YEAR 1 / SEMESTER 1

aZLAN0131p Anatomy I - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor prof. RNDr. Petr Dubový, CSc.

Department of Anatomy - Theoretical Departments - Faculty of Medicine

Course objectives This subject is dedicated to study of passive and active movement apparatus. At the end of the course students should be able to:

- understand the standardized and universally accepted anatomical terminology (P.N.A.)

- name all parts of the human skeleton including the detailed relief

- characterize the newborn skull

- describe correctly joints of the bones including the movements occurring at each joint

- identify individual muscles of the human body, describe their attachments and define actions of these muscles

Syllabus

・1. Terminology, planes and direction of the body. General osteology. Skeleton of the spine and the thorax.

・2. Skeleton of the upper extremity.

・3. Skeleton of the lower extremity.

・4. Neurocranium.

・5. Splanchnocranium.

・6. Cavities of the skull.

・7. General arthrology. Joints of the spine and thorax.

・8. Joints of the skull and upper extremity.

・9. Joints of the lower extremity. Pelvis.

・10. General myology, muscles of the head.

・11. The muscles of the neck, thorax, back.

・12. Muscles of the upper limb.

・13. Muscles of the lower limb.

・14. Muscles of the abdomen, canalis inguinalis.

Literature

・recommended literature

・Liebgott, Bernard. The anatomical basis of dentistry. 3rd ed. Mosby, ISBN 0-323-06807-3

・SOBOTTA, Johannes. *Atlas of human anatomy.* Edited by Reinhard Putz - Reinhard Pabst - Renate Putz. 13th English ed., 21st Germa. Philadelphia: Lippincott Williams & Wilkins, 2001. 404 s. ISBN 0781731747.

・PÁČ, Libor a Ladislava HORÁČKOVÁ. *Anatomie pohybového systému člověka (Anatomy of lomomotory system in man)*. 1. vyd. Brno: Masarykova univerzita, 2009. 146 pp. ISBN 978-80-210-4953-6.

・SVÍŽENSKÁ, Ivana a Vlastimil VÁLEK. *Základy anatomie v zobrazovacích metodách. I. Skiaskopie a skiagrafie (Anatomy in image methods. I. Skiascopy and skiagraphy)*. První. Brno: IDVPZ Brno, MU Brno, Boston Scientific ČR s.r.o., 2001. 72 pp. ISBN 80-7013-334-1.

・SOBOTTA, Johannes. *Sobottův Atlas anatomie člověka.* Edited by Reinhard Putz - Reinhard Pabst - Renate Putz. 1. české vyd. Praha: Grada, 2007. 399 s. ISBN 9788024718705.

・PÁČ, Libor, Ladislava HORÁČKOVÁ a Hana NECHUTOVÁ. *Anatomy of human locomotor system*. 1. vyd. Brno: Masarykova univerzita Brno, 2010. 119 pp. ISBN 978-80-210-5258-1.

・not specified

・NETTER, Frank H. *Atlas of human anatomy*. 4th ed. Philadelphia: Saunders Elsevier, 2006. 548 color. ISBN 1416033858.

・ČIHÁK, Radomír. *Anatomie.* Edited by Miloš Grim. 2., upr. a dopl. vyd. Praha: Grada, 2002. 470 s. ISBN 9788024701431.

・NETTER, Frank H. *Anatomický atlas člověka*. Edited by John T. Hansen, Translated by Libor Páč - Petr Dubový. Vyd. 2., rozš. Praha: Grada, 2005. [14], 542. ISBN 8024711532.

Teaching methods Lectures

Assessment methods Assessment is carried out after completion of following subjects within the scope of anatomy final examination: ZLAN0131s Anatomy I - seminar, ZLAN0232p Anatomy II - lecture, ZLAN0232s Anatomy II - seminar, ZLAN0333p Anatomy III - lecture, ZLAN0333s Anatomy III - seminar, ZLAN0333c Anatomy III - dissection.

aZLAN0131s Anatomy I - seminar

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: z (credit).

Supervisor prof. RNDr. Petr Dubový, CSc.

Department of Anatomy - Theoretical Departments - Faculty of Medicine

Course objectives This subject is dedicated to study of passive and active movement apparatus. At the end of the course students should be able to:

apply the correct anatomical nomenclature

- name all parts of the human skeleton including the detailed relief
- describe correctly joints of the bones including the movements occuring at each joint
- characterize the newborn skull
- distinguish the male and female skull and pelvis
- identify individual muscles of the human body, discuss their attachments and innervations
- define actions of individual muscles and muscular groups
- define skeletal structures demonstrated by radiographs in basic projections

Syllabus

・1. Terminology, planes and direction of the body. General osteology. Rtg anatomy.

・2. Skeleton of the spine and thorax.

・3. Skeleton of the upper extremity.

・4. Skeleton of the lower extremity.

・5. Neurocranium.

・6. Splanchnocranium.

・7. Cavities of the skull.

・8. Joints of the spine and thorax. Joints of the upper extremity.

・9. Joints of the skull and lower extremity. The pelvis.

・10. Oral examination: osteology, arthrology.

・11. Muscles of the head, neck, thorax, back.

・12. Muscles of the abdomen, canalis inguinalis.

Literature

・recommended literature

・Liebgott, Bernard. The anatomical basis of dentistry. 3rd ed. Mosby, ISBN 0-323-06807-3

・SOBOTTA, Johannes. *Atlas of human anatomy.* Edited by Reinhard Putz - Reinhard Pabst. 13th English ed., 21st Germa. Philadelphia: Lippincott Williams & Wilkins, 2001. 429 s. ISBN 0781731 739.

・PÁČ, Libor a Ladislava HORÁČKOVÁ. *Anatomie pohybového systému člověka (Anatomy of lomomotory system in man)*. 1. vyd. Brno: Masarykova univerzita, 2009. 146 pp. ISBN 978-80-210-4953-6.

・SVÍŽENSKÁ, Ivana a Vlastimil VÁLEK. *Základy anatomie v zobrazovacích metodách. I. Skiaskopie a skiagrafie (Anatomy in image methods. I. Skiascopy and skiagraphy)*. První. Brno: IDVPZ Brno, MU Brno, Boston Scientific ČR s.r.o., 2001. 72 pp. ISBN 80-7013-334-1.

・SOBOTTA, Johannes. *Sobottův Atlas anatomie člověka.* Edited by Reinhard Putz - Reinhard Pabst - Renate Putz. 1. české vyd. Praha: Grada, 2007. 431 s. ISBN 9788024718705.

・PÁČ, Libor, Ladislava HORÁČKOVÁ a Hana NECHUTOVÁ. *Anatomy of human locomotor system*. 1. vyd. Brno: Masarykova univerzita Brno, 2010. 119 pp. ISBN 978-80-210-5258-1.

・not specified

・NETTER, Frank H. *Atlas of human anatomy*. 4th ed. Philadelphia: Saunders Elsevier, 2006. 548 color. ISBN 1416033858.

・ČIHÁK, Radomír. *Anatomie.* Edited by Miloš Grim. 2., upr. a dopl. vyd. Praha: Grada, 2002. 470 s. ISBN 9788024701431.

・NETTER, Frank H. *Anatomický atlas člověka*. Edited by John T. Hansen, Translated by Libor Páč - Petr Dubový. Vyd. 2., rozš. Praha: Grada, 2005. [14], 542. ISBN 8024711532.

Teaching methods Practice with the human anatomical specimens.

Assessment methods Completion of the subject is assessed by the course-unit credit. A precondition for obtaining the course-unit credit is 95% attendance at the seminars (1 non-attendance tolerated).

aZLBF011c Medical Physics and Informatics - practice

Extent and Intensity Seminar: 4 hour(s) per week. Number of credits: 4 credit(s). Type of Completion: z (credit).

Supervisor prof. RNDr. Vojtěch Mornstein, CSc.

Department of Biophysics - Theoretical Departments - Faculty of Medicine

Contact Person: Mgr. Daniel Vlk, CSc.

Course objectives At the end of the course students should be able: understand and explain biophysical principles and laws; operate basic biophysical devices; evaluate obtained data by the basic biophysical methods in light of a scientific, effective, safe and efficient attitude to their use; understand principles of the more complex therapeutical and diagnostical medical devices; discriminate possible usage of the biopfysical techniques and medical devices in practice;

Syllabus

・**Practical exercises on biophysics**

・1. Introduction, regulations of practical exercises, laboratory safety rules, etc. An introduction to the theory of measurement.

・2. Information (overview and evolution). Medical informatics (definitions, the subject). Information technologies (hardware, software, OS, LAN, WAN).

・3. Information resources (data mining - data warehousing). Information systems (HIS, expert systems, AI, CME).

・4. Measurement of liquid viscosity. Measurement of surface tension of liquids

・5. Eosin absorption curve. Spectrophotometrical determination of concentration of eosin. Refractometric

determination of NaCl concentration. Polarimetry.

・6. Audiometry. Measurement of the blood presure. Ergometry.

・7. Temperature measurement with a thermocouple. Measuring surface skin temperature with a thermistor. Measuring enviromental parameters (noise).

・8. Haemolysis of erythrocyte suspension by therapeutic ultrasound. Measuring ionising radiation absorption.

・9. Measuring the voltage and frequency of electric signals by the oscilloscope. Measuring skin resistance. Measuring tissue model impedance. Analysis of acoustic elements of human voice.

・10. Electromagnetic radiation Measuring the cooling effect of the environment. Catathermometry. Measuring the illuminance, Luxmeter.

・11. Contact and contactless thermography. Thermocamera and thermovision. Physiotherapy.

・12. Electrodiagnostic, electrotherapeutic methods. Individual measuring of the ECG. Electrical excitability. Effect of the direct and alternating currents.

・13. Advanced imaging methods. Ultasound – diagnostic and therapeutic usage. Doppler measuring of the velocity of the blood flow. X-rays and Tomography. NMR.

・14. Final test.

Literature

・recommended literature

・HRAZDIRA, Ivo, Vojtech MORNSTEIN, Aleš BOUREK a Jiřina ŠKORPÍKOVÁ. *Fundamentals of Biophysics*

and Medical Technology. 1. vydání 1. dotisk. Brno: Muni Press, 2009. 317 pp. ISBN 978-

80-210-4228-5.

・MORNSTEIN, Vojtěch, Ivo HRAZDIRA a Aleš BOUREK. *Lékařská fyzika a informatika : (se zaměřením*

na zubní lékařství). [1. vydání]. Brno: Neptun, 2007. 352 stran. ISBN 9788086850023.

・HRAZDIRA, Ivo a Vojtěch MORNSTEIN. *Lékařská biofyzika a přístrojová technika*. Dotisk 1. vyd.

Brno: NEPTUN, 2004. 381 s. ISBN 8090289614.

Teaching methods Practical exercises

Assessment methods Basic requirement is the full atendance in the lessons. Basic requirement is the full atendance in the lessons. Theoretical knowledges of the principles used methods are continuously controled by oral examination, in case of fundamental ignorance, student can be excluded from a lesson. For all tasks students must elaborate comprehensive and unique report, these are graded. If are two or more reports graded as ” unsuccessful” , student cannot write a closing test. Course is finished by the multiple choice test consisting usually 20 questions, evaluated by 20 points. For successfully mastered test student need at least 10 points.

aZLBF011p Medical Physics and Informatics - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion:

zk (examination).

Supervisor prof. RNDr. Vojtěch Mornstein, CSc.

Department of Biophysics - Theoretical Departments - Faculty of Medicine

Contact Person: prof. RNDr. Vojtěch Mornstein, CSc.

Course objectives At the end of the course students should be able to: to understand the principles of devices used in dental medicine; to recognize possible risks connected with the use of some medical devices (of mechanical, electromagnetic or optical character, ionizing radiation); to accept rules and methods of safe use of this devices - both in patients and in the healthcare professionals; to understand physical principles of some physiological processes and their affection by external physical/environmental conditions (cardiovascular system, respiration, origin of membrane potentials; to understand the main concepts of the biophysics of sensory organs; to understand the main concepts in information theory and namely the healthcare informatics

Syllabus

・Medical physics and informatics.

1. Introduction. Biophysical view on structure of matter.

2. Biological effects of ionising radiation.

3. Thermodynamic principles and entropy.

4. Thermodynamic processes in living organisms.

5. Introduction into molecular biophysics I (subject of study).

6. Biophysics of biomembranes. Bioelectric phenomena.

7. Biophysics of cardiovascular system.

8. Biophysics of respiratory system.

9. Biophysical function of sensory receptors. Biophysics of hearing.

10. Biophysics of vision.

11. Effects of mechanical forces and acoustic fields on the living organisms.

12. Biological effects of electromagnetic fields and non-ionising radiation.

13. Introduction into biocybernetics and modelling.

14. Medical informatics (importance and resources).

Physical principles of medical technology.

1. Medicine and technology. Biosignals and their processing.

2. Conventional X-ray imaging methods.

3. Modern tomographic methods (CT, MRI).

4. Radionuclide diagnostics.

5. Methods and instruments for ionising radiation therapy.

6. Measurement and registration of temperature.

7. Optical laboratory instruments.

8. Electrodiagnostic methods.

9. Ultrasound imaging.

10. Ultrasound Doppler and duplex methods.

11. Measurement and registration of mechanical quantities, namely blood pressure measurement.

12. Methods and instruments used in physiotherapy.

13. Modern physical methods in surgery.

Literature

・required literature

・HRAZDIRA, Ivo, Aleš BOUREK a Jiřina ŠKORPÍKOVÁ. *Fundamentals of biophysics and medical technology*.

Edited by Vojtěch Mornstein. 1. vydání. Brno: Masaryk University, 2007. viii, 317.

ISBN 9788021042285.

・MORNSTEIN, Vojtěch, Ivo HRAZDIRA a Aleš BOUREK. *Lékařská fyzika a informatika : (se zaměřením na zubní lékařství)*. [1. vydání]. Brno: Neptun, 2007. 352 stran. ISBN 9788086850023.

Teaching methods lectures

Assessment methods The practical exercises in Biophysics are compulsory, missing practicals have to be substituted. The exam has theoretical character but can be done only with the credits gained for practicals. The exam consists of written test consisting of 25 questions and oral part, which can be done only when the number of correctly answered questions is 14 or more. This limit is lowered to 11 in the last exam resit. The oral part consists of 2 questions as a rule. They are chosen from the list which is available in department web page. The examined student has to be able to explain the problems and characterise their possible clinical importance.

aZLBI0121c Biology I - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: z (credit).

Supervisor prof. Ing. Petr Dvořák, CSc.

Department of Biology - Theoretical Departments - Faculty of Medicine

Contact Person: Mgr. Kateřina Vopěnková, Ph.D.

Course objectives After completion of the course student: operates light microscope; understands the basics of electron microscopy, genetic toxicology, gene engineering or the methods of karyotyping; is able to evaluate the risk of hereditary diseases in a patient on the basis of assigned family anamnesis of this disease; is able to propose and interpret elementary molecular screening methods for some hereditary, neoplastic or microbial diseases. Student is also able to apply this knowledge and skills in other subject, especially histology, pathology and human genetics.

Syllabus

・Week 1: Biology - instructions. Non-cellular organisms and infectious agents

・Week 2: Prokaryotic cells and their medical significance

・Week 3: Microscopic observation of eukaryotic cells

・Week 4: In vitro cultivation methods of human cells - implication for medical research

・Week 5: Plasma membrane - osmosis, cell fusion

・Week 6: Principles of electron microscopy and cellular ultrastructure

・Week 7: Structure and replication of DNA. **Control test (knowledge of the weeks**

1 to 6 - practices, lectures)

・Week 8: Transcription and translation

・Week 9: Methods of cell cycle studying

・Week 10: Mitosis observation under light microscope

・Week 11: Biological significance of meiosis - gametogenesis

・Week 12: Human karyotype and chromosomal abnormalities

・Week 13: Genetic disorders - autosomal inheritance **Control test (knowledge**

of the weeks 7 to 12 - practices, lectures)

・Week 14: substitution practices

・Week 15: Credits. **Re-sit control tests, credit tests**

Literature

・required literature

・Actual protocols for practices are provided in electronic form in the Information System of the

Masaryk University (IS): Study Materials of the course aZLBI0121c

Teaching methods laboratory practice, class discussion

Assessment methods Practical classes are mandatory.
Requirements for course completion: full attendance in the practical classes (1 absence, excused or unexcused, is allowed); all protocols completed (also for missed lessons) and checked and signed by appropriate teachers; successfully passed 2 written control tests during the semester (20 questions each, 4 possibilities, 1 answer correct, student need to reach at least 14 points out of 20 in each test). In case you do not pass one of the control tests and its re-sit, you have to pass the final test (so-called Credit test) based on knowledge of the whole semester. The test comprises of 20 questions: 10 test questions (multiple answers can be correct, negative marking is obtained for incorrect answers) + 10 given terms for written explanation. At least 14 points out of 20 are needed to pass.
In case of student’ s late arrival to the practice, poor activity at the practice student is required to write an essay in the length of 2 pages on a given topic. Same for the case of 2nd and any additional absence in practices, excused or unexcused. Find the instructions for essay writing in the Courserelated instructions in the IS, bring the essay printed to the teacher who specified the topic and be ready to answer the teacher’ s questions regarding the topic. In case of 3 absences, (or more than 3 absences all excused by the Office for Studies within 5 days from the beginning of the absence and introduced into the Information System), it is addressed individually and credit is given only after the proof of the student’ s knowledge of the whole semester topics (socalled Credit test, see above).
In case of 4 or more unexcused absences, credit is not awarded.

aZLBI0121p Biology I - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 0 credit(s). Type of Completion:

z (credit).

Supervisor prof. Ing. Petr Dvořák, CSc.

Department of Biology - Theoretical Departments - Faculty of Medicine

Contact Person: Mgr. Kateřina Vopěnková, Ph.D.

Course objectives After completion of the course student: understands elementary cellular processes and processes taking place during development of a human body; comprehends the complexity of intercellular communication and mutual regulation of individual cells in a multicellular organism; is able to deduce and explain the difference between healthy and pathologically-working cell; is able to express basic coherence between malfunction in cellular processes and development of diseases, especially hereditary diseases, cancers or developmental defects; can explain and justify action of some therapeutics with emphasis on modern medicine. Student is also able to apply this knowledge and skills in other subject, especially physiology, pathophysiology and human genetics.

Syllabus

・Week 1:・Introduction to medical biology - from understanding of cellular principle to modern biomedicine

(prof. Ing. Petr Dvořák, CSc.)

・Week 2:・Basic architecture and function of eukaryotic cells (prof. MUDr. Augustin Svoboda, CSc.)

・Week 3:・Plasma membrane structure and function (prof. MUDr. Augustin Svoboda, CSc.)

・Week 4:・Molecular mechanisms of cell adhesions and intercellular communications (Mgr. Kateřina Cetkovská)

・Week 5:・Cytoskeleton and cell migration in health and disease (prof. MUDr. Marie Kopecká, CSc.)

・Week 6:・Mitosis and cytokinesis in normal and cancer cells (prof. MUDr. Marie Kopecká, CSc.)

・Week 7:・Molecular mechanisms regulating cell cycle and cell proliferation (Mgr. Stjepan Uldrijan, CSc.)

・Week 8:・Architecture, molecular biology and pathology of eukaryotic cell nucleus (doc. MUDr. Iva Slaninová,

Ph.D.)

・Week 9:・Biosynthesis of proteins in eukaryotic cells (RNDr. Mário Špírek, Ph.D.)

・Week 10:・Regulation of gene expression - principles and examples (prof. MUDr. David Šmajs, Ph.D.)

・Week 11:・Cell death - mechanisms, implication for medical research (doc. MUDr. Iva Slaninová, Ph.D.)

・Week 12:・Introduction to developmental biology (Mgr. Vladimír Rotrekl, Ph.D.)

・Week 13:・Basic principles and molecular mechanisms regulating early development of mammals – physiology and pathology (Yuh-Man Wadeley, M.Sc., Ph.D.)

・Week 14・Substitution lecture

Literature

・required literature

・*Essential cell biology*. Edited by Bruce Alberts. 3rd ed. New York: Garland Science, 2009. 1 v. ISBN 9780815341307.

・*Medical genetics at a glance*. Edited by D. J. Pritchard - Bruce R. Korf. 3rd ed. Chichester, England: Wiley-Blackwell, 2013. 1 online r. ISBN 9781118689028.

・recommended literature

・HARDIN, Jeff, Gregory BERTONI a Lewis J. KLEINSMITH. *Becker's world of the cell*. 8th ed. Boston: Benjamin Cummings, 2012. xxviii, 79. ISBN 9780321709783.

・LODISH, Harvey F. *Molecular cell biology*. 6th ed. New York, N.Y.: W.H. Freeman and Company, 2008. xxxvii, 11. ISBN 9780716776017.

・SNUSTAD, D. Peter a Michael J. SIMMONS. *Principles of genetics*. 5th ed. Hoboken: John Wiley & Sons, Inc, 2009. xix, 823. ISBN 9780470388259.

・WEINBERG, Robert A. *The biology of cancer*. Second edition. London: Garland Science, 2013. xx, 876. ISBN 9780815345282.

・WOLPERT, Lewis. *Principles of development*. 2nd ed. Oxford: Oxford University Press, 2002. xxv, 542. ISBN 0198792913.

・not specified

・CAMPBELL, Neil A. *Biology*. Edited by Jane B. Reece. 7th ed. San Francisco: Pearson/Benjamin Cummings, 2005. xl, 1231. ISBN 080537146X.

Teaching methods lecture

Assessment methods Lecture attendance is optional. Students continue with following subjects without proof of this semester's knowledge. Biology I (aZLBI0121p) is followed by Biology II (aZLBI0222p) that ends up with a written examination test. The test is based on knowledge of all topics from both semesters (lectures, practices).

aZLCJ0181 Czech Language for Foreigners I - practice

Extent and Intensity Seminar: 3 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: z (credit).

Supervisor PhDr. Ivana Rešková, Ph.D.

Language Centre, Faculty of Medicine Division - Faculty Branches of University Departments - Faculty of Medicine

Course objectives The aim of the tuition is working knowledge of the Czech language on the A1 level of the ” Common European Framework of Reference” (CEFR)(Independent User) checked by an examination.

Syllabus

・1st week: *Communicative Competency:* Introduction, Greetings. Where are you from? Phrases in the classroom. *Grammar:* Czech alphabet. The sounds of Czech and their pronunciation and spelling. Vowels, diphthongs. Consonants, assimilation of consonants in groups. The verb ” to be” . Cardinal numerals 1 - 20.

・2nd week: *Communicative Competency:* What do you do in Brno? *Grammar:* Who is it? What is it? Natural/grammatical genders in Czech. Three genders of Czech nouns. Nominative of singular in nouns, adjectives, pronouns, and numeral ” one” .Demonstrative pronouns ” ten, ta, to” . Cardinal numerals 21-1000.

・3rd week: TEST 1. *Communicative Competency:* What is my friend like? *Grammar:* Adjectives: hard and soft. Jaký, -á, -é? Possesive pronouns.

・4th week: *Communicative Competency:* My family. *Grammar:* What time is it? Czech verbs (introduction). Project 1: My family.

・5th week: *Communicative Competency:* Time and activities. *Grammar:* Present tense of verbs (conjugation ” -ám” ,” -uji, -ím, -u”). Verb negation. Time expressions, days of the week, months.

・6th week: TEST 2. *Communicative Competency:* I like/dislike doing st, I like/don’ t like st. *Grammar:* Modal verbs. The verb ” to have” . Accusative case in singular (introduction), see 10th week.Project 2: Likes and dislikes.

・7th week: *Communicative Competency:* Where is it? How can I get there? Orientation in the City. *Grammar:* Adverbs of place. The verb ” to go” . Locative case of nouns in singular (introduction)

・8th weeks: TEST 3. *Communicative Competency:* My daily routine. University city Brno. *Grammar:* . Where do you go versus Where are you? Project 3: My life in Brno.

・9th week: *Communicative Competency:* How to write an informal letter in Czech. Telephone calls.

Grammar: Parts of body I. Revision.

・10th week: TEST 4 (ORAL TEST). *Communicative Competency:* Meals. Café, Restaurant. Likes and dislikes: rád+verb, mít rád, líbit se, chutnat. *Grammar:* Present tense, infinitive. Accusative of singular in nouns, adjectives, pronouns, and numeral ”one”. Verbs nad prepositions used with the accusative.

・11th week: *Communicative Competency:* Conversation at restaurant. .*Grammar:* Modal verb ”to want”. Prepositons do-na-v. Personal pronouns in the accusative. Bolí mě... . Parts of body II.

・12th week: REVISION TEST 5 (1-5). *Communicative Competency:* Visit. Czech traditions. Christmas.

・13th week: *Dissection week.* Attendance of Czech class according to Schedule of dissection practice (morning/afternoon) is compulsory!!!

・14th week: FINAL TEST (21th December).

Literature

・HOLÁ LÍDA. *New Czech Step by Step*. 4. opr. vyd. Praha: Akropolis, 2008. 256 pp. ISBN 978-80-86903-73-6.

・GRUNDOVÁ, Dominika. *Needs of Patients. Czech-English Phrasebook for Beginners.* 2., revid. vyd. Praha: Eurolex Bohemia, 2004. 104 pp. ISBN 80-86432-86-6.

・REMEDIOSOVÁ, H. a E. ČECHOVÁ. *Chcete mluvit česky? / Do you want to speak Czech? Textbook 1. A communicative course of contemporary Czech for English speakers (beginning to intermediate level).* 5. vyd. Liberec: Harry Putz, 2005. 414 pp. ISBN 80-86727-04-1.

・The first title is obligatory; the others are recommended.

Teaching methods The tuition is realised in the form of practical courses.

Assessment methods The tuition is realised in the form of practical courses. The students' presence in these courses is strictly required, maximally two properly apologised absences are tolerated. The tuition is finished by a course-unit credit given on the basis of the students' presence, preparation for classes, sitting for Progress Tests and their successful passing of a credit test. The basic limit for passing all tests is 70%. In case of passing five class tests, which are obligatory for all students, the basic limit in the credit test is reduced by 10%. Any copying, recording or leaking tests, use of unauthorized tools, aids and communication devices, or other disruptions of objectivity of exams will be considered noncompliance with the conditions for course completion as well as a severe violation of the study rules. Consequently, the teacher will finish the exam by awarding grade ”NNN” in the Information System, and the Dean will initiate disciplinary proceedings that may result in study termination.

aZLLC011c Medical Chemistry - practice

Extent and Intensity 3x2 hodiny. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor prof. RNDr. Eva Táborská, CSc.

Department of Biochemistry - Theoretical Departments - Faculty of Medicine

Course objectives Students become familiar with the background and equipments of chemical laboratory. They will learn to perform simple laboratory operations. During experiments students verify some findings discussed in theoretical lessons.

Syllabus

・Safety measures in chemical laboratory. Volumetric ware. Preparation of solutions.

・Measuring pH of solutions (acids, bases, salts, saliva, beverages). Preparation of phosphate

buffers.Determination of buffer capacity.

・Formation of unsoluble salts, product of solubility. Reactions of phosphate and carbonate ions. Determination of phosphates after the demineralization of bone. Detection of selected ions in saliva. Corrosive properties of dental aloys.

Literature

・required literature

・Návody ke cvičením v IS MUNI. Instruction for experiments in IS MUNI.

Teaching methods laboratory practicals

Assessment methods Full attendance in all lessons (making up all missing and justified lessons), completion of all lab reports is the condition for the course-unit credit. Obtaining of course-unit credits of practicals is the pre-requisite for registration to the examination of Medical chemistry and for enrollment of Biochemistry in the Spring semester.

aZLLC011p Medical Chemistry - lecture

Faculty of Medicine, Autumn 2015

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion:

zk (examination).

Supervisor prof. RNDr. Eva Táborská, CSc.

Department of Biochemistry - Theoretical Departments - Faculty of Medicine

Course objectives At the end of the course student should has knowledge that is necessary for understanding of chemical principles applied in further study subjects, especially in biochemistry. He/she understand solution properties and basic physico-chemical laws. Describes the properties of elements and inorganic compounds important for medicine, nutrition and toxicology. Discuses the structure of compounds and reactions taking part in metabolism and organic compounds that have

importance in toxicology. Is able to explain chemical principles of structure and function of restorative and auxiliary dental materials.

Syllabus

・Acid base reactions, basic terms, dissociation of electrolytes, buffers, buffer systems in organism.

・Energetics of chemical reactions, chemical equilibrium, redox reactions, biochemically important redox reactions.

・Biologically important elememts and their compounds (selection).

・Biochemically important reactions of organic compounds (e.g. reactions of alcohols, carboxylic acids, transamination, teh reactions of citric acid cycle).

・Structure and properties of carbohydrates, polysaccharides, glycoside, nucleosides.

・Fatty acids, lipids, fosfolipids, glycolipids, steroids, steroidal hormones.

・restorative and auxiliary stomatological materials- chemial view.

Literature

・required literature

・Dostál J. (Ed.): Essentials of Medical Chemistry and Biochemistry http://portal.med.muni.cz/article-623-essentials-of-medical-chemistry-and-biochemistry.html

Teaching methods Teaching form are lectures. Supplementary subjects are seminars and practicals

Assessment methods Student must have course-unit credit of seminar in the day of exam.

Examination from Medical chemistry is only written. The test consists from two parts.

The first part is solved on computers in the computer room of Department of Biochemistry: calculations (concentration, pH, buffers, osmotic pressure) - see seminars

simple questions (multiple choice or free answer)

structural formulas (essential organic and inorganic compounds).

The second part is written and is focused on the active knowledge of structural formulas of the most important compounds, expression of important biochemical reactions by chemical equations and the ability to formulate the basic physico-chemical relationships or to draw graphs. For detailed instructions see Study materials - Information about exam.

aZLLC011s Medical Chemistry - seminar

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor prof. RNDr. Eva Táborská, CSc.

