIOLOGY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Course description

- ☐ At the end of the course, Student should be able to:
- ☐ Understand the basic concepts and application of epidemiology
- ☐ Describe epidemiological measures of health and diseases: Frequency

- ☐ Describe epidemiological 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 surveillance and routine data
- ☐ Describe screening and diagnostic tests

Course content

EPIDEMIOLOGY				
Discipline			Professional Subjects	
Department			Epidemiology and biostatistics	
Subject			Epidemiology and biostatistics	
Course code			DMD 010 25	
Class			V	
Semester		10	Fall	
Number of credits		1	Theory	1
			Practical	
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1	1		Basic concepts and application of epidemiology	Studying epidemiology; distribution and determinants of health status or event; the epidemiological approach: what, who, where when why; models of causation of disease
2	1		Basic concepts and application of epidemiology	Natural history of disease; application 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
3	1		Epidemiological measures of health and diseases: frequency	Definition of a case: measure of diseases frequency: prevalence, incidence, risk of cumulative incidence, odds and incidence rate

4	1		Epidemiological measures of health and diseases: frequency	Use of frequency measures and crude and specific rates: standardized rates, direct and indirect standardization
5	1		Epidemiological measures of health and diseases: association and impact	Measures of exposure effect and impact: relative measures, risk ratio, rate, ratio, odds ratio, absolute measure, attributable (absolute) risk
6	1		Epidemiological measures of health and diseases: association and impact	Population attributable (absolute) risk population attributable fraction, selection of appropriate measure for different study design
7	1		Cross-sectional studies	What is a cross-sectional study? Descriptive and analytical studies, study design, sampling, data collection, analysis, strength and weaknesses
8	1		Cohort studies	What is a cohort? Types of cohort study. Study design: Selection of the study population, exposures, follow-up and outcomes, analysis, strengths and weaknesses
9	1		Case-control studies	Study design, hypothesis, selection of cases, selection of controls and measuring exposures, analysis and interpretation, bias, confounding, and strengths and weakness.
10	1		Intervention studies	Types of intervention study, study design, selection of population, allocation of treatment regimens, efficacy and effectiveness, other types of study design
11	1		Intervention studies	Measuring outcome, analysis, interpretation, ethical issues, and strength and weaknesses
12	1		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-effect relationship: temporal Dose-response, strength of association, biological plausibility, consistency with other studies, specificity, reversibility, coherence and analogy
13	1		Screening and diagnostic tests	Definition and purpose of screening, mass of targeted screening, reliability and validity of screening test, predictive value, ethics in screening and criteria for screening
14	1		Screening and diagnostic tests	Evaluating screening program: relative burden of diseases, feasibility, effectiveness, biases, cost and study design for evaluating screening
15	1		What is health research	Introduction, field selection of research, drivers for health research, criteria for good research topic
32	1		Planning the health research	Introduction, research design and selecting appropriate design, defining and refining research

			question, generating research hypothesis, sampling measurement, notes of questionnaire design
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Textbooks & reference books recommended (last edition)

Essential Epidemiology

Format Mixed media product | 504 pages, Dimensions 190 x 255 x 20mm | 980g, Publication date 25 Jun 2020, 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; 61 Tables, color; 61 Tables, black and white; 171 Line drawings, color, ISBN10 1108766803, ISBN13 9781108766807, Bestsellers rank 224,430

Essential Epidemiology : An Introduction for Students and Health Professional

Format Paperback | 450 pages, Dimensions 190 x 246 x 22mm | 990g, Publication date 18 Jan 2018, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note 66 Tables, black and white; 33 Halftones, black and white; 55 Line drawings, black and white ISBN10 1107529158, Bestsellers rank 33,112

Gordius Epidemiology

Format Paperback | 433 pages, Dimensions 191 x 235 x 20.32mm | 884.51g, Publication date 23 Sep 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 6th Revised edition Illustrations note Approx. 426 illustrations (320 in full color) ISBN10 0323552293 ISBN13 9780323552295, Bestsellers rank 107,617

BIOSTATIC

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Course description

At the end of the source, 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 probability distribution
- ☐ Describe normal probabilities distribution
- ☐ Introduction to statistical inference
- ☐ Basics of hypotheating
- ☐ Basic of confidence intervals

Course content

BASIC BIOSTATIC				
Discipline			Professional Subjects	
Department			Epidemiology and biostatistics	
Subject			basic biostatistics	
Course code			DMD 10 25	
Class			V	
Semester		10	Fall	
Number of credits		1	Theory	1
			Practical	
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1	1		Measurement	What is biostatistics? Organizing data
2	1		Measurement	Type of measurements, data quality, and exercise
3	1		Type of studies: survey	Simple random samples, table of random digits, other types of probability samples
4	1		Type of studies: comparative studies	The basics, explanatory variables and response variable, confounding, factors and treatments, random assignment of treatment, blinding and ethics
5	1		Frequency distribution: stem-plots	Shape, location, spread additional illustrations of stem-plots, frequency count from stem-plots,

				frequency tables, class-interval frequency table, additional frequency charts
6	1		Summary statistics: central location	Mean, mode, median and their comparison, range; quartiles
7	1		Summary statistics: central location	5 points summary and interquartile range; and boxplot, variance and standard deviation (SD), facts about SD, and selecting summary statistics
8	1		Probability concepts	What is probability? Type of random variables, discrete random variables, continuous random variable more rules and properties of probability
9	1		Binomial probability distribution	Binomial random variables, calculating binomial probabilities, cumulative probabilities, probabilities calculators, expected value and variance of binomial random variables and using the binomial distribution to help make judgment
10	1		Normal probabilities distribution	Normal distribution: A heuristic example, characteristics of normal distributions, the 68-95-99.7 rule, and determining normal probabilities: standardizing values, the standard normal table, probabilities for ranges of normal random variables
11	1		Normal probabilities distribution	Finding values that correspond to normal probabilities: terminology and notation, and assessing departures from normality
12	1		Introduction to statistical inference	Concept: sampling variability, parameters statistics; Sampling behavior of mean: simulation experiment, the sampling distribution of mean, the effect of increasing the sample size, and sampling behavior of count and proportion: the normal approximation to the binomial
13	1		Basics of hypotheses testing	The null and alternative hypotheses, test statistics, p-value, significance level, one sample, z-test, and power and sample size
14	1		Basics of confidence intervals	Introduction to estimation, confidence level for μ when γ is unknown, sample size requirements, and relationship between hypothesis testing and confidence interval
15	1		Inference about mean:	Intimated standard error, Student's distribution, one sample test, confidence interval for mean, paired sample, conditions for inference, sample size and power
16	1		Comparing independent mean	Paired and independent samples, exploratory and descriptive sraristics, inference about mean difference, equal variance t procedure, conditions for inference, sample size and power

Textbooks & reference books recommended (last edition)

Biostatistics The Bare Essentials

Format Paperback | 438 pages, Dimensions 232 x 279 x 22.61mm | 1,233.77g, Publication date 30 Nov 2014, Publisher PMPH-USA Limited, Publication City/Country Shelton, United States Language English, Edition Revised, Edition Statement 4th Revised edition, ISBN10 3207951789 ISBN13 9783207951780, Bestsellers rank 506,356

Clinical Biostatistics Made Ridiculously Simple

Format Paperback | 104 pages, Dimensions 154 x 227 x 8mm | 204g, Publication date 01 Apr 2011 Publisher Med master, Language English, Illustrations note Figures; Tables, black and white ISBN10 1935660020, ISBN13 9781935660026, Bestsellers rank 101,484

Primer of Biostatistics, Seventh Edition

Format Paperback | 320 pages, Dimensions 188 x 236 x 12mm | 494g, Publication date 09 Dec 2011, Publisher McGraw-Hill Education - Europe, Imprint McGraw-Hill Medical, Publication City/Country New York, United States, Language English, Edition Statement 7th edition, Illustrations note 100 Illustrations, unspecified, ISBN10 0071781501, ISBN13 9780071781503

OPERATIVE DENTISTRY & ENDODONTICS

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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
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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%
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- ☐ Mid semester exam 20%
- ☐ Final semester exam 60%
- ☐ Total 100%

Operative Dentistry

Operative Dentistry is one of the branches of Dentistry that deals with the art and science of the diagnosis, prevention, treatment, and prognosis of diseases

At the end of the training, each Student must be able to:

- To diagnosis Dental caries, Dental defects, malformed teeth and discolored teeth for treatment planning
- To prevent any recurrence of the causative disease and their defects, it is the procedures done for prevention before the manifestation of any sign and symptoms of disease
- To restore form, function, phonetics and aesthetics
- To maintain for providing service for longer duration
- To know about tooth nomenclature and physiology of tooth form
- To know principles of cavity preparation for amalgam and composite resin material for different classes
- To become familiar with amalgam restorations, glass ionomer cement and pin retained restorations
- To control pain during operative procedures
- To manage deep carious lesions, indirect and direct pulp capping
- To understand about isolation methods, infection control, patient operative position and mat ricing and tooth separation
- To know about pulp protection and interim restorations
- To know about Dental hypersensitivity and cervical lesions and their management

Endodontic

At the end of the training, each Student must be able:

- To know about scope of endodontic, endodontics diagnostic procedures and basic principles of the endodontic treatment
- To become familiar with the anatomy of pulp cavity and periapical tissues, pulp and periapical pathologies and their treatment
- To know rationale of endodontic treatment case selection indication and contraindications for root canal treatments
- To become familiar with the internal anatomy of different teeth
- To be able to perform preparation of root canal space, determination of working length, cleaning and shaping of root canals, irrigating solution chemical aids to instrumentation
- To know about disinfection of root canal space and intra canal medicaments
- To understand about problems during cleaning and shaping of root canal spaces, perforation and its management, broken instruments and its management
- To know about obturation of the root canal system and different methods of obturation system
- To understand about root canal sealers, ideal properties classification, manipulation of root canal sealers
- To learn about traumatized teeth, classification of fractured teeth, management of fractured tooth and root
- To know about emergency endodontic procedures

- To learn the importance of asepsis and infection control in endodontic treatment
- To become familiar with geriatric endodontic and the usages of laser in endodontic
- To learn the Endo and Perio relationship and restoration of endodontic ally treated teeth

Course contents

OPERATIVE DENTISTRY (MODULE 1)					
Discipline				Professional Subjects	
Department				Operative Dentistry & educations	
Subject				Operative Dentistry	
Course code				DMD 05 26	
Class				III	
Semester			5	Spring	
Number of credits			2	Knowledge	1
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Introduction to operative Dentistry	Definition, history, indication of operative Dentistry procedures purpose of operative Dentistry and recent advanced in restorative Dentistry	
2	1	1	Tooth nomenclature	Classes of human teeth, sets of teeth and tooth numbering system	
3	1	1	Tooth nomenclature	Nomenclature of tooth surfaces, nomenclature related to Dental caries and nomenclature related to nun carious defects of teeth	
4	1	1	Physiology of tooth form	Function of teeth and physiology of tooth form	
5	1	1	Physiology of tooth form	Occlusion and operative Dentistry	
6	1	1	Dental caries	Definition, sites of Dental caries, epidemiology of Dental caries, Dental plaque/biofilm, theories of Dental caries, local factors; affecting the incidence of caries and irradiation and Dental caries	
7	1	1	Dental caries	Classification of Dental caries and diagnosis of Dental caries	

8	1		Dental caries	Diagnosis of Dental caries, arrested caries, root caries and caries risk assessment
9	1	1	Dental caries	Prevention of Dental caries, current methods of caries prevention and management of Dental caries
10	1	1	Principles of tooth preparation	Introduction, purpose of tooth preparation, terminology of tooth preparation, number of line, angles and point angles in different tooth preparation designs and tooth preparation
11	1	1	Principles of tooth preparation	Steps in tooth preparation
12	1	1	Principles of tooth preparation	Steps in tooth preparation
13	1	1	Patient evaluation, diagnosis and treatment planning	Introduction patient evaluation, examination and diagnosis
14	1	1	Patient evaluation, diagnosis and treatment planning	Examination and diagnosis, treatment planning and treatment record
15	1	1	Isolation of the operating field	Introduction, components of oral environment and equipment needed for isolation of operating field
16	1	1	Isolation of the operating field	Equipment needed for isolation of operating field and pharmacological methods and methods used for gingival tissue management

Textbooks & reference books recommended (last edition)

Text-Book of Operative Dentistry

Format Hardback | 318 pages, Dimensions 156 x 234 x 19mm | 621g, Publication date 20 Oct 2018 Publisher Franklin Classics Trade Press, Language English, ISBN10 0343868474 ISBN13 978034386847

A Text-Book of Operative Dentistry

Format Paperback | 778 pages, Dimensions 156 x 234 x 39mm | 1,070g, Publication date 29 Aug 2032, Publisher Wentworth Press, Publication City/Country United States, Language English Illustrations note black & white illustrations, ISBN10 1374248053, ISBN13 9781374248052

Text-Book of Operative Dentistry

Format Paperback | 605 pages, Dimensions 232 x 279 x 22.86mm | 1,500g, Publication date 31 Oct 2018, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition Statement 4th Revised edition, Illustrations note 6 Tables, unspecified; 1000 Halftones, unspecified; 587 Illustrations, unspecified, ISBN10 9352705351, ISBN13 9789352705351, Bestsellers rank 19,60

OPERATIVE DENTISTRY (MODULE 2)					
Discipline			Professional Subjects and skills		
Department			Operative Dentistry & educations		
Subject			Operative Dentistry		
Course code			DMD 06 26		
Class			III		
Semester		6	Fall		
Number of credits		2	Knowledge	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Patient and operating position	Introduction, chair and patient position, operating position consideration for doctors while doing patient, setting arrangement of operator assistant	
2	1	1	Infection control	Rationale for infection control, cross-infection, objective of infection control, universal precautions, classification of instruments and instrument processing procedures	
3	1	1	Infection control	Instrument processing procedures, management of Dental equipment, needle stick injury, disinfection and infection control checklist	
4	1	1	Pain control	Introduction, methods of pain control in Dental clinic, anxiety control, local anesthesia, use of high speed rotary instruments with sharp burs and coolants, analgesia and hypnosis	
5	1	1	Met ricing and tooth separation	Introduction and mat ricing	
6	1	1	Met ricing and tooth separation	Mat ricing	
7	1	1	Mat ricing and tooth separation	Mat ricing and tooth separation	
8	1	1	Pulp protection	Introduction, pulpal irritants, effect of Dental caries on pulp, effect of chemical irritants on pulp and pulp protection procedures	
9	1	1	Pulp protection	Material used for pulp protection, methods of pulp protection under different restorations and defense mechanism of pulp	

10	1	1	Interim restorations	Introduction, material used for interim restorations
11	1	1	Interim restorations	Material used for interim restorations
12	1	1	Management of deep caries lesions	Indirect and direct pulp capping
13	1	1	Tooth preparation for composite restorations	Class III tooth preparation, class IV tooth preparation and class V tooth preparation
14	1	1	Tooth preparation for composite restorations	Tooth preparation for posterior composite restoration, class I tooth preparation, class II tooth preparation and restorative technique for composites
15	1	1	Tooth preparation for composite restorations	Restorative technique for composite, repair of composite restorations and indirect composite inlays and onlays
16	1	1	Aesthetics in Dentistry	Introduction, Dental aesthetics, Dent facial composition, color translucency, aesthetics and operative Dentistry

Textbooks & reference books recommended (last edition)

Text-Book of Operative Dentistry

Format Paperback | 778 pages, Dimensions 156 x 234 x 39mm | 1,070g, Publication date 29 Aug 2032, Publisher Wentworth Press, Publication City/Country United States, Language English Illustrations note black & white illustrations, ISBN10 1374248053, ISBN13 9781374248052

Text-Book of Operative Dentistry

Format Hardback | 318 pages, Dimensions 156 x 234 x 19mm | 621g, Publication date 20 Oct 2018 Publisher Franklin Classics Trade Press, Language English, ISBN10 0343868474 ISBN13 978034386847

A Text-Book of Operative Dentistry

Format Paperback | 605 pages, Dimensions 232 x 279 x 22.86mm | 1,500g, Publication date 31 Oct 2018, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition Statement 4th Revised edition, Illustrations note 6 Tables, unspecified; 1000 Halftones, unspecified; 587 Illustrations, unspecified, ISBN10 9352705351, ISBN13 9789352705351, Bestsellers rank 19,60

OPERATIVE DENTISTRY (MODULE 3)					
Discipline			Professional Subjects and skills		
Department			Operative & endodontics		
Subject			Operative Dentistry		
Course code			DMD 07 26		
Class			IV		
Semester		7	Spring		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Amalgam restoration	Introduction, composition of amalgam powder, composition of amalgam alloys, advantage of silver amalgam, disadvantages of silver amalgam, incisions of amalgam restoration, contraindications of amalgam restoration, types of amalgam powder, physical properties of amalgam and recent advantages in amalgam	
2	1	1	Amalgam restoration	Principles of tooth preparation for amalgam restorations	
3	1	1	Amalgam restoration	Principles of tooth preparation for amalgam restoration and steps of amalgam restoration	
4	1	1	Amalgam restoration	Steps of amalgam restoration, failure of amalgam restorations and mercury hygiene	
5	1	1	Pin retained restorations	Introduction, advantages of pin amalgam restoration, disadvantages of pin amalgam restoration, indications for pin amalgam restorations, contraindications for pin amalgam restoration and retentive pins	
6	1	1	Pin retained restorations	Principles and techniques of pin placement, factors, affecting retention of pin in tooth structure and factors affecting retention of pins in restorative material	
7	1	1	Pin retained restorations	Pins and stresses, failure of pin retained restorations, pin placement for maxillary teeth, pin placement for mandibular teeth pin amalgam foundation and amalgam pin	

8	1	1	Glass ionomer cement	Introduction, classification of glass ionomer cements, generation of glass ionomers, composition of glass ionomer cement, indications of glass ionomer cement, contraindications of glass ionomer cement and properties of glass ionomer cement
9	1	1	Glass ionomer cement	Uses of glass ionomer cements and clinical steps for placement of glass ionomer cement
10	1	1	Tooth hypersensitivity	Introduction, definition, neurophysiology of teeth, mechanism of dentin sensitivity, incidence and distribution of dentin hypersensitivity, etiology and predisposing factors
11	1	1	Tooth hypersensitivity	Differential diagnosis, diagnosis and treatment strategies
12	1	1	Management of discolored teeth	Introduction, classification of discoloration and etiology of tooth discoloration
13	1	1	Management of discolored teeth	Bleaching, history of tooth bleaching, contraindications for bleaching, medicaments used as bleaching agents and constituents of bleaching gels, home bleaching technique and in-office bleaching
14	1	1	Management of discolored teeth	Bleaching of nonvital teeth and effect of bleaching agents on tooth and its supporting structures
15	1	1	Cervical lesions	Introduction, classification of cervical lesions, carious of cervical lesions and non-carious cervical lesions
16	1	1	Cervical lesions	No carious cervical lesions and management of cervical lesions

Textbooks & reference books recommended (last edition)

A Text-Book of Operative Dentistry

Format Paperback | 778 pages, Dimensions 156 x 234 x 39mm | 1,070g, Publication date 29 Aug 2032, Publisher Wentworth Press, Publication City/Country United States, Language English Illustrations note black & white illustrations, ISBN10 1374248053, ISBN13 9781374248052

Text-Book of Operative Dentistry

Format Hardback | 318 pages, Dimensions 156 x 234 x 19mm | 621g, Publication date 20 Oct 2018 Publisher Franklin Classics Trade Press, Language English, ISBN10 0343868474 ISBN13 978034386847

A Text-Book of Operative Dentistry

Format Paperback | 605 pages, Dimensions 232 x 279 x 22.86mm | 1,500g, Publication date 31 Oct 2018, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Edition Revised, Edition Statement 4th Revised edition, Illustrations note 6 Tables, unspecified; 1000 Halftones, unspecified; 58

ENDODONTICS (MODULE 1)					
Discipline			Professional Subjects and skills		
Department			Operative Dentistry & endodontics		
Subject			Endodontics		
Course code			DMD 08 26		
Class			IV		
Semester		8	Fall		
Number of credits		2	Knowledge	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Introduction and scope of endodontic	Introduction, history of endodontic, modern endodontic and patient education	
2	1	1	Pulp and per radicular tissue	Introduction, development of Dental pulp, histology of Dental pulp, supportive elements and innervations of pulp	
3	1	1	Pulp and per radicular tissue	Anatomy of Dental pulp, pulp chamber, root canal, functions of pulp, age changes in pulp, pulpal calcification, calcific Metamorphosis and per radicular tissue	
4	1	1	Pathologies of pulp and periapix	Introduction, pulp pathologies, etiology of pulpal diseases, progression of pulpal pathology, classification of pulpal pathologies and barodontalgia	
5	1	1	Pathologies of pulp and periapex	reversible pulpitis, irreversible pulpitis’, chronic pulpitis and internal resorption	
6	1	1	Pin retained restorations	Pulp necrosis degeneration, per radicular pathologies, periapex pathologies, etiology of per radicular diseases, diagnoses of per radicular pathologies and classification of par radicular pathologies	
7	1	1	Pathologies of pulp and periapex	Acute apical periodontist, acute apical abscess, phoenix, abscess, periapical granuloma and radicular cyst	
8	1	1	Pathologies of pulp and periapex	Chronic alveolar abscess, persistent apical periodontist, external root resorption and disease of per radicular tissue of non-endodontic origin	
9	1	1	Diagnostic procedures	Case history	

10	1	1	Diagnostic procedures	Pulp vitality tests, recent advances in pulp vitality testing and diagnosis findings
11	1	1	Diagnostic procedures	Role of radiographs in endodontics, digital radiography, digital Dental radiography and phosphor imaging system
12	1	1	Differential diagnosis of orofacial pain	Introduction, pain, diagnosis, source of odontogenic & non odontogenic pain
13	1	1	Case selection and treatment planning	Endodontic therapy, contraindication of endodontic therapy, treatment planning, medical conditions influencing endodontic treatment planning and sequence of treatment delivery
14	1	1	Internal anatomy	Introduction, pulp cavity common canal configuration, methods of determining pulp anatomy and variations in internal anatomy of teeth
15	1	1	Internal anatomy	Variations in internal anatomy of teeth, factors affecting internal anatomy and individual tooth anatomy
16	1	1	Internal anatomy	Individual tooth anatomy, C-shaped canal and classification of C-shaped root canals

Textbooks & reference books recommended (last edition)

Microsurgery in Endodontics

Format Hardback | 256 pages, Dimensions 232 x 284 x 18mm | 880g, Publication date 23 Oct 2017 Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 1. Auflage, ISBN10 1118452992, ISBN13 9781118452998 Bestsellers rank 977,09

The Principles of Endodontics

Format Paperback | 232 pages, Dimensions 221 x 275 x 11mm | 632g, Publication date 24 Dec 2019, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Revised, Edition Statement 3rd Revised edition, ISBN10 0198812078 ISBN13 9780198812074, Bestsellers rank 761,018

Bioceramic Materials in Clinical Endodontics

Format Hardback | 101 pages, Dimensions 178 x 254mm, Publication date 30 Dec 2020 Publisher Springer Nature Switzerland AG, Publication City/Country Cham, Switzerland Language English, Edition Statement 1st ed. 2021, Illustrations note 40 Tables, color; 57 Illustrations, color; 13 Illustrations, black and white; IX, 101 p. 70 illus., 57 illus. in color. ISBN10 3030583291, ISBN13 9783030583295

Endodontics Principles and Practice

Format Hardback | 496 pages, Dimensions 232 x 276 x 25.4mm | 32,299.39g, Publication date 31 Aug 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 6th Revised edition illustrations note Approx. 1181 illustrations (615 in full color) ISBN10 0323624367 ISBN13 9780323624367, Bestsellers rank 1,378,581

ENDODONTICS (MODULE 2)

Discipline				Professional Subjects and skills			
Department				Operative Dentistry & endodontic			
Subject				Endodontic			
Course code				DMD 09 26			
Class				V			
Semester			9	Spring			
Number of credits			2	Knowledge		1	
				Practical		1	
Weeks	Hours		Topics	Descriptions			
	Knowledge	Practical					
1	1	1	Access cavity preparation	Definition, instruments for access cavity preparation and guidelines for access cavity preparation			
2	1	1	Access cavity preparation	Access cavity for anterior teeth, access cavity preparation for premolars, access cavity preparation for maxillary molars and access cavity preparation for mandibular molars			
3	1	1	Access cavity preparation	Clinical managing difficult cases for access opening			
4	1	1	Working length determination	Definition, significance of working length, difference methods of working length determination and radiographic methods of working length determination			
5	1	1	Working length determination	Grossman method and electronic apex locators			
6	1	1	Irrigation and intra canal medicaments	Ideal requirements for an irritant, functions of irritants factors that modify activity of irrigating solutions, common used irrigating solutions, choice of an irrigate solution, normal saline, sodium hypochlorite,, urea, hydrogen peroxide, urea peroxide and chlorhexidine			
7	1	1	Irrigation an d intra canal medicaments	Chelating agents, ultrasonic, irrigation, newer irrigation solutions and methods of irrigation			
8	1	1	Irrigation and intra canal medicaments	Endovac (apical negative pressure irrigation system), intra canal medicaments, characteristic of intra canal medicaments and placement of intra canal medicament			
9	1	1	Cleaning and shaping of root canal system	Objective of biomechanical preparation, different movements of instruments, basic principles of canal instrumentation, technique of root canal preparation,			

				standardized preparation technique and step back technique
10	1	1	Cleaning and shaping of roots canal system	Modified step back technique, passive step back technique, coronal to apical approach technique, hybrid technique of canal preparation, double flare technique, modified double flared technique, balanced force technique, reverse balanced force, preparation, types of crown down hand instrumentation technique, modified manual step down technique and profile GT technique
11	1	1	Cleaning and shaping of roots canal system	Quantic instrument technique, protaper files, engine driven preparation with NiTi instruments, profile system, greater taper files, light speed system, K3 rotary file system, real world endo sequence file, hero 642, wave one file system and canal preparation using ultrauments
12	1	1	Cleaning and shaping of roots canal system	Canal preparation using sonic instruments, laser assisted root canal therapy, evaluation criteria of canal preparation and special anatomic problems in canal cleaning and shaping
13	1	1	Obturation of root canal system	Timing of obturator, extent of root canal filling and material used for obturation
14	1	1	Internal anatomy	Material used for obturation, methods of sealer placement and obturation technique
15	1	1	Obturation of root canal system	Armamentarium for obturation, lateral compaction technique, variation of lateral compaction technique chemical alteration of gutta-percha, vertical compaction technique and system B: continuous wave of condensation technique
16	1	1	Obturation of root canal system	Lateral/vertical compaction of warm gutta-percha, sectional methods of obturation thermos mechanical compaction of the gutta-percha, thermos plasticized injectable gutta-percha obturation, solid core carrier technique, obturation with silver cone, apical third filling postobturation Instructions and repair following endodontic treatment

Textbooks & reference books recommended (last edition)

The Principles of Endodontics

Format Paperback | 232 pages, Dimensions 221 x 275 x 11mm | 632g, Publication date 24 Dec 2019, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Revised, Edition Statement 3rd Revised edition, ISBN10 0198812078 ISBN13 9780198812074, Bestsellers rank 761,018

Bioceramic Materials in Clinical Endodontics

Format Hardback | 101 pages, Dimensions 178 x 254mm, Publication date 30 Dec 2020 Publisher Springer Nature Switzerland AG, Publication City/Country Cham, Switzerland Language English, Edition Statement 1st ed. 2021, Illustrations note 40 Tables, color; 57 Illustrations, color; 13 Illustrations, black and white; IX, 101 p. 70 illus., 57 illus. in color.

