Anesthesiology and Resuscitation

Anesthesia is given for surgery and painful diagnostic procedures. Anesthesiology also deals with pain management. Intensive care or intensive therapy covers all aspects of treatment of a patient in serious condition with life threatening illness. While studying the subject students learn about general and regional anesthesia for different types of procedures, preparing patient for anesthesia, post-operative care, and rudiments of intensive therapy. Problems of acute and chronic pain management are presented as well. Resuscitation is taught especially during Advanced Life Support in-hospital settings.

Biochemistry


Biophysics


Clinical Pharmacology


Clinical Psychology

The overall purposes of the psychology course:

2. Emphasis on the part of psychological factors in formation and the course of somatic diseases.
4. The methods of recognition of the most important psychological problems during the course of somatic illnesses.
5. Psychological problems in the palliative care; specificity of the emotional and intellectual contact with these patients. The standard methods of giving information (especially bad news) to the patients and families.

Conservative Dentistry

Caries epidemiology, caries prophylaxis, signs and symptoms, diagnosis and treatment of simple caries, planning of complex and conservative treatment, methods of carious lesion detection, preparation and resoration of carious and non-carious cavities with different materials, methods of pain control in conservative dentistry, elimination of dentine sensivity. Gerostomatology – characteristics of dental care for the elderly.

Conservative Dentistry – Combined Exercises

Conservative Dentistry and Endodontics (Endodontics)

Endodontics is that branch of dentistry that deals with diagnosis and treatment of oral conditions which arise as a result of pathosis of dental pulp. It is related to the biology of the normal pulp and supporting structures, etiology, diagnosis, prevention and treatment of diseases and injuries of pulp and periradicular tissues.

Conservative Dentistry and Endodontics (Conservative Dentistry)


Dental Radiology


The course is to familiarize dental students with radiological appearance of different pathological states of the facial part of the skeleton in classic xray (plain films), pantomographs and new radiological modalities (MR, CT, US) used for diagnosing the facial part of the skeleton. The radiological signs and symptoms of different dental and maxillofacial diseases will be discussed.

The course is to familiarize dental students with practical performing of different dental, pantomographic, sinonasal, and cephalometric radiograms. The classes are supervised by radiographers who teach dental students how to properly perform a radiogram and also familiarize them with the techniques of film processing and fixing in the conventional darkroom. After this course dental student should be able to correctly perform and develop a dental or pantomographic radiogram by him/herself to obtain a diagnostic image.

The course is to familiarize dental students with the general use of contemporary diagnostic imaging modalities as; CT, MR and US as well as X-ray examinations. The main goal for clinicians and radiologists is to choose the most efficient diagnostic method to make correct diagnosis in a short time and gather maximum information about pathology. Dental Students should know diagnostic imaging modalities, the general rules how to apply different imaging techniques to get the diagnosis of the specific pathology and what are the risks for the patients and medical personnel while the x-rays are being applied.

Dermatology and Venerology

The teaching program comprises two main sections, i.e. skin diseases and sexually transmitted diseases. The section of cutaneous diseases includes clinical pictures, diagnosis and treatment of the following dermatoses: infectious skin diseases (bacterial, viral, fungal and parasitic); psoriasis and lichen ruber, allergic skin diseases, dermatoses of pregnancy, autoimmune conditions, including blistering dermatoses and connective tissue diseases, skin malignancies and paraneoplastic syndromes, acne and seborrhoeic dermatosis. Current trends in esthetic dermatology, dermatological surgery and psychodermatology are presented. The section syphilis, gonorrhea and non-gonococcal urethritis, as well as acquired immunodeficiency syndrome (AIDS).

Emergency and Disaster Medicine

Lectures: General principles of first aid in emergencies: first aid in injuries, bleedings, dressing of bleeding injuries, fractures, burns; bites, drowning; immobilization of victim after accident; poisoning, electrification; recovery position; anaphylactic shock. Exercises: practical exercises (working on training manikins) in: dressing of bleeding injuries, fractures, burns, bites, drowning, immobilization of victim after accident, poisoning, electrification, recovery position, anaphylactic shock, first aid in shocking, Heimlick maneuver.

Ergonomics

Acquirement of theory and practical skills to perform basic dental procedures. Application of basic ergonomic principles while working with dental team. Theoretical knowledge and implementation of practical abilities to treat patients in the supine position using the four-hand work system. Basic dental procedures. Premedication of patients, methods of pain control in dentistry. Dryness of operation field. Dental equipment (instruments, devices) of the dental office.