Department of Biochemistry - Theoretical Departments - Faculty of Medicine

Course objectives Seminars are complementary to Medical chemistry lecture. The knowledge of general, inorganic, and (bio)organic chemistry, required in the end of semester, is thoroughly practiced during Medical chemistry seminars.

Syllabus

・Basic chemical calculations.

・TEST 1(chemical calculations). Electrolytes, osmotic pressure.

・Acid-base reactions, pH calculations, buffers.

・Non-covalent interactions, adsorption, tensides.

・TEST 2(Electrolytes, pH, buffers, osmolarity). Reaction kinetics, chemical equilibrium.

・Redox reactions.

・Organic compounds I.

・Organic compounds II.

・TEST 3(Organic compounds). Heterocycles.

・Saccharides.

・TEST 4(Heterocycles, saccharides). Lipids and steroids.

・Amino acids. Proteins.

・CREDIT TEST.

Literature

・required literature

・Seminar texts available in IS.

Teaching methods Discussions of the problems in the seminar textbook.

Assessment methods Conditions for giving the course-unit credit First condition is full attendance in all lessons (or making up all missing and justified lessons). Short revision tests are written during the semester. Students that will obtain the specified semestral limit are not obliged to write the credit test.
The other students will write the credit test with the 30 questions in the last week of the semester. The limit for passing the credit test is 14 points. Students that will not fulfill this limit will be allowed to repeat the test once. Remedial dates for writing the credit test will be scheduled. Students that will not fulfill this requirement will not be given the course-unit credit. Obtaining of course-unit credits of practices and seminars is the pre-requisite for registration to the examination of Medical chemistry and for enrollment of Biochemistry in the Spring semester.

aZLLT0121c Basic Medical Terminology I - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor Mgr. Natália Gachallová

Language Centre, Faculty of Medicine Division - Language Centre

Course objectives General characteristics of the subject: Greek-Latin medical terminology is one of the relevant means for acquisition of the target knowledge of medical students. The tuition is of both theoretic and practical character, conceived as a preparatory course sui generis, introducing the students into the study of medicine by means of its language. The content of tuition is, like the set of knowledge postulated in the examination, exclusively determined by the needs of the discipline and medical practice. In the first place it provides such knowledge of Latin and/or Greek as enables the student to master quickly and purposefully the semantic aspect of terms, their grammatical form, and word-forming structure. Simultaneously it provides systematic instruction to independent solution of current terminological problems consisting in understanding of the technical content of the terms and in the formation of medical terms. Besides this it opens a view of the wider historical and linguistic fundamentals of medical terminology as well as its general theoretical contexts.

Learning outcomes

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

use Latin and Greek-Latin medical terminology and expressions correctly and understand them;

recognize and explain grammatical devices and rules relevant for acquisition of Greek-Latin medical terminology; explain syntactic structure of complex terms;

recognize the semantic structure of selected anatomical and clinical one-word terms;

form compound words applying the most used word-formation principles;

translate selected expressions from anatomy and pre-clinical and clinical fields of study.

Syllabus

・**BASIC MEDICAL TERMINOLOGY - practice.** Syllabus.

・An obligatory part of each class is practising and testing of knowledge acquired during the semipage

・*1st week:* Checking the level of initial knowledge.

・*2nd week:* The language of medicine with its functions and characteristics. Medical terms, their etymology and definition.Renowned personalities of medicine in ancient history, historical aspects of medical terminology against the background of the history of medicine.

・*3rd week:* History of anatomical nomenclature : BNA, JNA, PNA.

・*4th week:* General terms and terms denoting parts and regions of the human body.

・ *5th week:* Names of bones and terms describing the skeletal system.

・ *6th week:* Latin in medical documentation. The history of medical record, its characteristics and present form.

・ *7th week:* Terms denoting simple types of fractures.

・ *8th week:* Terms denoting number in anatomy and clinical terminology. Fractures of fingers, ribs and vertebras.

・ *9th week:* Internal organs, main terms from splanchnology.

・ *10th week:* Introduction to word-formation, basic principles of derivation, the most productive Latin suffixes. Terms denoting inflammatory and non-inflammatory diseases using systematic suffixes *-itis* and *-osis*.

・ *11th week:* Terms denoting the oncogenic diseases. Diagnoses containing expressions *suspicio* a *suspectus, a, um*.

・ *12th week:* Diminutives in anatomical terminology. Derivation of adjectives using suffix *-ideus, a, um* and expression of the forms and shapes similarities.

・ *13th week:* Revision.

・ *14th week:* Credit test.

Literature

・ required literature

・ PRUCKLOVÁ, Renata - SEVEROVÁ, Marta. Introduction to Latin and Greek Terminology in Medicine. Prague: Koniasch Latin Press, 2012. ISBN 978-80-86791-24-1

・ recommended literature

・ BUJALKOVÁ, Mária - Anna JUREČKOVÁ. Introduction to Latin medical terminology. 1. vyd. Bratislava:

Univerzita Komenského, 2013. 148 s. ISBN 978-80-223-3394-8

・ *Atlas of anatomy : Latin nomenclature*. Edited by Anne Marie Gilroy - Brian R. MacPherson - Lawrence M. Ross - Michael S. New York: Thieme Medical, 2009. xv, 656. ISBN 9781604060997.

Teaching methods lectures, translation and grammar exercises, drills, homework

Assessment methods Requirements for gaining the credit: regular class attendance, active participation in class, preparation for classes, sitting class tests (twice per semester) and a credit test. The basic limit for passing all tests is 70%. Passing each of the class test, which is obligatory for all students, reduces the basic limit in the credit test by 5%. Only one unexcused absence will be tolerated; further absences must be properly excused (i.e. via the Study Department of the Faculty of Medicine).

aZLLT0121s Basic Medical Terminology I - seminar

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor Mgr. Natália Gachallová

Language Centre, Faculty of Medicine Division - Faculty Branches of University Departments - Faculty of Medicine

Course objectives General characteristics of the subject: Greek-Latin medical terminology is one of the relevant means for acquisition of the target knowledge of medical students. The tuition is of both theoretic and practical character, conceived as a preparatory course sui generis, introducing the students into the study of medicine by means of its language. The content of tuition is, like the set of knowledge postulated in the examination, exclusively determined by the needs of the discipline and medical practice. In the first place it provides such knowledge of Latin and/or Greek as enables the student to master quickly and purposefully the semantic aspect of terms, their grammatical form, and word-forming structure. Simultaneously it provides systematic instruction to independent solution of current terminological problems consisting in understanding of the technical content of the terms and in the formation of medical terms. Besides this it opens a view of the wider historical and linguistic fundamentals of medical terminology as well as its general theoretical contexts.

Learning outcomes

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

use Latin and Greek-Latin medical terminology and expressions correctly and understand them;

recognize and explain grammatical devices and rules relevant for acquisition of Greek-Latin medical terminology;

explain syntactic structure of complex terms;

recognize the semantic structure of selected anatomical and clinical one-word terms;

form compound words applying the most used word-formation principles;

translate selected expressions from anatomy and pre-clinical and clinical fields of study.

Syllabus

・**BASIC MEDICAL TERMINOLOGY - seminar.** Syllabus.

・*1st week:* Introduction to the study of the subject: introduction to the anatomical, clinical and pharmacology Latin terminology (significance and contents of the course, methodological instructions,

study literature). Characteristics of the graphical and acoustic form of Latin. Selected Greek sounds, transcription into Latin. Dictionary entry, how to read it and how to master Latin lexicon.

・ *2nd week:* The system of Latin and Greek declensions. Organisation of the declension chart. Basic nominal categories and their specific features in medical terminology. Latin nouns of 1st declension (*a*-stems). Syntactic relations among constituents of multiple terms : non-agreed attribute and prepositional phrase.

・ *3rd week:* Greek nouns of 1st declension (*a*-stems). Adjectives of 1st declension. Ordinal numerals. Syntactic relations among constituents of multiple terms : agreed attribute. Word order in anatomical and clinical medical terminology.

・ *4th week:* Latin and Greek nouns of 2nd declension (*o*-stems), Adjectives of 2nd declension. Introduction to pharmacology terminology, scientific name in Botany.

・ *5th week:* Adjectives of 1st and 2nd declensions. Specifics of their usage in medical terminology. Latin in medical reports, authentic sample I. Supplementing of the subject matter.

・ *6th week:***Progress test I.** Characteristics of Latin 3rd declension. Latin nouns of 3rd declension : consonant stems. Agreed attribute of Latin nouns of 3rd declension and Adjectives of 1st and 2nd declensions. Latin in medical reports, authentic sample II.

・ *7th week:* Latin nouns of 3rd declension : *i*-stems. Agreed attribute of Latin nouns of 3rd declension and Adjectives of 1st and 2nd declensions. Latin in medical reports, authentic sample III.

・ *8th week:* Greek nouns of 3rd declension (consonant stems and *i*-stems). Agreed attribute of Latin and Greek nouns of 3rd declension and Adjectives of 1st and 2nd declensions. Latin in medical reports, authentic sample IV. Supplementing of the subject matter.

・ *9th week:***Progress test I.** Latin nouns of 4th declension (*u*-stems). Agreed attribute of nouns of 1st- 4th declensions and Adjectives of 1st and 2nd declensions. Latin in medical reports, authentic sample V.

・ *10th week:* Latin nouns of 5th declension (*e*-stems). Agreed attribute of nouns of 1st- 5th declensions and Adjectives of 1st and 2nd declensions. Latin in medical reports, authentic sample VI.

・ *11th week:*Introduction to adjectives of 3rd declension, their characteristics and inflection, threetermination, two-termination, one-termination types. Agreed attribute of Latin and Greek nouns of 1st- 5th declensions and Adjectives of 1st and 2nd declensions and Adjectives of 3rd declension.

・*12th week:*Adjektiva III. deklinace II. Derivation of adjectives using suffixes *-alis, e; -aris, e; -icus, a, um; eus, a, um.* Terms denoting position and orientation of the body parts. Terms denoting extremities. Latin in medical reports, authentic sample VII.

・*13th week:* Prepositions and selected conjunctions. Latin in medical reports, authentic sample VIII.

・*14th week:*Final summary and supplementing of the subject matter. **Credit test.**

Literature

・required literature

・PRUCKLOVÁ, Renata - SEVEROVÁ, Marta. Introduction to Latin and Greek Terminology in Medicine. Prague: Koniasch Latin Press, 2012. ISBN 978-80-86791-24-1

・recommended literature

・BUJALKOVÁ, Mária - Anna JUREČKOVÁ. Introduction to Latin medical terminology. 1. vyd. Bratislava:

Univerzita Komenského, 2013. 148 s. ISBN 978-80-223-3394-8

・*Atlas of anatomy : Latin nomenclature*. Edited by Anne Marie Gilroy - Brian R. MacPherson - Lawrence M. Ross - Michael S. New York: Thieme Medical, 2009. xv, 656. ISBN 9781604060997.

Teaching methods lectures, translation and grammar exercises, drills, homework

Assessment methods First-term credit requirements: regular class attendance (the maximal number of absences is two), active class participation, class preparation, passing the class tests.

aZLPO011c First Aid - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Vladimír Šrámek, Ph.D.

Department of Anesthesiology and Intensive Care - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: MUDr. Lukáš Dadák, Ph.D.

Course objectives At the end of this course students should be able to:

understand basic vital signs;

provide Basic Cardiac Life Support according to ERC guidelines from 2005;

provide first aid including wound dressing, transport and vital signs monitoring.

Syllabus

・**Cardiopulmonary resuscitation** Examination of the casualty. Basic vital functions. Breathing disorders, apnea, airway obstruction. Airway management, artificial ventilation. Cardiac arrest, circulation failure. Chest compressions, precordial thrust, cardiopulmonary resuscitation.

・**CPR in children.**

・Bleeding external, internal. Wounds. Bleeding management. Shock, treatment. Fainting. Burns. Fractures, injuries of joint and muscles - treatment, fixation, transport.

Literature

・recommended literature

・*First aid : manual*. 10th ed. London: Dorling Kindersley, 2014. 288 s. ISBN 9781409342007.

Bookmarks https://is.muni.cz/auth/ln/tag/LF:aZLPO011c!

Teaching methods We use simulators / models/ for practical lessons during teaching cardiopulmonary resuscitaion. We use bandages from practical point of view, too.

Assessment methods Class exercises are obliged. MCQ test - student must pass well at least 75% of questions.

aZLPO011p First Aid - lecture

Extent and Intensity Lecture: .5 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: k (colloquium).

Supervisor prof. MUDr. Vladimír Šrámek, Ph.D.

Department of Anesthesiology and Intensive Care - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: MUDr. Lukáš Dadák, Ph.D.

Course objectives At the end of this course students should be able to: understand basic vital signs; provide Basic Cardiac Life Support; provide prehospital first aid including wound dressing, vital signs monitoring and transport.

Syllabus

・**Cardiopulmonary resuscitation I** Examination of the casualty. Basic vital functions. Breathing disorders, apnea, airway obstruction. Airway management, artificial ventilation.

・**Resuscitation II** Cardiac arrest, circulation failure. Chest compressions, precordial thrust, cardiopulmonary

resuscitation.

・**CPR in children.**

・**Bleeding external, internal.** Wounds. Bleeding management. Shock, treatment. Fainting, fatigue.

・**Disorders of consciousness, coma. Seizures, cramps.**

・**Road accidents, multiple casualties situations.** Survey, assesment, evaluation of the casualties, first aid organisation. Emergency situations in diabetic patients.

・**Drawning. Chest pain evaluation, treatment.**

・**Animal, snake, insect bites . Infection, rabies, allergic reactions.**

・**Poisoning alcohol, drugs, CO, food. Injuries to the eye.**

Literature

・recommended literature

・*First aid : manual*. 10th ed. London: Dorling Kindersley, 2014. 288 s. ISBN 9781409342007.

Bookmarks https://is.muni.cz/auth/ln/tag/LF:aZLPO011p!

Teaching methods Lectures are theoretical. Presentations of lectures are with a support of PPT.

Assessment methods lectures; oral exam Attending of lectures is obliged. Oral exam consists of two questions and demonstration of BLS on model.

aZLPR0131c Preclinical Dentistry I - practice

Extent and Intensity Seminar: 5 hour(s) per week. Number of credits: 6 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Branch content: Students are meeting with the dentistry and are obtainig basic knowledes and skills in inherent branches of dentistry.Basic aims of subject education: To acquaint students with main tools and devices used in the dentistry is the main goal of subject, same as to quip them for clinical stages in dental surgery room. Preclinical dentistry I. Practice is focused on operative dentistry basic rules of cavity preparation, knowledge and skills in the field of oral hygiene.

Syllabus

・1.Basic dental materials, gypsum, preparation for laboratory purposes, mixing,armamentarium. Preparation of the dowel for modelling

・2. Instruments for gypsum and wax. Modellation 11 of gypsum. Identification of frontal teeth - maxillary inisors and canines

・3.Modelling of the premolar of wax.Modelling of molar of wax - the additive method. identification of frontal teth - mandibulary incisors and canines. Marking of the teeth

・4.Instruments for investigation, manner of work with them, exercise of marking of teeth. Identification

of lateral teeth - premolars

・5.Dental surgery‐equipment. Preparation instruments, their identification and manner of use. Identification of lateral teeth - molars

・6.Armamentarium for fillings. Cavity preparation in novodur plates. Mixing of tamporary filling materials and filling of the prepared cavities. Identification of teeth - repetition

・7. Cavity preparation in novodur plates. Mixing of permanent filling materials and filling of the prepared cavities. 8. Class I. cavity: carving on gypsum model. Class I. cavity preparation for amalgam

・9. Dry operation field, rubber dam techniques, practical training. Base materials, application into the prepared cavities

・10. Class I. cavity preparation for composits. Pulp capping. Class I. cavity preparation for an inlay. Modelling of an inlay (a wax pattern)

・11. Class V. cavity preparation for amalgam, composit and glasionomer, identification of the teeth and the instruments.

・12. Oral hygiene home care. 13. Class III. cavity preparation, composite filling. 14. Finishing of preparation, exercise, repetition. Credit test.

Literature

・Jedynakiewitz N.M.: A practical quide to technology in dentistry. Wolf publ.

・Jedynakiewitz N.M.: A practical quide to technology in dentistry. Wolf publ.1992

Teaching methods practical training

Assessment methods 2 written tests, final written test. 17 points are necessary to pass. Discussion.

aZLPR0131p Preclinical Dentistry I - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Branch content: Students are meeting with the dentistry and are obtainig basic knowledes and skills in inherent branches of dentistry.Basic aims of subject education: To acquaint students with main tools and devices used in the dentistry is the main goal of subject, same as to quip them for clinical stages in dental surgery room. Preclinical dentistry II. Practice is focused on operative dentistry (students are able to prepare anf fill all kinds of cavities in simulators), basic knowledge and skills in endodontology,periodontology,pedodontics and orthodontics.

Syllabus

・1.Introduction to the study of dentistry. Development of dentistry. The subject. Preclinical entistry.

Vestibulum oris, cavum oris proprium. Topography of teeth, surfaces of teeth, latin terminology.

Signation of teeth

・2.Development and eruption of primary and permanent dentitions. Microscopic structure of teeth.

Morphology of frontal teeth

・3.Maxillary premolars. Mandibular premolars

・4.Maxillary molars. Mandibular molars.Morphology of the primary dentition

・5.Dental caries, aethiology, pathogenesis, diagnosis, therapy

・6.Regime of hygiene in dental surgery. Asepsis, antisepsis, desinfection, sterilization.Basic rules

of preparation

・7.Temporary filling materials. Definitive filling materials‐amalgam

・8. Definitive filling materials‐composites and glasionomers.Dry operation field

・9. Basic rules of cavity preparation. Class I. cavity preparation

・10. Protection of the dentin wound, base materials, pulp capping,

・11.Class V. cavity preparation for amalgam, composits and glasionomers

・12.Oral hygiene‐home care

・13. Class III. cavity preparation, suitable matrices

Literature

・recommended literature

・STEJSKALOVÁ, Jitka. *Konzervační zubní lékařství*. 2. vyd. Praha: Galén, 2008. 235 s. ISBN 97880

72625406.

・not specified

・HECOVÁ, Hana a Květoslava MONHARTOVÁ. *Morfologie zubů, kreslení a modelování zubů*. 1. dotisk. Praha: Karolinum, 2006. 57 s. ISBN 802461071X.

・ASH, Major M. a Stanley J. NELSON. *Wheeler's dental anatomy, physiology, and occlusion*. 8th ed. St. Louis: Saunders, 2003. xiv, 523. ISBN 0721693822.

・SCHEID, Rickne C. *Woelfel's dental anatomy : its relevance to dentistry*. 7th ed. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins, 2007. ix, 534. ISBN 9780781768603.

・*Dental anatomy : coloring book*. Edited by Margaret J. Fehrenbach. 1st ed. St. Louis: Saunders, 2008. x, 358. ISBN 9781416047896.

Teaching methods Lecture

Assessment methods Final discussion on choosen topics.

YEAR 1 / SEMESTER 2

aZLAN0232p Anatomy II - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor prof. RNDr. Petr Dubový, CSc.

Department of Anatomy - Theoretical Departments - Faculty of Medicine

Contact Person: MUDr. Ilona Klusáková, Ph.D.

Course objectives This subject is dedicated to the study of organ systems and topographic anatomy of the extremities. At the end of the course students should be able to:

- understand the standardized and universally accepted anatomical terminology

- define the components of the major organ systems (digestive, respiratory, urinary, male and female genital, cardiovascular and lymphatic)

- explain the morphology of the organs

- create apprehension about position and spatial relationships of particular organs and organ systems

- explain anatomy, development and basic functions of the skin and its derivatives

- identify all components of the upper and lower extremities

- relate structures of the upper and lower limb with respect to adjacent structures

Syllabus

・1. Digestive system 1 (oral cavity)

・2. Digestive system 2 (pharynx - rectum)

・3. Digestive system 3 (liver, spleen, pancreas, peritoneum)

・4. Respiratory system. Thyroid gland, parathyroid glands, thymus.

・5. Urinary system. Suprarenal glands

・6. Male genital system

・7. Female genital system

・8. Heart

・9. Arteries

・10. Veins. Lymphatic system

・11. Skin. Brachial plexus

・12. Topography of the upper limb

・13. Lumbar and sacral plexus. Topography of the lower limb

・14. Topography of the lower limb

Literature

・recommended literature

・Liebgott, Bernard. The anatomical basis of dentistry. 3rd ed. Mosby, ISBN 0-323-06807-3

・SCHEID, Rickne C. *Woelfel’s dental anatomy : its relevance to dentistry*. 7th ed. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins, 2007. ix, 534. ISBN 9780781768603.

・SOBOTTA, Johannes. *Atlas of human anatomy.* Edited by Reinhard Putz - Reinhard Pabst. 13th English ed., 21st Germa. Philadelphia: Lippincott Williams & Wilkins, 2001. 429 s. ISBN 0781731 739.

・DOKLÁDAL, Milan a Libor PÁČ. *Anatomie člověka II. Splanchnologie a cévní systém (Human anatomy*

II. Splanchnology and vascular system). 2. přepracované. Brno: Masarykova univerzita, Lékařská fakulta, 2003. 136 pp. 2. ISBN 80-210-2886-6.

・Grim,M; Druga, R.: Základy anatomie 5. Anatomie Krajin těla, Galén 2002

・SVÍŽENSKÁ, Ivana a Vlastimil VÁLEK. *Základy anatomie v zobrazovacích metodách. I. Skiaskopie a skiagrafie (Anatomy in image methods. I. Skiascopy and skiagraphy)*. První. Brno: IDVPZ Brno, MU Brno, Boston Scientific ČR s.r.o., 2001. 72 pp. ISBN 80-7013-334-1.

・SOBOTTA, Johannes. *Sobottův Atlas anatomie člověka.* Edited by Reinhard Putz - Reinhard Pabst - Renate Putz. 1. české vyd. Praha: Grada, 2007. 431 s. ISBN 9788024718705.

・HRADILOVÁ SVÍŽENSKÁ, Ivana, Michaela RAČANSKÁ a Petr DUBOVÝ. *Anatomy : handbook of splanchnology*

and angiology. 1st ed. Brno: Masaryk University, 2014. 153 s. ISBN 9788021067714.

・not specified

・*Anatomy of orofacial structures*. Edited by Richard W. Brand - Donald E. Isselhard - Elaine Satin.

7th ed. St. Louis: Mosby, 2003. xiii, 567. ISBN 0323019544.

・NETTER, Frank H. *Atlas of human anatomy*. 4th ed. Philadelphia: Saunders Elsevier, 2006. 548

color. ISBN 1416033858.

・ČIHÁK, Radomír. *Anatomie. 2*. 2. upr. a dopl. vyd. Praha: Grada Publishing, 2002. [xx], 470.

ISBN 80-247-0143-X.

・PLATZER, Werner. *Atlas topografické anatomie*. Translated by Josef Stingl, Illustrated by Gerhard

Spitzer. Vyd. 1. české. Praha: Grada, 1996. viii, 290. ISBN 807169214X.

・NETTER, Frank H. *Anatomický atlas člověka*. Edited by John T. Hansen, Translated by Libor Páč -

Petr Dubový. Vyd. 2., rozš. Praha: Grada, 2005. [14], 542. ISBN 8024711532.

Teaching methods Lectures

Assessment methods Assessment is carried out after completion of following subjects within the scope of anatomy final examination: ZLAN0232s Anatomy II ‑seminar, ZLAN0333p Anatomy III ‑ lecture, ZLAN0333s Anatomy III ‑ seminar, ZLAN0333c Anatomy III ‑ dissection.

aZLAN0232s Anatomy II - seminar

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor prof. RNDr. Petr Dubový, CSc.

Department of Anatomy - Theoretical Departments - Faculty of Medicine

Supplier department: Department of Anatomy - Theoretical Departments - Faculty of Medicine

Course objectives This subject is dedicated to the study of organ systems and topographic anatomy of the extremities. At the end of the course students should be able to:

- apply the correct anatomical nomenclature

- define practically the components of the digestive, respiratory, urinary, male and female genital, cardiovascular and lymphatic systems using the human cadavers

- identify basic morphological features of the organs

- analyse spatial relationships of particular organs and organ systems

- explain anatomy, development and basic functions of the skin and its derivatives

- identify all components of the upper and lower extremities

- relate structures of the upper and lower limbs with respect to adjacent structures

Syllabus

・1. Muscles of the limbs - repetition

・2. Digestive system 1 (oral cavity, teeth). Muscles of the head

・3. 2. Digestive system 2 (pharynx - rectum). Muscles of the neck

・4. Digestive system 3 (liver, spleen, pancreas, peritoneum). Muscles of the abdomen

・5. Respiratory system. Mediastinum. Thyroid gland, parathyroid glands, thymus. Muscles of the thorax and back

・6. Urinary system. Suprarenal glands. Test 1: digestive and respiratory system, muscles of head, neck, thorax, abdomen and back

・7. Male genital system

・8. Female genital system. Pelvic floor

・9. Heart

・10. Arteries and Veins

・11. Lymphatic system. Skin. Test 2: urogenital,cardiovascular and lymphatic system. Pelvic floor

・12. Brachial plexus. Topography of the upper limb

・13. Lumbar and sacral plexus. Topography of the lower limb

・14. Test 3: topography of the upper and lower limbs

Literature

・recommended literature

・Liebgott, Bernard. The anatomical basis of dentistry. 3rd ed. Mosby, ISBN 0-323-06807-3

・DOKLÁDAL, Milan a Libor PÁČ. *Anatomie člověka II. Splanchnologie a cévní systém (Human anatomy*

II. Splanchnology and vascular system). 2. přepracované. Brno: Masarykova univerzita, Lékařská fakulta, 2003. 136 pp. 2. ISBN 80-210-2886-6.

・Grim,M; Druga, R.: Základy anatomie 5. Anatomie Krajin těla, Galén 2002

・SCHEID, Rickne C. *Woelfel’s dental anatomy : its relevance to dentistry*. 7th ed. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins, 2007. ix, 534. ISBN 9780781768603.

・SVÍŽENSKÁ, Ivana a Vlastimil VÁLEK. *Základy anatomie v zobrazovacích metodách. I. Skiaskopie a skiagrafie (Anatomy in image methods. I. Skiascopy and skiagraphy)*. První. Brno: IDVPZ Brno, MU Brno, Boston Scientific ČR s.r.o., 2001. 72 pp. ISBN 80-7013-334-1.

・SOBOTTA, Johannes. *Atlas of human anatomy.* Edited by Reinhard Putz, Translated by Reinhard Pabst. 12th ed. Munich: Urban und Schwarzenberg, 1994. 399 s. ISBN 3541727225.

・SOBOTTA, Johannes. *Sobottův Atlas anatomie člověka.* Edited by Reinhard Putz - Reinhard Pabst - Renate Putz. 1. české vyd. Praha: Grada, 2007. 399 s. ISBN 9788024718705.

・HRADILOVÁ SVÍŽENSKÁ, Ivana, Michaela RAČANSKÁ a Petr DUBOVÝ. *Anatomy : handbook of splanchnology and angiology*. 1st ed. Brno: Masaryk University, 2014. 153 s. ISBN 9788021067714.

・not specified

・*Anatomy of orofacial structures*. Edited by Richard W. Brand - Donald E. Isselhard - Elaine Satin. 7th ed. St. Louis: Mosby, 2003. xiii, 567. ISBN 0323019544.

・NETTER, Frank H. *Atlas of human anatomy*. 4th ed. Philadelphia: Saunders Elsevier, 2006. 548 color. ISBN 1416033858.

・ČIHÁK, Radomír. *Anatomie.* Edited by Miloš Grim. 2., upr. a dopl. vyd. Praha: Grada, 2002. 470 s. ISBN 9788024701431.

・NETTER, Frank H. *Anatomický atlas člověka*. Edited by John T. Hansen, Translated by Libor Páč - Petr Dubový. Vyd. 2., rozš. Praha: Grada, 2005. [14], 542. ISBN 8024711532.

・PLATZER, Werner. *Atlas topografické anatomie*. Translated by Josef Stingl, Illustrated by Gerhard Spitzer. Vyd. 1. české. Praha: Grada, 1996. viii, 290. ISBN 807169214X.

Teaching methods Practice with the human anatomical specimens.

Assessment methods Completion of the course is assessed by the course-unit credit. A precondition for obtaining the course-unit credit is 95% attendance at the seminars (1 excused non-attendance tolerated) and demonstration of the basic knowledge of the semester schoolwork in the form of 3 tests, each containing 10 questions (each correctly answered question is evaluated by 1 point). A minimum of 6 out of 10 possible points in each test is required for fulfilment. For unsuccessful students and students who could not sit for the test due to an illness (medical confirmation required) a resit (alternate) date will be offered. The students who could not sit for the regular date (due to an illness) and did not pass the test during the alternate date will be offered one resit date. For obtaining the course-unit credit on a resit date it is necessary to obtain a minimum of 6 out of 10 possible points in the test.

aZLBC0221p Biochemisty I - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: zk (examination).

Supervisor prof. MUDr. Vladimír Palyza, CSc.

Department of Biochemistry - Theoretical Departments - Faculty of Medicine

Course objectives The aim of the course is to obtain knowledge on essential metabolic processes on the cell level. The graduate is: acquainted with properties and function of enzymes, oriented in catabolic and anabolic pathways of metabolism of saccharides, lipids and proteins and their consequences. Understands the principles of cell bioenegetics. Becomes familiar with the funcion of cell membranes, principle of cell compartmentation and membrane transport. has knowledge on proteosynthesis including processes replication, transcription, translation and posttranslantion modifications. Understands the relation between the structure and function of proteins, is acquinted with function of hemoglobine in oxygen transport. Molecular bases of some diseases are introduced. The course provides the essential knowledge for future understanding of metabolism on organe and inter-organe level and its disturbances.