ISBN10 3030583291, ISBN13 9783030583295

Microsurgery in Endodontics

Format Hardback | 256 pages, Dimensions 232 x 284 x 18mm | 880g, Publication date 23 Oct 2017 Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 1. Auflage, ISBN10 1118452992, ISBN13 9781118452998 Bestsellers rank 977,09

Endodontics Principles and Practice

Format Hardback | 496 pages, Dimensions 232 x 276 x 25.4mm | 32,299.39g, Publication date 31 Aug 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 6th Revised edition illustrations note Approx. 1181 illustrations (615 in full color) ISBN10 0323624367 ISBN13 9780323624367, Bestsellers rank 1,378,581

ENDODONTICS (MODULE 3)						
Discipline			Professional Subjects and skills			
Department			Operative Dentistry & endodontic			
Subject			Endodontic			
Course code			DMD 10 26			
Class			V			
Semester		10	Fall			
Number of credits		2	Knowledge		1	
			Practical		1	
Weeks	Hours		Topics	Descriptions		
	Knowledge	Practical				
1	1	1	Single visit endodontic	Advantage and disadvantage of single visit endodontic, criteria of case selection and contraindications of single visit endodontic		
2	1	1	Mid treatment flare-ups in endodontic	Etiology, mechanisms for flare-ups, clinical conditions related to flareUps and management of flare-ups		
3	1	1	Endodontic emergencies	Diagnosis and treatment planning, pretreatment endodontic emergencies and conditions requiring emergency endodontic treatment		
4	1	1	Endodontic emergencies	Condition requiring emergency endodontic treatment, intra treatment emergencies and post obturation emergencies		
5	1	1	Procedures accidents	Inadequately cleaned and shaped root canal system instrument separation		
6	1	1	Procedures accidents	Deviation from normal canal anatomy, inadequate canal preparation and perforation		
7	1	1	Procedures accidents	Perforation obturation related, vertical root fracture and instrument aspiration		
8	1	1	Endodontic periodontal relationship	Definition, pathways of communication between pulp and periodontium, impact of pulpal diseases on the periodontium, impact of periodontium diseases on th pulpal tissue, etiology of endodontic-periodontal problems, classification and diagnosis of endodontic-periodontal lesions		
9	1	1	Endodontic periodontal relationship	Primary endodontic lesions, primary endodontic lesion with secondary periodontal lesion with secondary endodontic involvement, independent endodontic and periodontal lesions which do not communicate and true combined endo-perio lesions		

10	1	1	Restoration of endodontically treated teeth	Introduction, importance of coronal restoration factors making endodontically treated teeth different from vital teeth, restorative treatment planning for endodontically treated teeth, components of the restored tooth
11	1	1	Restoration of endodontically treated teeth	Factors to be considered while planning post and core
12	1	1	Restoration of endodontically treated teeth	Preparation of the canal space and core, custom-made post core fabrication, investing and casting evaluation and cementation
13	1	1	Management of traumatic injuries	Classification of Dent facial injuries, examination of traumatic injuries, crown infraction, crown fracture, complicated crown fracture, and crown root fracture
14	1	1	Management of traumatic injuries	Root fracture, luxation injuries, assessment of traumatic injuries and prevention of traumatic injuries
15	1	1	Geriatric endodontics	Age changes in the teeth, endodontics in geriatric patients, diagnosis and treatment plan
16	1	1	Laser in endodontic	History, types of lasers, laser interaction with biological tissue, laser safety in Dental practice, soft and hard tissue applications of lasers in Dentistry

Textbooks and reference books recommended (last edition)

Microsurgery in Endodontics

Format Hardback | 256 pages, Dimensions 232 x 284 x 18mm | 880g, Publication date 23 Oct 2017 Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 1. Auflage, ISBN10 1118452992, ISBN13 9781118452998 Bestsellers rank 977,09

The Principles of Endodontics

Format Paperback | 232 pages, Dimensions 221 x 275 x 11mm | 632g, Publication date 24 Dec 2019, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Revised, Edition Statement 3rd Revised edition, ISBN10 0198812078 ISBN13 9780198812074, Bestsellers rank 761,018

Bioceramic Materials in Clinical Endodontics

Format Hardback | 101 pages, Dimensions 178 x 254mm, Publication date 30 Dec 2020 Publisher Springer Nature Switzerland AG, Publication City/Country Cham, Switzerland Language English, Edition Statement 1st ed. 2021, Illustrations note 40 Tables, color; 57 Illustrations, color; 13 Illustrations, black and white; IX, 101 p. 70 illus., 57 illus. in color. ISBN10 3030583291, ISBN13 9783030583295

Endodontics Principles and Practice

Format Hardback | 496 pages, Dimensions 232 x 276 x 25.4mm | 32,299.39g, Publication date 31 Aug 2020, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 6th Revised edition illustrations note Approx. 1181 illustrations (615 in full color) ISBN10 0323624367 ISBN13 9780323624367, Bestsellers rank 1,378,581

CLINICAL NEUROLOGY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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 this module, Student should be able to:

- ☐ List categories of diseases of the nervous system;
- ☐ Describe the common clinical presentation of nervous system diseases
- ☐ Incorporate laboratory data into the assessment of a patient with a nervous system disorder;
- ☐ 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;

Course content

CLINICAL NEUROLOGY & PSYCHIATRY					
Discipline			Professional Subjects and skills		
Department			Neuropsychiatry		
Subject			Clinical neurology and psychiatry		
Course code			DMD 06 27		
Class			III		
Semester		6	Fall		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Neurological history and examination	Motor system examination (inspection, tone, forces reflexes), cranial nerves examinations (olfactory, optic, occult motor, trochlear, trigeminal, abduces, facial, vestibulocochlear, glossopharyngeal, vagus, accessory and hypoglossal nerves), co-ordination and cerebellar examination, station and gait, sensory system examination (lamniscal and extra lamniscal sensory system)	

2	1	1	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 CSF, 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
3	1	1	Seizure disorders	Definition, etiology, classification, petit mal seizure, grand mal seizure, partial seizure: (simple & complex seizure), reflex seizure, febrile convulsion, pseudo seizure, status epileptics, management of tonic and clonic status epileptics, laboratory investigation, differential diagnosis, treatment of seizures disorders, prognosis
4	1	1	Facial paralysis	Anatomy physiology facial paralysis: definition, incidence clinic, etiology, diagnosis, differential diagnosis, prognosis, treatment
5	1	1	Headache	headache: etiology, history, classification, migraine: definition classification, differential diagnosis, treatment cluster headache: definition, diagnosis, treatment
6	1	1	Neuroglia	Trigeminal neuralgia: definition, etiology, diagnosis, treatment, prognosis, glossopharyngeal: definition, etiology, diagnosis, treatment
7	1	1	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
8	1	1	Vertigo	Vertigo: definition, etiology, classification, important pain when faced to patient who has vertigo, clinic and investigation
9	1	1	Psychiatric history and examination	Presentation (level of consciousness, general appearance), motor behavior, affect
10	1	1	Cognitive state exam	Cognitive state (attention, orientation, languages, memory), reasoning, mood, thought, perception
11	1	1	Schizophrenic disorders	Definition, natural history, incidence, prevalence, etiology, sign & symptoms, sub type of schizophrenia, course, D/DX, diagnostic criteria, treatment, prognosis
12	1	1	Mood disorders	Epidemiology, natural history, etiology, clinic, DSM-IV diagnostic criteria for mania, DSM-IV diagnostic criteria for anxiety patients, bipolar disorders, dysthymia, cyclothymic, types of bipolar disorders, course and prognosis, treatment for mania, social treatment, behavior treatment, psychotherapy

13	1	1	Anxiety disorders	Definition, epidemiology, knowledge of anxiety panic attack, agoraphobia, social phobia, specific phobia, OCD, generalized anxiety disorders, treatment
14	1	1	Substance related disorders	Definition, phenomenology, intoxication, neuro adaptation, dependence, abuse & addiction, etiology, epidemiology, neuropharmacology, antagonist, clinic over dosage, with drawl syndrome, course, side effect, diagnosis, treatment, cocaine and amphetamines, nicotine, cannabis related disorders, (neuropharmacology, clinic, treatment) alcohol related disorders, epidemiology, etiology, intoxication, neuro adaptation, alcohol withdrawal, alcohol withdrawal seizures, alcohol induces psychotic disorder, alcohol receptor, alcohol withdrawal delirium, treatment
15	1	1	Somatoform disorders	Definition, types, somatization disorders, conversion disorders, pain disorders, hypochondriasis, body dimorphic disorders
16	1	1	Malingering	Definition, sign and symptoms, diagnosis, treatment

Textbooks & reference books recommended (last edition)

Clinical Neurology

Format Paperback | 744 pages, Dimensions 189 x 246 x 38.1mm | 1,633g, Publication date 13 Mar 2012, Publisher Taylor & Francis Ltd, Imprint Hodder Arnold, Publication City/Country London United Kingdom, Language English, Edition New edition, Edition Statement 4th New edition Illustrations note 4-page colour plate section; 84 Line drawings, black and white; 217 Halftones, black and white; 301 Illustrations, black and white, ISBN10 0340990708, ISBN13 9780340990704 Bestsellers rank 635,582

Fenichel's Clinical Pediatric Neurology A Signs and Symptoms Approach

Format Hardback | 400 pages, Dimensions 184 x 260 x 25.4mm | 975.22g, Publication date 03 Sep 2019, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 8th Revised edition, Illustrations note Approx. 135 illustrations (35 in full color) ISBN10 0323485286, ISBN13 9780323485289 Bestsellers rank 387,704

Kaufman's Clinical Neurology for Psychiatrists

Format Hardback | 688 pages, Dimensions 232 x 276 x 33.02mm | 2,041.17g, Publication date 13 Jan 2017, Publisher Elsevier - Health Sciences Division, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 8th Revised edition Illustrations note Approx. 350 illustrations (300 in full color) ISBN10 0323415598 ISBN13 9780323415590, Bestsellers rank 360,825

Hankey's Clinical Neurology

Format Paperback | 976 pages, Dimensions 205.74 x 269.24 x 40.64mm | 2,449g, Publication date 04 Feb 2014, Publisher Manson Publishing Ltd, Publication City/Country London, United Kingdom, Language English, Edition New edition, Edition Statement 2nd New edition, Illustrations note 698 Illustrations, color, ISBN10 1840761938, ISBN13 9781840761931, Bestsellers rank 836,575

Neurology An Illustrated Color Tex

Format Paperback | 144 pages, Dimensions 210 x 297 x 7.62mm | 430.91g, Publication

date 21 Jul 2010, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE, Publication City/Country London, United Kingdom, Language English, Edition Statement 3rd edition, Illustrations note Illustrations (chiefly col.) ISBN10 0702032247, ISBN13 9780702032240 Bestsellers rank 317,597

Neurology A Queen Square Textbook

Format Hardback | 1096 pages, Dimensions 217 x 286 x 54mm | 3,136g, Publication date 32 Sep 2032, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States Language English, Edition Statement 2nd Edition, ISBN10 111848617X, ISBN13 9781118486177 Bestsellers rank 443,317

The neuroscience of clinical psychiatry, Edmond. S. Higgins, mark S. George.

Format Hardback | 336 pages, Dimensions 178 x 254 x 17.78mm | 907g, Publication date 06 Apr 2013, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement 2nd edition, Illustrations note 318 ISBN10 1451101546, ISBN13 9781451101546, Bestsellers rank 585,551

Kaplan's & sadoques synopsis in psychiatry, benjamines James, sadock MD.

Format Paperback | 1472 page, Publisher Lippincott India, Publication City/Country India, Edition Statement 10th edition, ISBN10 8189960377, ISBN13 9788189960377

NEUROSURGERY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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

Knowledge

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

- ☐ Perform a comprehensive neurologic examination;
- ☐ Assess clinical level of neurologic defection and propose etiologic differential diagnosis
- ☐ Assess skull and spine x-ray films, CT and CTA scans, and MRI, MRA and MRA scans;
- ☐ 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 the neurologically impaired patient;
- ☐ Demonstrate the ability to differentiate between trauma, metabolic disorders, and congenital anomalies; Tumors and infections, 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 the airway

Skills/Procedures

- ☐ Perform neurological examination (determine Glasgow coma scale);
- ☐ Perform a lumbar puncture for cerebrospinal fluid analysis and placement of lumbar drain;
- ☐ Develop interpersonal skills with neurologic patients

Course contents

NEUROSURGERY					
Discipline			Professional Subjects and skills		
Department			Neurosurgery		
Course title			Neurosurgery		
Prerequisite			Principles of surgery & neurology		
Course code			DMD 10 39		
Academic year			V		
Semester		10	Fall		
Number of credits		2	Knowledge	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Introduction & history of neurosurgery	Introduction of neurosurgery, historical background of neurosurgery, neuroanatomy (functional), brain and cranial nerves, spine & spinal cord, peripheral nerves, CSF and neurovascular review, the principles of neuro-investigation	
2	1	1	Intracranial diseases, diagnosis and management of head trauma	Introduction of 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, confusion and diffuse axonal injury	
3	1	1		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 cerebrospinal fluid leak, and chronic subdural hematoma (in children and adults)	
4	1	1	Closed head injury	Scalp injury, abrasion, laceration, infected wound, of the skull, vault fractures, linear fracture, depressed fractures, compound depressed fracture, base crane fractures, anterior cranial fossa, middle cranial fossa, posterior cranial fossa	
5	1	1	Head injury	Traumatic brain injury, concussion cerebral, contusion, cerebral compression, (EDH & SDH), laceration cerebral, management and principles of treatment, complication of head injury, traumatic	

				coma, synd increased intracranial pressure brain death
6	1	1	Open head injury	Open head injury, penetrated brain injury, perforated brain injury (war wound and non-war wound)
7	1	1	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 of the unstable spine, understand management principles in spinal cord injury including indications for DE compressive surgery and treatment of the medical complications associated with cord injury (skin, bladder, bowel movement, respiratory)
8	1	1	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
9	1	1	Diagnosis and management of brain abscess	Recognize the clinical manifestations of abscess and focal infections due to local spread, hematogenous disease associated with immune deficiency and how they differ from the mimic tumors, understand the general principles in the treatment of abscess and focal intracranial infections, brain abscess, T.B (complications), parasites (hydrated cyst)
10	1	1	Diagnosis and management of peripheral nerve injury and entrapment	Diagnosis traumatic nerve injury (laceration, stretch and compression) and understand indications and general strategies of treatment. Recognize the signs and symptoms of common nerve entrapment (carpal Tummel syndrome, ulnar, nerve entrapment, thoracic outlet syndrome and neuralgia paresthesia), their etiology, conservative management strategies and indications for surgical intervention
11	1	1	Spine TB and spinal cord tumors	Introduction, etiology, pathophysiology, clinic, laboratory and imaging, diagnosis complications surgical and medical management & prognosis
12	1	1	Diagnosis and management of non-traumatic neck and back problems	Diagnose and understand the natural history and management principles of whiplash and soft tissue injury. Recognisethe broad categories of spinal pain and radiocolopathy, the signs and symptoms (including cauda equine syndrome), (their common causes, their diagnosis and their management (cervical and lumbar disc henitation, osteoarthritic disease, spondylolisthesis), their differential diagnosis and management (including metastatic disease and primary spinal tumora) recognize the board 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 disease) differential diagnosis and management (including transverse myelopathy, metastatic disease and primary spinal tumors)
13	1	1	Diagnosis and management of brain tumor	Introduction: know the relative incidence and location of the major types of primary and secondary brain tumors, understand the general clinical manifestations (focal deficit and irritations, mass effect; supratentorial vs. infratentorial) of brain tumors, recognize specific syndromes: extra-axial (cerebellopontine, pituitary, frontal....) and intra-axial, in brain tumor presentation, review the diagnostic tools that are currently used for evaluation (laboratory tests, radiology biopsy) understand broad treatment strategies (surgery, radiosurgery, radiation, and chemotherapy) in the treatment of tumors
14	1	1	Diagnosis and management of surgically treatable pain problems, movement disorders	Recognize the features of trigeminal and glossopharyngeal neuralgia, causalgia, and cancer pain, indications for surgical referral and the spectrum of surgical therapeutic options recognize the spectrum disorders amenable to surgical intervention, including Parkinson's disease
15	1	1	Diagnosis and management of surgically treatable pain problems, movement disorders	Dystonia, spasticity, and hemi facial spasm indications for surgical referral and the spectrum of surgical therapeutic options, understand the general classification of seizure disorders, Definition of intractable epilepsy and the broad categories of surgical intervention for epilepsy including invasive electrodes, resective and disconnected surgery
16	1	1	Diagnosis and management	Know the major causes of intracranial hemorrhage: vasculopathy in the aged (hypertension and amyloidosis) aneurysm, vascular malformation, tumor and coagulopathy Recognize the symptoms and signs 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 broad treatment strategies (surgery, radiosurgery, interventional radiology as well as treatment of vasospasm) of intracranial aneurysms and vascular malformations, differentiate the symptomatology, of migraine cluster and tension headache and sinusitis headache

Textbooks & reference books recommended (last edition)

Neurology and Neurosurgery Illustrated

Format Paperback | 612 pages, Dimensions 189 x 246 x 25.4mm | 1,156.66g, Publication date 08 Sep 2010, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE, Publication City/Country London, United Kingdom, Language English, Edition Illustrated, Edition Statement 5th edition, Illustrations note Approx. 2226 illustrations; Illustrations, unspecified, ISBN10 0443069573 ISBN13 9780443069574, Bestsellers rank 110,78

Principles of Neurosurgery, Robert G. Grossman, Christopher M Loftus

Format Hardback | 864 pages, Dimensions 232 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 536 halftones, 141 line illustrations, 109 tables, ISBN10 0397518404 ISBN13 9780397518401

Textbooks of Neurosurgery, Christopher G Goets

Format Hardback | 1392 pages, Dimensions 232 x 276 x 57.66mm | 3,955.33g, Publication date 28 Sep 2007, Publisher Elsevier Health Sciences, Imprint W B Saunders Co Ltd, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note Approx. 400 illustrations (250 in full color) ISBN10 1432036180, ISBN13 9781432036180, Bestsellers rank 2,913,89

ORAL & MAXILLOFACIAL SURGERY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

a) Aim

to produce a graduate who is competent in performing extraction of teeth and minor surgeries under both local and general anesthesia, prevent and manage related complication, acquire knowledge regarding aseptic procedures, have reasonable understanding of management of infectious patients and prevention of cross infections, learn about BLS.

Acquire a reasonable knowledge and understanding of the various diseases, injuries, infections occurring in the oral & maxillofacial region and offer solutions to such of those.

Common conditions and has an exposure in to the in-patient management of maxillofacial problems and to acquire reasonable knowledge regarding the surgical principals involved in implant placement and be able to communicate properly and understand medico legal responsibilities

Knowledge

Objectives: At the end of the course, the Students must be able to:

- Apply the knowledge gained in the preclinical subjects and related Medical subjects like general surgery and general medicine in the management of patients with oral surgical problem
- Diagnose, manage and treat (understand the principles of treatment of) patients with oral surgical problems
- Decide the requirement of a patient to have oral surgical specialist opinion of treatment
- Understand the principles of in-patient management.
- Understand the principles of emergency management of maxillofacial injuries, BLS measures and the medico legal responsibilities and formalities.
- Understand the management of major oral surgical procedures and principals involved in patient management
- Be able to decide the need for medical/surgical consultations and the method of doing so
- Should know ethical issues and have communication ability
- Should know the common systemic and local diseases, drugs used and drug interactions

Course contents

ORAL & MAXILLOFACIAL SURGERY (Module 1)					
Discipline			Professional Subjects and skills		
Department			Oral & maxillofacial surgery		
Subject			Oral & maxillofacial surgery		
Course code			DMD 05 28		
Academic year			III		
Semester		5	Spring		
Number of credits		2	Knowledge	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Introduction	Definition, scope, aims and objectives Diagnosis in oral surgery, history taking, clinical examination, investigations	
2&4	3	3	Sterilization and infection control	Introduction, cleansing of instruments, methods of sterilization, operating room decorum, post-surgical asepsis	
				Infection control: control (infection, infection control, cross infection, routs of transmission)	
				Infection control (infectious diseases of concern in Dentistry, general principles, waste disposal in a health care sitting)	
5	1	1	Drainage and debridement	Purpose of drainage in surgical wounds, types of drains used debridement: purpose, soft tissue and bone debridement	
6	1	1	Wound repair	Causes of tissue damage, wound repair (epithelialization, stages of wound healing), surgical significance of wound healing concepts (factors that impair wound healing, healing by primary-secondary and tertiary infection, healing of extraction sockets bone healing implant osseous ntrgartion, facial neuropathology of traumatic origin	
7&8	2	2	Suturing materials and technique	Introduction, historical background, role of suture in sound healing, feature of ideal suture material	
				Principles of suturing, suture methods, knots, suture removal	
9	1	1	Painless surgery	Pre-anesthetic consideration, pre-medication, use of general anesthetic	

10 &1 1	2	2	Post-operative care	Post-operative instructions, Physiology of cold and heat in the control of pain and swelling, Analgesics and anti-inflammatory drugs in the control of pain and swelling
				Control of infection-antibiotics, principles of antibiotic therapy, prevention of antibiotic abuse, long term post operative up
12 & 13	2	2	-Surgical pharmacology -Emergency drugs and intra muscular and IV injection	Essential drugs for surgery, drug enforcement administration schedule of drugs and examples
				Emergency drugs required in a Dental clinic, Applied anatomy, sites for intra muscular and intra venous injection, techniques
14	1	1	Management of hospital patients	Hospital governance(administrative organization, medical staff membership), Hospital Dentistry (hospitalizing patients for Dental care, care of hospitalized patient, management of postoperative problems)
15 & 16	2	2	Management of hospital patients	Hemorrhage (types of hemorrhage and homeostasis)
				Shock (classification and treatment)

Textbooks & reference books recommended (last edition)

Oral and Maxillofacial Surgery Secrets

Format Paperback | 576 pages, Dimensions 152 x 229 x 20.32mm | 521.63g, Publication date 21 Jan 2032, Publisher Elsevier - Health Sciences Division, Imprint Mosby, Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 3rd Revised edition ISBN10 0323294308, ISBN13 9780323294300

Oral and Maxillofacial Surgery

Format Paperback | 384 pages, Dimensions 189 x 246 x 17.78mm | 832.47g, Publication date 18 May 2013, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note Approx. 234 illustrations (117 in full color) ISBN10 0702046000 ISBN13 9780702046001, Bestsellers rank 89,07

Contemporary Oral and Maxillofacial Surgery

Format Hardback | 721 pages, Dimensions 222 x 281 x 35.56mm | 2,404.04g, Publication date 08 Dec 2018, 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. 3910 illustrations (3790 in full color) ISBN10 0323552218 ISBN13 9780323552219, Bestsellers rank 738,906