First Medical Aid


Forensic Medicine

Medicolegal investigative systems, timing of death, deaths due to natural causes, blunt trauma wounds, blunt trauma injuries of the trunk and extremities, trauma to the skull and brain – cranioencephal injuries, wounds caused by pointed and sharp-edged weapons, gunshot wounds, asphyxia, deaths caused by motor vehicle accidents, airplane crashes, fire deaths, deaths by drowning, the effects of heat and cold, rape, emboli, ethyl alcohol toxicology, carbon monoxide poisoning, DNA technology in forensic sciences.

Functions of the Oromandibular System


General Chemistry

Lectures: Broensted-Lowry concept of acids and bases. Ionisation contacts (Ka and Kb).

Properties of acid basic water solutions, the hydrogen ion exponent(pH). Strong and weak acids bases. Buffers. Examples of acid-base reactions applying in dental practice; acid etch enamel conditioning, dental cements that are result of acid-base reaction.


Organic chemistry: hydrocarbons, alcohols, phenols and thiols, ethers, aldehydes and ketones Carboxylic acids and their derivatives, carbohydrates, amines, aminiacids, peptides, proteins.

Main chemical components of enamel and dentine. Hydroxylapatite, reaction with fluorine anions, reaction with acids. Collagen as the most fundamental protein of dentine. Stucture of collage, peptide bond, I, II, III and IV-order structures of collagen, basic information about biosynthesis of collagen. The role of vitamin C during collagen biosynthesis.

Laboratory training: Qualitative inorganic analysis.
1. Identification of cations.
2. Identification of anions. 3-Identification of salts. Acidimetry and alkalimetry: Preparation of 0.1 hydrochloric acid. Determination of NaOH and CH3COOOH. Miscellaneous volumetric determinations: of sodium bicarbonate, determination of sodium chlorate. Determination of oxalates of potassium dichromate, colorimetric determinations of iron ions (Fe 3) and chromatography of aminoacids.

General Surgery and Oncology (General Surgery)

Principal symptoms and signs in surgical diseases of the digestive system (abdominal pain, vomiting, disturbances of the passage of faeces and gas, bleeding into the lumen of the alimentary tract, peritoneal symptoms). Acute diseases of the abdominal cavity.


Neoplasm (head and neck) -- essential problem. Postoperative management of patients. Principles of resuscitation. The methods used in the diagnosis of surgical diseases of the digestive system (general principles of the physical examination, accessory investigations, ultrasound scanning, computed tomography, magnetic resonance imaging, endoscopic examination). The lectures deal with the problem of general surgery.

General Surgery and Oncology (Oncology)

The main purpose of the course is to learn about the common cancer types. During the course of studies the following topics are realized:

1. Common cancer types (breast, lung, colon and rectal, cervical cancer, melanoma, leukemia)
2. Cancer prevention, genetics, causes and risk factors. Smoking and cancer
3. Screening and testing
4. Cancer treatment. Types of treatment, drug information and development

General Surgery and Oncology

The aim of Propedeutics of Surgery is to instruct the students in basic knowledge and practical skills necessary for further classes in general surgery, pediatric surgery and other surgical specialties. The teaching process is based on the seminars and clinical training. The personal and individual educational program in English, carried out in 3-5 groups are the background of these education. The course is assessed with a colloquium.

Gerostomatology


Gross Anatomy

The general educational aim of the course is to provide understanding of the structure of the normal living body. The main emphasis throughout the course is placed on the functional and clinical aspects of anatomy, especially regarding head and neck anatomy (II semester), based on the knowledge of the structure.

The subject of the course was assumed to be the first step on the way of further medical studies of physiology, pathomorphology, pathophysiology, surgery, internal medicine and neurology.

The course consists of lectures, classes and seminars. The classes are performed in dissection rooms, anatomical museum, computer and radiology rooms.

The main method of student learning is a supervised self-directed examination of dissected specimen.

As the result of the course the student will acquire wide knowledge of the human body, concentrated on the details of head and neck anatomy.

Histology, Cytology and Embryology

The processes of spermatogenesis and oogenesis; the development of the three germ layers and derivatives, exploring the conservation of the genome concept as demonstrated in development; the development of the organ systems; common causes
and treatments of male/ female infertility; chromosomal and gene aberrations and the major chromosomal abnormalities affecting fetal/neonate viability; the filed of teratology, indicating drugs, conditions, viruses and other causative agents that act as tratogens; the development of common congenital malformations and possibility of interventions that promote maternal-fetal health.