Syllabus

・Enzymes. Characteristic features of biocatalysis, enzyme structure and function, nomenclature and classification of enzymes. Enzyme cofactors, review of structures and functions. Mechanisms of enzyme action. Kinetics of enzyme catalyzed reactions. Assays of enzyme activity, the conditions used. Factors affecting catalytic activity of enzymes, types of enzyme inhibition. Metabolism: basic concepts and design. Biological oxidations, generation of high-energy compounds. Saccharide metabolism: the glycolytic pathway and aerobic decarboxylation of pyruvate. Gluconeogenesis. Glycogen biosynthesis and breakdown. The pentose phosphate pathway. The glucuronate pathway. Interconversions of monosaccharides and of their derivatives. Protein and amino acid metabolism. The common reactions in amino acid degradation. The ureosynthetic cycle. Metabolic breakdown of individual amino acids. Biosynthesis and breakdown of fatty acids, ketogenesis. Synthesis of triacylglycerols. Metabolism of phospholipids and glycolipids. Synthesis of eicosanoids. Biosynthesis and transformations of cholesterol, biosynthesis of bile acids. Interrelationships among the major pathways involved in energy metabolism. The citric acid cycle. Synthesis of haem. Mitochondria. Oxidative phosphorylation - mitochondrial electron transport chain, synthesis of ATP. Biosynthesis and catabolism of purine and pyrimidine nucleotides. Chromatin, DNA replication. DNA transcription. Regulation of gene expression. Protein synthesis and post-translational processing.

Literature

・required literature

・KOOLMAN, Jan a Klaus-Heinrich RÖHM. *Color atlas of biochemistry*. 3rd ed., rev. and updated. Stuttgart: Thieme, 2013. ix, 495. ISBN 9783131696939.

・recommended literature

・RODWELL, Victor W., David A. BENDER, Kathleen M. BOTHAM, Peter J. KENNELLY a P. Antony WEIL. *Harper's Illustrated Biochemistry*. 30th ed. : McGraw-Hill Education, 2015. 817 pp. ISBN 978-1-259-25286-0.

Teaching methods Teaching form are lectures. Supplementary subjects are seminars VSBC021s

Assessment methods Student must have course-unit credit of seminar in the day of exam. Examination

has writen and oral part. Writen part has 25 questions and is solved on computers in computer room of Department of Biochemistry. Limit for the oral part is 14/25. The second part is oral. Examination questions and other instructions you will find in the section Study materials of the course.

aZLBC0221s Biochemistry I - seminar

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor prof. RNDr. Eva Táborská, CSc.

Department of Biochemistry - Theoretical Departments - Faculty of Medicine

Course objectives Seminars are complementary to Biochemistry I lecture. At the end of the course student understand and can describe the major metabolic pathways and their significance.

Syllabus

・Introduction into the metabolism of cells (differences between prokatyotic and eukaryotic cell). Structure of haemoglobin and its relationship to the function. Hb types in the blood of healthy subjects, HbCO and MetHb, abnormal Hb types. Enzymes - reaction rate, progress curve, the Michaelis plot and Km, enzyme inhibition. Coenzymes, their relationship to vitamins. Written test I (Biochemical methods, hemoglobin, enzymology, coenzymes.) Membrane structure and assembly. Transport across membranes. Metabolism of glucose: Glycolysis under anaerobic and aerobic conditions and the oxidation of pyruvate. Gluconeogenesis. Glycogenesis and glycogenolysis. Metabolism of proteins. Common features of amino acid conversion. The synthesis of urea. Nitrogen balance. Important reactions in amino acid catabolism. Written test II (Membranes, transport across membranes, metabolism of saccharides and amino acids.) Biosynthesis and desaturation

of fatty acids. The sources of essential fatty acids. Metabolism of triacylglycerols. Metabolism of phospholipids. Biosynthesis of eicosanoids. Peroxidation of lipids. Written test III (Metabolism of lipids.) The citric acid cycle. The respiratory chain and oxidative phosphorylation. Replication, transcription, proteosynthesis.

Literature

・required literature

・Seminar texts available in Information system

Teaching methods Course is based on group discusion to the given topics. The outlines of discusion are in the recommended textbook. Complementary materials are available in section Study materials.

Assessment methods Credit. Conditions for giving the course-unit credit: Three short tests are written during the semester. Students that will obtain 52/75 points or more during the semester are not obliged to write the credit test. The other students will write the credit test with the 30 questions in the last week of the semester. The limit for passing the credit test is 14 points. All absences must be made up before writing the credit test. Students that will not fulfill this limit will be allowed to repeat the test once. Students that will not fulfill this requirement will not be given the course-unit credit. Obtaining of course-unit credits of practices and seminars is the pre-requisite for registration to the examination of Biochemistry I.

aZLBI0222c Biology II - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor prof. Ing. Petr Dvořák, CSc.

Department of Biology - Theoretical Departments - Faculty of Medicine

Contact Person: Mgr. Kateřina Vopěnková, Ph.D.

Course objectives After completion of the course student: operates light microscope; understands the basics of electron microscopy, genetic toxicology, gene engineering or the methods of karyotyping; is able to evaluate the risk of hereditary diseases in a patient on the basis of assigned family anamnesis of this disease; is able to propose and interpret elementary molecular screening methods for some hereditary, neoplastic or microbial diseases. Student is also able to apply this knowledge and skills in other subject, especially histology, pathology and human genetics.

Syllabus

・Week 1: Genetic disorders - gonosomal inheritance

・Week 2: Deviations from Mendelian genetics

・Week 3: Genetic prognosis and genetic counselling

・Week 4: Human population genetics

・Week 5: DNA cloning and gene engineering. **Control test for knowledge from week 13 of the autumn semester to week 4 of the spring semester (practices and lectures)**

・Week 6: Molecular analysis of human genotype

・Week 7: Molecular diagnostics of human pathogenic bacteria

・Week 8: Restriction mapping of DNA

・Week 9: Molecular diagnostics of cancer disease

・Week 10: Substitution practices

・Week 11: Analysis of protein binding to DNA

・Week 12: Substitution practices

・Week 13: Genetic toxicology. **Control test for knowledge from week 5 to week 12 of the spring semester (practices and lectures)**

・Week 14: Credit awarding

Literature

・required literature

・Protocols for practices are provided in electronic form in the Information System of the Masaryk University in the Study Materials of the course aZLBI0222c

Teaching methods laboratory practice, class discussion

Assessment methods Practical classes are mandatory. Requirements for course completion: full attendance in the practical classes (1 absence, excused or unexcused, is allowed); all protocols completed (also for missed lessons) and checked and signed by appropriate teachers; successfully passed 2 written control tests during the semester (20 questions each, 4 possibilities, 1 answer correct, student need to reach at least 14 points out of 20 in each test). In case you do not pass one of the control tests and its re-sit, you have to pass the final test (so-called Credit test) based on knowledge of the entire semester. The test comprises of 20 questions: 10 test questions (multiple answers can be correct, negative marking is obtained for incorrect answers) + 10 given terms for written explanation. At least 14 points out of 20 are needed to pass.

In case of student’s late arrival to the practice, poor activity at the practice student is required to write an essay in the length of 2 pages on a given topic. Same for the case of 2nd and any additional absence in practices, excused or unexcused. Find the instructions for essay writing in the course related instructions in the IS, bring the essay printed to the teacher who specified the topic and be ready to answer the teacher’s questions regarding the topic.
In case of 3 absences, (or more than 3 absences all excused by the Office for Studies within 5 days from the beginning of the absence and introduced into the Information System), it is addressed

individually and credit is given only after the proof of the student’ s knowledge of the entire semester topics (socalled Credit test, see above).

In case of 4 or more unexcused absences, credit is not awarded.

aZLBI0222p Biology II - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 3 credit(s). Type of Completion:

zk (examination).

Supervisor prof. Ing. Petr Dvořák, CSc.

Department of Biology - Theoretical Departments - Faculty of Medicine

Contact Person: Mgr. Kateřina Cetkovská, Ph.D.

Course objectives After completion of the course student: understands elementary cellular processes and processes taking place during development of a human body; comprehends the complexity of intercellular communication and mutual regulation of individual cells in a multicellular organism; is able to deduce and explain the difference between healthy and pathologically-working cell; is able to express basic coherence between malfunction in cellular processes and development of diseases, especially hereditary diseases, cancers or developmental defects; can explain and justify action of some therapeutics with emphasis on modern medicine. Student is also able to apply this knowledge and skills in other subject, especially physiology, pathophysiology and human genetics.

Syllabus

・Week 1:・Growth factors and signal transduction in development and disease (Mgr. Pavel Krejčí, Ph.D.)

・Week 2:・Biology and use of stem cells in disease modelling and cell therapy (prof. Ing. Petr Dvořák, CSc.)

・Week 3:・Cell differentiation and tissue engineering (prof. Ing. Petr Dvořák, CSc.)

・Week 4:・Genome instability - from molecular mechanisms of damage and DNA repair to clinical implications

(doc. Mgr. Lumír Krejčí, Ph.D)

・Week 5:・Introduction to cancer biology (Mgr. Stjepan Uldrijan, CSc.)

・Week 6:・Oncogenes and oncoviruses in cancer transformation (Mgr. Stjepan Uldrijan, CSc.)

・Week 7:・Tumour suppressor genes - implications for diagnostics and therapy (Mgr. Stjepan Uldrijan, CSc.)

・Week 8:・Paradigm of cancer stem cells (doc. MUDr. Iva Slaninová, Ph.D.)

・Week 9:・Molecular principle of genetically determined diseases (doc. MUDr. Iva Slaninová, Ph.D.)

・Week 10:・Objectives and strategies of molecular therapy (doc. MUDr. Iva Slaninová, Ph.D.)

・Week 11:・Genomics and other omics in current biomedicine (prof. MUDr. David Šmajs, Ph.D.)

・Week 12:・Human microbiome (prof. MUDr. David Šmajs, Ph.D.)

・Week 13:・Bioinformatics in medicine - from molecules to populations (Mgr. Vladimír Rotrekl, Ph.D.)

・Week 14:・substitution lecture

Literature

・required literature

・*Essential cell biology*. Edited by Bruce Alberts. 3rd ed. New York: Garland Science, 2009. 1 v. ISBN 9780815341307.

・*Medical genetics at a glance*. Edited by D. J. Pritchard - Bruce R. Korf. 3rd ed. Chichester, England: Wiley-Blackwell, 2013. 1 online r. ISBN 9781118689028.

・recommended literature

・HARDIN, Jeff, Gregory BERTONI a Lewis J. KLEINSMITH. *Becker´s world of the cell*. 8th ed. Boston: Benjamin Cummings, 2012. xxviii, 79. ISBN 9780321709783.

・LODISH, Harvey F. *Molecular cell biology*. 6th ed. New York, N.Y.: W.H. Freeman and Company, 2008. xxxvii, 11. ISBN 9780716776017.

・SNUSTAD, D. Peter a Michael J. SIMMONS. *Principles of genetics*. 5th ed. Hoboken: John Wiley & Sons, Inc, 2009. xix, 823. ISBN 9780470388259.

・WEINBERG, Robert A. *The biology of cancer*. Second edition. London: Garland Science, 2013. xx, 876. ISBN 9780815345282.

・WOLPERT, Lewis. *Principles of development*. 2nd ed. Oxford: Oxford University Press, 2002. xxv, 542. ISBN 0198792913.

・not specified

・CAMPBELL, Neil A. *Biology*. Edited by Jane B. Reece. 7th ed. San Francisco: Pearson/Benjamin Cummings, 2005. xl, 1231. ISBN 080537146X.

Teaching methods lecture

Assessment methods The subject is completed with a written examination test, based on knowledge of all topics from both semesters (lectures, practices). The test contains 94 questions with 1 correct answer. Negative marking is obtained for incorrect answers. For successful passing the exam, minimum

Requirements for attendance at the exam: successful passing of the autumn semester´s lecture and seminar, and successfull completion of Biology-practices of both autumn and spring semester.

Students have to bring their valid ICIS card to prove their identity at the exam. For more information on the test see: https://is.muni.cz/auth/el/1411/jaro2016/aZLBI0222p/op/Exam_information_and_instructions_ENG .Lecture attendance is optional.

aZLCJ0282 Czech Language for Foreigners II - practice

Extent and Intensity Seminar: 3 hour(s) per week. Number of credits: 4 credit(s). Type of Completion: zk (examination).

Supervisor PhDr. Ivana Rešková, Ph.D.

Language Centre, Faculty of Medicine Division - Language Centre

Course objectives The aim of the tuition is working knowledge of the Czech language on the A2 level of the ” Common European Framework of Reference” (CEFR) checked by an examination.

Syllabus

・**Syllabus of Czech for Foreigners II.**

・1st week: REVISION LESSON.*Conversation:* Daily routine. Visit. Time, Days (expressing dates), Months, Seasons.*Grammar:* Ordinal numerals. The accusative case of personal and possesive pronouns. The phrase Bolí mě+basic parts of body.

・2nd week: LESSON 6: *Conversation:* What did you do yesterday? *Grammar:* Past tense (regular forms). Second position in Czech sentences. Countries and nationalities.

・3rd week: REVISION TEST. LESSON 6: *Conversation:* Who is who in the world history. Narrate about past events.*Grammar:* Past tense (irregular forms). Adverbs expressing time.

・4th week: LESSON 7: *Conversation:* Buy, sell and describe an appartment. *Grammar:* Verbs znát-vědět-umět. Verbs and prepositions with the accusative.

・5th week: PROGRESS TEST 1. LESSON 7: *Conversation:* Reading and writing advertisements. *Grammar:* Indefinite Pronouns and Adverbs. Imperfective and Perfective Verbs (Introduction).

・6th week: LESSON 7: *Conversation:* Buy, sell and describe an appartment. *Grammar:* Double negative. Prepositions with the accusative (na, pro, za, o). Ordinal numerals.

・7th week: LESSON 8: *Conversation:* Plan your future. *Grammar:* Future tense of the verb BÝT, verbs of motion imperfective verbs.

・8th week: LESSON 8: *Conversation:* Plan your future. *Grammar:* Future tense. Verbs of motion. Where are you going? (Prepositions NA, DO and K/KE).

・9th week: REVISION LESSON. *Conversation:* Narrate about your past. Plan your future. Describing of Human body. *Grammar:* Past and Future tenses. Where are you going? Where did you go? Where are/were you?

・10th week: PROGRESS TEST 2. LESSON 9: *Conversation:* Human body. *Grammar:* Modal Verbs. Adverbs of Place. Ordinal Numerals

・11th week: LESSON 9: *Conversation:* Human body. *Grammar:* Nominative and accusative plural.

・12th week: LESSON 9: *Conversation:* Human body. *Grammar:* Accusative object-centered constructions.

・13th week: LESSON 10: *Conversation:* Travelling. *Grammar:* Genitive of singular.

・14th week: PROGRESS TEST 3. LESSON 10: *Conversation:* Plans for summer holiday. *Grammar:* Prepostions with genitive.

・15th week: Final Test.

Literature

・required literature

・HOLÁ LÍDA. *New Czech Step by Step*. 4. opr. vyd. Praha: Akropolis, 2008. 256 pp. ISBN 978-80-86903-73-6.

・HOLÁ, Lída. *New Czech step by step : activity book*. V nakl. Akropolis 4., opr. v. Praha: Akropolis, 2008. 2 sv. ISBN 9788086903736.

・recommended literature

・REMEDIOSOVÁ, H. a E. ČECHOVÁ. *Chcete mluvit česky? / Do you want to speak Czech? Textbook 1. A communicative course of contemporary Czech for English speakers (beginning to intermediate level).* 5. vyd. Liberec: Harry Putz, 2005. 414 pp. ISBN 80-86727-04-1.

・GRUNDOVÁ, Dominika. *Needs of Patients. Czech-English Phrasebook for Beginners.* 2., revid. vyd. Praha: Eurolex Bohemia, 2004. 104 pp. ISBN 80-86432-86-6.

・not specified

・The first two titles are obligatory, the others are recommended.

Teaching methods The tuition is realised in the form of practical courses.

Assessment methods The tuition is realised in the form of practical courses. The students' presence in these courses is strictly required, maximally two properly apologised absences (i.e. via the Study Department of the Faculty of Medicine) are tolerated. The tuition is finished by an end-of-term examination (ETE) consisting of a WRITTEN and an ORAL part. Passing the examination is conditioned by proper attendance, active participation in practical courses, sitting for Progress Tests and successful passing of written and oral exams. The basic limit for passing all tests is 70%. In case of

passing two from three class tests, which are obligatory for all students, the basic limit in the written exam is reduced by 10%. Without successful passing the written exam students will not be allowed to sit for the oral part! Any copying, recording or leaking tests, use of unauthorized tools, aids and communication devices, or other disruptions of objectivity of exams (credit tests) will be considered non-compliance with the conditions for course completion as well as a severe violation of the study rules. Consequently, the teacher will finish the exam by awarding grade ” F” in the Information System.

aZLET021c Ethics in Dentistry - practice

Extent and Intensity Seminar: .5 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

z (credit).

Supervisor doc. Mgr. Josef Kuře, Dr. phil.

Department of Medical Ethics - Theoretical Departments - Faculty of Medicine

Contact Person: Mgr. Michaela Vaňharová, Ph.D.

Course objectives Introduction to ethics & Physician-patient relationship & Informed consent & Ethics and communication & Physician role and ” Doctor as a double agent” & Children as patients & Geriatric patients & Ethics and law & Personal data protection & Biomedical research

Syllabus

・Introduction & Physician-patient realtionship & Informed consent & Ethics and communication & Physician role and ” Doctor as a double agent” & Children’ s patients & Geriatric patients & Ethics and law & Personal data protection & Biomedical research

Literature

・*Od narození do smrti : etické problémy v lékařství*. Edited by David C. Thomasma - Thomasine Kimbrough Kushner, Translated by Lucie M. Vyd. 1. Praha: Mladá fronta, 2000. 389 s. ISBN 8020 408835.

・*Blízké a vzdálené :etické teorie a principy práce s lidmi*. Edited by Jan-Olav Henriksen - Arne Johan Vetlesen - Miluše Juříčková. 1. vyd. Boskovice: ALBERT, 2000. 210 s. ISBN 80-85834-85-5.

・PENCE, Gregory E. *Classic cases in medical ethics : accounts of cases that have shaped medical ethics, with philosophical, legal, and historical backgrounds*. 4th ed. Boston: McGraw Hill, 2004. xviii, 470. ISBN 0072829354.

Teaching methods seminar

Assessment methods Full attendance and activity in seminars.

aZLET021p Ethics in Dentistry - lecture

Extent and Intensity Lecture: .5 hour(s) per week. Number of credits: 1 credit(s). Recommended

Type of Completion: k (colloquium). Other types of completion: zk (examination).

Supervisor doc. Mgr. Josef Kuře, Dr. phil.

Department of Medical Ethics - Theoretical Departments - Faculty of Medicine

Contact Person: Mgr. Michaela Vaňharová, Ph.D.

Course objectives The course introduces to medical ethics, focussing on ethics in dentistry. The aim

is: - to inform about ethical dilemmas in medicine/dentistry - to develop ability to perceive ethical

questions - to learn to prevent problems applying ethical professional standards

Syllabus

・Introduction to ethics & Physician-patient relationship & Informed consent & Ethics of communication

& Physician role and ”Doctor as a double agent” & Children as patients & Geriatric patients

& Ethics and law & Personal data protection & Biomedical research

Literature

・HAŠKOVCOVÁ, Helena. *Lékařská etika*. třetí rozšířené vydání. Praha: Galén, 2002. 272 pp.

ISBN 80-7262-132-7.

・CAMPBELL, Alastair V., Grant R. GILLETT a D. Gareth JONES. *Medical ethics*. 4th ed. South Melbourne:

Oxford University Press, 2005. xiii, 312. ISBN 0195584872.

・*Casebook of medical ethics*. Edited by Terrence F. Ackerman - Carson Strong. [1st ed.]. Oxford:

Oxford University Press, 1989. xvii, 240. ISBN 0-19-503917-3.

・FREEMAN, John M. a Kevin MCDONNELL. *Tough decisions : cases in medical ethics*. 2nd ed. Oxford:

Oxford University Press, 2001. xix, 223. ISBN 9780195090420.

・SCHWARTZ, Lisa, Paul. E. PREECE a Robert A. HENDRY. *Medical ethics : a case-based approach*.

1st ed. Edinburgh: Saunders, 2002. xxi, 204. ISBN 0702025437.

Teaching methods lecture

Assessment methods The course is completed by oral colloquium.

aZLHE0221c Histology and Embryology I - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Drahomír Horký, DrSc.

Department of Histology and Embryology - Theoretical Departments - Faculty of Medicine

Course objectives Course objectives

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

1. Describe tissue processing for light and electron microscopy. 2. Understand and explain the structure

of a cell, basic structural principles and function of connective tissues, features of epithelial tissue,

structure of different types of muscle tissue, structure and function of nervous tissue. 3. Identify tissue

types and organs of circulatory, lymphatic and respiratory systems in histologic slides. 4. Characterize

microscopic structure of some organs of human body and explain correlations of tissues within organs.

5. Describe gamete development, explain principle of meiosis and regulation of gametogenesis. 6.

Define the early embryonic development as well as development of fetal membranes, placenta and

umbilical cord. 7. Characterize main phases of prenatal development.

Syllabus

・**1.** Introduction, organization of practicals, teaching aids. Introduction into histological technique.

Overview of tissue processing for light and electron microscopy - explanation and film. Study of

hard tissues (bones and teeth). (Explanation and film)

・**2. Cytology:** Ultrastructure of the cell nucleus (during interphase and mitosis). Ultrastructure of

cell organelles (mitochondria, the Golgi apparatus, the endoplasmic reticulum, ribosomes, lysosomes,

peroxisomes, and the centriol). Cell inclusions. Cell surfaces and intercellular junctions.

Aids: Atlas of electron micrographs.

・**3. Blood:** Blood corpuscles: Cytomorphology of erythrocytes and leukocytes. Differential white

cell count (dWCC) - average values, abnormities and terminology of dWCC. Thrombocytes. Slide:

A smear of peripheral blood stained by Pappenheim’ s method. Repetition I: Tissue processing for

light and electron microscopy. Cytology (a test). Development of blood cells (hematopoiesis):

Erythropoiesis, granulopoiesis and development of thrombocytes. Microscopic structure of the

bone marrow. Slide: A bone marrow smear stained by Pappenheim’ s method.

・**4. General histology:** Use of the light microscope, common faults in microscopy. Results of basic staining methods in histology: Hematoxylin-eosine /HE/ (hepar), hematoxylin‑eosine-saffron /HES/ (esophagus), AZAN (prostate), impregnation (cerebellum).

・**5.** Epithelial tissue - epithelial membranes (covering epithelia). Slides: Ren, Vesica fellea, Trachea, Esophagus, Ureter, Palpebra, Skin from the finger tip. Glandular epithelium. Absorptive, respiratory and sensory epithelia. Slides: Intestinum tenue, Intestinum crassum, Glandula parotis, Glandula submandibularis, Papilla vallata (taste buds)

・**6.** Connective tissue proper ans special connetive tissues - classification and examples. Slides: Funiculus umbilicalis, Esophagus, Posterior segment of the eye, Lien, Aorta.Supporting tissues: cartilage and bone. Histogenesis of the bone tissue (ossification). Slides: Trachea, Auricula, Elastic cartilage, Lamellar bone, Chondrogenic ossification. Repetition II:Blood and development of blood cells, connective and supporting tissues (a test).

・**7.** Muscle tissue: the smooth, akeletal and crdiac. Slides: Intestinum tenue, Intestinum crassum, Glandula parotis, Glandula submandibularis, Apex linguae, Cardiac muscle tissue (H.E. + staining according to Heidenhain)

・**8.** Nerve tissue: neuron, dendrites, neurit and synapses; neuroglia. Slides: Cortex cerebri, Cerebellum,

Medulla spinalis, Ganglion spinale, Peripheral nerve, Motor end plate.

・**9. Microscopic anatomy and embryology**

・Microscopic structure of the heart and blood vessels. Capillaries. Slides: Artery of the muscular type with a vein, Aorta, Vena cava, Myocardium. Atlas of electron micrographs: Types of capillaries. Repetition III: Epithelial tissue, muscle tissue and nerve tissue (a test).

・**10.** Microscopic structure of the lymphatic system. Slides: Lymphonodus, Lien (spleen), Thymus of a young individual, Thymus of the adult (with involution changes), Palatine tonsil, Lingual tonsil.

・**11.** Microscopic structure of the respiratory system. Slides: Nasal conchae, Epiglottis, Larynx, Trachea, Pulmo.

Literature

・recommended literature

・MESCHER, Anthony L. *Junqueira´s basic histology : text and atlas*. 13th ed. New York: McGraw-Hill Medical, 2013. xi, 544. ISBN 9781259072321.

・not specified

・EROSCHENKO, Victor P. a Mariano S. H. di. FIORE. *Di Fiore´s atlas of histology with functional correlations*. 11th ed. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins, 2008. xvii, 532. ISBN 9781608314928.

Teaching methods In the course students observe histological slides and electron micrographs in microscopic hall.

Assessment methods Testing of knowledge: Student must prove sufficient level of knowledge by written test examination. Each student completes 4 partial tests during semester. Tests are evaluated by point for correct answer. More than half number of correct answers (points) is evaluated as ”YES”.

All of these tests must be successful. In case of failure, only 1 resit is possible. There is condition 4 from 4 (ie. 4 YES / 4 regular tests) or 4 from 5 (ie. 3 YES / 4 regular tests + 1 YES / 1 resit). If student does not fulfill this condition, credit test follows in the relevant exam period. This test covers all topics

studied during semester. In case of failure in credit test, credit will not be given and student **must enroll the course again.**

Conditions for obtaining credit: 1. Attendance at all practical exercises (100% participation, all absences must be regularly excused (in IS) and substituted).

2. Successful completion of all tests.

3. Submission of all protocols (correctly completed forms of protocols signed by teacher).

aZLHE0221p Histology and Embryology I - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Drahomír Horký, DrSc.

Department of Histology and Embryology - Theoretical Departments - Faculty of Medicine

Course objectives Main objective of the subject is to combine programmed teaching of histology ana embryology that occupy a key position among subjects of the theoretical study on medical faculties.

At the end of the course students should be able to: - in histology a) define basic terms and categories of the subject and apply used classification system in the praxis; b) describe and explain structure and function of animal cells on submicroscopic and molecular levels; c) describe and explain structural characteristics of epithels, connective and supporting tissues (incl. their function), muscle tissue including mechanism of muscle contraction and nerve tissue; d) identify basic tissues and main organs of the human body in histological slides; e) analyze the microscopic structure of organs under normal conditions and compare it with changes evoked with pathological changes or

alterations; f) understand existing close interrelations between structure and function of individual tissues and organs of the human body; - in embryology: 1) explain the development of gametes, meiosis principle and regulation processes during gametogenesis; 2) discuss main developmental processes and genetic controle of development; 3) describe early development of the human embryo incl. development of extraembryonic structures; 4) categorize phases of prenatal development and characterize key developmental stages of individual organ systems.

Syllabus

・**1.** Introduction. Histology - definition, classification and significance inclusive of a short history of the branch. Brno histological and embryological school.

・**2. Cytology:** The cell - definition and general characteristics. Concept of the unit membrane. Overview of main cell components. Plasma membrane, cell surfaces and intercellular junctions. Cell cycle, cell division, and cell differentiation.

・**3. Body fluids.** Blood cell morphology: erythrocytes, leukocytes, and thrombocytes. Differential white cell count. Prenatal and postnatal hematopoiesis. Short outline of erythropoiesis and granulopoiesis. Origin of platelets.

・**4. General histology.** Tissues - definition, their origin and classification. Epithelial tissue - definition and classification. Overview of covering and glandular epithelia. Characteristics of glandular cells. Absorptive, respiratory, and sensory epithelia.

・**5.** Connective and supporting tissues - their general characteristics and components: cells, fibres and ground substance. The connective tissue proper and special connective tissue - types, chief distribution, and function. Supporting tissues: cartilage and bone - types, chief distribution, and function. Development of the bone tissue (ossification).

・**6.** General characteristics of muscle tissue and its classification. Smooth muscle tissue, skeletal muscle tissue, and cardiac muscle tissue. Ultrastructure of myofibrils and mechanism of the muscle contraction.

・**7.** Overview of components of the nerve tissue. Neuron and its processes, classification of neurons. Synapse. Neuroglial cells and sheathes of nerve fibres. Propagation of nerve impulses.

・**8. Microscopic anatomy and embryology.** Outline of microscopic structure of the heart and blood vessels and lymphatic organs. Mononuclear phagocyte system.

・**9.** Embryology - definition, classification and importance. Overview of the early human development:

The phases of the human ontogeny. Human gametes - their structure, physiology and origin. Meiosis and main differences between spermatogenesis and oogenesis. Transport of gametes.

Sperm capacitation and acrosome reaction. Fertilization and cleavage, morula and blastocyst.

・**10.** Outline of the implantation. Abnormal sites of implantation (extrauterine pregnancies). Outline of differentiation of the trophopblast and embryoblast during implantation. Outline of the development of fetal membranes: amniotic sac, chorion, and placenta. Function of the placenta. The umbilical cord. Anomalies of the placenta and umbilical cord.

・**11.** Development of the germ disc: origin of the intraembryonic mesoderm and notogenesis (development of the chorda dorsalis). Development of somites and nephrotomes. Derivatives of the germ layers - an overview. Summary of the first three weeks of the human development.

Literature

・recommended literature

・MESCHER, Anthony L. *Junqueira´s basic histology : text and atlas*. 13th ed. New York: McGraw-Hill Medical, 2013. xi, 544. ISBN 9781259072321.