Textbook of Oral and Maxillofacial Surgery

Format Paperback | 1000 pages, Dimensions 232 x 279 x 44.45mm | 900g, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India, Language English Edition Revised, Edition Statement 4th Revised edition, Illustrations note 157 Tables, unspecified; 931 Halftones, unspecified; 497 Illustrations, unspecified, ISBN10 9385999877 ISBN13 9789385999871, Bestsellers rank 3,546,518

ORAL & MAXILLOFACIAL SURGERY (Module 2)

Discipline			Professional Subjects and skills		
Department			Oral & maxillofacial surgery		
Subject			Oral & maxillofacial surgery		
Course code			DMD 06 28		
Class			III		
Semester		6	Fall		
Number of credits		2	Knowledge	1	
			Clerkship	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Clerkship			
1 & 6	6	6	Local anesthesia	History of anesthesia, Osteology of maxilla and mandible, neurophysiology and pharmacology (vasoconstrictors), LA agents	
				L A in Dentistry (indication, contraindications, advantages and disadvantages, methods of pain control), Armamentarium	
				Practice of L A (medical evaluation, preanesthetic medications, basic techniques of L A for maxilla, management of Dental clinic waste)	
				Practice of L A (medical evaluation, preanesthetic medications, basic techniques of L A for mandible, management of Dental clinic waste)	
				Local complications (causes, prevention and management): -complications arising from drugs or chemicals used for LA -complications arising from injection techniques, complications arising from both	
				Systemic complications:, vasodepressor syncope, adverse drug reactions(allergic reactions, anaphylactic reactions, toxic reactions and idiosyncratic reactions)	
7& 10	4	4	Exodontia	Principle of oral surgery (developing a surgical diagnosis, basic necessities for surgery, aseptic technique, incision planning, flap design, tissue handling, hemostasis, dead space management, decontamination and debridement, suturing, edema control, patients general health and nutrition, follow-up	

				Definition, Pain and anxiety control, Indications and contraindications for removal of teeth, Clinical evaluation of teeth of removal, Radiographic examination of the tooth, Patient and surgeon preparation
				Tooth division and odontectomy, Teeth extraction:, Intra alveolar method, Trans alveolar method
				Complication of extraction, intraoperative: soft-tissue injuries to hard tissue, fractures, other complications
12 & 13	3	3	Impacted	Definition and types of impacted teeth, causes of impacted teeth indication and contraindications for removal of impacted teeth
				Classification (impacted mandibular third molar, maxillary third molar, impacted maxillary canine), root morphology, radiological examination, surgical removal of impacted teeth surgical procedure, reflecting adequate flaps for accessibility removal of overlying, sectioning the tooth delivery of the section tooth with elevator, preparing for wound closure
14 & 15	2	2	Endodontic surgery	Indications and contraindications for endodontic surgery classification of endodontic surgery: surgical drainage per radicular surgery (soft tissue management and hard tissue management)
				Corrective surgery (perforation repair, periodontal repair) replacement surgery Implant surgery Endodontic microsurgery
16	1	1	Sinus disorders	Surgical anatomy and development of the sinus, maxillary sinusitis oriental fistula, clad well-Luc procedures, traumatic disease iatrogenic disease, advances in the management of maxillary sinus disease

Textbooks & reference books recommended (last edition)

Textbook of Oral and Maxillofacial Surgery

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Oral and Maxillofacial Surgery Secrets

Format Paperback | 576 pages, Dimensions 152 x 229 x 20.32mm | 521.63g, Publication date 21 Jan 2032, Publisher Elsevier - Health Sciences Division, Imprint Mosby, Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 3rd Revised edition ISBN10 0323294308, ISBN13 9780323294300

Oral and Maxillofacial Surgery

Format Paperback | 384 pages, Dimensions 189 x 246 x 17.78mm | 832.47g, Publication date 18 May 2013, Publisher Elsevier Health Sciences, Imprint CHURCHILL

LIVINGSTONE, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note Approx. 234 illustrations (117 in full color) ISBN10 0702046000 ISBN13 9780702046001, Bestsellers rank 89,07

Contemporary Oral and Maxillofacial Surgery

Format Hardback | 721 pages, Dimensions 222 x 281 x 35.56mm | 2,404.04g, Publication date 08 Dec 2018, 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. 3910 illustrations (3790 in full color) ISBN10 0323552218 ISBN13 9780323552219, Bestsellers rank 738,906

ORAL & MAXILLOFACIAL SURGERY (module 3)

Discipline			Professional Subjects and skills		
Department			Oral & maxillofacial surgery		
Subject			Oral & maxillofacial surgery		
Course code			DMD 07 82		
Class			IV		
Semester		7	Spring		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1&3	3	3	Pre-prosthetic surgery	Objective of the prosthetic surgery, pathophysiology of edentulous bone loss, characteristics of idea Denture base area, aims of prosthetic surgery, treatment planning and exam, alveolar ridge correction: (alveolectomy, alveoloplasty)	
				Excision of tori, removal of tori, soft tissue surgeries for the correction of alveolar ridge, frenectomy, ridge extension procedure	
				Ridge augmentation procedures, interposition bone grafts, sinus lift procedure or sinus grafting	
4&5	2	2	Cleft lip and palate	Incidence, etiology, embryological asepsis, classification, associated deformities and problems	
				Management of cleft lip and palate (bilateral cleft lip, cleft palate), primary and secondary correction, closure of alveolar cleft	
6&13	8	8	Orofacial infection	Orofacial and cheek infections and their management (etiology , pathways of odontogenic, closure of alveolar cleft	
				Spread of orofacial infection, evaluation of the patient, general principles of therapy for the management	
				Potential spaces: infraorbital space, infratemporal fossa space, sub mental space , submandibular space	
				parental spaces: sublingual space, secondary potential facial spaces: temporal space, masticatory space, sub masseteric space, pteygomandibular space, par pharyngeal space	

				Possible untoward or life threatening complications of orofacial infection, Ludwig's angina
				Osteomyelitis of the jaw bone (definition, predisposing factors, etiology, pathogenesis, classification), acute pyogenic and chronic osteomyelitis their management
				Osteoradionecrosis of the facial bone (definition, incidence, etiology, clinical feature, treatment)
14 & 16	3	3	Implant and Osseo integration	Evolution of Dental implant material, types of implants successful implant, biological consideration for implant-tissue integration
				Classification of implant, classification of the bone endosteal implant, one stage and two stage implant surgeries assessment of bone for implant placement
				Components of implant, implant for completely edentulous patient, loading concept, implant failure, peri-implant, comparison of normal teeth and implant, complications

Textbooks & reference books recommended (last edition)

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Textbook of Oral and Maxillofacial Surgery

Format Paperback | 1000 pages, Dimensions 232 x 279 x 44.45mm | 900g, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India, Language English Edition Revised, Edition Statement 4th Revised edition, Illustrations note 157 Tables, unspecified; 931 Halftones, unspecified; 497 Illustrations, unspecified, ISBN10 9385999877 ISBN13 9789385999871, Bestsellers rank 3,546,518

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ORAL & MAXILLOFACIAL SURGERY (module 4)

Discipline			Professional Subjects and skills		
Department			Oral & maxillofacial surgery		
Subject			Oral & maxillofacial surgery		
Course code			DMD 08 28		
Class			IV		
Semester		8	Fall		
Number of credits		2	Theory	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Theory			
1 & 6	6	6	Cyst and tumors of the orofacial region	Cyst formation, intraosseous cysts: odontogenic epithelial origin, dentigerous cyst, developmental lateral periodontal cyst, multiple cystic lesions of the jaws	
				Intraosseous cysts: intraosseous cyst of no odontogenic epithelial origin, no odontogenic no epithelial bone cysts	
				Cysts associated the maxillary antrum	
				Soft tissue cysts of the oral cavity, odontogeniccysts, no odontogenic fissural cysts, retention cysts, lymphoepithelial cysts, heterotopic cysts, treatment of cysts of the oral cavity	
				Odontogenic tumors and non odontogenic tumors	
				General principles of management of a jaw lesion	
				Odontogenic tumors fo various origin tumors arising from odontogenic epithelial without odontogenic ectomesenchyme	
7 & 11	5	5	Salivary gland diseases:	Tumors arising from odontogenic epithelial with odontogenic ectomesenchyme with or without Dental hard tissue formation	
				Tumors arising from odontogenic ectomesenchyme with or without inclusion of odontogenic epithelium	
				No odontogenic lesions of the jaws	
				Nonneopastic bone lesions	
				Keratocystic odontogenic tumor	
7 & 11	5	5	Salivary gland diseases:	Salivary gland anatomy and physiology classification of salivary gland diseases	
				Salivary gland dysfunction; siallorhea of pyealism xerostomia , sialolithiasis and sialoadenities	

				Cysts of the salivary glands, tumors of the salivary glands necrotizing sialo metaplasia, sialadenosis
				Sialadenosis, diagnostic imaging, salivary analysis differential diagnosis
				Surgical management, complications
12 & 14	3	3	Neurological disorder	Anatomy of the peripheral nerve, classification of disorders of the nerve: traumatic nerve injuries
				Classification of disorders of the nerve: inflammation, facial nerve pathology
				Classification of disorders of the nerve: neuralgia
15 & 16	2	2	Lasers in oral and maxillofacial surgery	Lasers in oral and maxillofacial surgery, piezo surgery
				Surgical diathermy (cautery, electrocautery,) cryosurgery

Textbooks & reference books recommended (last edition)

Oral and Maxillofacial Surgery

Format Paperback | 384 pages, Dimensions 189 x 246 x 17.78mm | 832.47g, Publication date 18 May 2013, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note Approx. 234 illustrations (117 in full color) ISBN10 0702046000 ISBN13 9780702046001, Bestsellers rank 89,07

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Textbook of Oral and Maxillofacial Surgery

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Oral & maxillofacial surgery (module 5)

Discipline			Professional Subjects and skills		
Department			Oral and maxillofacial		
Subject			Oral and maxillofacial		
Course code			DMD 09 28		
Class			V		
Semester		9	Spring		
Number of credits		2	Theory	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Theory			
1 & 8	8	8	Maxillofacial trauma	Basic principles of the management of maxillofacial injuries	
				Injuries of the maxillofacial skeleton	
				Dental alveolar fracture	
				Fracture of the middle third to the facial skeleton	
				Principles of treatment of midfacial fracture	
				Applies surgical anatomy of the mandible and classification of mandibular fracture	
				Management of mandibular fracture	
				Fracture of the condylar process and its management	
9 & 12	4	4		Anatomy of the TMJ, TMJ disorder	
				An kylosis of the temporomandibular joint and management	
				Moy-facial pain dysfunction, inflammatory disease of T. M joint arthroscopy	
				Neuralgia	
13 & 14	2	2		Introduction, diagnosis and treatment planning	
				Peri-surgical orthodontic phase Orthodontic surgery (osteomy procedures)	
15	1	1	Surgical reconstruction of defects of the jaw (grafts)	Biologic basic of reconstruction, types of grafts assessment of patient in need of reconstruction	
16	1	1	Carcinoma of the oral cavity	Lymphatic spread, TNM classification, staging biopsy-type, filling of histopathology request from outline of management of squamous cell carcinoma: surgery, radiation and chemotherapy, role of Dental surgeons in the prevention and early detection of oral cancer	

Textbooks & reference books recommended (last edition)

Contemporary Oral and Maxillofacial Surgery

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Format Paperback | 1000 pages, Dimensions 232 x 279 x 44.45mm | 900g, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India, Language English Edition Revised, Edition Statement 4th Revised edition, Illustrations note 157 Tables, unspecified; 931 Halftones, unspecified; 497 Illustrations, unspecified, ISBN10 9385999877 ISBN13 9789385999871, Bestsellers rank 3,546,518

Oral and Maxillofacial Surgery Secrets

Format Paperback | 576 pages, Dimensions 152 x 229 x 20.32mm | 521.63g, Publication date 21 Jan 2032, Publisher Elsevier - Health Sciences Division, Imprint Mosby, Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 3rd Revised edition ISBN10 0323294308, ISBN13 9780323294300

Oral and Maxillofacial Surgery

Format Paperback | 384 pages, Dimensions 189 x 246 x 17.78mm | 832.47g, Publication date 18 May 2013, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 3rd Revised edition, Illustrations note Approx. 234 illustrations (117 in full color) ISBN10 0702046000 ISBN13 9780702046001, Bestsellers rank 89,07

OTORHINOLARYNGOLOGY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

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

a. Knowledge

At the end of the 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
- ☐ Training to perform various minor surgical procedures like ear syringing nasal packing and biopsy procedure;
- ☐ Assist common surgical procedures such as tonsillectomy, septoplasty, tracheostomy and endoscopic removal of foreign bodies

b. Skills

- ☐ At the end of the course Student should be able to:
- ☐ Proper ear, nose and throat examination;
- ☐ Discussion on common ENT conditions like; deviated nasal septum, nasal polyps, and 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, tonsillectomy, septoplasty, nasal polypectomy etc.

Course content

OTORHINOLARYNGOLOGY

Discipline			Professional Subjects and skills		
Department			ENT		
Subject			ENT		
Course code			DMD 07 30		
Class			IV		
Semester		7	Spring		
Number of credits		2	Knowledge	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Anatomy of the ear	Auricle, external auditory canal & tympanic membrane, middle ear, inner ear, mechanism of hearing and sound transmission	
2	1	1	Symptomatology of aural diseases	Otalgia, otorrhagia, irritation, otorrhea, tinnitus	
3	1	1	Symptomatology of the ear	Deafness (definition, types of conductive, sensory neural maxed hysterical)	
4	1	1	Diseases of external ear auricle & external auditory canal	Congenital, trauma, inflammatory, tumors	
5	1	1	Disease of external ear & tympanic membrane	Wax, foreign bodies, keratosis, atresia and stenosis	
6	1	1	Disease of the middle eat	Acute supportive otitis media, acute necrotizing otitis media, serous otitis media	
7	1	1	Anatomy & physiology of nose and para nasal sinuses	External nose, nasal cavity, maxillary sinuses, frontal sinuses, ethmoidal sinuses, sphenoid sinuses	
8	1	1	Rhinitis & epistaxis	Physiology of the nose & para nasal sinuses	
9	1	1	Sinusitis	Pathogenesis, microbiology, clinical features, treatment oriental fistula, SCC of maxillary sinuses	
10	1	1	Facial fracture	Types, clinical feature investigation, treatment	
11	1	1	Anatomy & physiology of pharynx	Neuro pharynx, adenoid hypertrophy	
12	1	1	Acute tonsillitis, chronic tonsillitis acute pharyngitis & chronic pharyngitis	Acute tonsillitis, chronic tonsillitis & chronic pharyngitis	
13	1	1	Deep neck space infections (Ludwig’s angina)	Surgical anatomy of the neck, causes, treatment	

14	1	1	Anatomy & physiology of the larynx	Anatomy & physiology of the of the larynx
15	1	1	Stridor and acute laryngitis	Types of stridor, causes of stridor, acute laryngitis, sign and symptoms, treatment
16	1	1	Tumors of the larynx & tracheostomy	Benign & malignant tumors of larynx, definition, applied anatomy of the trachea, classification, functions, of tracheostomy, indication, contraindication, procedures

Textbooks and reference books recommended (last edition)

Basic Otorhinolaryngology A Step-by-Step Learning

Format Paperback | 430 pages, Dimensions 194 x 270 x 20.32mm | 1,179g, Publication date 11 Oct 2017, Publisher Thieme Publishing Group, Publication City/Country Stuttgart, Germany Language English, Edition New edition, Edition Statement 2nd edition, Illustrations note 635 Abb. ISBN10 3131324422, ISBN13 9783131324429, Bestsellers rank 592,759

Ballenger's Otorhinolaryngology Head and Neck Surgery

Format Hardback | 1300 pages, Dimensions 152 x 229 x 101.6mm | 7,076.04g, Publication date 30 May 2017, Publisher PMPH-USA Limited, Publication City/Country Shelton, United States Language English, Edition Revised, Edition Statement 18th Revised edition, Illustrations note 1,000 full-color illustrations, ISBN10 3207951770, ISBN13 9783207951773, Bestsellers rank 1,329,801

Scott-Brown's Otorhinolaryngology

Format Hardback | 1428 pages, Dimensions 232 x 279 x 63.5mm | 4,037g, Publication date 26 Sep 2018, Publisher Taylor & Francis Ltd, Imprint CRC Press, Publication City/Country London, United Kingdom, Language English, Edition New edition, Edition Statement 8th New edition, Illustrations note 800 artworks; 1200 photos, ISBN10 1138094641, ISBN13 9781138094642, Bestsellers rank 2,212,348

Atlas of Operative Otorhinolaryngology

Format Hardback | 1200 pages, Dimensions 232 x 279 x 107.95mm | 2,400g, Publication date 30 Jun 2013, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Illustrations note 2200 Halftones, color; 500 Illustrations, unspecified ISBN10 9350901994, ISBN13 9789350901991, Bestsellers rank 3,545,595

PEDIATRIC & PREVENTIVE DENTISTRY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% of absente is within result in disqualification from the final content exam

Factory rules

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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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Delay policy

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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%

The goals of the course are to prepare the Student to diagnose; treatment plan and treat of refer the oral diseases and conditions of children and adolescents

Course objectives:

The Student will be able to:

- ☐ Understand the principles of growth and development.
- ☐ Understand the value of radiographs for children, and be familiar with proper radiographic technique for the child patient.
- ☐ Understand the basic principles of operative Dentistry for primary and young permanent teeth and perform various procedures including amalgam, composite and stainless steel crowns.
- ☐ Assess and treat pulpal problems in primary and young permanent teeth.
- ☐ Understand oral surgical techniques for children and the use of topical and local anesthetics for the control of pain.
- ☐ Understand pain and anxiety control measures including behavioral management, use of drugs and medications and hospital treatment.
- ☐ Understand the etiological factors and treatment methods for periodontal disease in children.
- ☐ Describe the etiology and treatment procedures for occlusion and space maintenance problems.
- ☐ Recognize and understand treatment and preventive procedures for Dental injuries to primary and permanent teeth including splinting deviated teeth, and restoration of fractured anterior teeth.

Course content

PEDIATRIC & PREVENTIVE DENTISTRY (module 1)						
Discipline			Professional Subjects and skills			
Department			Pediatric & preventive Dentistry			
Subject			Pediatric Dentistry			
Course code			DMD 07 26			
Class			IV			
Semester		7	Spring			
Number of credits		2	Knowledge		1	
			Practical		1	
Weeks	Hours		Topics	Descriptions		
	Knowledge	Practical				
1	1	1	Introduction to pedantic and preventive Dentistry	Definition, scope, objective and importance		
2	1	1	Development of Dentulous and jaws	Definition, tooth development stage, deciduous Dentulous, permanent Dentulous, development of maxilla and mandible, development of occlusion		
3	1	1	Eruption and shedding of primary teeth	Clinical eruption, stage, theories fo eruption, definition, resorption, and time		
4	1	1	Delayed eruption of teeth	Local and systemic factors		
5	1	1	Dental anatomy and histology	Anatomical structure of primary and permanent teeth Enamel, Dentin, cementum, pulp, PDL		
6	1	1	Teething	Definition, clinical manifestation & treatment		
7	1	1	Morphology of primary and permanent teeth	Introduction, morphological differences between primary and permanent teeth, practical application of understanding tooth morphology, importance of first permanent molar		
8	1	1	Congenital abnormalities of teeth children	Definition, classification, clinical features & management		
9	1	1	Tooth development disturbances in children	Number, size & shape disturbances of teeth in children		
10	1	1	Structural defects of developing teeth	Amylogenesis, Dentin genesis, & cement genesis imperfect Enamel hypoplasia, types, clinical features & treatment		
11	1	1	Child psychology	Definition, theories of child psychology, psychological development of children with age, factors affecting child’s reaction to Dental treatment		

12	1	1	behavioral management	Definition, types of behavioral encounter in Dental clinic, non-pharmacological and pharmacological methods of behavior management
13	1	1	Case history recording	Principal of examination, diagnosis & treatment planning, Dental radiology, related to pedantic
14	1	1	Oral surgical procedures in children	Indications and contra-indication of extractions of primary and permanent teeth in children, methods and techniques
15	1	1	Local anesthesia	Knowledge of local anesthesia, types, indications, contra-indications, complications & principles
16	1	1	Space maintainers	Fixed and removable SM, knowledge of functional appliances, intra-oral and extra-oral appliances

Textbooks & reference books recommended (last edition)

Pediatric Dentistry

Format Hardback | 408 pages, Dimensions 220 x 276 x 24mm | 1,346g, Publication date 04 Jan 2017, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States, Edition Statement 3rd Edition, ISBN10 1118913493, ISBN13 9781118913499, Bestsellers rank 83,617

Handbook of Clinical Techniques in Pediatric Dentistry

Format Paperback | 208 pages, Dimensions 189 x 246 x 11mm | 462g, Publication date 04 May 2015, Publisher John Wiley & Sons Inc, Publication City/Country New York, United State Language English, ISBN10 1118792696, ISBN13 9781118792698, Bestsellers rank 746,624

Pediatric Dentistry for Special Child

Format Hardback | 590 pages, Dimensions 232 x 279 x 25.4mm | 1,100g, Publication date 31 Mar 2032, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Illustrations note 69 Tables, unspecified; 240 Halftones, color; 55 Illustrations, unspecified, ISBN10 9352501934, ISBN13 9789352501939, Bestsellers rank 2,556,119

PEDIATRIC & PREVENTIVE DENTISTRY (module 2)

Discipline			Professional Subjects and skills		
Department			Pediatric & preventive Dentistry		
Subject			Pediatric Dentistry		
Course code			DMD 08 26		
Class			IV		
Semester		8	Fall		
Number of credits		2	Knowledge	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Oral habits in children	Definition, etiology & classification, clinical features of digit sucking, tongue trusting, mouth breathing & various other secondary habits, management of oral habits in children	
2	1	1	Space maintainers	Fixed and removable SM, knowledge of functional appliances, intra-oral and extra-oral appliances	
3	1	1	Preventive Dentistry for children	Definition, principles, types of preventive approach to crazes control, mechanical aids, chemotherapeutic aids	
4	1	1	Preventive Dentistry for children	Parent counseling, definition, objective, instructions to the parents education of parents in various aspects of Dentistry	
5	1	1	Pit and fissure sealants	Definition, indication, contra-induction, age related, method	
6	1	1	Fluorides	Historical background, systemic & topical fluorides, mechanism of action, fluoride therapy technique	
7	1	1	Dental caries	Definition, classification, management, defluoridation technique	
8	1	1	Dental caries	Historical background, definition, etiology & pathogenesis, caries pattern in primary, permanent and permanent teeth in children	
9	1	1	Rampant caries, early childhood caries & extensive caries	Definition, etiology, pathogenesis, clinical features, complication and management	
10	1	1	Role of diet and nutrition in Dental caries	Definition, classes of nutrients, diet and Dental caries, diet counseling	
11	1	1	Pediatric operative Dentistry	Principles & concepts of pediatric operative Dentistry	

12	1	1	Pediatric operative Dentistry	Procedures required for restoration (isolation, rubber dam, additional isolation aids), modification of cavity preparation in primary teeth, young permanent first molars, matrices & wedges used for restoring the tooth
13	1	1	Pediatric operative Dentistry	Modern restorative materials and techniques
14	1	1	Pediatric operative Dentistry	Semi-permanent restorations, (Polycarbonate crowns, stainless steel crown), factors to be considered in preoperative evaluation, clinical procedure
15	1	1	Pediatric esthetics in Dentistry	Esthetic restorations of primary anterior teeth, full coronal restoration, advanced pediatric esthetics
16	1	1	Children with special health care needs	Definition, classification, special considerations in Dental management

Textbooks & reference books recommended (last edition)

Pediatric Dentistry

Format Hardback | 408 pages, Dimensions 220 x 276 x 24mm | 1,346g, Publication date 04 Jan 2017, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States, Edition Statement 3rd Edition, ISBN10 1118913493, ISBN13 9781118913499, Bestsellers rank 83,617

Handbook of Clinical Techniques in Pediatric Dentistry

Format Paperback | 208 pages, Dimensions 189 x 246 x 11mm | 462g, Publication date 04 May 2015, Publisher John Wiley & Sons Inc, Publication City/Country New York, United State Language English, ISBN10 1118792696, ISBN13 9781118792698, Bestsellers rank 746,624

Pediatric Dentistry for Special Child

Format Hardback | 590 pages, Dimensions 232 x 279 x 25.4mm | 1,100g, Publication date 31 Mar 2032, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Illustrations note 69 Tables, unspecified; 240 Halftones, color; 55 Illustrations, unspecified, ISBN10 9352501934, ISBN13 9789352501939, Bestsellers rank 2,556,119

PEDIATRIC & PREVENTIVE DENTISTRY (module 3)