History of Medicine


The main medicine achievements in the 19th century and in the first half of the 20th century. Polish medicine since th18th c. to the 17th c. Polish medicine during annexation and in the times of II Polish Republic.

Development of dental erudition in Poland in the 19th and the 20th centuries.

History of Philosophy

Lectures. It is focused on the main philosophical questions such as nature of being and existence of God, mind and cognition, values and meaning of life. The course aims at: (a) giving students the basic knowledge of some vital philosophical controversies and discussions, (b) stimulating their analytical skills and reasoning abilities, (c) enhancing their intellectual sensibility and awareness of the constitutive ideas of western culture.

Internal Medicine


Training in history taking. Training in physical examination. Presentation of typical signs and symptoms. Reading and interpreting ECG. Presentation of patients.

Implantology

Students familiarize themselves with the history and development of dental implants and relevant terminology and implant characteristics. Also brief overview of basic planning and procedure for implant therapy will be given.

Infectious Diseases

The essential method is demonstration of patients with various infectious diseases. When available, students will examine the mouth and teeth of the patients. Visible lesions will be discussed. Students need the phonendoscopes and medical torches for the exerсise.

Ethics in Dentistry

The interface between law, medicine and ethics is a subject of great contemporary interest and relevance. New developments in medical practice and research are constantly in the headlines, and the advancements in knowledge that this represents create new challenges, on an almost weekly basis, that lawyers, judges, medical professionals and the public find themselves struggling to address. The aim of this module is to explore the critical relationship between the law, and the practice of medicine, in order to set the groundwork for discussions in the more detailed modules. In doing so, it will focus on the varied approaches to, and multi-layered interrelationships between, ethics, medicine and law, including basic ethical principles and key (legal) concepts relating to, among others, personhood, autonomy, human rights, sanctity of life, and quality of life.

Library Training

Training syllabus: Librarianship, bibliography and scientific information: academic libraries in Łódź: organizational structure of university library, information about reading rooms, circulating rooms, information services, presentation of special bibliographies and library catalogues: types of collections (books, journals, special collection and information media - CDs, audio cassettes, video recordings Euro Trans Med teletransmission) ERL-Medline database and Internet.
Management and Economics in Dentistry

Basic knowledge of economics in dentistry.

Material Science

The aim of the classes: acquisition of the theoretical knowledge of composition, structure, physical, chemical and biological properties, advantages, disadvantages and appliance of basic and auxiliary dental materials (temporary restorative materials, liners, amalgams, composites, glassionomer cements, resin - modified glassionomer cements, compomers, luting cements, impression materials, plasters, laboratory wax, isolation materials, acrylic resins, ceramic materials, investment materials, metals and metal alloys, abrasive and polishing materials). Students also acquire ability to work with dental materials used in restorative dentistry and prosthodontics in clinical (phantom conditions) and technical standard procedures.

Maxillofacial Surgery and Oncology

This course will cover the areas of maxillofacial traumatology, head and neck oncology and revision of basic applied head and neck anatomy and physiology. The aim of this course is to familiarize students with signs and symptoms of hard and soft tissue injuries and neoplasms, taking medical history and clinical examination and to provide efficient knowledge to make a provisional diagnosis, understanding etiology, assessing risk factors, epidemiology. Basic principles of ablative and reconstructive surgery in patients with neoplasms within the head and neck region are presented. Students will also familiarize themselves with some surgical tools and procedures. Classes are directed toward providing the student with theoretical and fundamental practical knowledge in making diagnosis, treatment planning and follow-up.

Medical Biology


Medical Genetics


Microbiology of Oral Cavity


Microbiology and Immunology

Neurology

The clinical rotation in Neurology consists of lectures and ward teaching, which provide close contact with patients and various disorders of the nervous system. The course will cover most of the neurological problems, with a special emphasis on cerebrovascular diseases, demyelinating diseases, dementias and neurodegenerative diseases, movement disorders, epilepsy, headaches and other pain symptoms. Both lectures and practical classes will extensively apply to a state of the art neuroimaging techniques and other important diagnostic methods. In order to benefit most of the course the students are expected to be well familiar with neuroanatomy, neurophysiology and neuroscience.