・MOORE, Keith L., T. V. N. PERSAUD a Mark G. TORCHIA. *Before we are born : essentials of embryology*

and birth defects. 8th ed. Philadelphia, PA: Elsevier Saunders, 2013. xviii, 348. ISBN 9781 437720013.

・not specified

・LOWE, James S. a Peter G. ANDERSON. *Stevens and Lowe´s Human Histology*. 4th. : Elsevier, 2015. ISBN 978-0-7234-3502-0.

・OVALLE, William K., Patrick C. NAHIRNEY a Frank H. NETTER. *Netter´s essential histology*. 2nd ed. Philadelphia, PA: Elsevier/Saunders, 2013. xv, 517. ISBN 9781455706310.

・MOORE, Keith L., T. V. N. PERSAUD a Mark G. TORCHIA. *The developing human : clinically oriented embryology*. 9th ed. Philadelphia, PA: Saunders/Elsevier, 2013. xix, 540. ISBN 9781437720020.

・SADLER, T. W. *Langman´s medical embryology*. 12th ed. Philadelphia: Wolters Kluwer Health/Lippincott

Williams & Wilkins, 2012. xiii, 384. ISBN 9781451144611.

Teaching methods lectures

Assessment methods Students will pass examination after completing Histology and embryology II - lecture. All informations about required knowledge and the course of examination are on web site: http://www.med.muni.cz/histology/education

aZLLT0222c Basic Medical Terminology II - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion:

z (credit).

Supervisor Mgr. Libor Švanda, Ph.D.

Language Centre, Faculty of Medicine Division - Language Centre

Contact Person: Mgr. Libor Švanda, Ph.D.

Course objectives General characteristics of the subject: Greek-Latin medical terminology is one of the relevant means for acquisition of the target knowledge of medical students. The tuition is of both theoretic and practical character, conceived as a preparatory course sui generis, introducing the students into the study of medicine by means of its language. The content of tuition is, like the set of knowledge postulated in the examination, exclusively determined by the needs of the discipline and medical practice, with a particular focus on the head and neck regions. In the first place it provides such knowledge of Latin and/or Greek as enables the student to master quickly and purposefully the semantic aspect of terms, their grammatical form, and word-forming structure. Simultaneously it provides systematic instruction to independent solution of current terminological problems consisting in understanding of the technical content of the terms and in the formation of medical terms. Besides this it opens a view of the wider historical and linguistic fundamentals of medical terminology as well as its general theoretical contexts.

Learning outcomes

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

use Latin and Greek-Latin medical terminology and expressions correctly and understand them;

explain and apply grammatical devices and rules relevant for acquisition of Greek-Latin medical terminology;

recognize the syntactic structure of complex terms;

describe the semantic structure of one-word terms;

form compound words applying the most used word-formation principles;

translate selected expressions from anatomy, pre-clinical and clinical fields of study, medical prescriptions,

and pharmacology;

guess the meanings of unknown terms on the basis of semantic, grammatical and logical relations.

Syllabus

・**Basic medical terminology - practice.** Syllabus.

・*1st week:* Use of Adjectives of 3rd declension in clinical terminology and in terminology of medical

documentation. Frequented Adjectives ending in -alis,e and aris, e; use of participles ending in

-ans and - ens.

・*2nd week:* Anatomical structures containing in their names regularly derived comparatives and superlatives.

・*3rd week:* Anatomical structures containing in their names irregularly and defectively derived comparatives and superlatives, comparative and superlative forms in denoting position and direction.

・*4th week:* Cardinal and ordinal numerals in anatomical, clinical and pharmacological terminology. Samples of different types of medical prescriptions

・*5th week:* Supplementing material to the terminology of the most frequented types of fractures and injuries.

・*6th week:* **Progress test I.** Introduction to the word formation I. - basic rules of derivation. Latin and Greek prefixes, their meanings and mutual relations.

・*7th week:* Introduction to the word formation II. Latin and Greek suffixes of nouns and adjectives, their meanings and mutual relations. Synonymy, antonymy, polysemy, and homonymy of prefixes.

・*8th week:* **Progress test II.** Introduction to the word formation III. - basic rules of composition, connecting vowels. Latin and Greek compound words, hybrid compounds. Latin compound words in anatomical nomenclature.

・*9th week:* Introduction to the word formation IV. Samples of authentic documentation containing word-forming components with the meaning of general terms, terms naming anatomical structures and bodily fluids.

・*10th week:* Introduction to the word formation V. Samples of authentic documentation containing word-forming components with the meaning of physiological and pathological processes ongoing in the human body, components denoting different qualities, characteristics and amount

・*11th week:* Introduction to the word formation VI. Samples of authentic documentation containing word-forming components with the meaning for naming branches of medicine and the most frequent types of medical interventions and examinations.

・*12th week:* Post mortem diagnosis as an example of authentic application of Latin in medical practice.

・*13th week:* Final summary of the Latin medical terminology.

・*14th week:* **Final test.**

Literature

・required literature

・PRUCKLOVÁ, Renata a Marta SEVEROVÁ. *Introduction to Latin and Greek terminology in medicine*.

3rd, rev. ed. Praha: KLP, 2012. xii, 115. ISBN 9788086791241.

・recommended literature

・EHRLICH, Ann a Carol L. SCHROEDER. *Medical terminology for health professions*. 6th ed. Clifton

Park, NY: Delmar, Cegage Learning, 2009. xxvi, 582. ISBN 9781418072520.

Teaching methods lectures, translation and grammar exercises, drills, homework,

Assessment methods Requirements for gaining the credit: regular class attendance, active participation in class, preparation for classes, sitting progress tests and a credit test which is focused on word-formation, nominal inflexion being involved only marginally. The basic limit for passing all tests is 70% (the pass-mark for the credit test is lowered by 5% each time the progress test, which is obligatory, is successfully written, at most by 10%). Only one unexcused absence will be tolerated; further absences must be properly excused (i.e. via the Study Department of the Faculty of Medicine). Class attendance is registered through the IS.

aZLLT0222s Basic Medical Terminology II - seminar

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 2 credit(s). Type of Completion:

zk (examination).

Supervisor Mgr. Libor Švanda, Ph.D.

Language Centre, Faculty of Medicine Division - Language Centre

Contact Person: Mgr. Libor Švanda, Ph.D.

Course objectives General characteristics of the subject: Greek-Latin medical terminology is one of the relevant means for acquisition of the target knowledge of medical students. The tuition is of both theoretic and practical character, conceived as a preparatory course sui generis, introducing the students into the study of medicine by means of its language. The content of tuition is, like the set of knowledge postulated in the examination, exclusively determined by the needs of the discipline and medical practice, with a particular focus on the head and neck regions. In the first place it provides such knowledge of Latin and/or Greek as enables the student to master quickly and purposefully the semantic aspect of terms, their grammatical form, and word-forming structure. Simultaneously it provides systematic instruction to independent solution of current terminological problems consisting in understanding of the technical content of the terms and in the formation of medical terms. Besides this it opens a view of the wider historical and linguistic fundamentals of medical terminology as well as its general theoretical contexts.

Learning outcomes

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

use Latin and Greek-Latin medical terminology and expressions correctly and understand them; explain and apply grammatical devices and rules relevant for acquisition of Greek-Latin medical terminology; recognize the syntactic structure of complex terms; describe the semantic structure of one-word terms; form compound words applying the most used word-formation principles; translate

selected expressions from anatomy, pre-clinical and clinical fields of study, medical prescriptions, and pharmacology; guess the meanings of unknown terms on the basis of semantic, grammatical and logical relations.

Syllabus

・**BASIC MEDICAL TERMINOLOGY - seminar.** Syllabus.

・*1st week:* Summary and revision of the Basic medical terminology I. Adjectives of 3rd declension in clinical terminology and in terminology of medical documentation.

・*2nd week:* Comparison of adjectives ‑ regular. Frequented comparatives and superlatives in the anatomical terminology.

・*3rd week:* Comparison of adjectives ‑ irregular and imcomplete. Translation of terms containing comparatives/superlatives.

・*4th week:* Numerals ‑ the most frequented cardinal and ordinal numerals. Numerals in anatomical, clinical and pharmacological terminology. Factual and formal grammatical structure of medical prescription.

・*5th week:* Supplementing of the subject matter - terminology of fractures and injuries.

・*6th week:* **Progress test I.** Introduction to the word formation I. - basic rules of derivation. Latin and Greek prefixes, their meanings and mutual relations.

・*7th week:* Introduction to the word formation II. Latin and Greek suffixes of nouns and adjectives, their meanings and mutual relations. Synonymy, antonymy, polysemy, and homonymy of prefixes.

・*8th week:* **Progress test II.** Introduction to the word formation III. - basic rules of composition, connecting vowels. Latin and Greek compound words, hybrid compounds. Latin compound words in anatomical nomenclature.

・*9th week:* Introduction to the word formation IV. Greek productive word-forming components denoting general terms, names of anatomical structures and bodily fluids

・*10th week:* Introduction to the word formation V. Greek productive word-forming components for physiological and pathological processes ongoing in the human body, components denoting different qualities, characteristics and amount.

・*11th week:* Introduction to the word formation VI. Greek productive word-forming components naming branches of medicine and the most frequent types of medical interventions and examinations.

・*12th week:* Post mortem diagnosis as an example of authentic application of Latin in medical

practice.

・*13th week:* Final summary of the Latin medical terminology.

・*14th week:* **Final test.**

Literature

・required literature

・PRUCKLOVÁ, Renata a Marta SEVEROVÁ. *Introduction to Latin and Greek terminology in medicine*.

3rd, rev. ed. Praha: KLP, 2012. xii, 115. ISBN 9788086791241.

・recommended literature

・EHRLICH, Ann a Carol L. SCHROEDER. *Medical terminology for health professions*. 6th ed. Clifton

Park, NY: Delmar, Cegage Learning, 2009. xxvi, 582. ISBN 9781418072520.

Teaching methods lectures, translation and grammar exercises, drills, homework,

Assessment methods Examination (zk) mainly proceeds in the oral form but also includes a shorter written part in the form of a translation of clinical and prescription terms from Czech into Latin. The oral part contains grammatical analysis of selected Latin anatomical and clinical terms, determination and variation of basic grammatical categories, explanation of a technically relevant grammatical phenomenon, and tasks which check knowledge of word formation. The exam may be supplemented with questions from the theory of terminology (historical aspects, contemporary state of development, characteristic features, etc.). A prerequisite for admission to the examination is successful completion of the final written test focused especially on word-formation. Only one unexcused absence will be tolerated; further absences must be properly excused (i.e. via the Study Department of the Faculty of Medicine).

aZLPR0232c Preclinical Dentistry II - practice

Extent and Intensity Seminar: 6 hour(s) per week. Number of credits: 6 credit(s). Type of Completion:

z (credit).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Students are meeting with the dentistry and are obtainig basic knowledes and skills in inherent branches of dentistry.Basic aims of subject education: To acquaint students with main tools and devices used in the dentistry is the main goal of subject, same as to equip them for clinical stages in dental surgery room. Preclinical dentistry II. Practice is focused on operative dentistry (students are able to prepare anf fill all kinds of cavities in simulators), basic knowledge and skills in endodontology,periodontology,pedodontics and orthodontics.

Syllabus

・1. Class III. and IV. Cavity preparation. Composite Fillings. Matrix bands, wedges.Finishing and

polishing.

・2. Carving of Class II Cavities in gypsum models.

・3. Preparation (class II. MO,DO) in resin models. Bases. Matrix bands. Wedges.

・4. Fundaments of preiodontology. Instruments - their identification, proper usage of scalers and currets. Tool maintenance.

・5. Principles of the work with simulators. Ergonomy.

・6. Class I cavity preparation in simulators. Fabrication of amalgam fillings in 1st. maxillary molar and 2nd. mandibulary premolar.

・7. Clas V. Cavity Preparation for amalgam, composites and glass ionomers. 1x molar,2x premolar, fabrication of fillings.

・8. Class III. and IV. cavity preparation. Fabrication of composit fillings. Matrices.

・8. Class II. cavity preparation, MO, OD, MOD in molars and premolars. Making bases and fillings.

9. Class II. cavity preparation, MO in a mandibulary molar. Bases.

・10. Fabrication of class II. MO filling in a mandibulary molar. Class II. MOD cavity preparation in a mandibulary premolar an OD in a maxillary molar. Bases.Fabrication of fillings.

・11. Class II. MOD cavity preparation in a mandibulary molar. fabrication of an amalgam filling. Finishing and polisging of amalgam fillings.

・12. Slot preparations and fillings. Lrge direct rstoration replacing a cusp. 13. Endodontics I. Endodontic instruments. Trepanation. Root Canal Instrumentation. 14. Endodontics II. Root Canal Instrumentation and Filling.Central cone, cold lateral condensation.

・14. Large Direct Restorations - replacement of a cusp. 12. Orthodontics. Bite and teeth anomalies. Angle’ s classification.

Literature

・Stejskalová a kol. Konzervační zubní lékařství.2. vydání, Praha 2008. Galén.

・W.S.O.,Powers J.M.:Dental materials properties and manipulation. Mosby Year Book 1992,5th Edition,

St. Louis-Missouri 5.

・Sturdevant, C.M.: The art and science of operative dentistry. 1995, Mosby comp.

Teaching methods practical training

Assessment methods 2 written tests, final written credit test. Discussion. Extent of the subject : 6 hours practical training /week.

aZLPR0232p Preclinical Dentistry II - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Jiří Vaněk, CSc.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Students are meeting with the dentistry and are obtainig basic knowledes and skills in inherent branches of dentistry.Basic aims of subject education: To acquaint students with main tools and devices used in the dentistry is the main goal of subject, same as to equip them for clinical stages in dental surgery room. Preclinical dentistry II. Practice is focused on operative dentistry (students are able to prepare anf fill all kinds of cavities in simulators), basic knowledge and skills in endodontology,periodontology,pedodontics and orthodontics.

Syllabus

・1.Class IV. cavities and defects. Preparation, matrices, composite filling. 2. Class II. cavities. Preparation, MO, OD, MOD cavities. Matrix bands. Wedges. 3. Class II. Cavities. Fabrication of the amalgam filling, condensation, carving, finishing and polishing. 4. Instruments and equipment for tooth preparation, correct manipulation and servicing. 5. Slot cavities‐praparation and fillings. 6. Preprations with the replacement of the cups for amalgam. 7. Endodontics I. Morphology. Phases of endodontic treatment 8. Endodontics II. Instruments and principles of root canal instrumentation. Working length. 9. Endodontics III Root canal flling. Endodontic materials. 10. Principles of pedodontics. Special approach to the dental treatment in children. Prophylaxix of dental caries. 11. Periodontal minimum fot the preclinical dentistry I. Supportive tissues, periodontal diseases, instrumentarium - curretes and scalers. 12. Periodontal minimum fot the preclinical dentistry II. Gingivitis, parodontitis‐classification, principles od diagnosis and treatment. 13. Principles of orthodontics‐anomalies of teeth, groups of teeth, bite anomlaies. Angle s classification. 14. Procedures in operative dentistry - a preview.

Literature

・FIALOVÁ, Sylvia a Květoslava NOVÁKOVÁ. *Vybrané kapitoly z pedostomatologie*. 1. vyd. Olomouc: Univerzita Palackého, 2000. 155 s. ISBN 8024400758.

・BEZROUKOVÁ, Zdenka. *Propedeutika endodoncie*. 1. vyd. Olomouc: Univerzita Palackého, 1998. 34 s. ISBN 8070678755.

・BEZROUKOVÁ, Zdenka. *Základní pracovní postupy v konzervační stomatologii*. 2. vyd. Olomouc: Univerzita Palackého, 1998. 27 s. ISBN 8070678771.

・*The art and science of operative dentistry*. Edited by Clifford M. Sturdevant - Theodore M. Roberson. 3rd ed. St. Louis: Mosby, 1995. xxi, 824 s. ISBN 0-8016-6366-0.

・KOVAĽOVÁ, Eva a Michal ČIERNY. *Orálna hygiena*. 1. vyd. Prešov: Vydavateľstvo Anna Nagyová, 1994. 246 s. ISBN 80-967041-3-3.

・JANSOVÁ, Katarína a Miroslav EBER. *Stomatologická propedeutika.* 1. vyd. Olomouc: Univerzita Palackého - Lékařská fakulta, 1992. 78 s. ISBN 80-7067-147-5.

・KAMÍNEK, Milan a Marie ŠTEFKOVÁ. *Ortodoncie.* 1. vyd. Olomouc: Univerzita Palackého - Lékařská fakulta, 1991. 68 s. ISBN 80-7067-996-4.

・KAMÍNEK, Milan a Marie ŠTEFKOVÁ. *Ortodoncie I.* 1. vyd. Praha: Státní pedagogické nakladatelství, 1990. 76 s.

・ŠKACH, Miroslav. *Onemocnění parodontu : Učebnice pro lékařské fakulty*. 4. část. přeprac. vyd. Praha: Avicenum, 1977. 513 s.

Teaching methods lecture

Assessment methods discusion

aZLPT0221 Prosthetic Technology I - Materials

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Short annotation of the subject Branch content Students will know basic attributes of the dental materials, how to devite them, and they will know basic laboratory equipment. Laboratory equipment Categorization of the dental materials Categorization of the dental impression materials Model materials Forms materials Ceramic materials Plastic materials Metals and their alloys Composite materials Basics aims and content of the subject: Get to know step by step all techniques and materials, get knowledges about all laboratory procedures of fixed and partial dentures.

Syllabus

・Alginate impression of the lower jaw - pouring with plaster and cast removal Alginate impression

of the upper jaw - pouring with plaster and cast removal Light and haevy bodied impression of the lower jaw Light and heavy bodied impression of the upper jaw Pouring of the rubber gum impression, divided cast preparation. Repetition. Credits.

Literature

・Bittner J.,Sedlácek J.: Technologie pro zubní laboranty 1979

Teaching methods practical training

Assessment methods Type of the subject: Obligatory 2. sem: 1 hr. practise Teaching of the subject style: practise, Finalization of the subject: credit,

YEAR 2 / SEMESTER 3

aZLAN0333c Anatomy III - dissection

Extent and Intensity Total 40 hours. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor prof. RNDr. Petr Dubový, CSc.

Department of Anatomy - Theoretical Departments - Faculty of Medicine

Course objectives This subject is dedicated to the extended study of head topography. At the end of the course students should be able to:

- apply the correct anatomical nomenclature
- define topographical regions of the head
- demonstrate practically particular organs of the head at the human cadaver
- create the anatomical prosection of some studied region using specified dissecting procedures
- distinguish abnormalities of the prosections

Syllabus

・Dissection of the head:

・- parotideomasseteric region

・- anterior facial region

・- temporal region

・- ocipitofrontal region

・- infratemporal fossa

・- cranial cavity

・- dissection of the brain

・- para and retropharyngeal space

・- pharynx, larynx

・- nasal cavity

・- oral cavity, hard and soft palate, floor of the mouth

・- orbital cavity

Literature

・required literature

・DUBOVÝ, Petr. *Instructions for anatomical dissection course*. 3. vyd. Brno: Masarykova univerzita, 2013. 71 pp. ISBN 978-80-210-6202-3.

・recommended literature

・Liebgott, Bernard. The anatomical basis of dentistry. 3rd ed. Mosby, ISBN 0-323-06807-3

・DUBOVÝ, Petr. *Gross anatomy and structure of the human nervous system. Part I. Surface anatomy and structural arrangement of the central nervous system*. 2. dotisk 3. vyd. Brno: Masarykova univerzita, 2016. 92 pp. ISBN 978-80-210-6125-5.

・Anne M. Gilroy, Brian R. MacPherson (eds.) Atlas of Anatomy, 3rd Edition, 2016, Thieme Medical Publishers, Inc. ISBN: 9781626232525

・KACHLÍK, David a Ondřej VOLNÝ. *Memorix anatomy : comprehensive book of human anatomy in English and Latin*. Illustrated by Radovan Hudák - Jan Balko - Simona Felšőová - Šárka Zaváza. 1st edition. Praha: Triton, 2015. xvii, 610. ISBN 9788073879501.

・Gosling, Harris, Humpherson, Whitmore & Willan. Human Anatomy, Color Atlas and Textbook, 6th Edition. Elsevier Books, 2016. ISBN 9780723438274

Teaching methods Anatomical dissection of the head.

Assessment methods Completion of the subject is assessed by the course-unit credit. A precondition for obtaining the course-unit credit is 100% attendance and demonstration of basic knowledge during examination at the close of the practicals. The student who fails the 100% attendance due to an illness (after presentation of a medical certificate) substitutes the course to the full extent during the examination period of the semester. A minimum of 6 out of 10 possible points (E) in each examination is required for fulfillment. The results of the examination will be included in the results of the practical part of the final examination in Anatomy. The unsuccessful student will be re-examined at the respektive date of the theoretical part of the final examination in Anatomy.

aZLAN0333p Anatomy III - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 4 credit(s). Type of Completion: zk (examination).

Supervisor prof. RNDr. Petr Dubový, CSc.

Department of Anatomy - Theoretical Departments - Faculty of Medicine

Course objectives This subject is dedicated i/ to the study of nervous system and ii/ study of topographic anatomy of the head, neck, thorax, abdomen, and pelvis. At the end of the course students should be able to:

- understand the standardized and universally accepted anatomical terminology

- describe organs of senses, peripheral and central nervous systems

- explain function of senses, peripheral and central nervous systems

- relate organs of senses, peripheral and central nervous systems with respect to adjacent structures

- identify distribution and function of the sympthetic and parasympathetic components of the autonomic nervous system

- define topographical regions of the head, neck, thorax, abdomen, and pelvis

- identify basic anatomical structures (bones, joints, viscera, vessels, and nerves) in the regions of the head, neck, thorax, abdomen, and pelvis

- review mutual continuity between particular organ systems

Syllabus

・1. Basic anatomy of the nervous system. Spinal nerve. Structure of the spinal cord.

・2. Structure of the brain stem.

・3. Structure of the cerebellum and diencephalon.

・4. Structure of the telencephalon.

・5. Meninges, ventricles and vascular system of the CNS Cranial nerves 1.

・6. Cranial nerves 2. Cervical plexus. Intercostal nerves. Dorsal rami.

・7. Autonomic nervous system.

・8. Visual system.

・9. Regional anatomy of the head and neck.

・10. Dissection course (head, neck).

・11. Auditory system.

・12. Regional anatomy of the body (except limbs).

・13. Regional anatomy of the body (except limbs).

・14. Diagnostic imaging

・15. Spare lecture

Literature

・required literature

・Liebgott, Bernard. The anatomical basis of dentistry. 3rd ed. Mosby, ISBN 0-323-06807-3

・DUBOVÝ, Petr. *Gross anatomy and structure of the human nervous system. Part I. Surface anatomy and structural arrangement of the central nervous system*. 2. dotisk 3. vyd. Brno: Masarykova univerzita, 2016. 92 pp. ISBN 978-80-210-6125-5.

・recommended literature

・Anne M. Gilroy, Brian R. MacPherson (eds.) Atlas of Anatomy, 3rd Edition, 2016, Thieme Medical Publishers, Inc. ISBN: 9781626232525

・KACHLÍK, David a Ondřej VOLNÝ. *Memorix anatomy : comprehensive book of human anatomy in English and Latin*. Illustrated by Radovan Hudák - Jan Balko - Simona Felšőová - Šárka Zaváza. 1st edition. Praha: Triton, 2015. xvii, 610. ISBN 9788073879501.

・Gosling, Harris, Humpherson, Whitmore & Willan. Human Anatomy, Color Atlas and Textbook, 6th Edition. Elsevier Books, 2016. ISBN 9780723438274

Teaching methods Lectures

Assessment methods The subject is evaluated in the scope of the final examination.

Final examination:

The final examination in Anatomy consists of a practical and a theoretical part. To pass successfully the exam, the student has to obtain at least the grade E in both practical and theoretical parts of the final examination.

The practical part of final examination is represented by the results of the examinations in Anatomy III

- Dissection. The student, who has not obtained at least grade E during above-mentioned courses, will

be re-examined at the respective date of the theoretical part of the final examination in Anatomy.

The theoretical part of final examination first proceeds in the form of a test with subsequent oral examination.

To be entitled to proceed to oral examination, the student has to obtain at least 12 out of

16 points in the test. When successful at the test the student does not repeat it during a re-sit date. In

the course of oral examination the student answers 4 questions selected by lot out of 4 preannounce sets of questions and presents an anatomical description of the imaging technique.

aZLAN0333s Anatomy III - seminar

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

z (credit).

Supervisor prof. RNDr. Petr Dubový, CSc.

Department of Anatomy - Theoretical Departments - Faculty of Medicine

Course objectives This subject is dedicated to i/ study of nervous system and ii/ study of topographic anatomy of the head, neck, back, thorax, abdomen and pelvis. At the end of the course students should be able to:

- apply the correct anatomical nomenclature

- define and describe organs of senses and organs of peripheral and central nervous systems

- identify practically particular anatomical features of the eye, ear and central and peripheral nervous

systems on the human cadavers (i.e. brain, spinal cord, and peripheral nerves)

- characterize function of organs of senses and peripheral and central nervous systems

- relate studied organs of the head, neck, back, thorax and abdomen with respect to adjacent structures

Syllabus

・1. Surface anatomy and structure of the spinal cord.

・2. Surface anatomy and structure of the brain stem.

・3. Surface anatomy and structure of the cerebellum and diencephalon.

・4. Surface anatomy and structure of the telencephalon.

・5. Meninges, ventricles and vascular system of the CNS The cranial nerves 1.

・6. The cranial nerves 2. Cervical plexus. Intercostal nerves. Dorsal rami.

・7. Autonomic nervous system.

・8. Visual system.

・9. Demonstration of topographical regions (head and neck).

・10. Dissection course (head, neck).

・11. Auditory system.

・12. Demonstration of topographical regions (excl. limbs).

・13. Demonstration of topographical regions (excl. limbs).

・14. Diagnostic imaging.

Literature

・required literature

・Liebgott, Bernard. The anatomical basis of dentistry. 3rd ed. Mosby, ISBN 0-323-06807-3

・DUBOVÝ, Petr. *Gross anatomy and structure of the human nervous system. Part I. Surface anatomy and structural arrangement of the central nervous system*. 2. dotisk 3. vyd. Brno: Masarykova univerzita, 2016. 92 pp. ISBN 978-80-210-6125-5.

・recommended literature

・Anne M. Gilroy, Brian R. MacPherson (eds.) Atlas of Anatomy, 3rd Edition, 2016, Thieme Medical Publishers, Inc. ISBN: 9781626232525

・KACHLÍK, David a Ondřej VOLNÝ. *Memorix anatomy : comprehensive book of human anatomy in English and Latin*. Illustrated by Radovan Hudák - Jan Balko - Simona Felšőová - Šárka Zaváza. 1st edition. Praha: Triton, 2015. xvii, 610. ISBN 9788073879501.

・Gosling, Harris, Humpherson, Whitmore & Willan. Human Anatomy, Color Atlas and Textbook, 6th Edition. Elsevier Books, 2016. ISBN 9780723438274

Teaching methods Practice with the human anatomical specimens.

Assessment methods Completion of the subject is assessed by the course-unit credit. A precondition for obtaining the course-unit credit is 95% attendance at the seminars (1 non-attendance tolerated).

aZLFY0321c Physiology I - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Marie Nováková, Ph.D.

Department of Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: MUDr. Zuzana Nováková, Ph.D.

Course objectives At the end of the course, students should be able to apply practically the methods used for examination of the functions of human organ systems. Students will be capable of interpreting the acquired records with respect to physiological processes taking place in human organisms. Next, the students will derive and calculate other parameters and indices routinely used in clinical practice. Students will be able to evaluate the results acquired both by measurement and by calculation, and to explain possible deviations.

Syllabus

・Red blood cell count. Estimation of haemoglobin concentration and of mean corpuscular haemoglobin.

Estimation of blood group by slide method. Erythrocyt sedimentation rate. Estimation of osmotic resistance of red blood cells.

・Examination of pulse by palpation. Blood pressure in man. Non-invasive methods of blood pressure measurements. Apex beat, heart sounds. Systolic time intervals. ECG record by means of personal computer. Measurement of pulse wave velocity. Sphygmography.

・Spirometric examination - Kroghs respirometer, Cosmed. Recording of forced vital capacity. Pneumography.

Literature

・required literature

・NOVÁKOVÁ, Zuzana, Robert ROMAN, Mohamed AL-KUBATI, Markéta BÉBAROVÁ, Pavel BRAVENÝ, Alena DAMBORSKÁ, Bohumil FIŠER, Nataša HONZÍKOVÁ, Miloslav KUKLETA, Drahoslava MRÁZOVÁ, Jiří MOUDR, Kateřina NOGOVÁ, Marie NOVÁKOVÁ, Zuzana NOVÁKOVÁ, Michal PÁSEK, Miroslav SVĚTLÁK, Zdeněk WILHELM a Eva ZÁVODNÁ. *Praktická cvičení z fyziologie*. 2. dotisk 1. vyd. Brno: Masarykova univerzita, 2011. 118 pp. ISBN 978-80-210-4391-6.

・AL-KUBATI, Mohamed, Markéta BÉBAROVÁ, Pavel BRAVENÝ, Alena DAMBORSKÁ, Bohumil FIŠER, Nataša HONZÍKOVÁ, Miloslav KUKLETA, Drahoslava MRÁZOVÁ, Jiří MOUDR, Kateřina FIALOVÁ, Marie NOVÁKOVÁ, Zuzana NOVÁKOVÁ, Michal PÁSEK, Robert ROMAN, Miroslav SVĚTLÁK, Zdeněk WILHELM a Eva ZÁVODNÁ. *Physiology Practicals*. 1. dotisk 1. vyd. Brno: Masarykova univerzita, 2010. 109 pp. ISBN 978-80-210-4409-8.