Discipline			Professional Subjects and skills		
Department			Pediatric & preventive Dentistry		
Subject			Pediatric Dentistry		
Course code			DMD 09 26		
Class			V		
Semester		9	Spring		
Number of credits		2	Knowledge	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	The pulp-Dentin complex in primary and young permanent teeth	Fundamental of Dentin/pulp histology, Dentin genic response to injury, reactions to Dental caries, reactions to Dental procedures, reactions to Dental material	
2	1	1	Clinical considerations of root canal morphology in primary teeth	Morphology of primary anterior teeth & primary molars for endodontic purposes	
3	1	1	Principles and diagnosis of pulp diseases in children	History and characteristics of pain, clinical examination, radiographic examination of pulp diseases in children	
4	1	1	Pulp pathology in primary & young permanent teeth	Classification & clinical manifestations of various pulp diseases in primary and young permanent teeth	
5	1	1	Pulp therapy for primary Dentulous	Pulp capping, pulptomy, form cresol pulptomy and alternatives to formal cresol pulptomy (Gluretaidihyde, fericsalfate, MTA, laser, electro surgery)	
6	1	1	Non-vital pulp theory in young and immature permanent teeth	Polypectomy in primary teeth, access opening, root filling materials for primary teeth, follow-up after polypectomy	
7	1	1	Pulp therapy I'm young and immature permanent teeth	Definition, apex genesis & apexifination (indications, contraindications & techniques)	
8	1	1	Gingival & periodontal diseases in children ¹	Introduction, differences between child and adult periodontium, physiologic gingival changes associated with tooth eruption, gingivitis In children, scurvy, developmental disorders of gingivae, etiology, classification & treatment	
9	1	1	Gingival & periodontal diseases in children ²	Definition, characteristics of periodontal diseases in children, differentiation diagnosis of Dental abscess	

				of primary teeth with other selling's of mouth in children classification & treatment
10	1	1	Lesions of oral mucosa in children ¹	Viral infections affecting oral mucosa (herpes simplex, varicella zoster infection, herpangina, measles, mumps)
11	1	1	Lesions of oral mucosa in children ²	Congenital syphilis, tuberculosis, candidiasis, aphthous ulcers traumatic ulcers
12	1	1	Management of medically compromised patients ¹	Heart disease, leukemia, diabetes mellitus, respiratory diseases
13	1	1	Management of medically compromised patients ²	Sickle-cell anemia, hemophilia, Dental procedures with high risk for bleeding, AIDs
14	1	1	Traumatic injuries to anterior teeth in children ¹	Trauma on tooth germ components, trauma on dentin-pulp complex, etiology, mechanism of Dental injuries, classification of traumatic injuries, examination and diagnosis, management
15	1	1	Traumatic injuries to anterior teeth in children ²	Luxation, classification & management
16	1	1	Setting up of pediatric clinic	Initial communication with parents, Dental clinic environment, infection control

Textbooks and reference books recommended (last edition)

Pediatric Dentistry

Format Hardback | 408 pages, Dimensions 220 x 276 x 24mm | 1,346g, Publication date 04 Jan 2017, Publisher John Wiley & Sons Inc, Publication City/Country New York, United States, Edition Statement 3rd Edition, ISBN10 1118913493, ISBN13 9781118913499, Bestsellers rank 83,617

Handbook of Clinical Techniques in Pediatric Dentistry

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Format Hardback | 590 pages, Dimensions 232 x 279 x 25.4mm | 1,100g, Publication date 31 Mar 2032, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Language English, Illustrations note 69 Tables, unspecified; 240 Halftones, color; 55 Illustrations, unspecified, ISBN10 9352501934, ISBN13 9789352501939, Bestsellers rank 2,556,119

CLINICAL ANESTHESIOLOGY

Attendance policy

- ☐ Regular student attendance at all.
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- ☐ More than 25% of absente is within result in disqualification from the final content exam

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- ☐ Students factory scare is calculated in the sum of its final scores
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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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 - ☐ 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%
-
- ☐ The purpose of anesthesia training for medical Students in not to make anesthesiologists out of all medical Students, but to give Students knowledge of 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 of what anesthetic will do to the patient, even though the physician does not administer it him or herself.
- ☐ The Student, therefore, should observe and study the physiological changes, which take place in the anesthetized patient, when these changes are of sufficient magnitude, they become complications or toxic effects, the Student should learn what these are, how they are caused, and how they may present and be treated.
- ☐ Emphasis should be laid on good preoperative preparation, Students should learn basic techniques of maintaining a clear airway and giving assisted or artificial ventilation.
- ☐ They should also learn how to position the patient's 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 or spinal anesthesia under the direct and constant supervision of a member of the staff.

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 operating 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 ventilations 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;
- ☐ Introduction 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 anesthesia: 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
- ☐ Attaching pulse oximeter, BP cuff and electrocardiography (ECG) electrodes and setting up a monitor
- ☐ Demonstration of epidural/nerve block
- ☐ LMA (laryngeal mask airway) insertion demonstration
- ☐ Intubation 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 the patients during the learning curve of Student. To allow repeat practice according to ability of the Student the reach the level of competence needed

Logbook for skills

- ☐ I/v cannulation – 5times
- ☐ Oropharyngeal/nasopharyngeal airway insertion – 10times
- ☐ Bag mask ventilation first on manikin – 5times
- ☐ Mask ventilation in unconscious patient – 5times
- ☐ Attaching pulse oximeter, BP cuff and ECG
- ☐ Applying electrodes and setting up a monitor - 5times
- ☐ Lumbar puncture – 2times
- ☐ Infiltration block – 2 times
- ☐ Demonstration of epidural/nerve block – 2times each
- ☐ LMA (Laryngeal mask airway) insertion demonstration – 5times
- ☐ Intubation demo – 5times
- ☐ CPR (cardiopulmonary resuscitation) on manikin – 5times

Course content

CLINICAL ANESTHESIA					
Discipline			Professional Subjects and skills		
Department			Anesthesia		
Subject			Anesthesia		
Course code			DMD 06 29		
Class			III		
Semester		6	Spring		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1 & 2	1	1	Introduction	Anesthesia pain-anesthesia history	
	1	1	Evaluation of patient	Visit-risk (p.s.) (the A.S.A.S. scoring system)	
3	1	1	Premedication	Premedication drugs, goal of premedication	
4	1	1	Intubation	Endotracheal intubation, indication, laryngoscope, technic of intubation, difficult intubation	
5 & 6	1	1	Clinical anesthesia	Technic of anesthesia, steps and sign in general anesthesia	
	1	1	Ether	Definition of ether, technic and administration, side effect contraindication	
7	1	1	Nitrous oxide+halothane	Definition of N2O, pharmacology property of N2O, use of N2O in anesthesia, definition of halothane, effect of halothane in anesthesia, definition of mathoxyfuran- enflurance-isoflurance-desflurance and sevoflurance.	
8	1	1	IV anesthesia (thiopental)	Intravenous anesthesia, definition, effect, complication	
9	1	1	Ketamine + propofol	Definition of keremine, effect, indication and contraindication, definition of propofol effect, clinical use	
10	1	1	Curare	Definition, depolarization of curare, non-depolarization curare, d- tubocurarine –gallamin-povalon, antagonist of non-depolarization curare	
11	1	1	Local anesthetics (SA)	Definition, advantage and disadvantage, lidocaine bupivacaine, toxicity of local anesthesia	
12	1	1	Neuroleptic analgesia	Definition, method stage of neuroleptic analgesia	

13	1	1	IV fluid therapy	Definition, goal, fluid and electrolyte, replacement, of fluid and electrolyte, intravenous solution
14	1	1	Tarns fusion	Definition, rolls of transfusion-indication-types transfusion
15	1	1	CPR	Definition, ethology, cardio pulmonary, diseases, drugs
16	1	1	Respiratory failure	Definition, clinical course of hypoxia, tracheostomy

Textbooks & reference books recommended (last edition)

Morgan and Mikhail's Clinical Anesthesiology

Format Paperback | 1456 pages, Dimensions 185.42 x 231.14 x 53.34mm | 1,987g, Publication date 14 Dec 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 6th edition, Illustrations note 540 Illustrations, unspecified ISBN10 1259834425, ISBN13 9781259834424, Bestsellers rank 83,37

Core Clinical Competencies in Anesthesiology

Format Paperback | 486 pages, Dimensions 190 x 246 x 25mm | 860g, Publication date 17 Jun 2010, Publisher CAMBRIDGE UNIVERSITY PRESS, Publication City/Country Cambridge, United Kingdom, Language English, ISBN10 0521144132, ISBN13 9780521144131, Bestsellers rank 1,201,99

Clinical Pediatric Anesthesiology

Format Paperback | 496 pages, Dimensions 150 x 210 x 22mm | 381g, Publication date 08 Jan 2021, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Illustrations note Illustrations, unspecified, ISBN10 1259585743 ISBN13 9781259585746

Clinical Anesthesiology Lessons Learned

Format Paperback | 563 pages, Dimensions 155 x 235 x 33.02mm | 9,975g, Publication date 07 Dec 2013, Publisher Springer-Verlag New York Inc .Publication City/Country New York, NY, United States, Language English, Edition Statement 2014 ed. Illustrations note 129 Tables, black and white; 119 Illustrations, color; 88 Illustrations, black and white; XXXII, 563 p. 207 illus., 119 illus. in color. ISBN10 1461486955, ISBN13 9781461486954, Bestsellers rank 2,267,19

FORENSIC ODONTOLOGY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

- Practice the under graduate Dentistry Student efficiently and effectively, backed by scientific and practical knowledge and skills
- Exercise empathy and caring attitude and maintain expected ethical standard requirement for Dentistry undergraduate Students
- Willing to share the knowledge and skills with any learner, junior of colleagues
- Develop the faculty for critical analysis and evaluation of various concepts and views it adopt the most rational approaches

Course content

FORENSIC ODONTOLOGY					
Discipline			Professional Subjects and skills		
Department			Forensic medicine & medical ethics		
Subject			Forensic odontology		
Course code			DMD 07 32		
Class			IV		
Semester		7	Spring		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Forensic science	Definition, what is a forensic Dentist? Goals, relations to other sciences, principal terms, expertness’s, types & forms of forensic examination, methods of forensic medicine, terminology, experts of forensic medicine, rights and responsibility of expert, report’s form, historical aspects, events and advances, most famous contributor to forensic sciences	
2	1	1	Thanatology	Definition, classification, definition, stages & types of death, early modifications of the body, let modification of the body, destructive processes of the body (putrefaction, destructive of the body by animals, insects and plants) preservation processes of the body	
3	1	1	Forensic traumatology	Definition, traumatism, classification, excoriation ecchymosis, wounds fracture, joint, dislocation, joint anathrosis, actions in death causing injuries causes of death in mechanical injuries firearm injuries,	

				definition, classification, fire, factors, mechanism of bullet effects
4	1	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
5	1	1	Forensic odontology and its applications	Dental identification, types of identification bite marks, identification, why a Dentist for identification, principles and phases of Dental identification, phases, reconstructive postmortem, Dental profile (age, sex role of skull and mandibular, classification of methods, race) opinion from forensic anthropologists, other methods of Dental identification. Role of DNA molecule in identification, the DNA molecule
6	1	1	Dental records and forensic photography	Introduction, what is a patient record? Creation and maintenance of a patient record Long-term storage of Dental record Access to patient, forensic uses of patient records, confidentiality of records, forensic photography, need the photography, the technical considerations, the basic optics of photographic process, handling of photographic evidence
7	1	1	Oral and maxillofacial radiology	Radiology and forensic sciences, historical perspectives, Dental radiology and forensic science, scope of forensic radiology, oral and maxillofacial radiology in person identification, radiographic anatomic landmarks of the jaws, radiological anatomical features and spatial relationship of the teeth, radiography in mass disaster victim identification, age estimation and Dental radiology, limitations of Dental radiography
8	1	1	Age estimation and Dental methodology	Historical perspective, need age estimation, age changes in oral cavity, soft tissue, changes, Dental changes, hard tissue changes, chronology of the human Dentulous, various methods for age estimation, estimation of age by skeletal means, estimation of age by teeth
9	1	1	Bite marks	Historical aspect, skin as registration materials for bite marks, classification of various bite mark systems, component injuries seen in bite marks, location of bite marks, the classic appearance, variations of the prototypical bite mark
10	1	1	Bite marks	Bite mark recognition, aging/changes over time, variable affecting appearance of bite marks, range of bite mark severity the bite mark, distortion in Hyman bite marks, general principles behind bruises, forensic physical comparison of exhibits, biological techniques for bite mark comparisons, patterns of

				child and bite differences in adults, bites, bite wound infections, prevention and management
11	1	1	Mass disaster victim identification and Dentist's role	What is a disaster and a mass fatality incident, kind of disaster, need for the preparedness, the way a Dentist can be of help in case need arises in disaster management, how Dental auxiliaries can help
12	1	1	Mass disaster victim identification and Dentist's role	Role of Dentists in mass disaster forensic, evidence protocols, phase of response, 1 st responder, stabilization, resolution, resolution of site to normal, the standard operating procedure
13	1	1	Mass disaster victim identification and Dentist's role	Evidence collection and preservation, Dental and mass disasters, Dental radiography in mass disasters, field equipment for mass disasters, commingled, skeletonized, skeletonized carbonized and mutilated remains
14	1	1	Child abuse, neglect and domestic violence: role of a Dentist	Child abuse, physical abuse, sexual abuse, emotional abuse and girl child neglecting bruises, characteristics bruises, conditions that may be confused with abusive bruising.
15	1	1	Forensic toxicology	Principle of toxicology, forensic toxicology, kinds of poisoning what is poison, pharmacokinetics and toxic dynamic of poison
16	1	1	Forensic toxicology	Medico legal aspect of poisons, poison, investigation, incidence of poison, ethanol and crime, opiate, morphine, heroin, hashish, heavy metals

Textbooks & reference books recommended (last edition)

Forensic Odontology Principles and Practice

Format Hardback | 496 pages, Dimensions 178 x 242 x 24mm | 950g, Publication date 08 Feb 2032 Publisher John Wiley & Sons Inc. Publication City/Country New York, United States Language English, Edition Statement 1. Auflage, ISBN10 1118864441, ISBN13 9781118864449 Bestsellers rank 1,548,125

Manual of Forensic Odontology

Format Hardback | 461 pages, Dimensions 178 x 254 x 25.4mm | 1,066g, Publication date 01 Mar 2013, Publisher Taylor & Francis Inc. Imprint CRC Press Inc, Publication City/Country Bosa Roca, United States, Language English, Edition New edition, Edition Statement 5th New edition Illustrations note 3/2032: INKJET reprint; 27 Tables, black and white; 281 Illustrations, color ISBN10 1439851336, ISBN13 9781439851333, Bestsellers rank 1,745,742

Forensic Odontology

Format Paperback | 232 pages, Dimensions 152 x 229 x 12mm | 322g, Publication date 20 Nov 2012, Publisher LAP Lambert Academic Publishing, Publication City/Country United States Language English, Edition Statement Aufl. Illustrations note black & white illustrations ISBN10 3659305030, ISBN13 9783659305030

Textbook of Forensic Odontology

Format Paperback | 148 pages, Dimensions 210 x 280 x 6mm | 442g, Publication date 28 Feb

2009 Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi,
India Language English, ISBN10 8184486839, ISBN13 9788184486834

ORAL MEDICINE

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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.

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%

At the end of training, each Student must be able to:

- Become familiar with oral diseases, diagnostic procedures and healing of oral wounds
- Know about keratotic and non-keratotic white lesions and how to manage them
- Understand and manage vascular, bilious and ulcerative lesions
- Become familiar with orofacial pain and its management
- Know about examination of lesions like swellings, ulcers, erosions, sinus & fistula

- Become familiar with oral pigmentations (exogenous and endogenous)
- To know about diseases of the tongue and lips and their management
- Understand about infections of oral and perioral structures (bacterial, viral and fungal infections)
- Know about temporomandibular joint diseases and its management
- Become familiar with salivary gland disorders and its treatment
- Know about aids and its oral manifestation
- Understand about oral manifestations due to blood disorders and its management
- Become familiar with oral manifestations due to endocrine disorders
- Know about vitamins and metabolic disorders and their oral manifestations

Course content

ORAL MEDICINE (Module 1)				
Discipline		Professional Subjects and skills		
Department		Operative Dentistry & endodontics		
Course title		Oral medicine		
Course code		DMD 08 33		
Class		IV		
Semester	8	Fall		
Number of credits	2	Knowledge	1	
		Practical	1	
Weeks	Hours		Topics	Descriptions
	Knowledge	Practical		
1	1	1	Oral diseases	An introduction
2	1	1	Healing of oral wounds	General factors affecting the healing of oral wounds, healing of biopsy wounds, healing of extraction wounds, healing of fractures
3	1	1	Diagnostic procedures	Case history, personal information, taking and recording history & examination of the patients
4	1	1	Diagnostic procedures	Examination of swelling, examination of ulcer, sinus and fistula, examination of cranial nerves & establishing the diagnosis
5	1	1	Keratotic & non keratotic white lesions	Normal variation, leukoedema, Fordyce granula, lines alba, non keratotic white lesions habitual cheek or lip listing, burns radiation microsites, uremic stomatitis, leukoplakia's spot and treatment of non keratotic lesion

6	1	1	Keratotic & non keratotic white lesions	Candidiasis, classification, causative organisms, predisposing factors, oral candidiasis, thrush, acute atrophic candidiasis, chronic hyperplastic candidiasis
7	1	1	Keratotic & non keratotic white lesions	Denture stomatitis, median rhomboid glossitis, angular Cheilitis, treatment of oral candidiasis
8	1	1	Keratotic & non keratotic white lesions	Keratotic white lesions with no definite precancerous potential (stomatitis nicotine, traumatic keratosis, psoriasis and focal epithelial hyperplasia
9	1	1	Vesicular, bullous & ulcerative lesions	Introduction, formation of ulcers, classification of ulcers, ulcers associated with trauma
10	1	1	Vesicular, bullous & ulcerative lesions	Ulcers associated with allergic reaction (drug allergy, contact allergy, secondary vaccinia, asrodynia & antineurotic edema)
11	1	1	Vesicular, Bullous & Ulcerative lesions	Disease of unknown (uncertain) etiology, aphtha's stomatitis
12	1	1	Vesicular, Bullous & Ulcerative Lesions	Erythema multiform & pemphigus (Types)
13	1	1	Vesicular, Bullous & Ulcerative Lesions	Bullous pemphigoid, benign mucus membrane pemphigoid, familial benign chronic pemphigus, eosinophilic ulcer of the oral mucosa, angina bullosa hemorrhagic
14	1	1	Vesicular, Bullous & Ulcerative Lesions	Stevens-Johnson syndrome, behest's syndrome, Oral ulcers secondary to center chemotherapy, ulcers from odontogenic infection, diffuse gangrenous stomatitis.
15	1	1	Orofacial Pain	Definition of pain, classification of orofacial pain & different types of orofacial pain
16	1	1	Orofacial Pain	Different types of orofacial pain & therapeutic modalities of pain control.

Textbooks & reference books recommended (last edition)

Caw son's Essentials of Oral Pathology and Oral Medicine

Format Paperback | 568 pages, Dimensions 232 x 276 x 25.4mm | 1,587.57g, Publication date 01 Jul 2017, Publisher Elsevier Health Sciences, Publication City/Country London, United Kingdom Language English, Edition Revised, Edition Statement 9th Revised edition Illustrations note Approx. 670 illustrations (570 in full color) ISBN10 0702049824, ISBN13 9780702049828, Bestsellers rank 96,057

Contemporary Oral Medicine : A Comprehensive Approach to Clinical Practice

Format Hardback | 2406 pages, Dimensions 178 x 254 x 127mm | 5,215g, Publication date 07 Mar 2019, Publisher Springer International Publishing AG, Publication City/Country Cham, Switzerland Language English, Edition Statement 1st ed. 2019, Illustrations note 1373 Tables, color; 1376 Illustrations, color; 247 Illustrations, black and white; XXX, 2406 p. 3223 illus., 1376 illus. in color. In 3 volumes, not available separately. ISBN10 3319723014, ISBN13 9783319723013

Modern Dental Materia Medica, Pharmacology

Format Paperback | 404 pages, Dimensions 156 x 234 x 21mm | 562g, Publication date 24 Feb 2018, Publisher Palala Press, Language English, Illustrations note Illustrations, black and white ISBN10 1378584406, ISBN13 9781378584408

Basic and Clinical Pharmacology

Format Paperback | 1264 pages, Dimensions 213.36 x 274.32 x 43.18mm | 2,205g,
Publication date 20 Jan 2018, Publisher McGraw-Hill Education, Publication
City/Country OH, United States Language English, Edition Statement 14th edition,
Illustrations note 300 Illustrations, unspecified ISBN10 1259641155,
ISBN13 9781259641152, Bestsellers rank 82,608

Study guide for Basic and Clinical Pharmacology

Format Paperback | 634 pages, Dimensions 205.74 x 274.32 x 40.64mm | 1,564.89g,
Publication date 22 Aug 2014, Publisher CRAM101, Publication City/Country United States,
Language English Illustrations note black & white illustrations, ISBN10 1497022932,

ORAL MEDICINE (Module 2)

Discipline			Professional Subjects and skills		
Department			Operative Dentistry & endodontics		
Course title			Oral medicine		
Course code			DMD 09 33		
Class			V		
Semester		9	Spring		
Number of credits		2	Knowledge	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Oral pigmentation	Different types of pigments & endogenous pigmentation.	
2	1	1	Oral pigmentation	Endogenous pigmentation	
3	1	1	Oral pigmentation	Exogenous pigmentation	
4	1	1	Oral pigmentation	Exogenous pigmentation	
5	1	1	Disease of Tongue	Function of the tongue, specialized examination of the tongue, classification of the tongue diseases.	
6	1	1	Disease of Tongue	Congenital & developmental disorders	
7	1	1	Disease of Tongue	Local tongue disorders	
8	1	1	Disease of Tongue	Depopulation of the tongue	
9	1	1	Disease of Tongue	Neurological disorders & premalignant lesions and conditions	
10	1	1	Disease of Lips	Classification of the lip disorders, developmental disorders & Cheilitis.	
11	1	1	Disease of Lips	Cheilitis & miscellaneous	
12	1	1	Temporomandibular Joint Disorders	Functional movement of TMJ, Diagnostic Studies, Classification of TMJ disorder, Degenerative joint disease	
13	1	1	Temporomandibular Joint Disorders	Inflammatory disorders of the joint	
14	1	1	Temporomandibular Joint Disorders	Metabolic disorders and miscellaneous disorders	
15	1	1	Salivary Glands Disorders	Classification of salivary glands, saliva, examination of salivary glands, diagnostic tests of the salivary glands & disorders of salivary glands.	

16	1	1	Salivary Glands Disorders	Disorders of salivary glands
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Textbooks & reference books recommended (last edition)

Contemporary Oral Medicine : A Comprehensive Approach to Clinical Practice

Format Hardback | 2406 pages, Dimensions 178 x 254 x 127mm | 5,215g, Publication date 07 Mar 2019, Publisher Springer International Publishing AG, Publication City/Country Cham, Switzerland Language English, Edition Statement 1st ed. 2019, Illustrations note 1373 Tables, color; 1376 Illustrations, color; 247 Illustrations, black and white; XXX, 2406 p. 3223 illus., 1376 illus. in color. In 3 volumes, not available separately. ISBN10 3319723014, ISBN13 9783319723013

Modern Dental Materia Medica, Pharmacology

Format Paperback | 404 pages, Dimensions 156 x 234 x 21mm | 562g, Publication date 24 Feb 2018, Publisher Palala Press, Language English, Illustrations note Illustrations, black and white ISBN10 1378584406, ISBN13 9781378584408

Cawson's Essentials of Oral Pathology and Oral Medicine

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Basic and Clinical Pharmacology

Format Paperback | 1264 pages, Dimensions 213.36 x 274.32 x 43.18mm | 2,205g, Publication date 20 Jan 2018, Publisher McGraw-Hill Education, Publication City/Country OH, United States Language English, Edition Statement 14th edition, Illustrations note 300 Illustrations, unspecified ISBN10 1259641155, ISBN13 9781259641152, Bestsellers rank 82,608

Study guide for Basic and Clinical Pharmacology

Format Paperback | 634 pages, Dimensions 205.74 x 274.32 x 40.64mm | 1,564.89g, Publication date 22 Aug 2014, Publisher Cram101, Publication City/Country United States, Language English Illustrations note black & white illustrations, ISBN10 1497022932, ISBN13 9781497022911 Bestsellers rank 2,693,232

ORAL MEDICINE (Module 3)

Discipline				Professional Subjects and skills	
Department				Operative Dentistry & endodontics	
Course title				Oral medicine	
Course code				DMD 10 33	
Class				V	
Semester		10		Fall	
Number of credits		2		Knowledge	1
				Practical	1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Systemic Infections	Introduction, Bacterial infection(syphilis)	
2	1	1	Systemic Infections	Bacterial information(tuberculosis, actinomycosis and noma)	
3	1	1	Systemic Infections	Viral infection (herpes simplex infection, measles)	
4	1	1	Systemic Infections	Viral infection (varicella zoster infection, coxsackie virus infection, cytomegalovirus infection)	
5	1	1	Systemic Infections	Fungal infection (histoplasmosis, blast mycosis)	
6	1	1	Acquired immunodeficiency syndrome (AIDs)	AIDs, oral manifestations	
7	1	1	Endocrine disorders	Diseases of pituitary glands & thyroid glands	
8	1	1	Endocrine disorders	Diseases of parathyroid glands & pancreatic glands pregnancy & menopause)	
9	1	1	Blood disorders	Diseases of the red blood cells (anemic & polycythemia and their oral manifestations)	
10	1	1	Blood disorders	While blood cell disorders & oral manifestation	
11	1	1	Blood disorders	Platelet disorders & oral manifestation	
12	1	1	Blood disorders	Hemorrhagic disorders & oral manifestation	
13	1	1	Vitamins	Introduction, causes of vitamin deficiency & water-soluble vitamins	
14	1	1	Vitamins	Water-soluble in protein & lipid metabolism	
15	1	1	Metabolic disorders	Disturbances in protein & lipid metabolism	
16	1	1	Metabolic disorders	Disturbances in carbohydrate & mineral metabolism	

Textbooks & reference books recommended (last edition)

Basic and Clinical Pharmacology

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Contemporary Oral Medicine : A Comprehensive Approach to Clinical Practice

Format Hardback | 2406 pages, Dimensions 178 x 254 x 127mm | 5,215g, Publication date 07 Mar 2019, Publisher Springer International Publishing AG, Publication City/Country Cham, Switzerland Language English, Edition Statement 1st ed. 2019, Illustrations note 1373 Tables, color; 1376 Illustrations, color; 247 Illustrations, black and white; XXX, 2406 p. 3223 illus., 1376 illus. in color. In 3 volumes, not available separately. ISBN10 3319723014, ISBN13 9783319723013

Modern Dental Materia Medica, Pharmacology

Format Paperback | 404 pages, Dimensions 156 x 234 x 21mm | 562g, Publication date 24 Feb 2018, Publisher Palala Press, Language English, Illustrations note Illustrations, black and white ISBN10 1378584406, ISBN13 9781378584408

RADIOLOGY & MEDICAL IMAGING

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.
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- ☐ 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%

Oral radiology

DMD doctors should have enough knowledge and exposure to various radiological techniques and be able to interpret radiological finding with accuracy and confidence.