Oral Surgery


Ophthalmology

Basic knowledge and understanding of the visual system is essential to any practicing physician. Ophthalmic signs and symptoms are present in many systemic diseases. We aim at providing students with good understanding of the basic anatomy and physiology of the visual system as well as with good history-taking and examining skills including recognition of important clinical signs and common diseases.

Having mastered the basics, you will be introduced to many interesting areas of medical and surgical Ophthalmology, remaining a subject of post-graduate teaching.

Orthodontics


Otolaryngology

Examination of the ENT patient – basic examination techniques and diagnosis of the most common otolaryngological diseases. Review of anatomy, physiology and pathophysiology of the nose, paranasal sinuses, pharynx, larynx, external, middle and inner ear. Head and Neck tumors with the special emphasis on:

- Oral cavity and pharynx
- Nasal cavity and paranasal sinuses
- Larynx
- External and middle ear.
- Principles of the audiometric examination and vestibular test.
- Inner ear disease: hearing loss, vertigo.
- Basic E.N.T. producers and surgical techniques – indications and complications
- Introduction to the out-patient E.N.T. practice
- Otolaryngologic Emergencies

Parasitology and Mycology

Epidemiological data about parasitic and fungal diseases in the aspect of the socially significant "disease of the contemporary world", and in relation to their role in the immunodeficiency syndromes. Parasites and fungi as part of the oral cavity ontocenosis;
the oral cavity as an entry of invasion. Clinical manifestations of fungal and protozoal infestation of the oral cavity: trichomonosis, candidosis, trichomonosisis complicated by mycosis.

Pathogenicity features of parasites and fungi. General data on the evaluation of parasitic and fungal sensitivity to chemical agents, with regard to drugs (antiparasitics, antimycotics), used in the oral cavity infections. Parasites and fungi of the digestive tract, the respiratory system, the nervous system, in parenchymal organs and muscles, in blood, of the urinary and genital organs, of the skin.

Sensitivity of selected parasites and fungi to drugs (determining curves of activity, estimating CL50 or MIC).

Pathomorphology of Oral Cavity


Neoplasia. Inflammation and healing. Pathomorphology of the heart and blood vessels, respiratory system, alimentary tract, pancreas and lever, kidneys and urinary tract, male and female reproductive system, nervous system, endocrine system, hemopoietic system, skin, oral pathology.

Pathophysiology


Pathomorphology


Neoplasia. Inflammation and healing. Pathomorphology of the heart and blood vessels, respiratory system, alimentary tract, pancreas and lever, kidneys and urinary tract, male and female reproductive system, nervous system, endocrine system, hemopoietic system, skin, oral pathology.

Pediatric Dentistry

The course in Pediatric Dentistry is held through the 2nd, 3rd, 4th and 5th year. Subjects of the course: to gain information about dental care at a particular stage of odontogenesis; management of children in a dental clinic, examination of young patients, assessment of developmental irregularities, preventive and therapeutic procedures in dental caries, oral health promotion and education, pulp and periapical diseases, traumatic injuries of milk and permanent teeth, diseases of mucosal membrane and periodontium, method of pain and anxiety control/ behaviour management, local analgesia, sedation, oral manifestations of systemic diseases.


Pediatrics

The clinical rotation allows the student to learn the symptomatology and the treatment of most common disorders and diseases of childhood. The rotation gives the opportunity to acquire the necessary skills in taking a paediatric history, to examine children of all ages and to gain experience in selection of important clinical information. During clinical presentations student learns how to recognize and differentiate diseases. Lectures and seminars provide the student with the basic knowledge of normal physical and mental development of children, proper feeding and various diseases of childhood.

Periodontology and Oral Mucosal Diseases

diseases relapse.

examination using Wood's lamp. Oral changes in diabetes mellitus. The etiology, pathogenesis, clinical appearances,
histopathology, treatment, diagnosis, and prognosis of these oral diseases are studied. The role of saliva in oral pathology.
Quantitative saliva tests. During the course students perform treatment of patients under the faculty supervision and assist in
periodontal surgical procedures.

Pharmacology

Principles of mechanism of drug action. Absorption, distribution and elimination of drugs and some most important toxins. Drug-
induced adverse reactions and most common drug interactions. Medical formulary. Principles of therapy with antibiotics and
other chemotherapeutics. Pharmacology and detailed formulary of antibiotics and sulphonamides. Antifungal, antimycobacterial
Analeptics. Sedatives and sleepinducing agents. Local anaesthetics. Pharmacology of drugs used as a pretreatment for surgical

Physical Education

Gymnastics, callanetics, aerobic, stretching, volleyball, basketball, tennis, table tennis, swimming.