Teaching methods The course is organized in the form of laboratory practices where students examine each other by given method, and they prepare the report from measured data.

Assessment methods Credits are given on the basis of full attendance in practices and handling of all laboratory reports.

aZLFY0321p Physiology I - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Marie Nováková, Ph.D.

Department of Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: MUDr. Zuzana Nováková, Ph.D.

Course objectives At the end of the course, students will have sufficient theoretical background required for profession of dentist. Student should be able to recall principles of human body functions in detail - from a cell level, across particular organs to a complex human organism. Students will be able to explain relationships among chemical, physical and biological factors of living processes. An essential aim is that students acquire critical scientific thinking, ability of independent text analysis and fundamental information selection.

Syllabus

・Structural and functional organization of the body. Metabolism. Water and solutes. Cellular contacts and signaling. Cell membranes. Nervous and muscular activity. Internal environment (homeostasis).

Physiology of the heart. Conduction system. Cardiac electrophysiology. Electrocardiography. Arrhythmias. Electromechanical coupling. Cardiac mechanics. Heart cycle. Heart failure. Examination of cardiovascular system, cardiol. examination techniques. Rheology of the blood. Coronary circulation. Coronary heart disease. Microcirculation. Regulation of blood flow. Regional circulation (pulmonary, cerebral).Regional circulation (splanchnic, skin, muscle). Regional circulation (renal, fetal).Regulation of blood circulation, of blood pressure. Variability of circulatory parameters. Arterial hypertension. Circulatory failure. Physiology of blood. Blood clotting. Blood types (groups).Plasma proteins. Immune system.

Literature

・required literature

・BARRETT, Kim E. *Ganong´s review of medical physiology*. 24th ed. Maidenhead: McGraw-Hill, 2012. 752 s. ISBN 9780071780032.

・GANONG, William F. *Přehled lékařské fyziologie*. 20. vyd. Praha: Galén, 2005. xx, 890. ISBN 807 2623117.

・recommended literature

・SILBERNAGL, Stefan a Agamemnon DESPOPOULOS. *Color atlas of physiology*. 6th ed., completely rev. and. New York: Thieme, 2009. xiii, 441. ISBN 9783135450063.

・SILBERNAGL, Stefan a Agamemnon DESPOPOULOS. *Atlas fyziologie člověka*. 6. vyd., zcela přeprac. a r. Praha: Grada, 2004. xiii, 435. ISBN 802470630X.

・HALL, John E. a Arthur C. GUYTON. *Guyton and Hall textbook of medical physiology*. 12th ed.

Philadelphia, Pa.: Saunders/Elsevier, 2011. xix, 1091. ISBN 9781416045748.

・LANGMEIER, Miloš. *Základy lékařské fyziologie*. 1. vyd. Praha: Grada, 2009. 320 s. ISBN 978802 4725260.

Teaching methods Lessons are led in the form of lectures.

Assessment methods Students pass to continuing education in next semester without any duty of knowledge checking in this semester.

aZLFY0321s Physiology I - seminar

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Marie Nováková, Ph.D.

Department of Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: MUDr. Zuzana Nováková, Ph.D.

Course objectives After finishing the course, students will be able to understand the terms used in general and systemic physiology of man. Students will acquire knowledge necessary for analysis and subsequent interpretation of phenomena taking place on cell, tissue and organ levels as well as on the level of whole human organism.

Syllabus

・Intercellular contact; resting membrane potential; action potential; principles of muscle contraction.

・Interpretation of the ECG curve; cardiac cycle; autoregulation of cardiac functions

・Heart as a muscle; coronary circulation; rheology.

・Immune mechanisms; cellular immunity; humoral immunity.

Literature

・required literature

・BARRETT, Kim E. *Ganong´s review of medical physiology*. 23rd ed. Maidenhead: McGraw-Hill, 2010. ix, 714. ISBN 9780071270663.

・GANONG, William F. *Přehled lékařské fyziologie*. 20. vyd. Praha: Galén, 2005. xx, 890. ISBN 807 2623117.

・recommended literature

・SILBERNAGL, Stefan a Agamemnon DESPOPOULOS. *Color atlas of physiology*. 6th ed., completely rev. and. New York: Thieme, 2009. xiii, 441. ISBN 9783135450063.

・SILBERNAGL, Stefan a Agamemnon DESPOPOULOS. *Atlas fyziologie člověka*. 6. vyd., zcela přeprac. a r. Praha: Grada, 2004. xiii, 435. ISBN 802470630X.

・HALL, John E. a Arthur C. GUYTON. *Guyton and Hall textbook of medical physiology*. 12th ed. Philadelphia, Pa.: Saunders/Elsevier, 2011. xix, 1091. ISBN 9781416045748.

Teaching methods Tuition is done in the form of seminar. Students should read the literature of particular area of physiology. Students present the topics and intensify their knowledge in discussion with the teacher.

Assessment methods The course-unit credit is conditioned by full attendance in the seminars and a multiple choice test. The test consists of 10 questions; 50% of correct answers is a condition for passing. In case of regullar attendance of the lectures (2 absences are allowed), there is no duty to write this test.

aZLGN0311c Gnatology - Bases of Prosthetics - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Students have basic knowledges of the gnatology and their use at dentistry. Chewing system. Morphology and topography of the chewing areas. Kinetics of the mandibule. Statics of the mandibule. Summary of the important anatomical terms. Articularors. Prosthodontics terapy. Orthodontics terapy.

Syllabus

・Lecture + practice: 1. MORPHOLOGY OF THE LOWER AND UPPER JAW 2. STATIC POSITION OF THE LOWER JAW, DYNAMIC POSITION OF THE LOWER JAW 3. EXAMINE OF THE ARTICULATIO TEMPORDMANDIBULARIS

4. MECHANICAL INSTRUMENTS

Literature

・TVRDOŇ, Martin. *Protetická stomatológia, liečba a prevencia*. 1. vyd. Bratislava: Science, 1999. 580 s. ISBN 8096796151.

・VACEK, Mojmír a Jiří BITTNER. *Gnatologie*. 1. vyd. Praha: Avicenum, 1986. 175 s., ob.

Teaching methods Seminar, i.e. case studies taught by various interactive methods Practical demonstration

of interjaw relationships, educational video watchig

Assessment methods Type of the subject: Obligatory 3. sem: 0,5 hr. seminar, 0,5 hr. practice

Teaching of the subject style: practice Finalization of the subject: credit,

aZLGN0311p Gnatology - Bases of Prosthetics - lecture

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

k (colloquium).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Students have basic knowledges of the gnatology and their use at dentistry. Chewing system. Morphology and topography of the chewing areas. Kinetics of the mandibule. Statics of the mandibule. Summary of the important anatomical terms. Articularors. Prosthodontics terapy. Orthodontics terapy.

Syllabus

・Lecture + praktice: 1. MORPHOLOGY OF THE LOWER AND UPPER JAW 2. STATIC POSITION OF THE

LOWER JAW, DYNAMIC POSITION OF THE LOWER JAW 3. EXAMINE OF THE ARTICULATIO TEMPORDMANDIBULARIS

4. MECHANICAL INSTRUMENTS

Literature

・TVRDOŇ, Martin. *Protetická stomatológia, liečba a prevencia*. 1. vyd. Bratislava: Science, 1999.

580 s. ISBN 8096796151.

・VACEK, Mojmír a Jiří BITTNER. *Gnatologie*. 1. vyd. Praha: Avicenum, 1986. 175 s., ob.

Teaching methods Lectures using PowerPoint presentations

Assessment methods Type of the subject: Obligatory 3. sem: 0,5 hr. seminar, Teaching of the subject

style: seminar, Finalization of the subject: colloquium

aZLHE0322c Histology and Embryology II - practice

Extent and Intensity Seminar: 3 hour(s) per week. Number of credits: 3 credit(s). Type of Completion:

z (credit).

Supervisor doc. MVDr. Aleš Hampl, CSc.

Department of Histology and Embryology - Theoretical Departments - Faculty of Medicine

Course objectives Course objectives

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

1. Understand and explain the structure of a cell, structural characteristics of epithels, connective and

supporting tissues (incl. their function), muscle tissue including mechanism of muscle contraction and

nerve tissue.

2. Identify basic tissues and main organs of body in histological slides.

3. Characterize microscopic structure of individual organs of human body and explain correlations of

tissues within organs.

4. Describe gamete development, explain principle of meiosis and regulation of gametogenesis.

5. Define the early embryonic development as well as development of fetal membranes, placenta and

umbilical cord.

6. Characterize stages of prenatal development and key developmental stages of individual organ

systems;

7. Explain the mechanisms of the origin of some developmental anomalies and debate their clinical

implications.

Syllabus

・**1.** Microscopic structure of the digestive system I, II, and III.Slides: Oesophagus, Cardia, Fundus

ventriculi, Pylorus,Duodenum, Intestinum tenue, Intestinum crassum. Appendix, Anus, Hepar - 2x,

Vesica fellea, Pancreas and Islets of Langerhans.

・Repetition I: Respiratory system and digestive system.

・**2.** Microscopic structure of the urinary system. Slides: Ren, Ureter, Vesica urinalis, Urethra feminina,

Pars cavernosa urethrae masculinae.

・**3.** Microscopic structure of the male reproductive system. Slides: Testis, Epididymis, Glandula

vesiculosa, Prostata, and Penis. Microscopic structure of the female reproductive system. Placenta

and umbilical cord. Slides: Ovary - 2x, Corpus luteum, Tuba uterina - ampulla, Tuba uterina -

isthmus, Uterus - prolipherative and secretory phases,Vagina, Placenta, and Funiculus umbilicalis.

・**4.** Embryology: Development of external form of the conceptus. Parturition. Marks of the full-term

fetus.

・Repetition II: Urinary system, male and female reproductive systems.

・**5.** Microscopic structure of endocrine glands. Slides: Hypophysis cerebri, Epiphysis, Glandula thyreoidea, Glandula parathyreoidea, Glandula suprarenalis, Islets of Langerhans.

・**6.** Microscopic structure of the central and peripheral nervous system. Slides: Cortex cerebri, Cerebellum, Medulla spinalis, Ganglion spinale (the dorsal root ganglion), Ganglion vegetativum (the autonomic ganglion), Peripheral nerves - 2x.

・**7.** Microscopic structure of the organ of vision and the vestibulocochlear organ. Slides: Anterior eye segment, Posterior eye segment, Palpebra, Glandula lacrimalis, Cochlea.

・Repetition III: endocrine glands, organ of vision, and vestibulocochlear organ.

・**8.** Microscopic structure of the skin and skin derivatives. Slides: Skin from the tips of the finger, Skin from the axilla, Skin with hairs, Nail, Mamma non lactans, Mamma lactans.

Literature

・recommended literature

・ČECH, Svatopluk, Drahomír HORKÝ, Irena LAUSCHOVÁ, Miroslava SEDLÁČKOVÁ a Jitka ŠŤASTNÁ. *Histologická praktika a metody vyšetřování tkání a orgánů (Histological practicals and methods of investigation of tissues and organs)*. 1.dotisk 1. vydání. Brno: Vydavatelství MU Brno-Kraví hora, 2002. 162 pp. ISBN 80-210-1774-0.

Teaching methods practicals (course of practical microscopy)

Assessment methods Testing of knowledge: Student must prove sufficient level of knowledge by written test examination. Each student completes 4 partial tests during semester. Tests are evaluated by point for correct answer. More than half number of correct answers (points) is evaluated as ” YES ”.

All of these tests must be successful. In case of failure, only 1 resit is possible. There is condition 4 from 4 (ie. 4 YES / 4 regular tests) or 4 from 5 (ie. 3 YES / 4 regular tests + 1 YES / 1 resit). If student does not fulfill this condition, credit test follows in the relevant exam period. This test covers all topics studied during semester. In case of failure in credit test, credit will not be given and student **must enroll the course again.**

Conditions for obtaining credit: 1. Attendance at all practical exercises (100% participation, all absences must be regularly excused (in IS) and substituted).

2. Successful completion of all tests.

3. Submission of all protocols (correctly completed forms of protocols signed by teacher).

aZLHE0322p Histology and Embryology II - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 3 credit(s). Type of Completion:

zk (examination).

Supervisor doc. MVDr. Aleš Hampl, CSc.

Department of Histology and Embryology - Theoretical Departments - Faculty of Medicine

Course objectives Main objective of the subject is to combine programmed teaching of histology ana embryology that occupy a key position among subjects of the theoretical study on medical faculties. At the end of the course students should be able to:

- in histology

a) define basic terms and categories of the subject and apply used classification system in the praxis;

b) describe and explain structure and function of animal cells on submicroscopic and molecular levels;

c) describe and explain structural characteristics of epithels, connective and supporting tissues (incl. their function), muscle tissue including mechanism of muscle contraction and nerve tissue;

d) identify basic tissues and main organs of the human body in histological slides;

e) analyze the microscopic structure of organs under normal conditions and compare it with changes evoked with pathological changes or alterations;

f) understand existing close interrelations between structure and function of individual tissues and organs of the human body;

- in embryology:

1) explain the development of gametes, meiosis principle and regulation processes during gametogenesis;

2) discuss main developmental processes and genetic controle of development;

3) describe early development of the human embryo incl. development of extraembryonic structures;

4) categorize phases of prenatal development and characterize key developmental stages of individual organ systems;

5) explain mechamisms of origin of frequent malformations using knowledge of course of development under physiological conditions.

Microscopic structure of organs of the orofacial system combined with their development is studied

separately within the special subject Oral histology and embryology that follows after completion of

histology and embryology.

Syllabus

・**Microscopic anatomy and embryology**

・**1.** Introduction to development of the digestive system - the gut tube and its divisions. Layers of the alimentary canal. A survey of the microscopic structure of the stomach. Microscopic structure of the small and large intestines. Microscopic structure of the liver and pancreas. Islets of Langerhans. Overview of development of the gut and its developmental malformations.

・**2.** Microscopic structure and development of the urinary system. Nephron - its structure, histotopography, and function. Stages in development of kidneys (pro-, meso-, and metanephros).

・**3.** Microscopic structure of male genital organs: Testis and epididymis. Spermato- and spermiogenesis. Composition of the ejaculate. Microscopic structure of female genital organs: Ovary and uterus. Ovarian cycle, menstrual cycle including relations between them. Oogenesis. Development of gonads and genital ducts, general characteristics of the indifferent stage. A short overview of defects of gonads and genital ducts.

・**4.** Microscopic structure and development of endocrine glands: Hypophysis, epiphysis, thyroid gland, parathyroid glands, adrenal gland, and islets of Langerhans.

・**5.** Microscopic structure of the central nervous system (telencephalon, cerebellum, and spinal medulla). Overwiev of development of the brain and spinal cord including histogenesis of the neural tube.

・**6.** Microscopic structure of the organ of vision: The eye and its refractive (dioptric) media. Overview of development of the eye. Microscopic structure of the internal ear (vestibulocochlear organ). Overview of development of the vestibulocochlear organ.

・**7.** Development of the skin and skin derivatives. Development of the heart and vessels. Fetal blood circulation. Development of body cavities and diaphragm.

Literature

・recommended literature

・ČECH, Svatopluk a Drahomír HORKÝ. *Přehled obecné histologie*. 1. vyd. Brno: Masarykova univerzita, 2005. 140 s. ISBN 8021038543.

・HORKÝ, Drahomír a Svatopluk ČECH. *Mikroskopická anatomie*. 2. nezm. vyd. Brno: Masarykova

univerzita, 2005. 353 s. ISBN 802103775X.

・ČECH, Svatopluk, Drahomír HORKÝ a Miroslava SEDLÁČKOVÁ. *Přehled embryologie člověka*. 1. vyd. Brno: Masarykova univerzita, 2011. 187 pp. ISBN 978-80-210-5414-1.

・MESCHER, Anthony L. *Junqueira´s basic histology : text and atlas*. 13th ed. New York: McGraw-Hill Medical, 2013. xi, 544. ISBN 9781259072321.

・MOORE, Keith L., T. V. N. PERSAUD a Mark G. TORCHIA. *Before we are born : essentials of embryology and birth defects*. 8th ed. Philadelphia, PA: Elsevier Saunders, 2013. xviii, 348. ISBN 9781 437720013.

・not specified

・VACEK, Zdeněk. *Embryologie : učebnice pro studenty lékařství a oborů všeobecná sestra a porodní aistentka*. 1. vyd. Praha: Grada, 2006. 255 s. ISBN 9788024712673.

・SADLER, T. W. *Langmanova lékařská embryologie*. 1. české vyd. Praha: Grada, 2011. xviii, 414. ISBN 9788024726403.

・KAPELLER, Karol a Viera POSPÍŠILOVÁ. *Embryológia človeka: učebnica pre lekárske fakulty*. Martin: Osveta, 2001. 370 pp. ISBN 80-8063-072-0.

・OVALLE, William K., Patrick C. NAHIRNEY a Frank H. NETTER. *Netter´s essential histology*. 2nd ed. Philadelphia, PA: Elsevier/Saunders, 2013. xv, 517. ISBN 9781455706310.

・YOUNG, Barbara. *Wheater´s functional histology : a text and colour atlas*. 5th ed. [Oxford]: Churchill Livingstone, 2006. x, 437. ISBN 044306850X.

・LOWE, James S. a Peter G. ANDERSON. *Stevens and Lowe´s Human Histology*. 4th. : Elsevier, 2015. ISBN 978-0-7234-3502-0.

Teaching methods lectures

Assessment methods Final examination is composed of the practical part (slide test) and the theoretical part that includes written test and oral exam. In practical part, student should identify minimally 6 out of 8 slides. Oral exam includes 2 questions (1 histology, 1 embryology). Rules and conditions applicable for practical training and for examining in Histology and Embryology can be found on the website of Department of Histology and Embryology (http://www.med.muni.cz/histology/education).

A necessary condition for admission to exam is to obtain credit from the Histology and Embryology II-practice.

aZLPR0333p Preclinical Dentistry III - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: zk (examination).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: Milena Prudíková

Course objectives Branch content: Students are meeting with the dentistry and are obtainig basic knowledes and skills in inherent branches of dentistry.Basic aims of subject education: To acquaint students with main tools and devices used in the dentistry is the main goal of subject, same as to equip them for clinical stages in dental surgery room. Preclinical dentistry III. is focused on prosthetic dentistry ane oral surgery as well as the repetion of previous knowledge. After finishing this subject students are able to mantain basic treatments in teachers check.

Syllabus

・1. Introduction, principles of surgical treatment in dentistry, Instrumentarium. Extraction of teeth. Sutura

・2. Orofacial morphology - repetition in relationship with local anaesthesia. Materials for suture, techniques of suture

・3. X- ray in dentistry. Kinds of dentures, classification of defects of dentition.

・4. Classification of dentures, fixed partial dentures

・5. Direct and indirect method of the fabrication of the root canal inlay. Sequence of operations

・6. Teeth preparation for crows and bridges. Sequence of the operations

・7. Fixed partial bridges - sequence of operations. Laboratory phases. Cementation

・8.Partial removable dentures - Class I. and II. Sequence of operations

・9. Partial removable dentures - Class III. Sequence of operations

・10. Complete denture - sequence of operations.

・11. Risks of dentures and their prevention

・12.Repetition of sequence of operation - removable partial dentures Mistakes

・13. Repetition of sequence of operation - complete denture. Mistakes

Literature

・recommended literature

・STEJSKALOVÁ, Jitka. *Konzervační zubní lékařství*. 2. vyd. Praha: Galén, 2008. 235 s. ISBN 97880

72625406.

・not specified

・Sturdevandtś Art of Science of Operative Dentistry, 1995, Mosby comp.

・BEZROUKOVÁ, Zdenka. *Propedeutika endodoncie*. 1. vyd. Olomouc: Univerzita Palackého, 1998. 34 s. ISBN 8070678755.

・BEZROUKOVÁ, Zdenka. *Základní pracovní postupy v konzervační stomatologii*. 2. vyd. Olomouc: Univerzita Palackého, 1998. 27 s. ISBN 8070678771.

Teaching methods lecture

Assessment methods Practical and theoretical examination.Practical examination consists of preparation

- cavity, tooth for crown, endodontic treatment on resin model and explanation of fabrication of prosthetic treatment. Theoretical part consist of three questions - a discussion on choosen topics of restorative, prosthetics and surgical dentistry.

aZLPR0333s Preclinical Dentistry III - practice

Extent and Intensity Seminar: 6 hour(s) per week. Number of credits: 6 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Branch content: Students are meeting with the dentistry and are obtainig basic knowledes and skills in inherent branches of dentistry.Basic aims of subject education: To acquaint students with main tools and devices used in the dentistry is the main goal of subject, same as to equip them for clinical stages in dental surgery room. Preclinical dentistry III. is focused on prosthetic dentistry ane oral surgery as well as the repetion of previous knowledge. After finishing this subject students are able to mantain basic treatments in teachers check.

Syllabus

・1.Introduction, principles of surgical treatment in dentistry, Instrumentarium. Extraction of teeth. Sutura

・2.Orofacial morphology - repetition in reletionship with local anaesthesia. Materials for suture, techniques of suture

・3.Training of anaesthesia and teeth extraction. Description of x-ray pictrues.Kinds of dentures, classification of defects of dentition

・4.Taking of impression. Root canal inlay- sequnece of operations

・5.Direct method of modellation of the root canal inlay.Demonstration of casting investment

・6.Indirect method of fanbrication of the root canal inlay. Sequence of operations

・7.Finishing of root canal inlay. Cementation. Preparation of teeth (33, 35, 36) for fixed bridge on the model of stone. Fabrication of the temporary bridge - a stamp method.

・8.Partial removable dentures - Class I. and II. Sequence of operations.Demonstration. Registration of the intermaxillary relationship Clasps. Kinds, practical training. Crown preparation in simulators.(46, 45, 44)

・9.Crown preparation in simulators (11 ceramic, 21 metalceramic)

・Bridge preparation (33, 35,36).Takig impression. Demonstration of the sequence of operations

・10.Class I., II. and III. denture. Sequence of operation. Class III. - drawing in. Fabrication of the bite template

・11. Complete denture. Sequence of operations. Fabrication of individual impression tray

・12. Functional impression, fabrication of the model－demonstration. Rebasis, repair of dentures.

・13. Repetition of class I. and V. cavity preparation

・14. Repetition II. III. and IV. cavity preparation

・15. Filling of prepared cavities

Literature

・Stejskalová a kol. Konzervační zubní lékařství, 2. vydání, Galén 2008, Praha

Teaching methods practical training

Assessment methods Written test - 25 points -17 points are necessary to pass.

aZLPT0322c Prosthetic Technology II - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: Milena Prudíková

Course objectives Short annotation of the subject Branch content Students will know basic attributes of the dental materials, how to devite them, and they will know basic laboratory equipment. Laboratory equipment Categorization of the dental materials Categorization of the dental impression materials Model materials Forms materials Ceramic materials Plastic materials Metals and their alloys Composite materials Basics aims and content of the subject: Get to know step by step all techniques and materials, get knowledges about all laboratory procedures of fixed and partial dentures.

Syllabus

・Alginate impression of the lower jaw - pouring with plaster and cast removal Alginate impression of the upper jaw - pouring with plaster and cast removal Light and haevy bodied impression of the lower jaw Light and heavy bodied impression of the upper jaw Pouring of the rubber gum impression, divided cast preparation. Repetition. Credits.

Literature

・Bittner J.,Sedlácek J.: Technologie pro zubní laboranty 1979

Teaching methods practical training

Assessment methods credit

aZLPT0322p Prosthetic Technology II - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: k (colloquium).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives in English	Basics aims and content of the subject: Get to know step by step all techniques and materials, get knowledges about all laboratory procedures of fixed and partial dentures.
Learning outcomes in English	Students: • - will know basic attributes of the dental materials, how to devite them, • - will know basic laboratory equipment. • - will know categorization of the dental materials abd categorization of the dental impression materials • - will know model materials, forms materials, ceramic materials, plastic materials, metals and their alloys and composite materials
Syllabus in English	Laboratory equipment Categorization of the dental materials Categorization of the dental impression materials Model materials Forms materials Ceramic materials Plastic materials Metals and their alloys Composite materials

Teaching methods in English	Lecture power-point presentation
Assessment methods in English	Colloquium
Literature	JOHNSON, Tony, David G. PATRICK, Christopher William STOKES, David G. WILDGOOSE and Duncan J. WOOD. Basics of dental technology : a step by step approach. Second edition. Chichester: Willey Blackwell, 2016. ix, 187. ISBN 9781118886212. Changed: 7/1/2018 15:35, Mgr. Jana Sedláková

aZLZM0311c Diagnostic Imaging in Dentistry - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

z (credit).

Supervisor doc. MUDr. Jiří Prášek, CSc.

Department of Radiology and Nuclear Medicine - Institutions shared with the Faculty Hospital Brno -

Adult Age Medicine - Faculty of Medicine

Contact Person: doc. MUDr. Jiří Prášek, CSc.

Course objectives Nuclear medicine: The concept of this course is introduction into the study of nuclear medicine. Students should know basic principles of examination and should be able to select the diagnostic and therapeutic methods of nuclear medicine. Radiodiagnostic: The concept of this course is introduction into the study of radiology and imaging methods, including CT, MR, X-ray, angiography and ultrasound. Students should know basic principle of examination and methods of CT, MR, UZ and X-ray, including technique, anatomy, indications, contraindications and risk factors.

Syllabus

・Nuclear Medicine: Radionuclides, interaction between ionizing radiation and matter, radiation detection, imaging techniques, SPECT, PET, fundamentals of radiopharmacology, biological effects of ionizing radiation, radiation safety. Methods of nuclear medicine used in urology, skeletal and bone marrow scintigraphy, nuclear cardiology. Scintigraphy of CNS, lungs, thyroid gland, gastrointestinal tract, liver and spleen. Examination in hematology, diagnostics of inflammations and tumors. With each examination procedure, the radiopharmaceuticals used, the methods, evaluation, interpretation of the findings, and indications are explained. Principles of radioimmunologic diagnostic procedures. Relations between the methods of nuclear medicine and other imaging methods, role of radionuclide methods in diagnostic algorithms. Fundamentals of therapy of diseases using radiopharmaceuticals.Radiodiagnostic: CT, MR, X-ray, ultrasound, angiography, interventional radiology, indications, contraindication, risk factors, limits, technical aspect, anatomy, interpretations of the findings. Methods of diagnostic imaging used in different subspecializations and areas like pediatric radiology, neuroradiology, interventional radiology, abdominal imaging, imaging in oncology, uroradiology, woman imaging and cardiac imaging are discussed. With each examination

procedure and method the contrast agents, indications, contraindications and risk factors as well as limits are explained. Technical principles, standards, protections and “how to do it” are also learned.

Literature

・NEKULA, Josef. *Radiologie*. 3. vyd. V Olomouci: Univerzita Palackého v Olomouci, 2008. 205 s. ISBN 9788024410117.

・KUPKA, Karel, Jozef KUBINYI a Martin ŠÁMAL. *Nukleární medicína*. 1. vyd. [Praha]: P3K, 2007. 185, xiv. ISBN 9788090358492.

・*Nukleární medicína*. 4. uprav. a dopl. vyd. Jilemnice: Gentiana, 2002. 154 s. ISBN 8086527050.

・SVÍŽENSKÁ, Ivana a Vlastimil VÁLEK. *Základy anatomie v zobrazovacích metodách. I. Skiaskopie a skiagrafie (Anatomy in image methods. I. Skiascopy and skiagraphy)*. První. Brno: IDVPZ Brno, MU Brno, Boston Scientific ČR s.r.o., 2001. 72 pp. ISBN 80-7013-334-1.

・BOUDNÝ, Jaroslav, Martin KÖCHER, Jan PEREGRIN a Vlastimil VÁLEK. *Moderní diagnostické metody. IV.díl Instrumentárium k intervenčním výkonům*. 1.vyd. Brno: Institut pro další vzdělávání pracovníků ve zdravotnictví, 2000. 42 pp. ISBN 80-7013-298-1.

・ELIÁŠ, Pavel, Petr MÁCA, Jiří NEUWIRTH a Vlastimil VÁLEK. *Moderní diagnostické metody. II.díl Výpočetní tomografie*. 1. vyd. Brno: Institut pro další vzdělávání pracovníků ve zdravotnictví, 1998. 84 pp. ISBN 80-7013-294-9.

・VÁLEK, Vlastimil. *Moderní diagnostické metody.* Edited by Jan Žižka. 1. vyd. Brno: Institut pro další vzdělávání pracovníků ve zdravotnictví, 1996. 43 s., obr. ISBN 80-7013-225-6.

・VÁLEK, Vlastimil, Boleslav PROKEŠ, Karel BENDA, Naděžda CHVÁTALOVÁ a Jitka PEČINKOVÁ. *Moderní diagnostické metody. I.díl Kontrastní vyšetření trávicí trubice*. 1.vyd. Brno: Institut pro další vzdělávání pracovníků ve zdravotnictví, 1996. 76 pp. ISBN 80-7013-215-9.

Teaching methods Type of teaching - seminars.

Assessment methods Type of teaching - seminars. Completion of a course: colloquium.

aZLZM0311p Diagnostic Imaging in Dentistry - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: k (colloquium).

Supervisor doc. MUDr. Jiří Prášek, CSc.

Department of Radiology and Nuclear Medicine - Institutions shared with the Faculty Hospital Brno -

Adult Age Medicine - Faculty of Medicine

Contact Person: doc. MUDr. Jiří Prášek, CSc.

Course objectives Nuclear medicine: The concept of this course is introduction into the study of nuclear medicine. Students should know basic principles of examination and should be able to select the diagnostic and therapeutic methods of nuclear medicine.Radiodiagnostic: The concept of this course is introduction into the study of radiology and imaging methods, including CT, MR, X-ray, angiography and ultrasound. Students should know basic principle of examination and methods of CT, MR, UZ and X-ray, including technique, anatomy, indications, contraindications and risk factors.