Learning objectives

After completing this course, you will be able to:

1. Discuss the importance of making radiographic examinations
2. Discuss the schedule of radiographic survey in children depending upon the age.
3. List various stages in the Dental development of the child
4. Describe panoramic radiography and explain the technique
5. Discuss advantages and disadvantages of panoramic radiology over conventional fully-mouth radiography
6. Describe the operational procedure for panoramic radiography

7. Describe digital Dental radiography and compare in with conventional film-based radiography
8. List four benefits of direct digital radiography systems
9. Describe measures for maintaining radiation safety for the operator and the patient
10. Explain the maximum permissible doses of whole-body radiation for a patient and for a Dental auxiliary
11. Explain guidelines for prescribing Dental radiographs for the child, adolescent and adult
12. Discuss when radiographic surveys should be made
13. Determine whether a per apical radiograph is of the right or left side
14. Describe step-by-step procedure for mounting radiographs
15. List distinctive tooth characteristics and bone structures that make mounting of radiography easier

Course content

RADIOLOGY & MEDICAL IMAGING (MODULE 1)					
Discipline			Professional Subjects and skills		
Department			Radiology and medical imaging		
Course title			Radiology		
Course code			DMD 08 34		
Class			IV		
Semester		8	Fall		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Scope of the subject and history of origin	Introduction, key definition, discovery, of x radiation chronology of events is the evaluation of Dental radiology	
2	1	1	Physics of radiation	(a) Introduction (b) Natures and types of radiation (c) Source of radiation (d) Dental x-ray machine (e) Production of x-ray (x-ray tube)	
3	1	1		(f) Properties of x-rays (g) Compton effect (h) Photoelectric effect (i) Dosimetry and radiation measuring units	

4	1	1	Biological effects of radiation	Introduction, effects of radiation (somatic deterministic, effects, somatic stochastic effects, genetic stochastic effects) Factors influencing radiation injury
5	1	1	Radiation safety and protection measures	Introduction, protection of the patient, protection of the predator protection of other persons
6	1	1	Radiographic techniques: i. Intra-oral ii. Extra-oral iii. Specialized	Intra-oral: (a) Periapical radiographs (bisecting and parallel techniques) (b) Bite wing radiographs (c) Occlusal radiographs
7	1	1		Extra-oral: (a) Lateral projections of skull and jaw boner and paranasal sinuses (b) cephalograms
				(c) prthopantomograph (d) projection of temporomandibular joint and condyle of mandible
				Specialized techniques: (a) solography (b) xeroradiography (c) tomography
8	1	1		Diseases of parathyroid glands & pancreatic glands pregnancy & menopause)
9	1	1	Factors in production of good radiographs:	(a) K.V.P. and mA of X-ray machine (b) Filters (c) collimations (d) Intensifying screens (e) Grids (f) X-ray films (g) Exposure time (h) Techniques (i) Dark room (j) Development and fixer solutions (k) Film processing
10	1	1	Panoramic radiography	Introduction, purpose and uses, disadvantages, fundamental principles of panoramic radiography, technique
11	1	1	Projection geometry	Image sharpness and resolution, image size distortion image shape distortion, paralleling and bisecting-angle techniques, object localization, peripheral eggshell effect
12	1	1	Specialized and advanced radiographs in Dental radiology	Control studies 9sialography, arthrography, angiography) radioisotope imaging (nuclear medicine), ultrasound
13	1	1		Computed tomography (CT), cone beam CT (CBCT), magnetic resonance (MR)

14	1	1	Normal radiographic anatomy and landmarks	Introduction, anatomic landmarks common the maxilla and the mandible, anatomic land marks in the maxilla, anatomic landmarks in the mandible
15	1	1	Guidelines for prescribing Dental radiographs	Role of radiographs in disease detection, and monitoring radiographic examinations intraoral radiographs extra oral radiographs, guidelines for ordering radiographs, previous radiographs
16	1	1	Introduction to radiological interpretation	Clinical examination, acquiring appropriate diagnostic images (quality of the diagnostic image, number and type of available images, viewing conditions), image analysis, systematic radiographic examination (intraoral images, extra oral radiographic) analysis of the intra osseous lesions

Textbooks & reference books recommended (last edition)

David Sutton. Textbook of Radiology and Imaging,

Format Hardback | 1800 pages, Publication date 24 Feb 2014, Publisher Elsevier India
Publication City/Country New Delhi, India, Language English, Edition Revised, Edition
Statement 7th Revised edition, ISBN10 8131220328, ISBN13 9788131220320, Bestsellers
rank 1,187,868

Adams, A.K.Dixon, Diagnostic Radiology,

Format Hardback | 2400 pages, Dimensions 222 x 281 x 101.6mm | 72,998.43g, Publication
date 30 Jul 2020, Publisher Elsevier Health Sciences, Publication City/Country London,
United Kingdom, Language English, Edition Revised, Edition Statement 7th Revised edition,
Illustrations note Approx. 3720 illustrations (220 in full color), ISBN10 0702075248
ISBN13 9780702075247, Bestsellers rank 654,013

Jerry L,Prince ,Medical imaging , Signal and System,

Format Paperback | 727 pages, Dimensions 155 x 235 x 27.94mm | 1,032.05g, Publication
date 01 Jul 2009, 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 2009 ed. Illustrations
note XVIII, 727 p. ISBN10 3642024971, ISBN13 9783642024979

Sabala R .Mandava.Breast Imaging, Biren A.Shah.

Format Paperback | 320 pages, Dimensions 210.82 x 274.32 x 10.32mm | 703g, Publication
date 29 Sep 2017, Publisher Lippincott Williams and Wilkins, Publication
City/Country Philadelphia, United States, Language English, Edition Statement 2nd edition
ISBN10 1496358201, ISBN13 9781496358202, Bestsellers rank 1,967,

ORAL RADIOLOGY (Module 2)

Discipline			Professional Subjects and skills		
Department			Medical imaging & radiological science		
Course title			Oral radiology		
Course code			DMD 09 34		
Class			V		
Semester		9	Spring		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Dental caries	Introduction, clinical examination, radiographic examination classification of carious lesions based on radiographic appearance, radiographic differential diagnosis of Dental caries	
2	1	1	Periodontal diseases	Introduction, use of radiographs in the diagnosis of periodontal disease, limitations of radiographs, radiographic features of periodontal disease (early periodontitis, moderate periodontitis advanced periodontitis), juvenile periodontitis	
3	1	1	Dental anomalies	Developmental abnormalities, acquired abnormalities	
4	1	1	Inflammatory lesions of the jaws	General clinical features, general radiographic features, per apical inflammatory lesions, pericoronitis, osteomyelitis, diagnostic imaging of soft, tissue infections, osteoradionecrosis	
5	1	1	Cysts and cystic lesions of the jaws	Clinical features, radiographic features, odontogenic cysts no odontogenic cysts, cyst like lesions	
6	1	1	Benign tumors of the jaws	Introduction, clinical features, radiographic, features hyperplasia’s benign tumors, odontogenic tumors no odontogenic tumors	
7	1	1	Malignant diseases of the jaws	Introduction, clinical features, radiographic features, carcinomas metastatic tumors, sarcomas, malignancies of the hematopoietic system, Dental radiology for the cancer survivor	
8	1	1	Diseases of bone manifested in the jaws	Bone dysplasia’s (fibrous dysplasia, cement-osseous dysphasia’s periapical cement dysplasia, florid osseous dysplasia), other lesion of bone (cement-ossifying fibroma, control giant cell granuloma,	

				aneurysmal bone, cyst, cherubim, pager's disease Langerhans's cell histiocytosis)
9	1	1	Systemic diseases manifested in the jaws	Introduction, radiographic features, endocrine disorders (hyperparathyroidism & hyperparathyroidism, hypopituitarism and hypopituitarism, hyperthyroidism and hypothyroidism, diabetes mellitus, Cushing's syndrome), metabolic bone diseases (osteoporosis, rickets and osteomalacia, hypophosphatemia renal osteodystrophy, hypophosphatemia, osteoporosis) other systemic diseases (progressive systemic sclerosis, sickle cell anemia, thalassemia)
10	1	1	Diagnostic imaging of the temporomandibular joint	Introduction, clinical features, radiographic anatomy of the TMJ, diagnostic imaging of the TMJ, radiographic abnormalities of the TMJ (developmental abnormalities, soft tissue abnormalities, remodeling and arthritic conditions psoriatic arthritis and ankylosing spondylitis, articular loose bodies, trauma, tumors)
11	1	1	Paranasal sinuses	Introduction, normal development and variations, diseases associated with the Para nasal sinuses (intrinsic disease of the Para nasal sinuses, inflammatory disease, neoplasms, extrinsic diseases involving the Para nasal sinuses, inflammatory benign odontogenic cysts and tumors, fibrous dysplasia, Dental structures displaced into the sinuses)
12	1	1	Soft tissue calcification and ossification	Introduction, clinical features, radiographic features, dystrophic calcification, idiopathic calcification metastatic calcification
13	1	1	Trauma to teeth and facial structures	Introduction, applied radiology, traumatic injuries of the teeth fractures of the teeth, traumatic injuries to the facial bones (mandibular fractures, midfacial fractures including maxillary fractures, le fort fractures (le i. ii. And iii.) monitoring the healing of fractures
14	1	1	Developmental disturbances of the face and jaws	Introduction, common developmental abnormalities (cleft lip and palate, Crouzon syndrome, hemi facial macrosomia, teacher Collins syndrome, Cleidocraniai dysplasia, hemi facial hyperplasia segmental odontomaxillary dysplasia lingual salivary gland depression, focal osteoporotic bone marrow
15	1	1	Salivary gland radiology	Definition of salivary gland disease, clinical signs and symptoms differential diagnosis of salivary enlargements, applied diagnostic imaging of the salivary glands, image interpretation of salivary gland disorders (obstructive and inflammatory disorders non inflammatory disorders, benign tumors,

				malignant tumors other malignant and metastatic tumors)
16	1	1	Dental implants	Introduction, diagnostic imaging for Dental implants, imaging techniques, preoperative planning, intraoperative and postoperative assessment

Textbooks and reference books recommended (last edition)

Imaging in Pediatric Dental Practice : A Guide to Equipment, Techniques and Clinical Considerations

Format Hardback | 134 pages, Dimensions 155 x 235 x 13.46mm | 434g, Publication date 29 May 2019, Publisher Springer Nature Switzerland AG, Publication City/Country Cham, Switzerland, Language English, Edition Statement 1st ed. 2019, Illustrations note 50 Tables, color; 59 Illustrations, color; 63 Illustrations, black and white; XIII, 134 p. 122 illus., 59 illus. in color. ISBN10 3030123537, ISBN13 9783030123536, Bestsellers rank 3,308,826

White and Pharoah's Oral Radiology Principles and Interpretation

Format Hardback | 672 pages Dimensions 222 x 281 x 33.02mm | 1,995.81g, Publication date 05 Dec 2018, Publisher Elsevier - Health Sciences Division, Imprint Mosby, Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 8th Revised edition Illustrations note Approx. 3240 illustrations (340 in full color), ISBN10 0323543839 ISBN13 9780323543835, Bestsellers rank 712,803

Dental Radiography Principles and Techniques

Format Paperback | 480 pages, Dimensions 232 x 276 x 25.4mm | 1,292.74g, Publication date 11 May 2032, Publisher Elsevier - Health Sciences Division, Imprint Saunders, Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 5th Revised edition, Illustrations note Approx. 860 illustrations (455 in full color) ISBN10 0323297420, ISBN13 9780323297424, Bestsellers rank 581,806

PERIODONTICS

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Course description

Periodontology is the foundation of good Dental health, the prevention; treatment and maintenance of periodontal diseases facilitate and allows for other modalities of Dental care. This is as true in a general Dental office as it is for a periodontist, the overall goal of undergraduate education within the department of periodontology are interconnected and

integral to the success of entry level Dental professionals, entry level general Dentists must demonstrate comprehensive knowledge concerning:

The pathogenesis of periodontal diseases, the biologic rationale for periodontal therapy and the necessary clinical skills to evaluate, diagnose, and appropriately Treat the most prevalent periodontal diseases ads a cornerstone of comprehensive Dental care,
Of primary importance in this effort is the proper identification and diagnosis of periodontal pathology the development of a treatment plan to address periodontal pathology, the prevention of periodontal disease and the attainment and maintenance of periodontal health

Objectives

The Student at the end of the course should be able to:

- ☐ diagnose accurately patient with periodontal, pan and deliver non-surgical and treatment as well as accurately evaluate the results of the treatment rendered
- ☐ Students differentiate the indications and contraindications for surgical periodontal procedures as well as the principles whit govern each procedures
- ☐ The Students evaluate the different consideration of periodontal patients with systemic diseases and conditions.
- ☐ The Students should be able to manage periodontal case with other Dental involvement as restorative, endodontic and orthodontic treatment

PERIODONTICS (Module 1)

Discipline				Professional Subjects and skills			
Department				Periodontology			
Course title				Periodontology			
Course code				DMD 08 35			
Class				IV			
Semester			8	Fall			
Number of credits			2	Knowledge		1	
				Practical		1	
Weeks	Hours		Topics	Descriptions			
	Knowledge	Practical					
1	1	1	History and introduction of periodontology	Early civilization, the classical world, the middle ages, the renaissance, eighteenth century, nineteenth century (NUG), twentieth century (focal infection, Dental implants).			
2	1	1	The normal periodontium (gingiva)	The gingiva, clinical features, marginal gingiva, gingival sulcus, attached gingiva, interdental gingiva, microscopic features, correlation of clinical and microscopic features (color, size, contour, shape consistency, surface texture, position)			
3	1	1	The normal periodontium (tooth supporting tissues)	Periodontal ligament (periodontal fibers, function of periodontal ligament cementum(permeability of cementum, cement enamel junction, cementoDental junction, exposure of cementum to oral environment)			
4	1	1	Defense mechanism of gingival	Sulcular fluid (methods of collection, permeability of junctional and sulcular epithelium, amount, composition, clinical significance) saliva (antimicrobial, factor, enzymes, salivary buffers and coagulation factor, periodontal pathology)			
5	1	1	Aging and the periodontium	Effect of aging on the periodontium, gingival epithelium, gingival connective tissue, periodontal ligament, cementum, alveolar bone, effect of aging on the progression periodontal disease			
6	1	1	Classification of periodontal disease	Gingival diseases of gingitis, necrotizing periodontitis, abscess of the periodontium, periodontitis associated periodontal disease			
7	1	1	Gingival disease	Gingivitis, stage of gingivitis, (I, II, III, IV), clinical features of gingivitis, course and duration, gingival bleeding on probing, gingival bleeding associated with systemic and local factors, color change, change			

				in consistency of gingiva, change in surface texture of gingiva, change in position of gingiva, changes in gingival contour
8	1	1	Acute gingival infections	Acute necrotizing uncreative gingivitis, clinical features: relation of bacteria to ANUG lesion, diagnosis, etiology, epidemiology, primary herpetic gingivostomatitis, clinical features: diagnosis, differential diagnosis pericoronitis, clinical features, complications
9	1	1	Desquamative gingivitis, gingival disease in childhood	Chronic desquamative gingivitis, diagnosis of desquamative gingivitis a systemic approach, disease clinically presenting as desquamative gingivitis, plaque induced gingival disease, non-plaque induced gingival lesion, periodontal disease of childhood, aggressive periodontitis, chronic periodontitis
10	1	1	Gingival enlargement	Inflammatory gingival enlargement, chronic inflammatory gingival enlargement, acute inflammatory gingival enlargement, drug induced gingival enlargement, general informal, anticonvulsant, immunosuppressant, calcium channel blocker, idiopathic gingival enlargement.
11	1	1	Gingival enlargement	Enlargement associated with systemic disease, conditioned, enlargement, systemic disease that cause gingival enlargement, neoplastic enlargement, false enlargement
12	1	1	Periodontal disease	Periodontal pocket, classification, clinical feature, pathogenesis, histopathology, periodontal, disease activity, pulp change associated with periodontal pocket, relationship of attachment loss and boneless to periodontal pocket, periodontal abscess, lateral periodontal cyst
13	1	1	Bone loss and patterns of bone destruction	Bone destruction caused by extension of gingival inflammation: barious of action, rate of bone loss, mechanism of bone destruction bine destruction caused by trauma from occlusion, bone distraction caused by systemic disorder, bone destruction patterns in periodontal disease
14	1	1	Chronic periodontitis	General characteristic, disease distribution, disease severity, symptoms, disease progression, prevalence, Risk factors for disease
15	1	1	Necrotizing uncreative periodontitis	Clinical features, microscopic findings, HIV-AIDS patients, etiology of necrotizing ulcerative periodontitis, microbial flora, immune compromised status, psychologic stress, malnutrition

16	1	1	Aggressive periodontitis	Aggressive periodontitis, localized aggressive periodontitis historical; background, clinical characteristic, radiographic finding, generalized aggressive periodontitis, clinical characteristics, radiographic findings, risk factors for aggressive periodontitis.
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Textbooks & reference books recommended (last edition)

Practical Periodontics

Format Paperback | 376 pages, Dimensions 232 x 276 x 19.05mm | 1,040g, Publication date 19 Nov 2019, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE, Publication City/Country London, United Kingdom, Language English, Edition Statement UK ed. Illustrations note Approx. 450 illustrations (350 in full color); Illustrations, unspecified, ISBN10 0702043575 ISBN13 9780702043574, Bestsellers rank 819,725

Comprehensive Periodontics for the Dental Hygienist

Format Paperback | 504 pages, Dimensions 220 x 280 x 17mm | 900g, Publication date 10 Jan 2014, Publisher Pearson Education (US) Imprint Pearson, Publication City/Country United States, Language English, Edition Statement 4th edition, Illustrations note colour illustrations, colour tables, figures, ISBN10 0133077721, ISBN13 9780133077728, Bestsellers rank 1,661,337

Foundations of Periodontics for the Dental Hygienist

Format Paperback | 752 pages, Dimensions 213 x 276 x 27.94mm | 1,792g, Publication date 12 Sep 2015, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement 4th edition, Illustrations note 705 ISBN10 1451194153, ISBN13 9781451194159, Bestsellers rank 77,799

Fundamentals of Periodontal Instrumentation and Advanced Root Instrumentation

Format Spiral bound | 752 pages, Dimensions 234.95 x 285.75 x 31.75mm | 1,769.01g Publication date 13 Jun 2012, Publisher LIPPINCOTT WILLIAMS & WILKINS. Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 7th, ISBN10 3209133315, ISBN13 9783209133313, Bestsellers rank 248,35

Foundations of Periodontics for the Dental Hygienist

Format Paperback | 848 pages Dimensions 213 x 276 x 38.1mm | 2,177g, Publication date 13 Dec 2018, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement 5th edition

PERIODONTICS (Module 2)

Discipline				Professional Subjects and skills			
Department				Periodontology			
Course title				Periodontics			
Course code				DMD 09 35			
Class				V			
Semester			9	Spring			
Number of credits			2	Knowledge		1	
				Practical		1	
Weeks	Hours		Topics	Descriptions			
	Knowledge	Practical					
1	1	1	Etiology of periodontal disease	Oral flora, Dental plaque: composition, formation, description and structure of plaque, etiological role of Dental plaque in periodontal disease			
2	1	1	Dental calculus and other predisposing factor	Introduction, definition, classification, composition, structure of Dental casuals, attachment of calculus of tooth surface, formation, of calculus, theories regarding mineralization of calculus, other predisposing factors: lactogenic factors, malocclusion, periodontal complication associated with orthodontic therapy, habits and self-inflected injuries, smokeless tobacco			
3	1	1	Trauma from occlusion	Acute and chronic trauma, primary and secondary trauma, stages of tissue response to increase occlusal forces, effect of insufficient occlusal force, reversibility of traumatic lesion			
4	1	1	Influence of systemic condition on the periodontium	Description, endocrine disorders and hormonal changes, diabetes mellitus, female sex hormones, hyperparathyroidism, hemalogi disorder, leukemia, anemia, thrombocytopenia			
o5	1	1	Influence of systemic condition of the periodontium	Description, endocrine, fat soluble vitamin deficiency, water soluble vitamin deficiency, protein deficiency, medications; biphosphomonates, corticosteroids, other systemic sonfitions osteoporosis, congenital heart disease, hypophosphatemia, metal intoxication			
6	1	1	Oral maodor	Classification, etiology, physiology of malodor detection, diagnosis of malodor, treatment of malodor			
7	1	1	Pathology and management of	Classification and staging, oral and periodontal manifestation of HIV, oral candidiasis, oral hairy			

			periodontal patients with HIV infection	leukoplakia, Kaposi's sarcoma, non-Hodgkin lymphoma, bacillary epitheloidangiomas, oral hyperpigmentation, atypical ulcer, salivary gland disorder and xerostomia, Dental treatment complication
8	1	1	Pathology and management of periodontal patients with HIV infection	Gingival and periodontal disease: linear erythema, NUG, NUP chronic periodontitis, periodontal treatment protocol, health status, infection control measures, goals of therapy, maintenance therapy, psychological factors
9	1	1	Diagnosis of periodontal disease	First meeting, overall appraisals of the patient, medical and Dental history, intra oral radiographic survey, casts and photographs review
10	1	1	Diagnosis of periodontal disease	Second meeting: oral examination, examination of the teeth and implants, level of attachment, determining the level of attachment, bleeding of probing
11	1	1	Radiographic aids in the diagnosis of periodontal disease	Normal inter Dental bone, destruction in periodontal disease, radiographic appearance of periodontal disease, additional radiographic criteria, skeletal disturbances manifested in jaws, digital intra oral radiography, advance imaging
12	1	1	Plaque control for periodontal patients	The tooth brush, power tooth brushes, dentifrices, the brushing methods, interdental cleaning aids, gingival irrigation
13	1	1	Plaque control periodontal patients	Oral rinses, disclosing agents
14	1	1	Anti-infective therapy chemotherapeutic agents	Definition, systemic administration of antibiotics, serial and combination of antibiotic therapy, local delivery agents, analgesic in periodontal therapy, nonsteroidanti inflammatory agents
15	1	1	Anti-infective therapy chemotherapeutic agents	Antimicrobial agents n periodontal therapy, chronic an aggressive periodontitis in the adults, refractory periodontitis, practical guidelines for systemic antibiotics in periodontal diseases
16	1	1	Treatment of periodontal emergencies	Acute gingival disease, acute necrotizing uncreative gingivitis acute pericoronitis acute herpetic gingivostomatitis, treatment of periodontal abscess, treatment of periodontitis, chronic periodontitis, aggressive periodontitis

Textbooks & reference books recommended (last edition)

Foundations of Periodontics for the Dental Hygienist

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Practical Periodontics

Format Paperback | 376 pages, Dimensions 232 x 276 x 19.05mm | 1,040g, Publication date 19 Nov 2019, Publisher Elsevier Health Sciences, Imprint CHURCHILL LIVINGSTONE, Publication City/Country London, United Kingdom, Language English, Edition Statement UK ed. Illustrations note Approx. 450 illustrations (350 in full color); Illustrations, unspecified, ISBN10 0702043575 ISBN13 9780702043574, Bestsellers rank 819,725

Comprehensive Periodontics for the Dental Hygienist

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Fundamentals of Periodontal Instrumentation and Advanced Root Instrumentation