Physiology

Cell functions. Intercellular communication. Physiology of neurons, skeletal smooth and cardiac muscle. Synaptic transmission.
Awakeness and sleep. Learning, Memory. Autonomic nervous system and visceral regulation. Endocrine system and hormones
functions. Physiology of blood and circulation system. Cardiovascular regulatory mechanisms. Respiration. Respiratory control.
Regulation of body fluids composition and volume. Acid-base balance.

Physiology of the Masticatory System

Anatomy and function of the masticatory system. Functions of the masticatory system. Occlusal conditions in the individual
development. Morphology and physiology of teeth and periodontal ligaments. Salivary glands, saliva and oral mucosa.
Neuromuscular masticatory system. Morphology and biomechanics of the temporo-mandibular joint. Biomechanics of the
masticatory system in three-dimensional static and dynamic systems. Diagnosis of normal structure and function of the masticatory
system.

Polish

The course is taught in two basic modules:
(1) introductory course for beginners; a survival language course"- the emphasis is on developing of the necessary language skills
to handle the most frequent situations. Therefore, the course centers around teaching functional basics in understanding and
speaking a language and does not attempt to present a systematic and comprehensive introduction to Polish grammar although
some of it elements are included.
(2) academic pre-intermediate course – elements of medical Polish in both written and spoken form, basic medical terminology with
focus on dental vocabulary, communication with the patient and medical personnel, asking questions, giving instructions and
explaining procedures, understanding and filling in medical forms.

Preclinical Endodontics

Endodontics is a branch of dentistry that deals with diagnosis and treatment of oral conditions which arise as a result of pathosis
of the dental pulp. It is related to the biology of the normal pulp and supporting structures, etiology, diagnosis, prevention and
treatment of diseases and injuries of pulp and periradicular tissues.

Pregnancy Physiology

First day: menstrual cycle, fertilisation and implantation, changes in a pregnant woman organism, optimal conditions for the
foetus development and the course of pregnancy. Second day: placenta and its role: protective, hormonal, nutritive, placental
transport. Third day: foetus development: normal, hypotrophy, clinical examination, USG and other. Fourth day: examinations performed during pregnancy and their interpretation and importance of management of a pregnant woman, pregnant woman’s nourishment, focal infections. Fifth day: normal labour and puerperium, mature newborn.

Preclinical Periodontology


Prosthetic Dentistry

Fifteen simulation exercises. During this manual course students follow the stages of clinical and laboratory work for fabrication of prosthetic appliances. (Fixed dentures) During the course the student should acquire the skills of preparing abutment crowns on the phantom model: intracoronal restorations (inlay, onlay, overlay), post and core restorations, full veneer metal crowns, all-ceramic crowns, metal-ceramic crowns, temporary crowns (protective), fixed bridges. During the classes students perform all the stages of clinical procedures for different prosthodontic appliances.

Rehabilitation

General physiotherapy. The program enables students to discuss: the basic sections of kinesitherapy and physiotherapy – sorts of treatment procedures, the influence of the procedures on the human body, indications and contraindications of kinesitherapy and physiotherapy procedures, usage of physiotherapy methods in dentistry, manners of performing procedures and safety principles while carrying out the procedures.

Social Dentistry

The subject of “Public Health Dentistry” comprises:
- Oral health promotion.
- Health hazards for patients and personnel resulting from hospital infections, ambulatory dental surgery.
- Epidemiological methods of oral health status assessment.
- Environmental health conditioning.
- Dental hygiene of developmental age.
- Hygiene of food and nutrition.
- Mode of nutrition and nutritional status assessment.
- Role of nutrition in prevention, etiopathogenesis and course of caries and other dental diseases.

Sociology

General Sociology: social life, current and scientific sociology, culture and its influence on social life, personality (concept, approaches, process of the development of personality) methods of sociological research, norms and pathology, selected aspects of social pathology; relation between medicine and sociology: object and problems of medical sociology, health and disease as social categories, models of doctor-patient relation, selected aspects of social communication, medicalization of social life, social effects of the engineering orientation in medicine and the biomedical model, models of health care organization, styles of control and management.