Syllabus

・Nuclear Medicine: Radionuclides, interaction between ionizing radiation and matter, radiation detection, imaging techniques, SPECT, PET, fundamentals of radiopharmacology, biological effects of ionizing radiation, radiation safety. Methods of nuclear medicine used in urology, skeletal and bone marrow scintigraphy, nuclear cardiology. Scintigraphy of CNS, lungs, thyroid gland, gastrointestinal tract, liver and spleen. Examination in hematology, diagnostics of inflammations and tumors. With each examination procedure, the radiopharmaceuticals used, the methods, evaluation, interpretation of the findings, and indications are explained. Principles of radioimmunologic diagnostic procedures. Relations between the methods of nuclear medicine and other imaging methods, role of radionuclide methods in diagnostic algorithms. Fundamentals of therapy of diseases using radiopharmaceuticals.Radiodiagnostic: CT, MR, X-ray, ultrasound, angiography, interventional radiology, indications, contraindication, risk factors, limits, technical aspect, anatomy, interpretations of the findings. Methods of diagnostic imaging used in different subspecializations and areas like pediatric radiology, neuroradiology, interventional radiology, abdominal imaging, imaging in oncology, uroradiology, woman imaging and cardiac imaging are discussed. With each examination procedure and method the contrast agents, indications, contraindications and risk factors as well as limits are explained. Technical principles, standards, protections and “how to do it” are also learned.

Literature

・Peter F. Sharp, Howard G. Gemmell, Alison D. Murray Practical Nuclear Medicine Springer Verlag

London 2005 ISBN 978-4-85233-875-6

・NEKULA, Josef. *Radiologie*. 3. vyd. V Olomouci: Univerzita Palackého v Olomouci, 2008. 205 s.

ISBN 9788024410117.

・KUPKA, Karel, Jozef KUBINYI a Martin ŠÁMAL. *Nukleární medicína*. 1. vyd. [Praha]: P3K, 2007.

185, xiv. ISBN 9788090358492.

・SVÍŽENSKÁ, Ivana a Vlastimil VÁLEK. *Základy anatomie v zobrazovacích metodách. I. Skiaskopie*

a skiagrafie (Anatomy in image methods. I. Skiascopy and skiagraphy). První. Brno: IDVPZ Brno,

MU Brno, Boston Scientific ČR s.r.o., 2001. 72 pp. ISBN 80-7013-334-1.

・BOUDNÝ, Jaroslav, Martin KÖCHER, Jan PEREGRIN a Vlastimil VÁLEK. *Moderní diagnostické metody.*

IV.díl Instrumentárium k intervenčním výkonům. 1.vyd. Brno: Institut pro další vzdělávání pracovníků ve zdravotnictví, 2000. 42 pp. ISBN 80-7013-298-1.

・ELIÁŠ, Pavel, Petr MÁCA, Jiří NEUWIRTH a Vlastimil VÁLEK. *Moderní diagnostické metody. II.díl Výpočetní tomografie*. 1. vyd. Brno: Institut pro další vzdělávání pracovníků ve zdravotnictví, 1998. 84 pp. ISBN 80-7013-294-9.

・VÁLEK, Vlastimil, Boleslav PROKEŠ, Karel BENDA, Naděžda CHVÁTALOVÁ a Jitka PEČINKOVÁ. *Moderní diagnostické metody. I.díl Kontrastní vyšetření trávicí trubice*. 1.vyd. Brno: Institut pro další vzdělávání pracovníků ve zdravotnictví, 1996. 76 pp. ISBN 80-7013-215-9.

Teaching methods Type of teaching - lectures.

Assessment methods Class discussion on the base of materials in the textbook. Giving the courseunit credit is conditioned by full atendance in the lessons.

YEAR 2 / SEMESTER 4

aZLBC041c Biochemistry II -practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor prof. RNDr. Eva Táborská, CSc.

Department of Biochemistry - Theoretical Departments - Faculty of Medicine

Course objectives Course is complementary to ZLBC041p and ZLBC041s. The aim of the course it to bring experience with solving practical problems in clinical biochemistry, to acquire practical laboratory skills and to learn students to use results of biochemical analysis for diagnostics

Syllabus

・1. Handling biological material. Drawing blood specimens. Blood serum. Anticoagulants, blood plasma. The enzymatic assay of glucose in serum. Estimation of blood glucose using a personal glucometer. Detection of glucose in urine. Detection of ketone bodies in urine. 2. Metabolism of hard tissues. Determination of serum calcium. Catalytic concentration of total ALP and its bone isoenzyme. 3. Investigation of saliva. Salivary secretion rate. Salivary buffering capacity. Detection of selected organic compounds in saliva. Detection of amylase in saliva and its substrate specificity.

Literature

・required literature

・Návody ke cvičením v IS. Instructions available in IS.

Teaching methods laboratory practicals

Assessment methods Full attendance in practicals and completion of all lab reports are conditions for giving the course-unit credit. Obtaining of course-unit credits of practices is the pre-requisite for registration to the examination of Biochemistry II.

aZLBC041p Biochemistry II - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: zk (examination).

Supervisor prof. RNDr. Eva Táborská, CSc.

Department of Biochemistry - Theoretical Departments - Faculty of Medicine

Course objectives The course extends the knowledge of biochemistry acquired in the course Biochemistry I and deals with integration of biochemical processes in human body.Upon completion of this course the student should understand: biochemical processes characteristic for individual organs and tissues and principles of their regulation, metabolic interrelationships between metabolism of nutrients under various conditions in organism, principles of maintenance of homeostasis and acid-base equilibrium in the body. He should also recognize which aspects of the biochemical pathways, when altered, lead to diseases. Special attention is focused on biochemical processes in oral cavity and biochemical aspects of dental tissues.

Syllabus

・Digestion and absorption of lipids. Blood plasma lipids and the major groups of lipoproteins. Metabolic fate of chylomicrons and VLDL, the metabolism of HDL. The biosynthesis of steroid hormones.

The synthesis and hydroxylation of calciol. The integration of intermediary metabolism at the tissue and organ level. The metabolic functions of the liver. Catabolism of haemoglobin, bilirubin metabolism. Metabolism of iron. Biotransformation of xenobiotics. Control of metabolism. Mechanism of hormone and neurotransmitter action. Types of cell membrane receptors, intracellular effects of ligand binding; intracellular receptors. Nerve cells. Neurosecretion. The biosynthesis and inactivation of neurotransmitters, neurotransmission across synapses. Cholinergic, adrenergic, and (inhibitory) gabaergic receptors. Body water, the movement of water between ECF and ICF, water excretion. Ionic composition of blood plasma, gradients of Na+ and K+ across cell membranes. Osmolality of ECF, regulation of the ECF osmolality and volume, fluid and electrolyte

balance. Transport of O2 and CO2. Metabolic pathways producing/consumpting H+ ions. Buffer bases of blood, blood plasma (concentrations of components), ICF, the parameters of acid-base status. The role of the lung, the kidney, and the liver in maintaining acid-base balance. Normal renal functions. Glomerular filtration. Tubular resorption and secretion. The major proteins of blood plasma. The blood-coagulation cascade, inhibition of clotting. Fibrinogen, fibrin, fibrinolysis. Blood cells. The specific immune response. Soluble and cell free antigens, immunoglobulin structures. Circulating immune complexes, secondary reactions. The extracellular matrix. Synthesis and post-translational modifications of collagen, intermolecular crosslinks in collagen and elastin, proteoglycans. Calcification of bone, regulation. Biochemical markers of bone resorption and formation. Metabolism of Ca, P, F. Saliva and metabolism of oral cavity. Dental plaques.

Literature

・required literature

・KOOLMAN, Jan a Klaus-Heinrich RÖHM. *Barevný atlas biochemie*. Grada. Praha, 2012. 498 pp. ISBN 978-80-247-2977-0.

・KOOLMAN, Jan a Klaus-Heinrich RÖHM. *Color atlas of biochemistry*. 3rd ed., rev. and updated. Stuttgart: Thieme, 2013. ix, 495. ISBN 9783131696939.

・recommended literature

・MURRAY, Robert K., David A. BENDER, Kathleen M. BOTHAM, Peter J. KENNELLY, Victor W. RODWELL a P. Anthony WEIL. *Harper's Illustrated Biochemistry*. 28th ed. : McGraw-Hill, 2009. ISBN 978-0-07-163827-2.

・LEDVINA, Miroslav, Alena STOKLASOVÁ a Jaroslav CERMAN. *Biochemie pro studující medicíny, I. a II. díl*. Druhé vydání. Praha: Karolinum, 2009. 546 pp. ISBN 978-80-246-1414-4.

Teaching methods Teaching form are lectures. Supplementary subjects are seminars and practicals (ZLBC041c and ZLBC041c).

Assessment methods Student must have course-unit credit of seminar and practicals in the day of exam. The examination has writen and oral part. The test consists of 25 questions and is solved on computers in the computer room of Department of Biochemistry (personal university ID /UCO/ and pass-word for IS MUNI is necessary for entrance to the test): As a rule, 10 questions are from practical exercises. Remaining 15 questions cover essential knowledge ranging over all studied topics. Only those students who gain 14 correct answers at a minimum will be permitted to sit for the oral examination. The oral part of examination Students select three questions and have about 30 minutes for the written preparation. They should summarize their answers as concisely and accurately as possible. It is recommended to follow these items: - to write a brief synopsis

emphasizing the main ideas - to draw metabolic pathways in structural formulas with a short comment - where appropriate, to draw a picture A good and concise preparation reflects the students' knowledge and understanding the biochemistry and will be considered in the final classification.

aZLBC041s Biochemistry II - seminar

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 2 credit(s). Type of Completion:

z (credit).

Supervisor prof. RNDr. Eva Táborská, CSc.

Department of Biochemistry - Theoretical Departments - Faculty of Medicine

Course objectives Seminars are complementary to Biochemistry lecture (ZLBC041p). The knowledge of intermediary metabolism, characteristic features of metabolism of individual organs and tissues and metabolism at various conditions of organism (well fed state, fasting, starvation, metabolic stress, obesity, metabolic syndrome)are thoroughly practiced during Biochemistry seminars.

Syllabus

・Laboratory tests in clinical biochemistry. Sources of error, assessing the significance of a test result. Enzyme assays in clinical diagnostics. Plasma lipoproteins, interconversion of lipoproteins. Cholesterol transport, balance of cholesterol intake and excretion. Blood glucose (sources, comsumption, regulation). Diabetes mellitus. 1st written test (Sources of error of biochemical tests, assessing the significance of results. Digestion, absorption and transport of lipids, lipoproteins, cholesterol, metabolism of lipids at the tissue and organ level, metabolism of steroid hormones, metabolism of glucose in the absorptive, postabsorptive state, and in prolonged fasting (the liver, adipose tissue, and muscle), diabetes and impairments of saccharide metabolism). Catabolism of proteins and of amino acid nitrogen. Proteins in nutrition. Absorption of amino acids, utilization of amino acids in tissues, blood transport of fixed ammonia, the glutamine cycle. Nitrogenous compounds excreted into the urine. Protein intake and nitrogen balance. Integration of metabolism of nutrients: relationships among the major metabolic pathways in the fed state, postabsorptive state, and prolonged starvation. The liver functions - the role in metabolism of nutrients, hormones, and vitamins. Catabolism of haemoglobin, urobilinoids, the types of hyperbilirubinaemia. Biotransformation of xenobiotics. 2nd written test (Proteins in nutrition, nitrogen metabolism, integration of intermediary metabolism of nutrients, biochemical functions of the liver, catabolism of haemoglobin, metabolism of xenobiotics). Neurotransmitter and hormone receptors. Water and mineral metabolism. Electrolyte composition of blood plasma, buffer bases. Respiration - transport of oxygen and CO2. The role of the kidney and the liver in acid-base balance. Blood acid-base parameters, the values indicating particular type of disturbance. 3rd written test (Immunochemical techniques, neurotransmitter and hormone receptors, water and mineral metabolism, iontograms, acid-base balance.) Major functions of the kidney. Glomerular filtration. Tubular resorption and secretion. Urine - normal constituents, amounts of nitrogenous compounds excreted per 24 h. The proteinuria types. Urinary sediment, renal stones. Biochemistry of Ca, P, F. Composition of bones and teeth, saliva.

Literature

・required literature

・Podklady pro semináře jsou k dispozici v IS, studijní materiály předmětu ZLBC041s. Seminar files are available in IS, study materials of ZLBC041s.

Teaching methods Course is based on group discusion to the given topics. The outlines of discusion are in the recommended textbook. Complementary materials are available in section Study materials.

Assessment methods Conditions for giving the course-unit credit: Three short tests are written during the semester. Students that will obtain 42/60 points or more during the semester are not obliged to write the credit test. The other students will write the credit test with the 30 questions in the last week of the semester. The limit for passing the credit test is 14 points. Students that will not fulfill this limit will be allowed to repeat the test once. Remedial dates for writing the credit test will be scheduled in IS. Students that will not fulfill this requirement will not be given the course-unit credit. Obtaining of course-unit credits of practices and seminars is the pre-requisite for registration to the examination of Biochemistry II

aZLFY0422c Physiology II - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Marie Nováková, Ph.D.

Department of Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: Mirka Hanousková

Course objectives At the end of the course, students should be able to apply practically the methods used for examination of the functions of human organ systems. Students will be capable of interpreting the acquired records with respect to physiological processes taking place in human organisms. Next, the students will derive and calculate other parameters and indices routinely used in clinical practice. Students will be able to evaluate the results acquired both by measurement and by calculation, and to explain possible deviations.

Syllabus

・Evaluation of sensitivity of respiratory center to hypoxia and to hypercapnia.

・Measurement of basic metabolic rate. Energy output in change of body position. Repay of oxygen debt. Calculation of energy expenditure. Compiling daily diet. Evaluation of nutritional state.

・Pletysmography (blood flow in forearm).

・Recruitment and summation in skeletal muscle.

Literature

・required literature

・NOVÁKOVÁ, Marie. *Physiology and neuroscience practicals*. 1. dotisk 1. vyd. Brno: Masarykova univerzita, 2017. 149 pp. ISBN 978-80-210-6369-3.

Teaching methods The course is organized in the form of laboratory practices where students examine each other by given method, and they prepare the report from measured data.

Assessment methods Credits are given on the basis of full attendance in practices, handling of all laboratory reports and passing the credit test.

aZLFY0422p Physiology II - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 4 credit(s). Type of Completion: zk (examination).

Supervisor prof. MUDr. Marie Nováková, Ph.D.

Department of Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: Mirka Hanousková

Course objectives At the end of the course, students will have sufficient theoretical background required for profession of dentist. Student should be able to recall principles of human body functions in detail - from a cell level, across particular organs to a complex human organism. Students will be able to explain relationships among chemical, physical and biological factors of living processes. An essential aim is that students acquire critical scientific thinking, ability of independent text analysis and fundamental information selection.

Syllabus

・Respiratory functions. Pulmonary mechanics. Gas transport. Regulation of respiration. Respiration under various physiological conditions. Functional morphology of the kidney. Clearance. Counter-current system. Regulation of kidney functions. Kidney in regulation of homeostasis. Thermoregulation. GIT - mechanical functions. GIT - secretory functions. Regulation of gastrointestinal functions. Vitamins, minerals, water in nutrition. Metabolism of sacharides and lipids. Metabolism of proteins. Energy metabolism. Nutrition, starvation, obesity. Physiology of exercise. General principles of endocrine functions. Hypophysis. Adenohypophysis. Thyroid gland. Regulation of calcium metabolism and endocrine pancreas. Stress and adrenal gland. Physiology of childhood and adolescence, aging. Male reproduction. Female reproduction. Pregnancy and lactation. Glandula pinealis, circadian rhythms. Skeletal, smooth and heart muscle. Physiology of adaptation.

Literature

・required literature

・HALL, John E. a Arthur C. GUYTON. *Guyton and Hall textbook of medical physiology*. 12th ed.

Philadelphia, Pa.: Saunders/Elsevier, 2011. xix, 1091. ISBN 9781416045748.

・recommended literature

・BARRETT, Kim E. *Ganong’s review of medical physiology*. 23rd ed. Maidenhead: McGraw-Hill,

2010. ix, 714. ISBN 9780071270663.

・SILBERNAGL, Stefan a Agamemnon DESPOPOULOS. *Color atlas of physiology*. 6th ed., completely

rev. and. New York: Thieme, 2009. xiii, 441. ISBN 9783135450063.

Teaching methods Lessons are led in the form of lectures.

Assessment methods Final examination in Physiology consists of three parts:

- written multiple-choice test which consist of 20 questions evaluated by 20 points - students successfully

pass the test if they reach at least 15 points;

- practical examination - students randomly choose one of the methods and practically demonstrate

and explain the measured parameters;

- oral examination - students randomly choose 2 questions and answer them after 15 minutes of preparation.

Students pass the examination at Physiology on condition that they succeed in all three abovementioned

parts.

aZLFY0422s Physiology II - seminar

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

z (credit).

Supervisor prof. MUDr. Marie Nováková, Ph.D.

Department of Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: Mirka Hanousková

Course objectives After finishing the course, students will be able to understand the terms used in general and systemic physiology of man. Students will acquire knowledge necessary for analysis and subsequent interpretation of phenomena taking place on cell, tissue and organ levels as well as on the level of whole human organism.

Syllabus

・Respiratory system: Ventilation of the lungs; gas transport; tissue respiration; regulation of ventilation

and pulmonary circulation; assessment of respiratory functions.

・Excretory system: Body fluids, volumes and ionic composition of body fluids; renal countercurrent system; clearance.

・Endocrine physiology: General principles of endocrine physiology; humoral regulation of mineral and water metabolism; regulation of glycemia; Diabetes mellitus; humoral regulation of energy production (thyroid gland, thyreopathies).

Literature

・required literature

・HALL, John E. a Arthur C. GUYTON. *Guyton and Hall textbook of medical physiology*. 12th ed. Philadelphia, Pa.: Saunders/Elsevier, 2011. xix, 1091. ISBN 9781416045748.

・recommended literature

・BARRETT, Kim E. *Ganong's review of medical physiology*. 23rd ed. Maidenhead: McGraw-Hill, 2010. ix, 714. ISBN 9780071270663.

・SILBERNAGL, Stefan a Agamemnon DESPOPOULOS. *Color atlas of physiology*. 6th ed., completely rev. and. New York: Thieme, 2009. xiii, 441. ISBN 9783135450063.

Teaching methods Tuition is done in the form of seminar. Students should read the literature of particular area of physiology. Students present the topics and intensify their knowledge in discussion with the teacher.

Assessment methods The course-unit credit is conditioned by full attendance in the seminars and a multiple choice test. The test consists of 10 questions; 50% of correct answers is a condition for passing. In case of regullar attendance of the lectures (2 absences are allowed), there is no duty to write this test.

aZLKK041c Restorative Dentistry - Cariology - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Contact Person: Milena Prudíková

Course objectives Short annotation of the subject Dental caries genesis, its subject, clinical symptoms, eventuality of treatment. Diagnostics and treatment of dental caries.

Syllabus

・Examination of the patient, plan of treatment, stomatological indexes

Literature

・Stejskalová, J. et al. : Konzervační zubní lékařství. Galén, 2003, 2008 ISBN 978-80-7262-540-6.

・Stejskalová, J. et al. : Konzervační zubní lékařství. Galén, 2003, 2008 ISBN 978-80-7262-540-6.

・ROUBALÍKOVÁ, Lenka. Amalgamová výplň. In *učební text*. Brno: IDV PZ, 1997. ISBN 80-7013-

242-6.

・*Přehled kariologie a endodoncie pro studenty stomatologie*. Edited by Boris Fiala - Jitka Stejskalová.

2. vyd. Olomouc: Vydavatelství Univerzity Palackého, 1996. 136 s. ISBN 80-7067-610-8.

・*The art and science of operative dentistry*. Edited by Clifford M. Sturdevant - Theodore M. Roberson.

3rd ed. St. Louis: Mosby, 1995. xxi, 824 s. ISBN 0-8016-6366-0.

・*Kariesprophylaxe und konservierende therapie*. Edited by Peter Riethe. 2. überarb. und erw. Aufl.

Stuttgart: Georg Thieme Verlag, 1994. XI, 368 s. ISBN 3-13-714702-6.

・JEDYNAKIEWICZ, Nicolas M. *A practical guide to technology in dentistry*. [1st ed.]. : Wolfe Publishing,

1992. 193 s. : i. ISBN 0-7234-1742-3.

Teaching methods Practical training: Examination of the patient, plan of treatment, stomatological

indexes

Assessment methods Type of the subject: Compulsory Extent of the subject : 1 hour/week, credits:

2, 4. term: 0,5 hour lectures, 0,5 hour practical training Teaching of the subject style: lecture, practical training

Finalization of the subject: credit,

aZLLM0421c Medical Oral Microbiology I - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion:

z (credit).

Supervisor doc. MUDr. Filip Růžička, Ph.D.

Department of Microbiology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: MUDr. Ondřej Zahradníček

Course objectives At the end of this course, students should be able:

to prepare wet mount, Gram stained preparation, to observe the results in a microscope, to list other staining methods to list culture media, their use, differences between them, to reinoculate a strain/specimen to a culture medium to identify bacteria and yeasts by means of various methods of biochemical identification and other identification methods to describe antibiotic susceptibility/resistance testing methods and to read their results to describe animal experiment (only basically) to read results of nucleic acid detection in microbiology (only basically) to describe methods detecting antigens or antibodies, theire use for antibody detection/antigen detection in specimen/antigen analysis of a strain; to read the results of these methods including titers, titer dynamics, detection of IgM/IgA/IgG; to interprete the results; to describe precipitation, agglutination, agglutination on carriers, complementfixing test, neutralisation reaction, immunofluorescence, radioimmunoassay, ELISA, Western blotting

Besides that, students will be able to describe the basic of medical virology

Syllabus

・J01 Safety in laboratory, technique of work with loop, wet mount. Gram staining, demonstration of more staining methods. Demostration of pictures of various organisms and structures in Gram staining.

・J02 Bacterial culture

・J03 Physiology of bacteria, idenctification according to biochemical activity and virulence factor determination

・J04 Microbes and outer influences, decontamination methods

・J05 Testing of bacterial susceptibility to antimicrobial drugs, detection of resistance factors

・J06 Introduction to serology, agglutination and precipitation, dilution and measuring titres

・J07 Following dynamics of titres, complement fixing test, neutralisation

・J08 Reactions with labelled components (IMF, RIA, ELISA) including immunoblotting

・J09 Molecular methods in microbiology

・J10 Medical virology I (influenza, respiratory viruses, tick-borne encefalitis)

・J11 Medical virology II (hepatitis and HIV))

・J12 Medical parasitology (basics)

・J13 Medical mycology (basics)

・J14 Biofilm infections, oral microbiology

・J15 No practical sessions (only exceptionally individual substitutions)

Literature

・required literature

・SAMARANAYKE, L.P. *Essential Microbiology for Dentistry*. 3rd Ed. : Churchill Livingstone, 2006. 372 pp. ISBN 978-0-323-04475-2.

・recommended literature

・MARSH, Philip. *Oral Microbiology*. : Wright, 2002. ISBN 0-7236-1051-7.

・BJARNSHOLT, Thomas, Claus MOSER a Niels HØIBY. *Biofilm Infections*. : Springer, 2011. ISBN 978-1-4419-6084-9. *e-book*

・not specified

・Book No 1 + lectures + all materials from practical sessions are basic for the examination. Other books are recommended

Teaching methods practical training in lab

self-study with use of e-learning materials

Assessment methods Conditions for credits:

(1) absolving all practicals, with following notes:

- two justified absences or absences approved by teacher are allowed; students are obliged to show that they completed the knowledge (in laboratory reports and in their heads)

- more absences than two require a substitution

- not justified absences are not allowed **(EXTRA PAYMENT IS REQUIRED FOR EVENTUAL SUBSTITUTION!!!)**

(2) complete laboratory report (signature of teacher is not necessary)

(3) succesfully written final test (usually 10 multiple choice questions, each for one point; 7 points needed)

(4) all ROPOT questionaires completed succesfully; if they are always fulfilled in time (prior to particullar lab session), the student has a bonus of one point for final test

aZLLM0421p Medical Oral Microbiology I - lecture

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Filip Růžička, Ph.D.

Department of Microbiology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: MUDr. Ondřej Zahradníček

Course objectives Course main objectives:

At the end of the course students should be able to understand and explain the features and function of the human oral flora in oral health and disease, especially importance of the oral flora in the plaque formation, dental caries, and parodontitis, as well as to describe key underlying processes, their changes, and contributing factors, inclusive the influence of oral flora on the human health in general.

Syllabus

・**Oral Microbiology I (Spring term)**

・

・Lectures

・1. Introduction to microbiology

・2. Bacterial cell and growth

・3. Microbes and environment

・4. Pathogenicity and virulence

・5. Microbial biofilm

・6. Microbes and the host

・7. Microbes and immunity of the host

・8. Antibiotics I.

・9. Antibiotics II.

・10. Principles of antimicrobial treatment

・11. Agents of sepsis

・12. Agents of healthcare associated infections

・13. Notes to special microbiology I.

・14. Notes to special microbiology II.

Literature

・required literature

・SAMARANAYKE, L.P. *Essential Microbiology for Dentistry*. 3rd Ed. : Churchill Livingstone, 2006.

372 pp. ISBN 978-0-323-04475-2.

・recommended literature

・MARSH, Philip. *Oral Microbiology*. : Wright, 2002. ISBN 0-7236-1051-7.

・BJARNSHOLT, Thomas, Claus MOSER a Niels HØIBY. *Biofilm Infections*. : Springer, 2011. ISBN 978-1-4419-6084-9. *e-book*

・not specified

・Book No 1 + lectures + all materials from practical sessions are basic for the examination. Other books are recommended.

Teaching methods lectures, presentations of case reports, reading of the recommended literature

Assessment methods This subject is without ending. After the second block of lectures (ZLLM0522p) practical and theoretical examinations follow.

aZLNV041c Neuroscience - practice

Extent and Intensity Seminar: .5 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

z (credit).

Supervisor prof. RNDr. Petr Dubový, CSc.

Department of Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: Mirka Hanousková

Course objectives At the end of the course, students should be able to apply practically the methods used for examination of the functions of human neural system. Students will be capable of interpreting the acquired records with respect to physiological processes taking place in human organisms. Next, the students will derive and calculate other parameters and indices routinely used in clinical practice. Students will be able to evaluate the results acquired both by measurement and by calculation, and to explain possible deviations.

Syllabus

・Examination of reflexes in man. Recording of Achille’s tendon reflex -mechanical and electrical respons. Estimation of reaction time. Examination of muscle tone. Stabilometry. Vertigo and nystagmus. Cutaneous sense organs. Estimation of visual acuity. Accomodation, Scheiner’s experiment. Visual field and blind spot. Vision in dark. Observation of ocular fundus. Purkyně’s images.Astigmatism. Examination of colour blindness. Electrooculography. Electroencephalography.

Literature

・NOVÁKOVÁ, Zuzana, Robert ROMAN, Mohamed AL-KUBATI, Markéta BÉBAROVÁ, Pavel BRAVENÝ, Alena DAMBORSKÁ, Bohumil FIŠER, Nataša HONZÍKOVÁ, Miloslav KUKLETA, Drahoslava MRÁZOVÁ, Jiří MOUDR, Kateřina NOGOVÁ, Marie NOVÁKOVÁ, Zuzana NOVÁKOVÁ, Michal PÁSEK, Miroslav SVĚTLÁK,

Zdeněk WILHELM a Eva ZÁVODNÁ. *Praktická cvičení z fyziologie*. 2. dotisk 1. vyd. Brno: Masarykova univerzita, 2011. 118 pp. ISBN 978-80-210-4391-6.

・AL-KUBATI, Mohamed, Markéta BÉBAROVÁ, Pavel BRAVENÝ, Alena DAMBORSKÁ, Bohumil FIŠER, Nataša HONZÍKOVÁ, Miloslav KUKLETA, Drahoslava MRÁZOVÁ, Jiří MOUDR, Kateřina FIALOVÁ, Marie NOVÁKOVÁ, Zuzana NOVÁKOVÁ, Michal PÁSEK, Robert ROMAN, Miroslav SVĚTLÁK, Zdeněk WILHELM a Eva ZÁVODNÁ. *Physiology Practicals*. 1. dotisk 1. vyd. Brno: Masarykova univerzita, 2010. 109 pp. ISBN 978-80-210-4409-8.

Teaching methods The course is organized in the form of laboratory practices where students examine each other by given method, and they prepare the report from measured data.

Assessment methods Credits are given on the basis of full attendance in practices and handling of all laboratory reports.

aZLNV041p Neurosciences - lecture

Extent and Intensity Lecture: 1.5 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: k (colloquium).

Supervisor prof. RNDr. Petr Dubový, CSc.

Department of Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: Mirka Hanousková

Course objectives Neurosciences course is based on the integration of morphology and function. At the end of the course, students will recall sufficient theoretical knowledge required for physician. Students should be able to understand and explain basic principles of human central and peripheral nervous systems - neuronal communication, perception, movement, learning and memory, motivational systems and emotions. Students will understand neurophysiological mechanisms of behaviour. Knowledge obtained in this course will help students in the future to understand pathophysiology mechanisms and clinical consequences of impairments of the nervous system.

Syllabus

・Brain and behavior, environment of the neuron. Structural arrangement of the nervous system. Blood-brain barrier, nervous tissue. Neurons as the signaling units of NS. Chemical synapses. Information processing in the NS. Principals of sensation and perception. Visual pathways. Physiological optics, information processing in the retina. Perception of motion, depth, form and color.

Pathways of auditory, vestibular, olfactory, and gustatory systems. Auditory and vestibular systems, chemical senses. Somatosensory and viscerosensory pathways. Central representation of the touch.