Format Spiral bound | 752 pages, Dimensions 234.95 x 285.75 x 31.75mm | 1,769.01g Publication date 13 Jun 2012, Publisher LIPPINCOTT WILLIAMS & WILKINS. Publication City/Country Philadelphia, United States, Language English, Edition Revised, Edition Statement 7th, ISBN10 3209133315, ISBN13 9783209133313, Bestsellers rank 248,35

Foundations of Periodontics for the Dental Hygienist

Format Paperback | 848 pages Dimensions 213 x 276 x 38.1mm | 2,177g, Publication date 13 Dec 2018, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement 5th edition, ISBN10 1496384024 ISBN13 9781496384027, Bestsellers rank 753,294

PERIODONTICS M 3)

Discipline				Professional Subjects and skills			
Department				Periodontology			
Course title				Periodontics			
Course code				DMD 10 35			
Class				V			
Semester			10	Fall			
Number of credits			2	Knowledge		1	
				Practical		1	
Weeks	Hours		Topics	Descriptions			
	Knowledge	Practical					
1	1	1	Phase II General principles o periodontal therapy (surgical phase)	Objectives of the surgical phase, indication of periodontal surgery, pocket elimination verses pocket maintenance methods of pocket therapy			
2	1	1	Splints	Introduction, definition, rationale of splinting, indication contraindication, basic characteristics of an ideal splint disadvantage of splinting, classification			
3	1	1	Gingival surgical technique	Introduction, gingival curettage, indication, procedure, healing after scaling and curettage, clinical appearance after scaling and curettage, gingivectomy, indication and contraindication, surgical gingivectomy, gingivoplasmy, gingivectomy by electro surgery, laser gingivectomy, gingivectomy by chemosurgery, gingivectomy for gingival enlargement			
4	1	1	The periodontal flap	Classification, flap, design, incisions, horizontal, vertical elevation fo the flap, suturing techniques, healing after flap surgery, treatment of gingival enlargement summary			
5	1	1	Periodontal flap technique for pocket therapy	Technique for accesses in pocket depth, reduction elimination incision, modified wide man flap undispanced flap, apically displaced flap, flaps for reconstructive surgery, distal molar surgery.			
6	1	1	Osseous surgery (respective osseous surgery)	Respective osseous surgery, selection of treatment technique rationale, normal alveolar bone, factors in selection of respective osseous surgery examination and treatment planning methods of respective osseous surgery, ooseus resection technique			

7	1	1	Reconstructive osseous surgery	Evaluation of new attachment and periodontal reconstruction reconstructive surgical technique, clinical methods, radiographic method, surgical reentry, histologic methods, non-bone graft associated procedure, graft material and procedure biologic methods, enamel matrix proteins, combined technique
8	1	1	Treatment of furcation involvement	Etiologic factors, diagnostic and classification of furcation defects, local atomic factors, anatomy of the bony lesions indices of furcation involvement, treatment, nonsurgical therapy prognosis
9	1	1	Mucogingival surgery and periodontal plastic surgery	Objectives, etiology of marginal tissue recession, factors that affect surgical outcome, technique to increase attached gingival
10	1	1	Mucogingival surgery and periodontal plastic surgery	Technique to deepen the vestibule, techniques to remove the frenemy, technique to improve esthetics
11	1	1	Microsurgery and laser therapy	The surgical microscope, advantage of microsurgery microsurgical suture, esthetic periodontal microsurgery, laser therapy, wave length and energy absorption, laser application for periodontal procedures, periodontal esthetic and functional crown lednthening, laser in management of periodontal disease
12	1	1	Diagnosis and management of endodontic periodontics lesion	Biologic effect of pulpal infection and periodontal tissue, biologic effect of periodontal infection ofn Dental pulp, differentiated diagnosis of pulpal and periodontal infection, treatment consideration of endodontic-periodontics lesion
13	1	1	Preparation of the periodontium for restorative Dentistry	Rationale for therapy, sequence for treatment control for active disease, preprosthetic surgery, conclusion
14	1	1	Periodontal-restorative interrelation	Biologic consideration, esthetic tissue management occlusal consideration in restive therapy, special restorative consideration
15	1	1	Implant ology	Introduction, rationale for implant therapy, advantage of implants, classification, biological aspects of Dental implant
16	1	1	Implant ology	Clinical aspect of Dental implants, surgical aspects of Dental implant par implant advanced implant therapy

Textbooks and Reference Books Recommended (Last Edition)

Comprehensive Periodontics for the Dental Hygienist

Format Paperback | 504 pages, Dimensions 220 x 280 x 17mm | 900g, Publication date 10 Jan 2014, Publisher Pearson Education (US) Imprint Pearson, Publication City/Country United States, Language English, Edition Statement 4th edition, Illustrations note colour illustrations, colour tables, figures, ISBN10 0133077721,

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Practical Periodontics

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Foundations of Periodontics for the Dental Hygienist

Format Paperback | 848 pages Dimensions 213 x 276 x 38.1mm | 2,177g, Publication date 13 Dec 2018, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement 5th edition, ISBN10 1496384024 ISBN13 9781496384027, Bestsellers rank 753,294

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ORTHODONTICS

Attendance policy

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- ☐ 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%

a) Goal

Undergraduate program in orthodontics in designed to introduce the undergraduate Student's to the principles of orthodontic treatment and give them a broad perspective about the diagnosis, analysis and treatment of common orthodontics problems by preventive, interceptive and corrective orthodontic procedures

b) Scheme of study

The undergraduate study of orthodontics spans over third, fourth year and fifth year in third year the emphasis is given for basic and preclinical wire bedding exercise and appliance fabrication.

In fourth year the Student has year the Student has to undergo clinical postings where patient care and appliance management is emphasized. in fifth year of study the candidate will be allotted with long cases for detailed discussion treatment plan formulation appliance construction, insertion and management

c) Skills

- i. To diagnose a case of malocclusion and formulate a treatment plan
- ii. To make a good alginate impression
- iii. To fabricate a good study model
- iv. To perform various modal analysis and cephalometric analysis
- v. To construct routine removable and my functional appliances using cold cure acrylic
- vi. Insertion and management of appliance

Course content

ORTHODONTICS (Module 1)					
Discipline			Professional Subjectsand skills		
Department			Orthodontics and Dental orthopedics		
Course title			Orthodontics		
Course code			DMD 08 36		
Class			IV		
Semester		8	Fall		
Number of credits		2	Knowledge		1
			Practical		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Introduction to orthodontics	Definition, scope, objective and importance of orthodontics	
2	1	1	Terminology in orthodontics	Introduction and definition of specific terms in orthodontics	
3	1	1	Concepts of growth and development	Definition, growth spurts and differential growth, factors influencing growth and development, cephalocaudal gradient of growth	

4	1	1	Concepts of growth and development	Growth theories (genetics, sicher's Scott's, mosses, petrovics) genetic and epigenetic factors in growth
5	1	1	Morphologic development of craniofacial structures	Methods of bone growth, prenatal growth of cranium, facial and oral structures
6	1	1	Morphologic development of craniofacial structures	Post natal growth and development of craniofacial complex comprising of cranial base, maxilla, mandible
7	1	1	Morphologic development of craniofacial structures	Growth of Dental arches and occlusion (primary, mixed and permanent Dentulous)
8	1	1	Malocclusion- in general	Concepts of normal occlusion, definition of malocclusion, description of different types of Dental skeletal and functional malocclusion
9	1	1	Classification of malocclusion	Principle, description, advantages, disadvantages of classification of malocclusion by angle's, Simon's lecher's and Ackerman and profit's
10	1	1	Etiology of malocclusion	Definition, causes, importance, classification local etiologic factors
11	1	1	Etiology of malocclusion	General etiologic factors: predisposing metabolic climate and disease, dietary problems and abnormal pressure habits and functional aberrations
12	1	1	Etiology of malocclusion	Etiology of different types of malocclusion: midline diatom, spacing crowding, cross bite (anterior and posterior) class III malocclusion, class II malocclusion, deep bite, open bite
13	1	1	Diagnosis and diagnostic aids	Definition: importance and classification of diagnostic aids, importance of case history
14	1	1	Periodontal-restorative interrelation	Intra oral and extra oral examination of the patients and photograph in orthodontics
15	1	1	Diagnosis and diagnostic aids	Study model, importance of intraoral x-rays, panoramic radiographs (principles, advantages, disadvantages and uses) cephalometric (definition, description and use of cephalostat)
16	1	1	Diagnosis and diagnostic aids	Description and uses of anatomical landmarks, lines and angles in cephalometric

Textbooks & reference books recommended (last edition)

Temporary Anchorage Devices in Clinical Orthodontics

Format Hardback | 808 pages, Dimensions 226 x 277 x 36mm | 2,232g, Publication date 21 Apr 2020, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell, Publication City/Country Hoboken, United States, Language English, Edition Statement 1. Auflage ISBN10 1119513472, ISBN13 9781119513476, Bestsellers rank 586,004

Essential Orthodontics

Format Paperback | 176 pages, Dimensions 177 x 254 x 9mm | 390g, Publication date 24 Jul 2017, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell, Publication

An Introduction to Orthodontics

Format Paperback | 368 pages, Dimensions 222 x 277 x 17mm | 1,060g, Publication date 27 Apr 2019, Publisher Oxford University Press, Publication City/Country Oxford, United

Kingdom Language English. Edition Revised, Edition Statement 5th Revised edition. ISBN10 0198808666 ISBN13 9780198808664, Bestsellers rank 275,722

Orthodontics Current Principles and Techniques

Format Hardback | 928 pages, Dimensions 222 x 281 x 45.72mm | 3,084.43g, Publication date 01 Sep 2032, Publisher Elsevier - Health Sciences Division, Imprint Mosby, Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 6th Revised edition, Illustrations note Approx. 2700 illustrations (2700 in full color) ISBN10 0323378323, ISBN13 9780323378321, Bestsellers rank 697,523

Contemporary Orthodontics

Format Hardback | 744 pages, Dimensions 222 x 281 x 35.56mm | 2,449.4g, Publication date 06 Oct 2018, Publisher Elsevier - Health Sciences Division, Imprint Mosby, Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 6th Revised edition, Illustrations note Approx. 1975 illustrations (1745 in full color) ISBN10 0323543871, ISBN13 9780323543873, Bestsellers rank 104,100

City/Country Hoboken, United States, Language English, ISBN10 1119325679 ISBN13 9781119325675, Bestsellers rank 612,005

ORTHODONTICS (Module 2)					
Discipline			Professional Subjectsand skills		
Department			Orthodontics and Dental orthopedics		
Course title			Orthodontics		
Course code			DMD 09 36		
Class			V		
Semester		9	Spring		
Number of credits		2	Knowledge		1
			Clerkship		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Clerkship			
1	1	1	Preventive orthodontics	Introduction, definition, preventive measures, undertaken and their limitation	
2	1	1	Interceptive orthodontics	Definition, different procedures undertaken in interceptive orthodontics	
3	1	1	Interceptive orthodontics	Space supervision and serial extractions: definition, indication, contra-indication, techniques, advantages and disadvantages	
4	1	1	Treatment planning	Genera principles in orthodontic treatment planning of different types of malocclusion	
5	1	1	Anchorage in orthodontics	Introduction, definition, source of anchorage, classification and types of anchorage	
6	1	1	Anchorage in orthodontics	Stability and importance of anchorage, intra-oral and extra-oral anchorage and classification of anchorage requirements	
7	1	1	Biomechanical principles	Force, center of resistance, different types of tooth movement and type of forces	
8	1	1	Biology of tooth movement	Tissue response to orthodontic force application, blood flow theory, piezoelectric theory, hydrodynamic theory	
9	1	1	Model analysis	Korkhaus analysis, Pont’s analysis lender heath analysis, carey’s analysis and Ashley howe’s analysis	
10	1	1	Methods of gaining space	Proximal stripping (devices used in proximal stripping) extractions of teeth and their indications	
11	1	1	Methods of gaining scape	Expansions, distalizaion, proclamation of interiors and de-rotation of posteriors	
12	1	1	Orthodontics appliances	Introduction, classification advantages, disadvantages and ideal requirements of orthodontics appliances	
13	1	1	Removable appliances	Introduction, components of removable appliances, advantages, disadvantages, and different components	

14	1	1	Removable appliances	Different types of clasps, labial bows and spring and their uses
15	1	1	Removable appliances	Anterior and posterior bite planes and their uses in different types of treatment of occlusion
16	1	1	Fixed orthodontic appliances	Definition, indication and contraindications, component parts and their uses

Textbooks & reference books recommended (last edition)

Contemporary Orthodontics

Format Hardback | 744 pages, Dimensions 222 x 281 x 35.56mm | 2,449.4g, Publication date 06 Oct 2018, Publisher Elsevier - Health Sciences Division, Imprint Mosby, Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 6th Revised edition, Illustrations note Approx. 1975 illustrations (1745 in full color) ISBN10 0323543871, ISBN13 9780323543873, Bestsellers rank 104,100

Temporary Anchorage Devices in Clinical Orthodontics

Format Hardback | 808 pages, Dimensions 226 x 277 x 36mm | 2,232g, Publication date 21 Apr 2020, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell, Publication City/Country Hoboken, United States, Language English, Edition Statement 1. Auflage ISBN10 1119513472, ISBN13 9781119513476, Bestsellers rank 586,004

An Introduction to Orthodontics

Format Paperback | 368 pages, Dimensions 222 x 277 x 17mm | 1,060g, Publication date 27 Apr 2019, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English. Edition Revised, Edition Statement 5th Revised edition. ISBN10 0198808666 ISBN13 9780198808664, Bestsellers rank 275,722

Orthodontics Current Principles and Techniques

Format Hardback | 928 pages, Dimensions 222 x 281 x 45.72mm | 3,084.43g, Publication date 01 Sep 2032, Publisher Elsevier - Health Sciences Division, Imprint Mosby, Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 6th Revised edition, Illustrations note Approx. 2700 illustrations (2700 in full color) ISBN10 0323378323, ISBN13 9780323378321, Bestsellers rank 697,523

Essential Orthodontics

Format Paperback | 176 pages, Dimensions 177 x 254 x 9mm | 390g, Publication date 24 Jul 2017, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell, Publication City/Country Hoboken, United States, Language English, ISBN10 1119325679 ISBN13 9781119325675, Bestsellers rank 612,005

ORTHODONTICS (Module 3)

Discipline				Professional Subjects and skills			
Department				Orthodontics and Dental orthopedics			
Course title				Orthodontics			
Course code				DMD 10 36			
Class				V			
Semester			9	Fall			
Number of credits			2	Knowledge		1	
				Clerkship		1	
Weeks	Hours		Topics	Descriptions			
	Knowledge	Clerkship					
1	1	1	Orthopedic appliances	Introduction to headgear, chin cap and reverse pull headgear and their uses			
2	1	1	Retention and relapse	Definition of retention and relapse, needs for retention, causes of relapse			
3	1	1	Retention and relapse	Types of retention devices, duration of retention, methods of retention			
4	1	1	Principle, diagnosis and treatment methods	Midline diastema)definition, etiology, intra –oral and extra – oral features, treatment and retention techniques0			
5	1	1	Principle, diagnosis and treatment methods	Cross bites (definition, classifications, introduction of different types of cross bites, etiology of anterior and posterior cross bites)			
6	1	1	Management of cross bite	Intra – oral and extra – oral features of anterior and posterior cross oral features, management and treatment			
7	1	1	Principle, diagnosis and treatment methods	Open bite: definition, classification, etiology, intra and extra oral features, management and treatment			
8	1	1	Principle, diagnosis and treatment methods	deep bite: definition, classification, etiology, intra and extra oral features, management and treatment			
9	1	1	Principle, diagnosis and treatment methods	Spacing : definition, classification, etiology, intra and extra oral features, management and treatment			
10	1	1	Principle, diagnosis and treatment methods	Crowding : definition, classification, etiology, intra and extra oral features, management and treatment			
11	1	1	Principle, diagnosis and treatment methods	Class I and bi – maxillary protrusion : definition, classification, etiology, intra and extra oral features, management and treatment			
12	1	1	Principle, diagnosis and treatment methods	Class II division I : definition, classification, etiology, intra and extra oral features, management and treatment			

13	1	1	Principle, diagnosis and treatment methods	Class II division II : definition, classification, etiology, intra and extra oral features, management and treatment
14	1	1	Principle, diagnosis and treatment methods	Class III malocclusion – true and pseudo class III: definition, classification, etiology, intra and extra oral features, management and treatment
15	1	1	Detrimental effects of orthodontic treatment	Complications of orthodontic treatment: tissue damage during treatment and increased predisposition to Dental disease and dysfunction
16	1	1	Orthodontic management	Cleft lip and palate: definition, classification, etiology, intra and extra oral features, management and orthodontic treatment

Textbooks & reference books recommended (last edition)

Orthodontics Current Principles and Techniques

Format Hardback | 928 pages, Dimensions 222 x 281 x 45.72mm | 3,084.43g, Publication date 01 Sep 2032, Publisher Elsevier - Health Sciences Division, Imprint Mosby, Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 6th Revised edition, Illustrations note Approx. 2700 illustrations (2700 in full color) ISBN10 0323378323, ISBN13 9780323378321, Bestsellers rank 697,523

Contemporary Orthodontics

Format Hardback | 744 pages, Dimensions 222 x 281 x 35.56mm | 2,449.4g, Publication date 06 Oct 2018, Publisher Elsevier - Health Sciences Division, Imprint Mosby, Publication City/Country St Louis, United States, Language English, Edition Revised, Edition Statement 6th Revised edition, Illustrations note Approx. 1975 illustrations (1745 in full color) ISBN10 0323543871, ISBN13 9780323543873, Bestsellers rank 104,100

Temporary Anchorage Devices in Clinical Orthodontics

Format Hardback | 808 pages, Dimensions 226 x 277 x 36mm | 2,232g, Publication date 21 Apr 2020, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell, Publication City/Country Hoboken, United States, Language English, Edition Statement 1. Auflage ISBN10 1119513472, ISBN13 9781119513476, Bestsellers rank 586,004

An Introduction to Orthodontics

Format Paperback | 368 pages, Dimensions 222 x 277 x 17mm | 1,060g, Publication date 27 Apr 2019, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English. Edition Revised, Edition Statement 5th Revised edition. ISBN10 0198808666 ISBN13 9780198808664, Bestsellers rank 275,722

Essential Orthodontics

Format Paperback | 176 pages, Dimensions 177 x 254 x 9mm | 390g, Publication date 24 Jul 2017, Publisher John Wiley and Sons Ltd, Imprint Wiley-Blackwell, Publication City/Country Hoboken, United States, Language English, ISBN10 1119325679 ISBN13 9781119325675, Bestsellers rank 612,005

CLINICAL INFICTION DISEASIS & TB

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

a. Learning objectives

At the end of infectious diseases, course Student must be able to:

- ☐ Understand of host defense mechanisms and immune responses in relation to infectious diseases;
- ☐ Understanding of the etiology, pathogenesis, diagnosis and therapy of patients with infectious diseases;
- ☐ Interpret and draw appropriate conclusions from laboratory results;
- ☐ Analyze and distinguish therapy is likely to be the most appropriate response;
- ☐ Specify the role of ecology and evaluation 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 team and study groups;
- ☐ Development an information base making personal health decisions in regard to infectious diseases

Learning Objectives

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

- ☐ Discuss about tuberculosis elimination in Afghanistan
- ☐ Identify TB disease in the Afghanistan
- ☐ List the racial and ethnic groups that are disproportionately affected by tb disease in the 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 vaccination;
 - Identify ways in which tuberculosis (TB) is spread
 - Describe the pathogenesis of TB
 - Identify conditions 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 tests (TBTS)
- ☐ Discuss general recommendation for the use of interferon-gamma release assays (IGRAS)
- ☐ Describe the five components of a TB diagnostic microbiology;
- ☐ Identify the major components of TB medical evaluation
- ☐ List at least five symptoms of pulmonary TB disease;
- ☐ 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) treatment
- ☐ Describe LTBI treatment regimens;
- ☐ Describe LTBI treatment regimens for specific situations;
- ☐ Identify components of patient monitoring 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

b.Clinical skills

- ☐ Use critical thinking (problem solving)
- ☐ Use learning resources including mentor 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 health care team

Course content

INFECTIOUS DISEASES & TB					
Discipline			Professional Subjects and skills		
Department			Infectious diseases & tuberculosis		
Course title			Infectious diseases & tuberculosis		
Course code			DMD 08 37		
Class			IV		
Semester		8	Fall		
Number of credits		2	Knowledge		1
			Clerkship		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Clerkship			
1	1	1	Amebiasis	Definition, etiology, epidemiology, pathogenesis and pathology clinical magnifications, laboratory investigation, deferential diagnosis, complications, treatment and prevention	
2	1	1	Acute viral hepatitis	Definition, Virology and etiology, pathogenesis and extra hepatic magnifications, pathology,	

				complication and sequelae, deferential diagnosis, treatment, prophylaxis
3	1	1	Diphtheria	Definition, etiology, epidemiology, pathogenesis and pathology clinical magnifications, laboratory investigation, deferential diagnosis, complications, treatment and prevention
4	1	1	Infectious mononucleosis	Definition, etiology, epidemiology, complications, treatment and prevention
5	1	1	Acute bacterial meningitis	Definition, etiology, epidemiology pathophysiology clinical presentation, diagnosis, deferential diagnosis, complications, treatment and prognosis
6	1	1	Anthrax	Definition, etiology, epidemiology, pathogenesis and pathology ,clinical magnifications, laboratory investigation, deferential diagnosis, complications, treatment and prevention
7	1	1	Terranes	Definition, etiology, epidemiology, pathogenesis and pathology clinical magnifications, laboratory investigation, deferential diagnosis, complications, treatment, prevention and prognosis
8	1	1	Human immunodeficiency virus infection and the human acquired immunodeficiency syndrome (HIV/AIDS)	Definition, etiology, epidemiology, pathogenesis and pathology clinical magnifications, laboratory investigation, deferential diagnosis, complications, treatment and prevention
9	1	1	Introduction (brief history of tuberculosis etiology and pathogenesis	Brief history of TB in Afghanistan and world, scientific progresses and views during the different socializations, agent and characteristics typical and atypical mycobacterium, isolation of BK, method of eradication, TB pathogenesis, routes of spread, development of the disease, course of infection in the organism
10	1	1	TB classification & TB diagnosis	Four types of classification: pathological epidemiological bacteriological and complete clinical, describe the five components of a TB medical evaluation (medical history, physical examination, test for m. tuberculosis infection, chest radiograph, bacteriologic examination of clinical specimens) Identify the major components of TB diagnostic microbiology, list at least five symptoms of pulmonary TB disease, explain the purpose and significance of direct sputum examination for acid-fast bacilli (AFB)
11	1	1	Primary Tb forms Secondary clinical forms of TB (acute disseminated pulmonary TB)	Primary complex of TB (Definitions, pathogenesis, clinical features, diagnosis, course and complications, prognosis and treatment) essential of differential diagnosis between primary and secondary forms of TB: disseminated pulmonary TB Acute disseminated pulmonary TB (military TB): definition pathogenesis, predisposing factors, clinical

				forms and features, diagnosis, D/Dx, complications, prognosis, treatment
12	1	1	Sub-acute disseminated pulmonary TB and chronic TB and pulmonary TB	Sub-acute disseminated pulmonary TB: definitions, clinical features, differential diagnosis, prognosis, treatment, chronic disseminated pulmonary TB: definition, pathogenesis, clinical features, diagnosis, differential diagnosis, course and prognosis, treatment
13	1	1	Infiltrative TB and fibro cavernous TB	Definitions, pathogenesis and routes of spread, structure of lymph nodes and pathologic changes, clinical forms, clinical features, diagnosis, differential diagnosis, treatment
14	1	1	TB of pharynx, oral and larynx	Definitions, pathogenesis and clinical forms, structure of lymph nodes and pathologic changes, clinical features, diagnosis, differential diagnosis, treatment
15	1	1	Prevention of TB general treatment of TB	BCG vaccination (what is BCG? Pre administration preparations, administration and stages of prophylaxis, complications, contra indications), chemoprophylaxis: definition, primary and secondary chemoprophylaxis, qualified groups, period and method, epidemiologic sanitary achievements) principles of treatment for TB patients, objectives, specific of anti-bacterial treatment nonspecific treatment
16	1	1	DOTS program & epidemiology of TB	DOTS methods for TB treatment, epidemiology of TB and epidemiological parameters, national campaign in the country, roles and responsibilities of the public health sector providers

Textbooks & reference books recommended (last edition)

Imaging in Tuberculosis Clinic opathological Correlation

Format Paperback | 259 pages, Dimensions 172 x 241 x 12.7mm | 544.31g, Publication date 31 Oct 2019, Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India, Language English, Illustrations note 409 Halftones, color; 4 Illustrations, unspecified, ISBN10 9388958977 ISBN13 9789388958974, Bestsellers rank 2,095,05

Tuberculosis

Format Hardback | 655 pages, Dimensions 183 x 259 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 3221820734, ISBN13 9783221820734, Bestsellers rank 2,368,822

Pulmonary Tuberculosis Edward , Osgood

Format Paperback | 252 pages, Dimensions 156 x 234 x 13mm | 358g, Publication date 08 Feb 2018, Publisher Sag wan Press, Language English, Illustrations note Illustrations, black and white, ISBN10 1377127915, ISBN13 978137712791

Essential of clinical infectious diseases, William F, Wright.

Format Paperback | 450 pages, Dimensions 152 x 229 x 24.89mm | 657.71g, 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 | 1328 pages, Dimensions 213 x 274 x 46mm | 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 150 Illustrations, unspecified ISBN10 1259835979, ISBN13 9781259835971, Bestsellers rank 71,575

OPHTHALMOLOGY

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Goal

The broad goals of the teaching of Students in ophthalmology are to provide such knowledge, and skills to the Student that shall enable him\her to practice as a primary eyecare physician

In addition, to function effectively as a community health leader to assist in the, implementation of national program for the prevention of blindness and rehabilitation of the visually impaired

Learning objectives

A. Knowledge

At the end of the course, the Student will have knowledge of

- ☐ Symptomatology in ocular disorders and their pathogenesis;
- ☐ Ocular involvement in systemic diseases;
- ☐ Disorders of the lid;
- ☐ Disorders of the lacrimal apparatus;
- ☐ Conjunctivitis;
- ☐ Ophthalmic neonatorum;
- ☐ Trachoma& other chronic conjunctivitis;
- ☐ Keratitis and corneal ulcers;
- ☐ Sclerosis& Episcleritis;
- ☐ Refractive errors& method of correction;
- ☐ Presbyopia;
- ☐ Accommodation convergence;
- ☐ Cataract(Congenital cataract, Senile cataract, Metabolic& complicated cataract);
- ☐ Glaucoma(Primary closed angle glaucoma, Primary Open angle glaucoma, Secondary glaucoma);
- ☐ Uveitis(anterior uveitis, posterior uveitis);
- ☐ Blindness prevalence, prevention& rehabilitation;;
- ☐ Retinopathies(Hypertensive, Toxemia& pregnancy, Diabetic Retinopathy);
- ☐ Retinal detachment, types, symptoms& predisposing factors;
- ☐ Endocrine ophthalmology;
- ☐ Retinal vascular disorders;
- ☐ Retinoblastoma& other ocular neoplasms;
- ☐ Binocular vision amblyopia& concomitant squint;
- ☐ Nutritional disorders;
- ☐ Incomitant strabismus (paralytic strabismus);
- ☐ Visual acuity, pupillary path ways& 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;
- ☐ Entropies / ectropion;
- ☐ Pterygium;
- ☐ Nasal lacrimal duct block / Dacryocystitis;
- ☐ Conjunctivitis /allergic /acute;
- ☐ Corneal ulcer;
- ☐ Keratitis;
- ☐ Iridocyclitis;
- ☐ Angle closure glaucoma;
- ☐ Scleritis / episcleritis;
- ☐ Dark room;
- ☐ Refractive errors& presbyopia:
- ☐ Cataract- senile:
 - Complicated
 - Post-operative
 - Complications
 - Intraocular lenses
- ☐ Xerophthalmia;
- ☐ Corneal opacities;
- ☐ Ocular injuries(Perforating /concessional injuries);
- ☐ Maurois's fug ax;
- ☐ Indirect ophthalmoscopy;
- ☐ Orthotics(study an 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 squeal of such diseases;
- ☐ Adverse drug reactions with special regernce to ophthalmic manifestations;

National program for prevention of blindness and 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 other national health programs

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 testing, examination of the eye, tonometry, staining for corneal pathology, confrontation prime try (visual field determination), and subjective refraction including correction for presbyopia and aphakia (absence of lens);
- ☐ Diagnose and treat common problems affecting the eye;
- ☐ Interpret ophthalmic signs in relation to common systemic disorders;
- ☐ Provide first aid in major ophthalmic emergencies;
- ☐ Organize primary eye care services through primary Health Centers;

Course content

OPHTHALMOLOGY					
Discipline			Professional Subjectsand skills		
Department			Ophthalmology		
Subject			Eye diseases		
Course code			DMD 09 38		
Class			V		
Semester		9	Spring		
Number of credits		2	Knowledge		1
			Clerkship		1
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Optical	General approach to Anatomy-physiology of the Eye, Eye Optical system, Vision, Growth & Development of the Eye, refractive errors, Hyperopia, Myopia & Astigmatism	
2	1	1	Optical system of the eye and Diseases of the eyelids	Anesometropia, anise Konia, presbyopia & convergence, Anatomy-physiology of eyelids, congenital anomalies of, Acquired diseases	
3	1	1	Disorder of eyelids	Skin diseases of, Neuro-muscular diseases of, marginal diseases of, Gland diseases of positional disorder of free margin of free margin of & tumor	
4	1	1	Disorders of conjunctiva	Anatomo0physiology of, congenital anomalies of, conjunctival inflammations of, non-infectious conjunctivitis, Bacterial, neonatal, viral, Chlamydia trachoma and inclusion conijctvitis	

5	1	1	Disorders of conjunctiva & Disorders Lacrimal apparatus	Allergic, Autoimmune, tumors & degeneration and trauma Anatomy-physiology of Lacrimal system, Lacrimation, dry eye, acute and acute, chronic dacryoadenitis & Lacrimal Gland tumors
6	1	1	Disorders Lacrimal apparatus & Disorder of extra ocular muscles	Epiphora, acute Canaliculitis, acute & chronic dacryocystitis, tumors of drainage passages, trauma of anatomy physiology of extra ocular Muscles, definition of squint, classification of strabismus
7	1	1	Disorders of extra ocular muscles & Disorders of orbital, vessels and nerves	Differential diagnosis of types of squint, motive & sensory changes in squint, squint patient examination, treatment of squint, Anatomy-physiology orbit, diseases of, traumas of, anatomy physiology of vessels & nerves
8	1	1	Disorders of extra ocular, nerves & Disorders of cornea	Disorders of blood vessels & nerves of the eye Anatomy-physiology of cornea, congenital anomalies of, corneal inflammations, classification of Keratitis, superficial Keratitis & noninfectious Keratitis
9	1	1	Disorders of cornea	Bacterial, chlamydial, viral, fungal, filamentary keratitis, keratomalacia and vernal keratitis, Peripheral Keratitis (marginal, rosacea, moorhen), interstadial, Keratitis, disc form, keratitis miscellaneous, exposure Keratitis, corneal degenerations, tumors of, Injuries of & principles of Keratoplasty
10	1	1	Disorders of sclera & disorders of uvea	anatomy physiology of sclera, congenital anomalies of & scleritis, Anatomy-physiology of uveal tract, congenital anomalies of uveal tract, classification, clinical aspect of uveitis, tumor of uvea
11	1	1	Disorder of retina	Anatomophysiology, of retina, retinal artery occlusion, Retinal Vein occlusion, eales disease, retinitis pimentos
12	1	1	Disorders of retina	Diabetic retinopathy, hypertensive retinopathy, retinopathy of blood disorder, retinopathy of prematurity, retinopathy ofgraviduum
13	1	1	Disorders of retina and Glaucoma	Toxic retinopathy, Senile Macular degeneration, retinal detachment & tumors, Relate anatomy physiology of glaucoma & congenital glaucoma
14	1	1	Glaucoma & Disorders of lens	Primary and secondary glaucoma (open angle and closed angle), anatomy physiology, of lens, congenital anomalies, cours and stage of cataract, clinical aspect related to ege
15	1	1	Disorders of lens, disorders of vitreous & disorders of visual pathway	Complication & treatment of cataract, anatomy physiology of vitreous, congenital anomalies of , acquired change & varieties, anatomy physiology of (optic nerve, chiasma optic, tract, radiation optic and visual cortex, Congenital anomalies of optic nerve

16	1	1	Disorders of visual pathway	Papilledema & Papillitis, Retrobulber neuritis, optic atrophy Tumors of the optic nerve and disorders of chiasmi optic. Disorders of the optic tract & optic radiation, Nystagmus & Migraine ophthalmic
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Textbooks & reference books recommended (last edition)

Ophthalmology, Myron Yanoff

Format Paperback | 324 pages, Dimensions 159 x 241 x 15.24mm | 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; 15 Illustrations, unspecified, ISBN10 9352706102 ISBN13 9789352706105, Bestsellers rank 3,514,275

Textbook of ophthalmology, HV, Nema

Format Paperback | 466 pages, Dimensions 171 x 241 x 25.4mm | 550g, 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 9352704010, ISBN13 9789352704019

Principles and practice in ophthalmology , Alberts Jacobieks

Format Hardback, Dimensions 178 x 254mm, 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 3030425886, ISBN13 9783030425883

Illustrated Tutorial in clinical ophthalmology. Jack , J, Kanski

Format Hardback | 928 pages, Dimensions 232 x 276 x 44.45mm | 2,902.99g, Publication date 09 Jun 2015, Publisher Elsevier Health Sciences, Imprint W B Saunders Co Ltd, Publication City/Country London, United Kingdom, Language English, Edition Revised, Edition Statement 8th Revised edition, Illustrations note Approx. 2750 illustrations (2450 in full color) ISBN10 0702055727, ISBN13 9780702055720, Bestsellers rank 83,35

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 1588905551, ISBN13 9781588905550, Bestsellers rank 1,349,492

PLASTIC & RECONSTRUCTIVE SURGERY\

Attendance policy

- ☐ Regular student attendance at all.
- ☐ Theoretical and practical sessions is a must.
- ☐ Students can only attend up to 25% with reasonable excuse.
- ☐ More than 25% 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%

Facial Plastic Surgery is responsible for the care of patients with a wide range of congenital and acquired defects requiring reconstruction. In addition, there are patients undergoing cosmetic procedures for a variety of indications. Plastic Surgery is divided into several categories. There are the areas of: (I) Core Knowledge/General Plastic Surgical Principles and

Techniques that includes wound repair, integument, flaps and grafts, microsurgery, Plastic Surgery Principles and Techniques are in the domains of:

- Facial Cosmetic /Aesthetic
- Burns
- Head and neck/Craniofacial Trauma
- Reconstruction of;
- Upper extremity
- Trunk
- Head and Neck Oncology
- Pediatric surgery

Learning objectives:

- ❖ Learn the physiology of wound healing, and be able to manage complex wound with a variety of techniques to achieve complete healing and maximum aesthetic benefit.
- ❖ Learn the physiology of the skin and be able to manage a variety of skin conditions surgically and non-surgically.
- ❖ Learn the physiology of flaps and grafts, be familiar with facial surgery in all types of flaps and grafts, and use flaps effectively for reconstruction in the full spectrum of facial plastic surgery.

Course content

PLASTIC & RECONSTRUCTIVE SURGERY						
Discipline			Professional Subjects and skills			
Department			Plastic and Reconstructive Surgery			
Subject			Plastic and Reconstructive Surgery			
Course code			DMD 10 40			
Class			V			
Semester		10	Fall			
Number of credits		2	Knowledge		1	
			Clerkship		1	
Weeks	Hours		Topics	Descriptions		
	Knowledge	Practical				
1	1	1	Modern Plastic Surgery and History of Plastic Surgery	Flaps, Transplants, Transposition, Transplantation, Short History of Maxillofacial Plastic Surgery		
2	1	1	Anatomy of Maxillofacial Region	Anatomy of maxilla, Oss platinum, Vomer, Mandibular, Head Bones, Facial Bones, mm Capitis, mm mimic, masseter maxillofacial Region		
3	1	1	Soft tissue Trauma	Trauma of Respiratory, system, central Nerve system Investigation		
4	1	1	Treatment of the Maxillofacial Soft Tissue injury	Local Anesthesia, Block, Operation Technique of the eyelids, Ear, Nose, Lips, Facial nerve and Parotit gland injuries		
5	1	1	Anomalies and Deformations of the Maxilla and Mandibular	Malocclusion, Angle classification, micrognathia, Retrognathia, Prognathous		
6	1	1	Facial Bone Fractures	Mandibular Fractures, Nasal Fractures, Zygomatic Fractures, Orbital Floor Fractures, Maxillary Fractures, Physical Examination, Radiologic Examination		
7	1	1	Treatment of Fractures	Reposition, Internal, axillary Fixation, Open Reduction Conservative, Treatment, External Fixation		
8	1	1	Craniofacial Surgery	Craniosynostitis, Plagiocephaly, Scapolcephaly, Trigonocephaly, Brachycephalic		
9	1	1	Craniofacial Dysostiosis	Corazon’s Syndrome, Apart Syndrome, teacher Collins, Syndrome, Craniofacial Technique		
10	1	1	Maxilla Facial Tumors	Classification, Etiology, Pathogenesis, Differential Diagnosis		

11	1	1	Soft tissue tumor of Maxillofacial Regain	Chondroma, Lipoma, Fibroma, neuroma, hemangioma
12	1	1	Treatment of	Conservative (Radiotherapy, Laser therapy, Cryotherapy, Sclerotherapy), Operative methods
13	1	1	Congenital Cleft Lip	Etiology, Embryology, Anatomy of Lip
14	1	1	Surgical Treatment of Clift lip	Straight line methods of Cheiloplasty, Millard method, Tennis son, Randal method
15	1	1	Congenital Cleft palate	History of facial clefts, Etiology, Embryology, Clinical Classification, Anatomy of Hard and Soft Palate
16	1	1	Cleft Palate repair(Uranoplasty)	Tow Flap Technique, Oxford V-Y Push Back Technique, Double, Opposite Z-plasty Technique, Complications, Postoperative care, Speech Therapy, Tharangoplasty

Textbooks & reference books recommended (last edition)

Facial Plastic Surgery Reference Guide

Format Paperback | 984 pages, Dimensions 100 x 180 x 30mm | 456g, Publication date 09 Jun 2032, Publisher Oxford University Press, Publication City/Country Oxford, United Kingdom Language English, Edition Statement UK ed. ISBN10 0198784783, ISBN13 9780198784784 Bestsellers rank 755,692

Facial Plastic and Reconstructive Surgery Clinical Reference Guide

Format Paperback | 500 pages, Dimensions 114 x 203 x 22.86mm | 453.59g, Publication date 15 Sep 2032, Publisher Plural Publishing Inc, Publication City/Country San Diego, United States Language English, Illustrations note black and white, ISBN10 1597569631, ISBN13 9781597569637 Bestsellers rank 1,858,020

Key Clinical Topics in Plastic & Reconstructive Surgery

Format Paperback | 352 pages, Dimensions 320 x 241 x 12.7mm | 1,061.41g, Publication date 30 Nov 2014, Publisher JP Medical Ltd, Publication City/Country London, United Kingdom Language English, Edition Statement 2nd UK ed. Illustrations note 50, ISBN10 1907832240 ISBN13 9781907832246, Bestsellers rank 1,181,347

Textbook of Plastic and Reconstructive Surgery

Format Hardback | 488 pages, Dimensions 203 x 254 x 31mm | 770g, Publication date 02 Aug 2032 Publisher UCL Press, Publication City/Country London, United Kingdom, Language English Illustrations note 186 Illustrations, unspecified, ISBN10 1910634379, ISBN13 978191063437

Grabb and Smith's Plastic Surgery

Format Hardback | 1108 pages, Dimensions 213 x 276 x 45.72mm | 3,153g, Publication date 03 Jul 2019, Publisher Lippincott Williams and Wilkins, Publication City/Country Philadelphia, United States, Language English, Edition Statement 8th edition, ISBN10 1496388240 ISBN13 9781496388247, Bestsellers rank 504,033

Review of Plastic Surgery

Format Paperback | 384 pages, Dimensions 232 x 276 x 15.24mm | 1,130g, Publication date 10 Dec 2015, Publisher Elsevier - Health Sciences Division, Publication

COMMUNITY & PREVENTIVE DENTISTRY

Attendance policy

- ☐ Regular student attendance at all.
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- ☐ More than 25% 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

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- ☐ 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 this training, the Students must be able:

- To prevent and control oral diseases and promote oral health through organized community efforts

- At the conclusion of the course Student shall have knowledge of the basis of preventive Dentistry, public health problems, Nutrition, epidemiological methods.

Course Contents

Community & Preventive Dentistry					
Discipline			Professional Subjects		
Department			Preventive and community Dentistry		
Subject			Preventive Dentistry		
Course code			DMD 10 41		
Class			V		
Semester		10	Fall		
Number of credits		2	Knowledge	1	
			Clerkship	1	
Weeks	Hours		Topics	Descriptions	
	Theory	Practical			
1	1	1	Introduction to Dental public health	Introduction, history of Dentistry, definition of particle of Dentistry, scope of Dental care, function of public health Dentist	
2	1	1	Epidemiology of Dental caries	Introduction, epidemiological studies, global scenario and current trends in caries incidence, epidemiological factors of Dental caries, host factors, agent factors, environmental factors	
3& 4	2	2	Epidemiology of periodontal diseases	Introduction, etiology of periodontal disease, pathogenesis of periodontal disease, epidemiology of periodontal disease, epidemiologic factors	
5	1	1	Epidemiology of oral cancer	Introduction, global scenario of oral cancer, age distribution gender distribution, ethic basis, etiology and risk factors, classification of oral cancer of oral mucosa, prevention and control oral cancer, role of Dentist in detecting and preventing oral cancer	
6	1	1	Oral health education	Introduction, consideration on oral health education, nature of learning education process, one to one communication, general education theories, basic concepts of oral health education, approaches in oral health education in health promotion	
7	1	1	Nutrition and oral health	Introduction, nutrition, classification of nutrients, assessments of patient’s nutritional status, dietary history and evaluation, diet counseling and dietary advice	

8	1	1	Surveying and oral health surveys	Surveying (introduction, step in surveys) Oral health survey pathfinder surveys, subgroups, index ages and age groups, number of subject, organizing the survey, reliability and validity of data, survey form
9	1	1	Oral hygiene aids	Introduction, manual tooth brush, powered toothbrushes, Dental floss, interproximal and unstuffed brushes, wooden or plastic triangular sticks
10	1	1	Oral hygiene	Tongue cleaners, rinsing irrigation devices, dentifrices and mouth rinses
11	1	1	Prevention of Dental caries	introduction, preventive methods and means, dietary measures, oral hygiene measure antimicrobial agents and treatments, delivery stimulation, general recommendations for prevention of Dental caries with respect to use surges
12	1	1	prevention of periodontal disease	Introduction, implications for preventions, factors predisposing to plaque accumulation, oral hygiene aids, chemical plaque control
13	1	1	Prevention of malocclusion	Introduction, etiology of malocclusion, preventive measures, interceptive measures, scopes and limitations of interceptive orthodontics
14	1	1	Prevention of Dental trauma	Introduction, primary protections, secondary prevention, tertiary prevention
15	1	1	occupational hazards in Dentistry	Introduction, occupational hazards, recommendations, hospital waste management in Dental care setting
16	1	1	Infection control in Dental care setting	Introduction, infection control procedures ,disinfection and Dental laboratory

Textbooks and reference books recommended (last edition)

Textbook of Preventive and Community Dentistry

Format Hardback | 582 pages, Dimensions 232 x 279mm, Publication date 15 Aug 2011
Publisher Elsevier India, Publication City/Country New Delhi, India, Language English,
Edition Statement 2nd edition, Illustrations note Approx. 400 illustrations (225 in full color);
Illustrations, unspecified, ISBN13 9788131225301

Textbook of Preventive and Community Dentistry Public Health Dentistry

Format Paperback | 460 pages, Dimensions 152.65 x 228.6mm | 720g, Publication date 30
Apr 2017, Publisher CBS Publishers & Distributors, Publication City/Country New Delhi,
India Language English, ISBN10 9386217937, ISBN13 9789386217936

FUNDAMENTALS OF COMMUNITY PREVENTIVE DENTISTRY

Publication date 01 Nov 2017, Publisher Paramount Publishing Enterprise, Publication
City/Country Karachi, Pakistan, ISBN10 9696372574, ISBN13 9789696372578

MCQ in Community and Preventive Dentistry

Format Paperback | 254 pages, Publication date 30 Jun 2006, Publisher Jaypee Brothers
Medical Publishers, Publication City/Country New Delhi, India, ISBN10 8180618536
ISBN13 9788180618536

RESEARCH

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- ☐ Mid semester exam 20%
- ☐ Final semester exam 60%
- ☐ Total 100%

Research

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 Subjects		
Department			Research & health		
Subject			Research		
Course code			DMD 05 42		
Class			III		
Semester		5	Fall		
Number of credits		2	Theory	1	
			Practical	1	
Weeks	Hours		Topics	Descriptions	
	Knowledge	Practical			
1	1	1	Research History	Research History	
2	1	1	Definition of research	Definition of research	
3	1	1	Research goals	Research goals	
4	1	1	Type of research	Type of research	
5	1	1	Description research	Description research	
6	1	1	Exploratory research	Exploratory research	
7	1	1	Qualitative research	Qualitative research	

8	1	1	Quantitative research	Quantitative research
9	1	1	Basic research	Basic research
10	1	1	Applied research	Applied research
11	1	1	Nature research	Nature research
12	1	1	Primary research	Primary research
13	1	1	Secondary research	Secondary research
14	1	1	Research design	Research design
15	1	1	Type of research design	Type of research design
16	1	1	Article	Article and monograph research

Textbooks & reference books recommended (last edition)

Daniel , Wayne Research , foundation for analysis in the health sciences

Format Paperback | 720 pages, Dimensions 200 x 251 x 25mm | 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 , Research, biostatistics and preventive medicine

Format Paperback Dimensions 232 x 276mm, Publication date 18 May 2007, Publisher Saunders, Language English, Edition Statement 3rd ed.ISBN10 1455755575 ISBN13 9781455755578

BK Mahajan, methods in biostatistics

Format Paperback | 488 pages, Dimensions 140 x 232mm, Publication date 28 Feb 2018 Publisher Jaypee Brothers Medical Publishers, Publication City/Country New Delhi, India Edition Revised, Edition Statement 9th Revised edition, ISBN10 9352703103 ISBN13 9789352703104

موانع فرهنگی توسعه تحقیق در ایران ، طایفی ، علی ، چاپ اول ، انتشارات آزاد اندیشان ، تهران ، 1380
مبانی نظری و عملی پژوهش در علوم انسانی و اجتماعی ، دلاور ، علی ، انتشارات رشد ، چاپ دهم ، پائیز 91
راهنمای تدوین طرح تحقیق (پروپوزال نویسی) ، رضا صفری شالی ، نشر موسسه فرهنگی هنری جامعه و فرهنگ ، 1391

روش تحقیق (پروپوزال و پایان نامه نویسی) ، سیده سکینه ساداتی ، سید عباس ساداتی ، نشر توسعه علوم ، 1385
چگونه تحقیق کنیم ؟ ، جعفر یوسفیان ، نشر ندای شمس ، 1386 (روش تحقیق ، عباسقلی خواجه نوری ، نشر دانشگاه تهران ، 1389
روش تحقیق ، خدارحم ، نشر سخن گستر ، 1386
روش تحقیق ، حمیدرضا میرزایی ، نشر شایسته گستر ، 1388

INTERSHIP (House job)

Internship is a phase of training wherein an undergraduate is expected to learn methods and modalities for actual practice of Dental medicine and health care and acquire skills under supervision so that he/she may become capable of functioning independently.

Internship: a period of compulsory training after graduation from a medical faculty which is required to be done.

Intern: is a doctor who is undergoing the training period in the internship.

Internship supervisor: the senior member of staff who coordinates the internship in each department and hospital, ensuring there is a proper setting for each intern without overloading a single department.

Internship certificate: does the internship department grant the certificate to the intern after finishing the full period of the internship.

Learning objectives of the MIHE & CME (continuous medical education) program

To integrate the medical Dentistry knowledge obtained by the undergraduate Dental Students during their five – year education studies with the clinical Dental practice taking place in the hospital and clinics constitutes the integral aim of the MIHE -CME Dental Internship program. This will consolidate what they have learned, help them in enhancing and improving their clinical skills necessary to Medical Dentistry practice, and finally cater standard Dental care for Dental patients. Thus, ensure and guarantee the improvement and maintaining of the international standards of Medical Dentistry knowledge and skills in Afghanistan.