Pain and stress analgesia. Somatomotor pathways. Pathways of the cerebellum and the basal ganglia. Spinal motor reflexes. Eye movements. Posture, locomotion and grasping movements. Motor control in man (clinical findings). Modulatory systems of the brain. Autonomic nervous system. Limbic forebrain and motivation. Emotions. Structure of the cerebral cortex.

Arousal mechanisms, sleep. EEG. Learning and memory. Language, functional asymmetry of the hemispheres. Consciousness and attention. Prefrontal cortex. Ontogenic development of the brain, critical periods. Neuronal plasticity and regeneration.

Literature

・recommended literature

・BARRETT, Kim E. *Ganong´s review of medical physiology*. 23rd ed. Maidenhead: McGraw-Hill, 2010. ix, 714. ISBN 9780071270663.

・not specified

・HALL, John E. a Arthur C. GUYTON. *Guyton and Hall textbook of medical physiology*. 12th ed. Philadelphia, Pa.: Saunders/Elsevier, 2011. xix, 1091. ISBN 9781416045748.

・KRÁLÍČEK, Petr. *Úvod do speciální neurofyziologie*. 3., přeprac. a rozš. vyd. Praha: Galén, 2011. x, 235. ISBN 9788072626182.

・JANČÁLEK, Radim a Petr DUBOVÝ. *Základy neurověd v zubním lékařství (Basis of Neuroscience for Stomatology)*. 2nd. Brno: Portál Lékařské fakulty Masarykovy univerzity, 2011. 117 pp. Multimediální podpora výuky klinických a zdravotni. ISSN 1801-6103.

・GANONG, William F. *Přehled lékařské fyziologie*. 20. vyd. Praha: Galén, 2005. xx, 890. ISBN 807 2623117.

・DUBOVÝ, Petr. *Struktura a dráhy nervové soustavy člověka (Structure and Pathways of the Human Nervous System)*. Brno: Vydavatelství MU Brno, 1998. 176 pp. ISBN 80-210-1927-1.

Teaching methods Lectures.

Assessment methods Neuroscience course is terminated by a written test: the students write answers to 3 questions within a two hours. In the 1st question the emphasis is on neuroanatomical knowledge and in the 2nd question on neurophysiological knowledge. The 3rd question is integrative and tests the student ‘s ability to describe the topic from the point of view of neuroanatomy and neurophysiology together. Each question is graded P (passed) or N (no-passed). In the 3rd question, neuroanatomy and neurophysiology sections are graded separately. To pass the test, student must obtain grade P in each evaluated part of the test.

aZLOC0451c Oral Surgery I - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

z (credit).

Supervisor doc. MUDr. Milan Machálka, CSc.

Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno – Adult Age Medicine - Faculty of Medicine

Contact Person: Blanka Suchá

Course objectives Investigation of the patient focused on surgical treatment; oncological investigation. Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction. Preprosthetic preparations in the oral cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations.

Temporomandibular joint disorders and diseases; contractures. Cysts in the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes, classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible.

Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will be able to use his knowledge for surgical treatment of patients in dental surgery.

Syllabus

・Surgical interventions on teeth, other tissues of the oral cavity and related organs. Rational, most

considerate and professionlly proper way in searching the disease cause, choice and treatment

procedure, after-treatment and preventive measures.

・introduction into teh subject of Oral Surgery

・primary examination of the patient, examination carried out by an oncologist, possibilities of radiographic

and ultrasound examination for diagnostics, documentation

・anesthesia in oral surgery, total anesthesia, special features of local anesthesia

・radiographic examination in oral surgery, orthopantomogram, intraoral and extraoral pictures

・problems of teeth extractions

Literature

・required literature

・PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita

Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600.

・not specified

・*Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.

・DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park, IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.

・MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.

・MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha: Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.

・MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.

・TOMAN, Jaroslav a Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.

・KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.

・TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp.

Teaching methods practical training

Assessment methods credit

aZLOC0451p Oral Surgery I - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Milan Machálka, CSc.

Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno – Adult Age Medicine - Faculty of Medicine

Contact Person: Blanka Suchá

Course objectives Investigation of the patient focused on surgical treatment; oncological investigation.

Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction. Preprosthetic preparations in the oral cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations.

Temporomandibular joint disorders and diseases; contractures. Cysts in the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes,

classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible.

Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will be able to use his knowledge for surgical treatment of patients in dental surgery.

Syllabus

・Surgical interventions on teeth, other tissues of the oral cavity and related organs. Rational, most considerate and professionlly proper way in searching the disease cause, choice and treatment procedure, after-treatment and preventive measures.

・introduction into teh subject of Oral Surgery

・primary examination of the patient, examination carried out by an oncologist, possibilities of radiographic and ultrasound examination for diagnostics, documentation

・anesthesia in oral surgery, total anesthesia, special features of local anesthesia

・radiographic examination in oral surgery, orthopantomogram, intraoral and extraoral pictures

・problems of teeth extractions

Literature

・required literature

・PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600.

・not specified

・*Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.

・DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park, IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.

・MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.

・MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha: Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.

・MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.

・TOMAN, Jaroslav a Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.

・KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.

・TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp.

Teaching methods lectures

Assessment methods oral exam on the 4th year of study

aZLOH041c Oral Histology and Embryology - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Drahomír Horký, DrSc.

Department of Histology and Embryology - Theoretical Departments - Faculty of Medicine

Contact Person: prof. MUDr. RNDr. Svatopluk Čech, DrSc.

Course objectives The oral histology and ebryology includes study of histological slides, electron micrographs, embryological illustrations and schemes, embryological models, etc. that cover all important organs of the orofacial system.

At the end of this course, students should be able to: 1) describe microstructure and embryologic development of all organs of orofacial system in complexly extent, 2) analyze changes and deviations in structure and development of organs of orafacial region and explain their causes, 3) apply obtained knowledge and practical skills in related clinical branches.

Syllabus

・2. week: **Oral histology:** Microscopic structure of lips, cheek, palate and tongue. Slides: labium oris, palatum molle, apex linguae, papilla vallata, radix linguae.

・4. week: Microscopic structure and diagnosis of major salivary glands. Slides: gl. apicis linguae, gl. parotis, gl. submandibularis, and gl. sublingualis. Hard tooth tissues - their physical properties and chemical composition, and origin. Microscopic structure of enamel, age changes, defects of amelogenesis and dental caries.

・6. week: Microscopic structure of periodontal ligament, its function and clinical importance. Gingiva, gingival sulcus, mucogingival and dentogingival junctions, age changes and clinical implications. Differences in structure and composition of deciduous and permanent teeth. Slides: decalcified tooth (transverse or longitudinal sectioned).

・8. week: **Oral embryology:** Definition of growth and development. From the fertilized ovum (zygote) to formation of germ layers, main derivatives of germ layers. Flexion of the embryo. Overview of development of the external appearance of the human conceptus. Study aids: Set of embryological illustrations and schemes (I and II).

・10. week: Development of the oral cavity and vestibule. Development of nasal cavities. Formation of the primary and secondary palates. Development of the mandible and maxilla. Overview of clefts of the maxilla and palate. Development of the nose including congenital defects. Exercise: Congenital clefts of the face, maxilla and secondary palate on schemes, pictures and models.

・12. week: Overview of birth defects related with maldevelopment of the brachial apparatus of the embryo. Odontogenesis (tooth development). Epithelial - mesenchymal interactions during tooth development, staging of tooth development. Slides: microscopic study of slides illustrating the tooth development.

・14. week: Formation of the permanent dentition and its eruption. Development of the alveolar process. Overview of congenital tooth defects. Repair and regeneration of oral tissues. Exercise: Chronology of tooth development and the order of eruption. Credit.

Literature

・recommended literature

・HORKÝ, Drahomír a Svatopluk ČECH. *Mikroskopická anatomie (Microscopical Anatomy)*. Druhé, nezměněné. Brno: Vydavatelství MU, 2005. 353 pp. ISBN 80-210-3775-X. Patent.

・ČECH, Svatopluk, Drahomír HORKÝ a Miroslava SEDLÁČKOVÁ. *Přehled embryologie člověka*. 1. vyd. Brno: Masarykova univerzita, 2011. 187 pp. ISBN 978-80-210-5414-1.

・ČECH, Svatopluk, Drahomír HORKÝ, Irena LAUSCHOVÁ, Miroslava SEDLÁČKOVÁ a Jitka ŠŤASTNÁ. *Histologická praktika a metody vyšetřování tkání a orgánů (Histological practicals and methods of investigation of tissues and organs)*. 1.dotisk 1. vydání. Brno: Vydavatelství MU Brno-Kraví hora, 2002. 162 pp. ISBN 80-210-1774-0.

・not specified

・MOORE, K.L. a T.V.N. PERSAUD. *Zrození člověka- Embryologie s klinickým zaměřením*. (překlad 6. vydání). Praha: ISV nakladatelství, 2002. 564 pp. ISBN 80-85866-94-3.

Teaching methods practise (course of microscopy + embryological demonstrations)

Assessment methods Histology course is based on microscopy of histological slides that cover all important organs of the orofacial region; for embryology teaching are used microscopic slides of developing teeth, sets of embryological illustrations and schemes, class discussion and problem directed guides and presentations of the teacher. Practices are closed by credit given; a precondition for it is full attendance.

aZLOH041p Oral Histology and Embryology - lecture

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: zk (examination).

Supervisor prof. MUDr. Drahomír Horký, DrSc.

Department of Histology and Embryology - Theoretical Departments - Faculty of Medicine

Contact Person: prof. MUDr. RNDr. Svatopluk Čech, DrSc.

Course objectives Main objective of this course is to supply students of dentistry with detailed microstructural and developmental knowledge of orofacial region.

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

1) repeat all important facts concerning the microscopic anatomy and embryology of organs of the orofacial system and interpret them in correct relations,

2) discuss clinical implications of obtained microstructural a embryological observations and facts,

3) describe existing aberrations or developmental changes in organs of orofacial region and explain their possible causes,

4) use obtained theoretical knowledge of microanatomy and embryology of orofacial organs in related clinical disciplines.

Syllabus

・1. week: **Oral histology:** Introduction - contents of subject, forms of teaching and texts recommended for study. The oral cavity and its content. Microscopic structure of the oral mucosa and its regionalization: lining mucosa, masticatory mucosa and specialized mucosa. Taste buds.

・3. week: General structure and classification of salivary glands. Histology of the major and minor salivary glands. Functions of saliva. Foundations of the comparative anatomy of teeth. The tooth and supporting tissues of the tooth - cementum, periodontal ligament and gingiva. Methods used for study of hard tooth tissues -decalcification of teeth, ground sections of undecalcified teeth.

・5. week: Basic structure of dentin, types of dentin, and its clinical importance. Microscopic structure of cementum and its clinical importance; hypertrophy of cementum. Microscopic organization of dental pulp and its function, age-related changes in the dental pulp. Dentin-pulp complex.

・7. week: Microscopic structure of the alveolar process, clinical aspects of bone reaction in the alveolar process. Anatomy and histology of the temporomandibular joint.

・9. week: **Oral embryology:** Birth defects - their causes, incidence and terminology. The human embryo aged fourth week. Head and neck of the embryo. Primitive mouth - the stomodeum – and development of the face.

・11. week: Development of the tongue and overview of its congenital malformations. Development of major salivary glands. Description of the pharyngeal apparatus of the embryo. Pharyngeal (branchial) arches and their derivatives. Derivatives of pharyngeal clefts and pouches.

・13. week: Early tooth development: dental lamina, bud, cup and bell stage. Crown and root formation. Development of the periodontal ligament. Deciduous tooth eruption.

・15. week: Consultations

Literature

・recommended literature

・HORKÝ, Drahomír a Svatopluk ČECH. *Mikroskopická anatomie (Microscopical Anatomy)*. Druhé, nezměněné. Brno: Vydavatelství MU, 2005. 353 pp. ISBN 80-210-3775-X. Patent.

・ČECH, Svatopluk, Drahomír HORKÝ a Miroslava SEDLÁČKOVÁ. *Přehled embryologie člověka*. 1. vyd. Brno: Masarykova univerzita, 2011. 187 pp. ISBN 978-80-210-5414-1.

・not specified

・MOORE, K.L. a T.V.N. PERSAUD. *Zrození člověka- Embryologie s klinickým zaměřením*. (překlad 6. vydání). Praha: ISV nakladatelství, 2002. 564 pp. ISBN 80-85866-94-3.

・NANCI. *Ten Cates Oral Histology. Development, Structure and Function*. 6. vyd. USA: Mosby, 2003.

・RIVIERE. *Lab Manual of Normal Oral Histology*. Chicago: Quintessence Publishing Co, Inc., 2000.

・MELFI a ALLEY. *Permar s Oral Embryology and Microscopic Anatomy. A Textbook for Students in Dental Hygiene*. 10. vyd. Philadelphia: Lippincott WW, 2000.

Teaching methods lectures

Assessment methods Attendance of lectures is recommended and randomly checked. Subject is closed with oral examination, students draw a lot 2 questions that cover microscopic anatomy and embryology of organs of the orofacial system.

aZLPL0451c Prosthetic Dentistry I - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives The objective is to teach students this semester all impression techniques to the prosthetic crowns and bridges and partial or total removable dentures.

Syllabus

・Extent of the subject :: hours per week 3,3, credits 14 4. sem: 0,5 hr. lecture, 1 hr. practise 5. sem: 0,5 hr. lecture, 1 hr. practise 6. sem: 0,5 hr. lecture, 2 hr. practise 7. sem: 0,5 hr. lecture, 4 hr. practise 8. sem: 0,5 hr. lecture, 3 hr. practise 9. sem: 0,5 hr. lecture, 3 hr. practise Lectures: Classification of the defects Biologic faktor Examination of the patient. Prosthetic plan. Crowns - lab and surgery steps Bridges - lab and surgery steps Parcial dentures I a II. classification of the Voldrich Parcial dentures III. classification of the Voldrich Full dentures Repairing of the dentures Rebaze protetické náhrady Immediate denture Special dentures

Literature

・recommended literature

・TVRDOŇ, Martin. *Protetická stomatológia, liečba a prevencia*. 1. vyd. Bratislava: Science, 1999. 580 s. ISBN 8096796151.

・not specified

・SHILLINGBURG, Herbert T. *Fundamentals of Fixed Prosthodontics*. Illustrated by Suzan E. Stone. 4th ed. Chicago: Quintessence Pub., 2012. x, 574. ISBN 9780867154757.

・SMANIOTTO, Paolo a Alexander BEIKIRCHER. *Aesthetics and techniques for new materials : achieving*

success for the dental team. Markham: Palmeri, 2010. 214 s. ISBN 8889626062.

・PHOENIX, Rodney D., David R. CAGNA a Charles F. DEFREEST. *Stewart ' s clinical removable partial prosthodontics*. 4th ed. Chicago: Quintessence, 2008. ix, 517. ISBN 9780867154856.

・*Contemporary fixed prosthodontics*. Edited by Stephen F. Rosenstiel. 2nd ed. St. Louis: Mosby, 1995. xi, 627. ISBN 0801665280.

・*Color atlas of oral diseases*. Edited by George Laskaris. 2nd rev. ed. Stuttgart: Georg Thieme Verlag, 1994. xiii, 372. ISBN 3-13-717002-8.

・GRABER, George, Urs HAENSLER a Peter WIEHL. *Removable partial dentures*. Translated by Richard Jacobi. 1st ed. Stuttgart: Georg Thieme Verlag, 1988. vii, 216. ISBN 3137110017.

Teaching methods practical training

Assessment methods credit

aZLPL0451p Prosthetic Dentistry I - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Branch content Theoretical knowledges a practical skills at prosthetic dentistry oriented to fixed and partial dentures. Basics aims and content of the subject: Students have knowledges how to produce prosthetic denture and when they can use different types of the dentures.

Syllabus

・Extent of the subject :: hours per week 3,3, credits 14 4. sem: 0,5 hr. lecture, 1 hr. practise 5. sem: 0,5 hr. lecture, 1 hr. practise 6. sem: 0,5 hr. lecture, 2 hr. practise 7. sem: 0,5 hr. lecture, 4 hr. practise 8. sem: 0,5 hr. lecture, 3 hr. practise 9. sem: 0,5 hr. lecture, 3 hr. practise Lectures: Classification of the defects Biologic faktor Examination of the patient. Prosthetic plan. Crowns - lab and surgery steps Bridges - lab and surgery steps Parcial dentures I a II. classification of the Voldrich Parcial dentures III. classification of the Voldrich Full dentures Repairing of the dentures Rebaze protetické náhrady Immediate denture Special dentures

Literature

・recommended literature

・TVRDOŇ, Martin. *Protetická stomatológia, liečba a prevencia*. 1. vyd. Bratislava: Science, 1999. 580 s. ISBN 8096796151.

・SHILLINGBURG, T. Herbert. Fundamentals of Fixed Prosthodontics. 4th Revised

Teaching methods lecture

Assessment methods Diskussion

aZLPZ041c Preventive Dentistry - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Martina Kukletová, CSc.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Branch content: Students are learning about etiology and prevention of dental caries and parodontopathies also the basics of oral hygiene and its importance for maintenance of the personal health. Basic aims of subject education: Students are obtaining knowledge about causes of dental caries and parodontopathies. They learn diagnostics, prevention and therapy these diseases with emphasis on basic prophylactic procedures. Subject content: Aim of lessons is to manage

students with importance of oral hygiene, causes of dental caries and parodontopathies. They learn to diagnose early phase these diseases and to start effective preventive actions. The consequence of epidemiological studies is accentuated and students are practically trained in determination of basic indices in restorative dentistry and periodontics. They learn how to remove tartar, plaque and make scaling. Students also meet with methods improving enamel resistance, local and systemic floridation, fundamentals of health nutrition.

Syllabus

・Anatomy of the periodontal tissues, demonstration of the diseased periodontal tissues, basic inpage istruments for examination, aids for dental plaque and dental calculus detection. CPITN, PI, PBI, PDI PI indices, practical training, aids for oral hygiene. Tooth-brushing techniques, kneeding of the gumm, types of tooth brushes, dental floss, stimulator, instructions for the patient. Scaling - supragingival calculus, subgingival calculus, ultrasound method, hand instruments, root planing. DMFT, DMFS indices, practical training in DMFT and DMFS calculation, early lesion identification and valuation, bite-wing radiograph in caries diagnosis. Examination of children, tooth-brushing methods: training with children. Topical fluoridation methods. Polishing of fillings. Enamel opacities, mottled enamel. Demonstration of bacteria: Dentocult LB, Dentocult SM. Determination of buffer capacity of saliva (Dentobuff strips). Fissure sealing, description of the method, training on extracted teeth, fissure sealing in the oral cavity.

Literature

・KOVAĽOVÁ, Eva a Michal ČIERNY. *Orálna hygiena*. 1. vyd. Prešov: Vydavateľstvo Anna Nagyová,

1994. 246 s. ISBN 80-967041-3-3.

・*Prevention of dental disease*. Edited by J. J. Murray. 2nd ed. Oxford: Oxford University Press, 1989.

xii, 503 s. ISBN 0-19-261806-7.

・ŠKACH, Miroslav. *Onemocnění parodontu : Učebnice pro lékařské fakulty*. 4. část. přeprac. vyd.

Praha: Avicenum, 1977. 513 s.

Teaching methods practical training

Assessment methods credit

aZLPZ041p Preventive Dentistry - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion:

zk (examination).

Supervisor prof. MUDr. Martina Kukletová, CSc.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Branch content: Students are learning about etiology and prevention of dental caries and parodontopathies also the basics of oral hygiene and its importance for maintenance of the personal health. Basic aims of subject education: Students are obtaining knowledge about causes

of dental caries and parodontopathies. They learn diagnostics, prevention and therapy these diseases with emphasis on basic prophylactic procedures. Subject content: Aim of lessons is to manage students with importance of oral hygiene, causes of dental caries and parodontopathies. They learn to diagnose early phase these diseases and to start effective preventive actions. The consequence of epidemiological studies is accentuated and students are practically trained in determination of basic indices in restorative dentistry and periodontics. They learn how to remove tartar, plaque and make scaling. Students also meet with methods improving enamel resistance, local and systemic loridation, fundamentals of health nutrition.

Syllabus

・Introduction to the preventive dentistry. WHO objectives to the year 2020. Primary, secondary, tertiary prevention. Periodontal ligament, cementum, gingiva, anatomy and histology. Microbial plaque, dental calculus, their role in aethiology and pathogenesis of periodontal diseases. Hygiene of the oral cavity, aids, techniques. Basic terminology in epidemiology of the dental caries and periodontal diseases. Indices. Prevalence, incidence, susceptibility, experience, OHI-S, CPITN, SBI, PBI. Dental plaque indices: PI-SilnessLoe,PI-Quinley-Hein. Measurement of pocket depth, BoP. Principle theories of cariogenesis. Early lesion, X-ray diagnostics. Dental caries, iatrogenic irritation in restorative dentistry. Epidemiology of the dental caries. Fluorides in dental caries prevention. Fluoride prevention - exogenous (topical) methods. Fluoride prevention - endogenous(systemic) methods. Nutrition in dental caries prevention. Prevention programmes in dentistry. Preventive aspects in prosthetic dentistry. Preventive aspects in surgery (epidemiology of tumours, precancerous states and AIDS).

Literature

・required literature

・1. Harris ,N.O., Garcia-Godoy F., Nathe Ch.N.: Primary preventive dentistry,8th edition, published by Pearson, 2013

・not specified

・KOVAĽOVÁ, Eva a Michal ČIERNY. *Orálna hygiena*. 1. vyd. Prešov: Vydavateľstvo Anna Nagyová, 1994. 246 s. ISBN 80-967041-3-3.

・ŠKACH, Miroslav. *Onemocnění parodontu : Učebnice pro lékařské fakulty*. 4. část. přeprac. vyd. Praha: Avicenum, 1977. 513 s.

Teaching methods lecture

Assessment methods oral exam

aZLVL0421p Public Health in Dentistry I - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 2 credit(s). Recommended Type of Completion: k (colloquium). Other types of completion: zk (examination).

Supervisor prof. MUDr. Bc. Zuzana Derflerová Brázdová, DrSc.

Department of Public Health - Theoretical Departments - Faculty of Medicine

Contact Person: MUDr. Kräuff Rainer Schwanhaeuser Wulff, MBA, Ph.D. et Ph.D., M.A.

Course objectives By the end of this course student should be able to: describe the content, mission, basic theories and methods of social medicine; use epidemiologic methods for assessing the health status of defined population; apply theoretical and methodological knowledge in health situation analysis; assess health risks and propose suitable measures to improve the health of the population; understand the basis of statistical and systemic thinking in medicine, the basis of methods of critical appraisal of population studies results and consequent organizational measures.

Syllabus

・1. General information about the course Public health for dentistry I. Social Medicine and Public Health. .

・2. The system of health care and healthcare.

・3. Evaluation of the health status.

・4. Determinants of health.

・5. Demography.

・6. Demographic statistics.

・7. Systems of health statistics.

・8. Statistics of morbidity.

・9. Statistics of mortality and causes of death.

・10. Standardization of indicators.

・11. Mortality tables and life expectancy.

・12. Health and illness.

・13. Nosology, nomenclature and classification of diseases.

・14. Epidemiology - focus, content, methods.

・15. Causality, aetiology, study models.

・16. Measurements of disease frequency in the population.

・17. Indicators of decay, gums and oral health status.

・18. Diagnosis in epidemiology, diagnostic tests validity.

・19. Basic types of epidemiological studies.

・20. Definitions of risk, relative risk, and attributable risk.

・21. Explanation of the observed association.

・22. Importance of statistics in medical research and healthcare.

・23. Epidemiology and health policy.

・24. Social and health policy.

・25. Introduction to the European health strategy.

Literature

・required literature

・HOLČÍK, Jan, Adolf ŽÁČEK a Ilona KOUPILOVÁ. *Sociální lékařství*. 3. nezměn. vyd. Brno: Masarykova univerzita, 2006. 137 s. ISBN 9788087192153.

・HOLČÍK, Jan. *Systém péče o zdraví a zdravotní gramotnost (System of health care and health literacy)*. 1. vydání. Brno: Masarykova univerzita, 2010. 293 pp. Škola a zdraví pro 21. století. ISBN 978-80-210-5239-0.

. *

・DOPORUČENÁ LITERATURA

. *

・Bonita R, Beaglehole R, Kjellström: Basic epidemiology. 2nd edition. Geneva - Switzerland: World Health Organization; 2006. 212 pages. ISBN 978-92-4-154707-9.

. *

. *

・REQUIRED LITERATURE

. *

・1. Bonita R, Beaglehole R, Kjellström: Basic epidemiology. 2nd edition. Geneva - Switzerland: World Health Organization; 2006. pp 1-68, 83-114, 133-143. ISBN 978-92-4-154707-9.

. *

・RECOMMENDED LITERATURE

. *

・2. Nordess R: Epidemiology and biostatistics secrets. China: Mosby Elsevier; 2006.

・*

Teaching methods

Lectures.

Reading and studying ALL REQUIRED LITERATURE.

For those who will have to write research projects and seminar papers during third, fourth and fifth year, it is strongly recommended to enrol the following courses:

VSIL021 - Information literacy - (3 credits) - e-learning.

VSKP041 - A course of working with information sources and tools (4 credits).

Assessment methods COLLOQUIUM INFORMATION:

1. To sit for colloquium, it will be required to successfully complete the prerequisite subjects.

2. Each student must register in the Information System (IS) in one of the offered examination terms.

The examination has fixed examination terms / dates - (Only during the examination period, except the examination pre-term). No extra-terms will be given.

3. Students registered to an examination term will fail the term if:

a-) arrive late the examination day.

b-) they are not present and previously did not cancel the term in the stipulated periods (see IS).

4. In case of failure, EACH STUDENT CAN RETAKE THE COLLOQUIUM TWO MORE TIMES, only in given terms (according to Masaryk University study rules).

5. In case of failure during the third term (second resit), the student must repeat the course in the following school year.

6. All colloquium questions are based on ALL REQUIRED LITERATURE, seminars and lectures.

Colloquium → Written examination → 20 multiple choice question test, with only one correct answer - (to pass the test, it is required a minimum of 14 correct answers / points).

SCORE:

Passed → 14 and more correct answers / points.

Failed → 13,5 or less correct answers / points.

In order to omit / avoid guessing while answering the MCQ test / examination, the following system will be used:

Correct answer = 1 point.

No answer = 0 point.

Wrong answer = -0,5 point.

Test scoring will be according to the next formula:

Final score = Number of correct answers - (Number of wrong answers / two).

For example:

15 correct answers (15 x 1 point = 15 points) - Passed.

5 wrong answers (5 x -0,5 = -2,5 points).

15 - 2,5 = 12,5. The final score of the test will be 12,5 answers / points.

Final result = Failed.

** For that reason, only answer the question when you are sure of the answer.

ACADEMIC MISCONDUCT, PLAGIARISM DETECTION AND ETHICAL ISSUES:

1. Any attempts of ACADEMIC MISCONDUCT, such as cheating or assisting someone else to cheat during the colloquium, will result in disciplinary actions, such as:

a-) You will be required to hand over your examination paper and asked to leave the examination room.

This means, you failed the examination (examination term), with the respective score F / 4, on your academic records in the information system.

b-) Opening disciplinary proceedings.

c-) Failing the subject / course.

d-) Expulsion from university.

2. During the colloquium, it is forbidden to use items such as:

a-) Smart phones / Tablets.

b-) Laptops.

c-) To wear earphones or headphones (if not medical prescribed).

d-) To talk.

*In such cases, disciplinary actions will be taken (See above numeral 1).

YEAR 3 / SEMESTER 5

aZLCP051c Clinical Introduction to Surgery - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

z (credit).

Supervisor MUDr. Jan Konečný, Ph.D.

First Department of Surgery - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: doc. MUDr. Jiří Vokurka, CSc.

Course objectives The aim of the training of the dental medicine students in the surgical propedeutice is to give them overview about the basic principles of the general surgery, clinical investigation, imaging and surgical techniques.

Syllabus

・1. Introduction, clinical investigation and imaging in surgery

・2. Surgical procedures, techniques, endoscopy

・3. Post-operative care, infusions, nutrition, complications

・4. Acute surgery, bleeding, acute abdomen, transfusion

・5. Traumatology, pre-hospital and acute care. Fractures, immobilisation.

Literature

・ZEMAN, Miroslav. *Chirurgická propedeutika*. 2., přeprac. a dopl. vyd. Praha: Grada, 2000. 516 s.

ISBN 8071697052.

Teaching methods The teaching proceeds in the one week block (daily 2-hours). The seminar follows after the lecture (themes in syllabus). Seminars have a form of discussion with the practical bedside examples.

Assessment methods The week is ended by a written test. The credit is given providing successful test and full attendance in tutorials.

aZLIM051c Immunology in Dentistry- practice

Extent and Intensity Seminar: 5 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Vojtěch Thon, Ph.D.

Department of Clinical Immunology and Allergology - Institutions shared with St. Anne’ s Faculty Hospital

- Faculty of Medicine

Contact Person: prof. MUDr. Vojtěch Thon, Ph.D.

Course objectives The course is focused to clinical and laboratory aspects of immunology in medicine. After finishing this course the student will understand the pathogenesis of immunopathological diseases and know the clinical manifestation and the treatment approaches to the most severe disturbances of the immune system particularly focused on the orofacial localization.

Syllabus

・Serological reactions - overview;

・Cells of the immune system;

・CD nomenclature of leukocyte antigens;

・Phenotyping of lymphocytes. Flow cytometry;

・Primary and secondary immunodeficiency disorders;

・Autoimmunity and disease;

・Autoantibodies and their laboratory detection;

・Hypersensitivity reactions;

・Clinical allergology. Allergic skin and exposition tests;

・Immunopathological reactions in the oropharyngeal region;

Literature

・recommended literature

・ABBAS, Abul K., Andrew H. LICHTMAN a Shiv PILLAI. *Basic immunology : functions and disorders of the immune system*. Fifth edition. St. Louis: Elsevier, 2016. x, 335. ISBN 9780323390828.