This program, consists of three sections as follows:

1. MIHE policies related to Dental medicine internship program
2. An introduction to Dental medicine internship program
3. Procedures of Dental medicine internship program

There are 9 underlying of MIHE support the interns to complete Dental medicine internship program and achieve the certificate:

1. **If the intern develops a disease** during the training, his/her condition will be reviewed by a chosen committee to decide on the possibility of continuation of the program or not. This process will be followed for both communicable and non – communicable diseases.
2. **Vaccination**
 - BCG, HBV and tetanus vaccinations are mandatory
 - Hemophilus influenza vaccines optional

3. Needle prick: if an intern gets a needle prick this is the procedures that should be taken:

- ☐ The needle should be sent to the laboratory in a closed and sterile container to check for HIV and HBV
- ☐ The prick site has to be cleaned and dressed
- ☐ A blood sample at zero time to be taken from the intern to check for HIV and HBV and should be documented in the intern file in the department as well as with the MIHE – CME department.
- ☐ A second blood sample to be taken after 30 days of the needle prick to check for HIV and HBV and should be documented in the intern file in the department as well as with the MIHE – CME department
- ☐ A third sample to be taken after 6 months of the needle prick to check for HIV and HBV and should be documented in the intern file in the department as well as with the MIHE – CME department
- ☐ If at any time the intern shows signs of infection with HIV or HBV he/she should undergo immediate treatment and his training will be suspended till proven free of disease
- ☐ If the needle was found to have traces of HIV or HBV in it (after step one) then the intern's training will be suspended till proven free of disease
- ☐ If the intern does not show any sign of infection after the needle prick, the internship program can be resumed with a condition to keep him under observation for signs of illness. And if in case the intern has to change the department as part of the training program the information of the needle prick should be handed over to the respected head of department
- ☐ All interns must be dressed with white coat during all time
- ☐ All interns must have their badges – on during all time
- ☐ Not allowed to wear clothes with exposed body parts or unacceptable prints at any time
- ☐ Not allowed sandals at any time only front closed safe shoes are permitted
- ☐ Personal hygiene should always be followed
- ☐ All interns should conduct in a professional manner
- ☐ Patient's rights must always be dealt with confidentiality
- ☐ All interns must treat the patients and their superiors with respect. Any violation of this will be dealt with immediately from the head of department and then to inform both the hospital CME committee and the MIHE – CME consider immediate termination from the program
- ☐ Patient safety must be intern's priority and if any discovered violation will cause immediate termination
- ☐ Personal safety of the intern should be always considered especially when dealing with bodily fluids or communicable diseases and if any violation of this discovered this will be taken as grounds for immediate termination

- ☐ Any violation of the above will be dealt with immediately from the head of department and then to inform both the hospital CME committee and the MIHE – CME to consider immediate termination from the program
- ☐ All decisions of the head of department, the hospital CME committee and the MIHE – CME should be respected, and the decision of the MIHE – CME will be final
- ☐ **Violation warning**
 - First violation will have a verbal warning
 - Second violation will have a written warning
 - Third violation will be reported to hospital CME committee which in turn will submit a report regard these repeated violations to the MIHE – CME department which in turn will consider the termination of the intern from the program
- ☐ Daily attendance; as per the MIHE law is from 8:30 AM till 3:30 PM in all working days daily signature compulsory as proof of attendance
- ☐ It is strictly forbidden to sign in for other people
- ☐ **Violation warning:**
 - First violation will have an oral warning
 - Second violation will have a written warning
 - The third violation will be seen in the hospital CME committee which in turn will send a report about these repeated violations to the MIHE – CME department which will consider the termination of the intern from the program
- ☐ On call duties will be provided in the beginning of each rotation to the intern by the head of department
- ☐ The on call duty rotation will be given by the head of department as per the normal +process of the particular department
- ☐ An on call room will be dedicated for the on call interns taking in considerations having separate rooms for males and females. Meals will be provided for them for that on call duty
- ☐ Refusal to do duties or delaying In starting the duties or leaving the duty without a previous approval from the head of department will be considered a violation
- ☐ **Violation warning**
 - First violation will have oral warning
 - Second violation will have a written warning
 - The third violation will be seen in the hospital CME committee which in turn will send a report about these repeated violations to the MIHE – MCE department which will consider the termination of the intern from the program

All laws of the MIHE in this regards should be followed concerning all leaves; annual leave, sick leave, maternity leave

A. Annual leaves

- ☐ The intern is allowed for 21 working days in total as per MIHE law

- ☐ The intern should be in the program for a minimum period of 3 months before requesting any leave.
- ☐ Any leave should be substituted in the rotation in which the leave was taken.
- ☐ Annual leave has to be submitted to the head of the department before 2 weeks of the required date and the approved request must be kept in the intern's file after the approval of the hospital's CME committee
- ☐ No SMS Email or phone calls on the day of absence, will be accepted as a request for leave.

B. Hours leaves

If permitted by the head of department, the intern is allowed for 2 hours leave in 2 working days in each month

C. Absence leaves

- ☐ Any day the intern does not appear for work will be considered as absence from work
- ☐ If the intern appears at work then a written letter explaining the reason of the absence with documented proof and he/she is to issued a warning.
- ☐ If the intern does not appear for 10 consecutive days, the head of department should inform the hospital CME committee who in turn will consider the immediate termination of the intern from the program
- ☐ Any unapproved absence days will be deducted from the total leave days allowed to the intern, but if the unapproved absence was repeated 3 times or more then, the head of department should inform the hospital CME committee who in turn will inform the MIHE – CME, which will consider the immediate termination of the intern from the program.

D. Sick leaves:

- ☐ A sick leave certificate must be submitted to the internship supervisor
- ☐ A sick leave certificate must be followed by the attestation rules and regulation applied by MIHE human resource
- ☐ Any sick leave more or equal to 10 days has to be reviewed and accepted by a special committee
- ☐ All interns must finish 52 full weeks with a fixed list of rotations
- ☐ Changes to the rotation are not allowed
- ☐ All interns must apply the whole approved program in the accepted
- ☐ Hospitals/ clinics of MIHE
- ☐ If intern accomplished less than 53 weeks of training, he/she will deserve taking the certificate.
- ☐ If the intern does not complete one – year internship program satisfactory, then the weak rotations will be repeated but if intern still shows weakness then he/she will be terminated from the program

A. Against the intern

- a. Will be dealt with by the head of department
- b. If the head of department did not succeed in solving the complaint then the matter should be referred to the hospital CME committee
- c. If the hospital CME committee does not succeed in solving the complaint then the matter should be referred to the MIHE – CME where a final decision will be taken

B. From the intern

- a. Will be dealt with by the head of department
 - b. If the head of department does not succeed in solving the complaint then the matter should be referred to the hospital CME committee
 - c. If the hospital CME committee does not succeed in solving the complaint then the matter should be referred to the MIHE – CME where a final decision will be taken
- ☐ All interns are required to have a minimum of 20 hours of credit hours
 - ☐ The credit hours can be covered by internal activities in the MIHE health care establishments with attendance certificates.
 - ☐ All credit hours' certificates should be given in with the application for the internship certificate.
 - ☐ No internship certificate will be issued if the credit hours requirement has not been fulfilled.
 - ☐ In case of completion of the internship program in the MIHE a request from the intern for issuing him/her a completion of internship should go to the internship supervisor who will check the requirements

And will issue a letter to the hospital CME committee specifying if the intern has completed the program in a satisfactory way or not and then the committee will forward their recommendation to the MIHE – CME committee for issuing a certificate of completion of internship or not.

In case of not completing the internship program a request from the intern for issuing him/her a training certificate go to internship supervisor with a detailed letter from the intern in which reasons for not completing the training has to be given. The internship supervisor will check the training feedback with the logbook of the intern and will issue a satisfactory way or not and then the committee will forward their recommendation to the MIHE – CME committee for issuing a certificate of completion of internship or not.

Section 2: introducing Dental medicine internship program

This section introduces the Dental medicine internship program for the new undergraduate Dental Students who are recently introduced for Dental medicine internship program in the medical facilities of MIHE

Based on the aim of the Dental medicine internship program approved by the department of continuous medical education of MIHE. Undergraduate Student of Dental medicine is considered intern when he/she successfully completes the

approved training activities in a collection of specialties and to the standard of performance expected in the specialties.

How does the intern become a junior/beginner doctor?

The intern become a junior/beginner doctor after he/she completes the recommended training duration and is assessed against the recommended specialty skill of MIHE official Dental medicine internship program (See table 1)

NO.	Recommended specialty	Duration (No. of weeks)	Comments
1	Oral & maxillofacial surgery	9	
2	Operative Dentistry & endodontic	9	
3	Pediatric & preventive Dentistry	8	
4	Periodontology	6	
5	Prosthodontics	8	
6	Oral medicine	4	
7	Orthodontics	5	
8	Reconstructive & plastic surgery	2	
9	Rational medicine uses & prescription writing methods	1	
	Total	52	

In order the intern to be certified as **junior/beginner doctor**, he/she is judged against established standards, these standards have been developed by the department of continuous practical education of MIHE and are called skill standard, skill standard is the professionally and scientifically approved performance of activity that ensures the accomplishment of a patient care

Skill assessment involves collecting evidence and the hospital CME coordinator is the person who collects the evidence and makes a judgment about whether the intern accomplished the skill recommended.

The MIHE – department of CME approved evidence includes:

- ☐ Observation of the intern performance to the specialty skill standards
- ☐ Internship supervisor verifications

A) Intern role

1. All interns are expected to follow all the rules and regulations of the MIHE and related health facilities as long as they are part of the internship program.
2. All interns are expected to take part in the morning reports of the department they are assigned in take part in the daily morning rounds and the discussions regarding the Dental cases in that department.

3. The cover the entire intern's logbook with daily documentation as per the requirements
4. Each intern has to be under direct supervision of a MIHE Dental medicine Doctor/instructor.
5. Seek help if the intern feels a certain weakness in a clinical area
6. The intern is expected to avoid the following:
 - a. It is strictly not allowed for any intern to meet, treat, advice of discharge a patient without direct supervision of a working senior staff doctor who is responsible for this with a counter signature from him
 - b. Interns are not allowed to do any invasive procedures unless there is a qualified supervisor present at the bedside of the patient
7. After the completion of the internship program, the intern has to give a request for the internship certificate to the completion supervisor who will check the following:
 - a. Completion of the program and the required periods
 - b. Completion of the intern's logbook
 - c. Completion of the feedback of the intern by every respected head of department
 - d. All he above has to be the satisfaction of the CME committee
 - e. The internship supervisor will inform the hospital committee which in turn will inform the MIHE – CME if there is a need for repeating any rotations or reviewing an intern's case
8. In the case where it is discovered that there is a violation from the above - mentioned points, this will cause the intern immediate terminated

B. Role of the head of department

- a. To respond to the education needs of the interns and facilitate learning.
- b. To aid the intern acquiring skills in communication, interpretation of clinical data as well as in the performance of diagnostic and therapeutic procedures, all under the direct supervision of an allocated senior staff with suitable qualifications.
- c. To ensure that skills in documentation of clinical data and the methods for their retrieval and analysis are learned and understood by the intern.
- d. To ensure that the intern is able to present appropriate observations in pair groups, clinical meetings and CME programs
- e. To provide opportunities for the intern have patient contact both in the ambulatory and inpatient setting
- f. To help the intern learn the importance of getting informed consent for diagnostic/therapeutic procedures and the appropriate methodology to achieve
- g. To Identify areas where the intern may not have acquired the requisite competency and suggest corrective measures, such information should be communicated to the intern and brought to the attention of the internship supervisor and the hospital committee as soon as possible, ensuring enough time for corrective measures to be initiated.
- h. To ensure that patient safety is paramount during procedures such as prescription of drugs and any invasive intentions when they are carried out by the intern which should be always under supervision

- i. To ensure that common precautions observed in the hospital are learnt and followed by the intern to ensure safety of the intern, patients and staff and aid them in doing so
- j. To assist the intern in learning the importance of ethical procedures such as patient confidentiality
- k. To present the intern with opportunities to acquire interdisciplinary communication skills with all of the associated hospital staff
- l. To conduct as investigation as first line authority for or against any intern of any professional misconduct complaint arouse, and facilitates proceeding required

C. The internship supervisor role:

- a. To have introductory meeting with all the interns in the beginning of their program in which the rules and regulations are explained and where any queries about the training addressed
- b. To allocate the interns with specific place of specialty
- c. To ensure that the interns are provide with necessary education support during their entire training period in the department
- d. To help the interns to gain access to learning resources in the hospital such as the medical records room or the library etc.
- e. To collaborate with the hospital committee at regular intervals to ensure satisfactory progress of the interns
- f. To develop learning programs consistent with the fulfillment of the learning objectives for the internship program
- g. Ro guide the interns in the realization of their objectives. The supervisor must give each intern individual attention
- h. To ensure that the interns fulfill the training requirements in terms of attendance and acquisition of competencies, The supervisor should monitor the progress of the intern at regular intervals and should allocate such time to discuss this with hem/her
- i. To Identify areas where the intern any not have acquired the requisite competency and suggest corrective measures
- j. To ensure that patient safety is paramount during procedures such as prescription of drugs and surgical interventions when they are carried out by the intern which should be always under supervision
- k. To ensure that common precautions observed in the hospital are learnt and followed by the intern to ensure safety of the intern, patients and staff and aid them in doing so
- l. To validate the internship logbook at regular intervals and ensure documentation of the competencies are complete
- m. To ensure that the intern have the requisite skills to access hospital service like the medical records, hospital and IT Department in completing their learning their learning requirements.

D. The MIHE – CME role

To present to the MIHE – CME department details of the intern and to complete the feedback and assessment reports about each intern at the end training period and clime a final evaluation report.

- a. Provide educational support measures for the HOD/hospital for the facilities at different hospitals of the MIHE which is part of his hospital as required, for example to arrange rotations unavailable in that particular hospital but is found in other hospital
- b. To coordinate any arrangement the hospital has made for training interns
- c. To ensure that patient safety is paramount during procedures such as prescription of medicine and surgical interventions when they are carried out by the intern which should be always under supervision
- d. To ensure that common precautions observed in the hospital are learnt and followed by the intern to ensure safety of self, patients and present staff and aid them in doing so.
- e. To conduct as investigation as a second line authority with the internship supervisor if the HOD failed to reach to a decision for or against any intern if any professional misconduct complaint arouse, and facilitates proceeding required

Section 3: procedures of Dental medicine internship program

All interns will be given a start date which they have to adhere to:

- a) On the first day of work the interns will be oriented by their internship supervisor for the rules and regulations and what is expected from them.
- b) All interns will be allocated to the specific places and they are strictly forbidden from changing the place of work or specialty they have been assigned to by their internship supervisor
- c) The intern will proceed to start in the specified rotation and will meet with the head of that department, and will start immediately with the tasks allocated by the HOD
- d) When the hospitals CME see any violation by the intern, it will sand a report to the MIHE – CME so that it decides to terminate the intern

Rotation 1

Name of intern _____

Department: oral & maxillofacial surgery

Obligatory requirement

1. 35 cases simple tooth extraction

Patient's file No.	5 observation	5 assisting	25 independent operations	Data	Signature of supervisor
1					

Table 1

2. 5 cases assisting and observing tarsal veolar surgery

Patient's file No.	2 observation	3 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 2

3. 2 cases of assisting and observing incision and drainage of dentolveolar abscess

Patient's file No.	2 observation	3 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 3

4. 2 cases assisting and observing management of dentolveolar trauma

Patient's file No.	1 observation	1 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 4

5. 1 case observing management of facial fracture

Patient's file No.	1 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 5

6. Presenting a conference/case presentation assigned by the department

Rotation II

Name of intern _____

Obligatory requirements

1. Preparation of patient's file and diagnosis of periodontal diseases (3 patients)

Patient's file No.	1 observation	1 assisting	1 independent operations	Data	Signature of supervisor
1					

Table 6

2. Scaling – root planning by handle and ultra – sonic instruments (10 patients)

Patient's file No.	1 observation	1 assisting	2 independent operations	Data	Signature of supervisor
1					

Table 7

3. Demonstration of periodontal surgery equipment's and principles

4. Assisting and observing periodontal surgical procedures in flap designing and crows elongation (2 patients)

Patient's file No.	2 observation	1 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 8

5. Presenting a conference/ case presentation assigned by the department

Rotation III

Name of intern _____

Department: pediatric and preventive Dentistry

Obligatory requirement

1. Principles of identification primary teeth & permanent teeth ad diagnosis

Patient's file No.	3 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 9

2. Demonstration of fluoride therapy & sealant therapy in patients of models

Patient's file No.	2 observation	2 assisting	1 independent operations	Data	Signature of supervisor
1					

Table 10

3. 15 extraction of primary teeth

Patient's file No.	2 observation	3 assisting	10 independent operations	Data	Signature of supervisor
1					

Table 11

4. Restoration of primary & young permanent teeth

Patient's file No.	2 observation	2 assisting	5 independent operations	Data	Signature of supervisor
1					

Table 12

5. 10 pulp therapy of primary & young permanent teeth (pulp capping, pulptomy, apex genesis)

Patient's file No.	4 observation	2 assisting	5 independent operations	Data	Signature of supervisor
1					

Table 13

6. Root canal therapy primary & young permanent teeth (apexification)

Patient's file No.	3 observation	2 assisting	2 independent operations	Data	Signature of supervisor
1					

Table 14

7. Management of anterior teeth trauma

Patient's file No.	1 observation	1 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 15

8. Demonstration of management of early loss of primary teeth (space maintenance & space regainer)

Patient's file No.	1 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 32

9. Management of gingival & periodontal disease in children

Patient's file No.	2 observation	2 assisting	2 independent operations	Data	Signature of supervisor
1					

Table 17

10. Presenting a conference/case presentation assigned by the department

Rotation IV

Name of intern _____

Department: orthodontics

Obligatory requirements:

1. Removable appliance of orthodontics (retainer, forming, adams, clasp, labial arch, Z spring canine retractor)

Patient's file No.	2 observation	2 assisting	2 independent operations	Data	Signature of supervisor
1					

Table 18

2. Placement of brackets and molar bands along with their auxiliaries

Patient's file No.	2 observation	2 assisting	2 independent operations	Data	Signature of supervisor
1					

Table 19

Rotation V

Name of intern _____

Department: prosthodontics

Obligatory requirements:

1. Tooth preparation & taking impression and casing for fixed partial denture

Patient's file No.	2 observation	2 assisting	3 independent operations	Data	Signature of supervisor
1					

Table 20

2. Taking impression, casting for removable partial denture and recording occlusion relation

Patient's file No.	2 observation	2 assisting	1 independent operations	Data	Signature of supervisor
1					

Table 21

3. Taking impression, casting, forming individual tray, rim occlusion base forming, mounting and recording occlusion relations

Patient's file No.	1 observation	1 assisting	1 independent operations	Data	Signature of supervisor
1					

Table 22

4. Presenting a conference /case presentation assigned by the department

Rotation VI

Name of intern _____

Department: operative Dentistry & endodontics

Obligatory requirements:

1. Patients evaluation, diagnosis & treatment planning (3 patients)

Patient's file No.	1 observation	1 assisting	1 independent operations	Data	Signature of supervisor
1					

Table 23

2. Patient & operator position on Dental unit (3 patients)

Patient's file No.	1 observation	1 assisting	1 independent operations	Data	Signature of supervisor
1					

Table 24

3. Tooth preparation for composite restoration (8 patients)

Patient's file No.	2 observation	2 assisting	4 independent operations	Data	Signature of supervisor
1					

Table 25

4. Amalgam restoration (3 patients)

Patient's file No.	1 observation	0 assisting	2 independent operations	Data	Signature of supervisor

1					
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Table 26

5. Access cavity preparation & cleaning and shaping (5 patients)

Patient's file No.	2 observation	1 assisting	2 independent operations	Data	Signature of supervisor
1					

Table 27

6. Canal obturation (4 patients)

Patient's file No.	1 observation	1 assisting	2 independent operations	Data	Signature of supervisor
1					

Table 28

7. Vital pulp therapy (4 patients)

Patient's file No.	1 observation	0 assisting	3 independent operations	Data	Signature of supervisor
1					

Table 29

8. Presenting a conference/case presentation assigned by the department

Rotation VII

Name of intern _____

Department: oral medicine

Obligatory requirements:

1. Management of oral candidiasis (2 patients)

Patient's file No.	2 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 30

2. Management of viral infection in oral mucosa and facial skin (4 patients)

Patient's file No.	4 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 31

3. Management of aphthae's stomatitis (4 patients)

Patient's file No.	4 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 32

4. Management of allergic stomatitis

Patient's file No.	1 observation	1 assisting	1 independent operations	Data	Signature of supervisor
1					

Table 33

5. Management of chronic ulcer in oral mucosa (2)

Patient's file No.	2 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 34

6. Presenting a conference/case presentation assigned by the department

Rotation VIII

Name of intern _____

Department: pharmacology

Obligatory requirements:

1. Rational drugs uses and prescription writing methods

Patient's file No.	2 observation	0 assisting	5 independent operations	Data	Signature of supervisor
1					

Table 35

Rotation IX

Name of intern _____

Department: reconstructive & plastic surgery

Obligatory requirements:

1. Observation & physical examination of patients in OPD

Patient's file No.	5 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 36

2. Document introduction & document entry of the patient

Patient's file No.	5 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 37

3. Dressing and follow up the patients

Patient's file No.	5 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 38

4. Different types of suturing procedures

Patient's file No.	2 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

Table 39

5. Participation in operation room

Patient's file No.	1 observation	0 assisting	0 independent operations	Data	Signature of supervisor
1					

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دستوماتولوژی پوهنځي داستادانوليسټ

شماره	نوم	تخلص	دپلارنوم	دتحصیل درجه	استاد
1	ډاکټر خان محمد	وردگ	گل حسن	MD St	دایمی استاد
2	ډاکټر نثار احمد	احمدی	محمد شریف	MD St	دایمی استاد
3	ډاکټر نجیب الله	نیازی	محمد دل	MD St	دایمی استاد
4	ډاکټر دریا خان	ملکزی	نظر محمد	MD St	دایمی استاد
5	ډاکټر اسد الله	سعیدی	عبدالقدوس	MD St	دایمی استاد
6	ډاکټر عبدالوکیل	سلامزی	عبدالظاهر	MD St	دایمی استاد
7	ډاکټر محمد سلیم	صالحی	عبدالخبیر	MD St	دایمی استاد
8	ډاکټر سیف الله	صمدی	عبدالصمد	MD St	دایمی استاد
9	ډاکټر عزیز الرحمن	مایار	شمالدین	MD St	دایمی استاد
10	ډاکټر منصور	وردگ	عبدالباقي	MD St	قراردادی استاد
11	ډاکټر نوید	صدیقی	محمد هاشم	MD St	قراردادی استاد
12	ډاکټر عصمت الله	عصمت	جان گل	متخصص	قراردادی استاد
13	ډاکټر امین خان	قیوم زی	عبدالقیوم	متخصص	قراردادی استاد
14	ذبیح الله	غلام سرور	سروری	متخصص	قراردادی استاد
15	ډاکټر عیسی خان	عادل	سلیم خان	MD	قراردادی استاد
16	ډاکټر لطف احمد	جلالزی	عبدالمالک	MD	قراردادی استاد
17	ډاکټر محب	عاصم	محمد نازک	MD	قراردادی استاد
18	ډاکټر نور الله	حبیبی	حبیب الله	MD	قراردادی استاد
19	ډاکټر صدیق الله	تاج وال	حبیب الله	MD	قراردادی استاد
20	ډاکټر مطیع الله	همدرد	عبدالقادر	MD	قراردادی استاد
21	ډاکټر عبدالحي	منیب	عبدالسلام	MD	قراردادی استاد
22	ډاکټر رسول خان	نظری	فیروز خان	MD	قراردادی استاد
23	ډاکټر نجیب الرحمن	عبدالغفور	غفورزی	MD	قراردادی استاد
24	ډاکټر سید احمد	خان	سردار ولی	MD	قراردادی استاد
25	ډاکټر اختر محمد	ترکی	محمد منیر	MD	قراردادی استاد
26	ډاکټر رحیم الله	سید نور	نور	MD	قراردادی استاد
27	محمد عارف	فیضی	نجیب الله	ماسټر	قراردادی استاد
28	کفایت الله	رسول زی	غلام رسول	لیسانس	قراردادی استاد
29	اسد الله	کمال زی	سید کمال	لیسانس	قراردادی استاد
30	عزیز الله	رحیمی	رحیم الله	لیسانس	قراردادی استاد
31	نصیر احمد	مایار	گل حبیب	لیسانس	قراردادی استاد
32	فیض الله	فیضانی	غزنوی	لیسانس	قراردادی استاد
33	عبدالمجید	جهید	عبدالجبار	لیسانس	قراردادی استاد
34	محمد نبی	جلالزی	نقیب الله	لیسانس	قراردادی استاد

دایمی استادان (9)	
قراردای استادان (25)	
تعداد	د استادانو تحصیلی درجه
3	متخصص استادان
1	ماستر استادان
23	استادان <i>MD</i>
7	لیسانس استادان

دديپارتمنت دناستی پریکړه په () تاریخ اوشمیره پروتوکول ()
(ترسره شوی ده داروند دپارتمنت دغړو د ناستی په ترڅ کی د کریکولم بیلابیلی برخی دکمی اوکیفی اړخ په پوره اړخ
په پوره غور اومسلکی توگه و ارزوی دقناعت اوتانید وړ وگڼل شو.

په درنښت

دپارتمنت آمر

ډاکتر عبدالوکیل (سلامزی)

دستوماتولوژی پوهنځي دعلمي ناستي پریکړه

پوهنځي دناستي پریکړه په () تاریخ اوشمیره او پروتوکول ()
(ترسره شوی ده دپوهنځي دعلمي شورا ناسته کی دپیاکتنی او غور په موخه دکریکولم موضوعات وړاندی اومطرح
شول، دیادي شورا غړو تر ارزونی اوکتنی وروسته د کوریکولم محتوا دتانیید وړ وگڼله.

په درنښت

رئیس پوهنځی

ډاکتر خان محمد(وردگ)

مؤسسي دعلمي ناستي پریکړه

دمؤسسي دعلمي ناستي پریکړه په () تاریخ اوشمیره دپروتوکول ()
ترسره شوي ده دکریکولم موضوعات له کمی اوکیفی اړخه د مربوطه دپارتمنت او اړونده پوهنځي دعلمي شورا
ترتانیید وروسته دمؤسسي دعلمي شورا دناستی په ترڅ کی ترهر اړخیز غور، برسي، زیاتونو اوسمنونو وروسته
دتانیید وړ وباله.

په درنښت

رئیس پوهنتون

ډاکترخیرالدین (نثار)