Teaching methods The course is given in a form of seminars. To get the credit, presence in 90% of seminars with active participation in discussions is required. The knowledge is continuously checked by oral questions.

Assessment methods Interview

aZLIM051p Immunology in Dentistry - lecture

Extent and Intensity Lecture: .5 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: zk (examination).

Supervisor prof. MUDr. Vojtěch Thon, Ph.D.

Department of Clinical Immunology and Allergology - Institutions shared with St. Anne’ s Faculty Hospital

- Faculty of Medicine

Contact Person: prof. MUDr. Vojtěch Thon, Ph.D.

Course objectives The course covers basic aspects of the structure and function of the immune systém in humans. Topics include mechanisms of non- specific immunity with main emphasis on the inflammatory process, such as humoral and cellular branches of the specific immune response. It includes mainly mechanisms of activation of the immune response and its regulation. Special emphasis is given to mucosal immunity and immune response to microbes and immunoprophylaxis to infectious and non-infectious diseases in the orofacial area. After finishing the course the students will understand the mechanisms of the immune response in physiology, and the knowledge will enable them to understand the immune system disturbances leading to immunopathological diseases.

Syllabus

・Immunology in medicine. Medical subject allergology and clinical immunology. Physiology and pathology of the immune system. Immunological concept of "own", "foreign", "dangerous". Anatomy and cellular elements of the immune system. Immune mechanisms. Innate and acquired immunity. Innate or natural immunity: phagocytosis, NK cells, cytotoxicity, interferon system, complement system, acute phase reaction, inflammation. B lymphocytes and immunoglobulins. Genetic basis of immunoglobulin heterogeneity. Biological properties of antibodies. Monoclonal antibodies as diagnostic and therapeutic tools. T-lymphocytes, their development and effector functions. Polarisation of T-lymphocytes (Th1, Th2, Th17). Cytotoxicity. Cytokines. Major histocompatibilitycomplex: structure, function. Activation of T and B cells by antigen. Interactions between antigen-presenting cells and T- and B-lymphocytes. Regulation of the immune reaction. Mucosal immunity. Immunity against infectious agents. Microbial antigens. Active and passive immunisation.

Literature

・ABBAS, Abul K., Andrew H. LICHTMAN a Shiv PILLAI. *Basic immunology : functions and disorders of the immune system*. Fifth edition. St. Louis: Elsevier, 2016. x, 335. ISBN 9780323390828.

Teaching methods Lecture. To get the creditactive participation in discussions is required. The knowledge is continuously checked by oral questions.

Assessment methods Oral exam

aZLKZ051c Restorative Dentistry - Dental Caries Treatment - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Dental caries diagnostics and treatment of different caries types by various materials.

Syllabus

・Practical training - syllabus: Examination of the patient, proposal of treatment, diagnostics of dental caries. Diagnostics and treatment of caries in premolars and molars on the occlusal surface. Diagnostics and treatment of carious defects on proximal surfaces of premolars and molars. Recurrent caries, secondary caries: its diagnostics and treatment. Treatment of deep (close-to-pulp) caries. Importance of x-ray examination in caries diagnosis.

Literature

・required literature

・*The art and science of operative dentistry*. Edited by Clifford M. Sturdevant - Theodore M. Roberson. 3rd ed. St. Louis: Mosby, 1995. xxi, 824 s. ISBN 0-8016-6366-0.

・recommended literature

・*Kariesprophylaxe und konservierende therapie*. Edited by Peter Riethe. 2. überarb. und erw. Aufl. Stuttgart: Georg Thieme Verlag, 1994. XI, 368 s. ISBN 3-13-714702-6.

・JEDYNAKIEWICZ, Nicolas M. *A practical guide to technology in dentistry*. [1st ed.]. : Wolfe Publishing, 1992. 193 s. : i. ISBN 0-7234-1742-3.

Teaching methods Practical training: Examination of the patient,diagnostics of dental caries. Diagnostics and treatment of caries in premolars and molars on the occlusal surface. Diagnostics and treatment of carious defects on proximal surfaces of premolars and molars. Recurrent caries, secondary caries: its diagnostics and treatment. Treatment of deep (close-to-pulp) caries.

Assessment methods Credit (completion of practical training)

aZLKZ051p Restorative Dentistry - Dental Caries Treatment - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: zk (examination).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Dental caries diagnostics and treatment of different caries types by various materials.

Syllabus

・Lectures: Treatment of caries in premolars and molars on the occlusal surface: indications, contraindications, choice of material. Plastic materials. Preventive fillings. Errors in diagnostics, choice, and implementation of fillings. Diagnostics and treatment of carious defects on proximal surfaces of premolars and molars. Indication, contraindication, choice of material. Plastic materials. Errors in diagnostics, choice, and implementation of fillings. Defects on proximal surfaces of teeth in frontal region. Indication, contraindication, choice of material. Errors in diagnostics, choice, and implementation of fillings. Treatment of defects of the neck. Indication, contraindication, choice of material. Errors in diagnostics, choice, and implementation of fillings. Cemental caries and possibilities of treatment. Use of various materials, combination of materials. Recurrent caries, secondary caries: its diagnostics and treatment. Treatment of subgingival caries. Possibilities of treatment of destroyed teeth.

Literature

・recommended literature

・*The art and science of operative dentistry*. Edited by Clifford M. Sturdevant - Theodore M. Roberson.

3rd ed. St. Louis: Mosby, 1995. xxi, 824 s. ISBN 0-8016-6366-0.

・*Kariesprophylaxe und konservierende therapie*. Edited by Peter Riethe. 2. überarb. und erw. Aufl.

Stuttgart: Georg Thieme Verlag, 1994. XI, 368 s. ISBN 3-13-714702-6.

・Stejskalová, J. et al. : Konzervační zubní lékařství. Galén, 2003, 2008 ISBN 978-80-7262-540-6.

Teaching methods Lectures - for practical training

Assessment methods Oral exam.

aZLLM0522c Medical Oral Microbiology II - practice

Faculty of Medicine, Autumn 2017

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Filip Růžička, Ph.D.

Department of Microbiology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: MUDr. Ondřej Zahradníček

Course objectives At the end of the course student

* defines microbial findings in different localisations

* defines the difference between common microbial flora, temporary findings, contaminants and pathogensin various localisations

* records infections that are rare and the rather common ones

* defines basics of diagnostic and therapeutic approach in the most typical microbial disease; here, basis is only supposed, more enlargement is supposed in other subjects, namely *Infectology*

Syllabus

・**Curriculum of lessons in Medical Oral Microbiology II (3rd year, autumn term)**

. .

Practical lessons

・P01 Diagnostics of staphylococci

・P02 Diagnostics of streptococci

・P03 Diagnostics of other G+ bacteria

・P04 Diagnostics of enterobacteriaceae

・P05 Diagnostics of G- bacteria II

・P06 Diagnostics of G- bacteria III

・P07 Diagnostics of anaerobic bacteria

・P08 Diagnostics of acid-fast bacteria

・P09 Diagnostics of spiral bacteria

・P10 Clinical microbiology I (general principles)

・P11 Clinical microbiology II (examination in respiratory and gastrointestinal infections)

・P12 Clinical microbiology III (examination in urogenital infections)

・P13 Clinical microbiology IV (examination in wound and bloodstream infections)

・P14 Review

・Teacher informs students about eventual imparities

Literature

・required literature

・MARSH, Philip. *Oral Microbiology*. : Wright, 2002. ISBN 0-7236-1051-7.

・recommended literature

・SAMARANAYKE, L.P. *Essential Microbiology for Dentistry*. 3rd Ed. : Churchill Livingstone, 2006. 372 pp. ISBN 978-0-323-04475-2.

・BJARNSHOLT, Thomas, Claus MOSER a Niels HØIBY. *Biofilm Infections*. : Springer, 2011. ISBN 978-1-4419-6084-9. *e-book*

・not specified

・(1) + all materials from practical sessions are essential, (2) and (3) are additionary

Teaching methods practical training

self-study from e-learning materials

Assessment methods Conditions for credits:

(1) absolving all practicals, with following notes:

- it is possible to substitute withing the week of tuition, if the capacity of the room allows it; no special formalities are required for it

- one absence is allowed according to Study Rules, but even in this case appology is recommended, and completing the konwledgen and the protocol required

- one more absence, if justified or approved by teacher, is possible under the same conditions

- more absences than two (although justified!) usually require some form of substitution (e. g. essay making or so) usually there are no substitutions organized at the end of semester

- absences that are neiter officially justified nor consulted with the teacheer in advance are **not allowed**

(2) complete laboratory protocol (usually signed by the teacher; teacher would not sign a protocol that is not satisfactory; if so, student has to redo it)

(3) succesfully filled in ROPOT questions to all topics (full number of points)

(4) succesfully written final test, date of the credit test will be declared in time. Number of questions is 12, ” single best answer” type, 8/12 correct answers required, 7/12 is sufficient for student having all ROPOTs filled in in time (in time = before the corresponing lesson; this is checked several times during the semester)

aZLLM0522p Medical Oral Microbiology II - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: zk (examination).

Supervisor doc. MUDr. Filip Růžička, Ph.D.

Department of Microbiology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: MUDr. Ondřej Zahradníček

Course objectives At the end of this course, student

* defines importance of individual bacterial findings in different clinical materials

* analyzes the difference between common microbial flora, transient findings, contamination and pathogensin different localisations

* judges what infections are rather rare and what infections use to be common

* describes basic approaches of diagnostics and treatment of the most typical microbial diseases; nevertheless, here only basis can be given, and more detailed knowledge should be given in clinical subjects, especially *Infectology*

Syllabus

・**Syllabus of Medical Oral Microbiology II (Autumn term)**

・

・Lectures

・1. Agents of respiratory infections I

・2. Agents of respiratory infections II

・3. Agents of digestive infections I

・4. Agents of digestive infections II

・5. Agents of neuroinfections

・6. Agents of UTI

・7. Agents of classical venereal diseases

・8. Agents of other STDs

・9. Agents of wound infections

・10. Agents of skin infections

・11. Agents of septicaemiae I

・12. Agents of septicaemiae II

・13. Agents of congenital and neonatal infections

・14. Agents of healthcare associated infections

Literature

・SAMARANAYKE, L.P. *Essential Microbiology for Dentistry*. 3rd Ed. : Churchill Livingstone, 2006. 372 pp. ISBN 978-0-323-04475-2.

・MARSH, Philip. *Oral Microbiology*. : Wright, 2002. ISBN 0-7236-1051-7.

・BJARNSHOLT, Thomas, Claus MOSER a Niels HØIBY. *Biofilm Infections*. : Springer, 2011. ISBN 978-1-4419-6084-9. *e-book*

・(1) + all materials from practical sessions are essential, (2) and (3) are additionary

Teaching methods lectures, presentations of case reports

self-study for the final exam

Assessment methods Attendance at lectures is not checked, but is recommended.

The subject is finished by the exam that has three parts. A student that is not successful at any of the parts does not continue to other parts. The exception is a student coming to his/her last resit. Such student always absolves all three parts, and a co-examiner is present at the third part.

(1) **Written admission test** consists of 20 questions, mostly ” single best answer” type, partially also filling in missing word or other type questions. Students having at least 14 correct answers are considered having successfully done this part. Students coming to a resit term and having the test successfully completed in one of previous attempts do not have to redo the test again.

(2) **Practical examination** means doing a task picked by a student, or given to him by a teacher. Students coming for a resit term do not have to absolve the practical part repeatedly if they have got value ” A” or ” B” at one of previous attempts. Elaborating of a written protocol from the practical part

may be requested.

(3) **Theoretical part** means that student picks one question for each of three groups of questions. The

total number of questions is approximately 180. The student elaborates the questions in written form, signs them and gives them to the teacher. The teacher asks additional questions to them orally. After that, the student is evaluated.

Warning 1: At any part of the exam the student may be told to show his/her protocols from practical sessions. The quality of the protocols may be taken into account at the final evaluation.

Warning 2: Skipping the test and/or the practical part cannot be done in case of students coming

again for their regular exam term in a repeatedly registered subject.

Note: Student that failed at part (1) and (2) and feel disadvantaged may appeal to the head-examiner during next 60 minutes.

aZLOC0552c Oral Surgery II - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Oliver Bulik, Ph.D.

Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno – Adult Age Medicine - Faculty of Medicine

Contact Person: Blanka Suchá

Course objectives Investigation of the patient focused on surgical treatment; oncological investigation. Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction. Preprosthetic preparations in the oral cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations.

Temporomandibular joint disorders and diseases; contractures. Cysts in the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes, classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible.

Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will be able to use his knowledge for surgical treatment of patients in dental surgery.

Syllabus

・Surgical interventions on teeth, other tissues of the oral cavity and related organs. Rational, most considerate and professionlly proper way in searching the disease cause, choice and treatment procedure, after-treatment and preventive measures.

・clinical examination and diagnosis in dental surgery

・anesthesia, emergencies in dental surgeries

・tooth extraction

・difficult eruption of mandibular third molars

・surgical extraction of impacted teeth

・complication during extraction

・orofacial infections, specific infalmmations

・conservative-surgical treatment of rroot canals

・cysts, infalmmation of maxillary sinus, oro-antral communication

Literature

・PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600.

・*Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.

・DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park, IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.

・MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.

・MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha: Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.

・MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.

・TOMAN, Jaroslav a Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.

・KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.

・TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp.

Teaching methods practical training

Assessment methods credit

aZLOC0552p Oral Surgery II - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno – Adult Age Medicine - Faculty of Medicine

Contact Person: Blanka Suchá

Course objectives Investigation of the patient focused on surgical treatment; oncological investigation.

Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction. Preprosthetic preparations in the oral cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations. Temporomandibular joint disorders and diseases; contractures. Cysts in the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes, classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible. Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will be able to use his knowledge for surgical treatment of patients in dental surgery.

Syllabus

・Surgical interventions on teeth, other tissues of the oral cavity and related organs. Rational, most considerate and professionlly proper way in searching the disease cause, choice and treatment procedure, after-treatment and preventive measures.

・clinical examination and diagnosis in dental surgery

・anesthesia, emergencies in dental surgeries

・tooth extraction

・difficult eruption of mandibular third molars

・surgical extraction of impacted teeth

・complication during extraction

・orofacial infections, specific infalmmations

・conservative-surgical treatment of rroot canals

・cysts, infalmmation of maxillary sinus, oro-antral communication

Literature

・PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600.

・*Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.

・DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park,

IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.

・MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.

・MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha: Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.

・MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.

・TOMAN, Jaroslav a Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.

・KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.

・TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp.

Teaching methods lectures

Assessment methods oral exam on the 4th year of study

aZLOP0521p Oral Pathology I - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Markéta Hermanová, Ph.D.

First Pathology Department - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives The main aims fo the course include:

to study causes and effects of oral diseases

to apply knowledge of basic pathologic processes (regressive and progressive changes, inflammation, pathologic immune reactions, oncogenesis, genetic background of diseases) on orofacial diseases

understanding of macroscopic and microscopic correlates of orofacial diseases

knowledge of basic classification of both non-neoplastic and neoplastic orofacial diseases.

Syllabus

・Disorders of development of teeth and cranofacial anomalies (developmental defects of the oral and maxillofacial region).

・Cysts of the jaws and oral soft tissues, including developmental cysts.

・Abnormalities of teeth.

・Dental caries.

・Disorders of dental pulp.

・Periapical diseases.

・Periodontal diseases.

Literature

・required literature

・SOAMES, J. V. a J. C. SOUTHAM. *Oral pathology*. 4th ed. Oxford: Oxford University Press, 2005. xii, 278. ISBN 0198527942.

Teaching methods Oral pathology course consists of lectures.

Assessment methods The course is closed by oral exam covering the set of oral pathology topics. The list of topics is available for students in advance. The student answers one question from the set of topics. Lectures are mandatory, knowledge is continuously orally interactivally tested during the lectures.

aZLPA0521c Pathology I - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Markéta Hermanová, Ph.D.

First Pathology Department - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives The main aims of the course include:
understanding the basic pathologic processes (regressive and progressive changes, inflammation, pathologic immune reactions, oncogenesis, genetic background of disease)
knowledge of basic classifications of non-neoplastic and neoplastic disorders
application of this knowledge in individual organ systems with focus on morphological substrate od individual disorders from both microscopis and macroscopic point of view
introduction of the role of pathology in clinical practice, of methods of tissue processing, methods of molecular pathology; demonstration of pathological anatomical autopsies and thier evaluation.

Syllabus

・Organization of education. Basic safety instructions (occupational safety in potentially infectious surroundings). Pathological-anatomical autopsy. Presentation of laboratories. Biopsy and its processing. Cytological examination. Molecular pathology.

・Regressive alterations, dystrophy, pigments.

・Circulation disorders, local, systemic.

・Inflammation. Progressive alterations (hyperplasia, hypertrophy, regeneration, reparation, metaplasia, dysplasia.)

・Tumors I(mesenchymal, epithelial, neuroectodermal, germ cell, mixed).

・Tumors II (hematooncology). Pathology of lymph nodes (reactive alterations, lymphomas).

・Pathology of cardiovascular system.

Literature

・required literature

・*Underwood's pathology : a clinical approach*. Edited by J. C. E. Underwood - Simon S. Cross. 6th ed. Edinburgh: Churchill Livingstone, 2013. xviii, 769. ISBN 9780702046735.

・recommended literature

・KUMAR, Vinay. *Robbins and Cotran pathologic basis of disease*. Illustrated by James A. Perkins. 8th ed. Philadelphia: Saunders, 2010. xiv, 1450. ISBN 9781416031215.

Teaching methods Pathology course consists of lectures and practical classes. Pathology course consists of lectures and practical classes. Practical classes include two parts: histopathological practices (with demonstration of microscopic and macroscopic findings of bioptic and auroptic samples) and autoptical practices (with demonstration of pathological anatomical autopsies).

Assessment methods The course of pathology is closed by oral exam covering three sets of topics: general pathology, systemic pathology and oncology. The list of these topics is available to the students in advance. Attendance is compulsory, knowledge of the students is periodically tested during the practical classes. Testing is oral or by written tests.

aZLPA0521p Pathology I - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Markéta Hermanová, Ph.D.

First Pathology Department - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives The main aims of the course include:

understanding the basic pathologic processes (regressive and progressive changes, inflammation,

pathologic immune reactions, oncogenesis, genetic background of disease)

knowledge of basic classifications of non-neoplastic and neoplastic disorders

application of this knowledge in individual organ systems with focus on morphological substrate od individual disorders from both microscopis and macroscopic point of view

introduction of the role of pathology in clinical practice, of methods of tissue processing, methods of molecular pathology; demonstration of pathological anatomical autopsies and thier evaluation.

Syllabus

・Introductory information. Basic nomenclature: autopsy, histological necroptic and bioptical examination,

the importance of autopsies. Death and postmortal changes. Necrosis: types and

appearance, causes and further evolution. Apoptosis, maceration.

・Atrophy, hypertrophy, hyperplasia, metaplasia.

・Inflammation (acute, chronic); gross and macroscopic appearance Phagocytosis, cells engaged in inflammation. Chemical mediators of inflammation.

・Inflammation: types and their characteristics (superficial, deep, serous, fibrinous...). Macroscopic & microscopic changes Fever, sepsis, pyemia Healing and reparation Specific inflammation (tuberculosis, lues, lepra, sarkoidosis); granulomatous inflam-mation.

・Immune system and its function Immune reactions, their classification and pathology. Autoimmune diseases. Rejection.

・Immunodeficiency diseases (inborn and acquired). HIV. Infections in immunocompromised patients Infectious diseases.

・Hemodynamic disorders od perfusion (central and peripheral). Shock, fluid loss and overload Local disorders of circulation (infarction, embolism, edema), DIC, eclampsy.

・General oncology; Benign and malignant tumors and their classification. Cancerogenesis. Epithelial tumors, choriocarcinoma, mesothelioma.

・Leukemia. Lymphomas (WHO classification)

・Mesenchymal tumors. Tumors of peripheral nervous system Pigmented skin lesions. Neuroectodermal tumors of CNS.

・Cardiovascular pathology: congenital heart disease, inflammatory heart disease, ischemic heart disease, cardiomyopathy.

・Cardiovascular pathology: blood vessels (degenerative changes, vasculitis), myocardial biopsy.

・The respiratory systém.

・Autopsy, biopsy. Tissue fixation, sampling and processing. Frozen sections.Light, fluorescent, electron microscopy. Cytology (smears, fine needle aspirations). Routine and special staining, histochemistry, immunohistochemistry Molecular biology techniques.

Literature

・required literature

・*Underwood’s pathology : a clinical approach*. Edited by J. C. E. Underwood - Simon S. Cross. 6th ed. Edinburgh: Churchill Livingstone, 2013. xviii, 769. ISBN 9780702046735.

・recommended literature

・KUMAR, Vinay. *Robbins and Cotran pathologic basis of disease*. Illustrated by James A. Perkins. 8th ed. Philadelphia: Saunders, 2010. xiv, 1450. ISBN 9781416031215.

Teaching methods Pathology course consists of lectures and practical classes. Practical classes include two parts: histopathological practices (with demonstration of microscopic and macroscopic findings of bioptic and auroptic samples) and autoptical practices (with demonstration of pathological anatomical autopsies).

Assessment methods The course of pathology is closed by oral exam covering three sets of topics: general pathology, systemic pathology and oncology. The list of these topics is available to the students in advance. Attendance is compulsory, knowledge of the students is periodically tested during the practical classes. Testing is oral or by written tests.

aZLPF0521c Pathological Physiology I - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Anna Vašků, CSc.

Department of Pathological Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: prof. MUDr. Anna Vašků, CSc.

Course objectives The objective of the practical exercises and seminars from pathological physiology is to provide students basic idea about pathological states and experimental work, show anaesthetic and basic surgical techniques. Students will also acquire practical skills necessary for their subsequent (future) study and work.

Syllabus

・Introduction, health & safety in the lab, principles and ethics of experimental use of laboratory animals, basic surgical skills, general principles of work with lab. animals & explorative laparotomy.

・Pathophysiology of ventilation disorders and pulmonary gas exchange‐spirometry.

・Essential hypertension (seminar), resting and ambulatory blood pressure (and heart rate) measurements, postural changes, effect of isometric and aerobic exercise.

・Secondary hypertension (seminar), exp. induced renal ischemia (quantification of renal renin expression).

・Atherosclerosis (seminar), principles and demonstration of peripheral blood flow examination using ultrasonography.

・Exp. induced acute renal insufficiency in lab. animal‐measurement of GFR based on kinetics of renal inulin excretion.

・Statistical analysis of experiments (introduction).

・Exp. induced acute radiation syndrome in lab. animal‐haematological consequences.

・Arrhytmias (seminar), demonstration of selected types of arrhythmias.

・Acid-base balance, Credits.

Literature

・required literature

・KAŇKOVÁ, Kateřina, Julie BIENERTOVÁ VAŠKŮ, Lydie IZAKOVIČOVÁ HOLLÁ, Michal JURAJDA, Michal MASAŘÍK, Lukáš PÁCAL a Anna VAŠKŮ. *Pathophysiology practicals for General Medicine and Dental Medicine courses*. 1. vyd. Brno: Masarykova univerzita, 2008. 46 pp. Portal of MU’ s Faculty of Medicine [online]. ISSN 1801-6103. URL

・BIENERTOVÁ VAŠKŮ, Julie, Dana BUČKOVÁ, Lydie IZAKOVIČOVÁ HOLLÁ, Michal JURAJDA, Kateřina KAŇKOVÁ, Šárka KUCHTÍČKOVÁ, Lukáš PÁCAL, Anna VAŠKŮ a Vladimír ZNOJIL. Praktikum z patologické

fyziologie. *Elportál*, Brno: Masarykova univerzita, 2007. ISSN 1802-128X. *URL*

Teaching methods practical training

Assessment methods Credit. Practical exercises are compulsory (one absence cen be tellerated, another ones can be excused only in case of sick leave). During the term, tutors can continuously test knowledge in written tests or students can be asked to elaborate special papers.Term tuition (blocks) is completed by credit, conditions for awarding credit are: i) participation in the practical exercises, ii)

elaboration of protocols from experimental practical exercises, iii) further individually chosen tutor's

criteria.

aZLPF0521p Pathological Physiology I - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Anna Vašků, CSc.

Department of Pathological Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: prof. MUDr. Anna Vašků, CSc.

Course objectives The objective of the theoretical part of the course is to provide complex information on etiology and pathogenesis of diseases. Basic knowledge of the origin and dynamics of the development of pathological states will be presented and trained during lectures and completed by individual study of recommended literature.

Syllabus

General pathophysiology • Student characterizes state of healthy and disease • Student calls main sources of interindividual variability • Student demonstrates understanding of an influence of external factors on disease development, especially in oral cavity • Student characterizes base features of complex diseases • Student summarises importance of epigenetics • Student describes pathophysiology of stress reaction • Student defines homeostasis term • Student identifies disorder of growth and development from ontogenetic point of view • Student describes results of hypoxia including HIF 1 program • Student explains a difference between local and systemic inflammation • Student explains pathogenesis of oedema • Student discusses etiopathogenesis of the most important ion homeostasis disturbances, especially those of Ca++, Mg++ and K+ • Student distinguishes base acid base balance disturbances and possibilities of their compensation • Student applies knowledge of volume and tonicity regulation • Student discusses a role of platelets and physiological endothelium during antiaggregation state and understands base principles of antiaggregation therapy • Student knows principles and performance of base coagulation tests • Student explains wound healing process with examples of pathological healing, especially in oral cavity • Student explains an importance of micronutrients abnormalities, especially considering oral cavity state • Student knows results of abnormal vitamin levels, especially in oral cavity • Student explains mechanism of genomic and non- genomic effects of soluble in lipids vitamins • Student discusses pathophysiology of protein metabolism • Student understands the base principles of regulation of glucose • Student interprets knowledge of immune recognition of own and foreign structure on examples of specifically organ and systemic disorders • Student interprets immunological knowledge of hypersensitive mechanisms in pathophysiology of atopic and allergic changes • Student describes onset, signs and results of heart and vessels remodelling • Student applies chronobiology knowledge for explication of different pathophysiological changes

Literature

・required literature

・NEČAS, Emanuel. *Patologická fyziologie orgánových systémů.* 1. vyd. Praha: Karolinum, 2003. s. 381-760. ISBN 9788024606743.

・NEČAS, Emanuel a spol. *Obecná patologická fyziologie*. 1. vyd. Praha: Karolinum, 2000. 377 pp. ISBN 80-246-0051-X.

・NEČAS, Emanuel. *Patologická fyziologie orgánových systémů.* 1. vyd. Praha: Karolinum, 2003. 379 s. ISBN 9788024606750.

・Ivan Damjanov: Pathophysiology, ISBN 13: 978-1-4160-0229-1, Saunders Elsevier, 2009.

・recommended literature

・KAŇKOVÁ, Kateřina. *Vybrané kapitoly z patologické fyziologie: Poruchy metabolizmu a výživy*. 1. vydání. Brno: Masarykova univerzita v Brně, 2005. 59 pp. ISBN 80-210-3670-2.

Teaching methods Lecture.

Assessment methods Oral examination.

aZLPL0562c Prosthetic Dentistry II - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 4 credit(s). Type of Completion: z (credit).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Branch content Theoretical knowledges a practical skills at prosthetic dentistry oriented to fixed and full dentures. Basics aims and content of the subject: Students have knowledges how to produce full prosthetic denture. and when they can use different types of the dentures.

Syllabus

Student:

• - learns, and practically all the work procedures for fixed dentures and for partiall and total removable dentures.

・Extent of the subject :: hours per week 3,3, credits 14 4. sem: 0,5 hr. lecture, 1 hr. practise 5. sem: 0,5 hr. lecture, 1 hr. practise 6. sem: 0,5 hr. lecture, 2 hr. practise 7. sem: 0,5 hr. lecture, 4 hr. practise 8. sem: 0,5 hr. lecture, 3 hr. practise 9. sem: 0,5 hr. lecture, 3 hr. practise

Literature

・SHILLINGBURG, Herbert T. *Fundamentals of Fixed Prosthodontics*. Illustrated by Suzan E. Stone.

4th ed. Chicago: Quintessence Pub., 2012. x, 574. ISBN 9780867154757.

・SMANIOTTO, Paolo a Alexander BEIKIRCHER. *Aesthetics and techniques for new materials : achieving*

success for the dental team. Markham: Palmeri, 2010. 214 s. ISBN 8889626062.

Teaching methods practical training. Practical training (about 50 % of the total volume of teaching) is complemented by a comprehensive range of simulation teaching methods on simulators with varying degrees of fidelity, trainers and virtual patients. Most of them are equipped with a DentSim software system that allows for every step of preparation, including feedback and test, and objective assessment of the student’ s work. Dental microscopes, CAD / CAM technologies, simulated X-ray teaching and other modern teaching aids are also used. Emphasis is also placed on the development of soft skills, incl. socalled ” 21st century skills” , particularly communication, decision-making skills, critical thinking, crisis communication and teamwork.

Assessment methods credit. Practical skills will be verified using the Dentsim software system. The course will also focus on the development of the ability to orientate in auxiliary investigative methods, their interpretation, critical thinking and teamwork. This way of evaluating gives students an objective and specific feedback.

aZLPL0562p Prosthetic Dentistry II - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: zk (examination).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives The object is to teach students of history, prosthetic plan, the types of the preparation for the fixed dentures , impression materials, recognise differnt types of the crown and bridges for fixed teeth and their detailed laboratory and office construction.

Syllabus

- knowledge of fixed dental crowns and bridges. • - students will know history, preparation for prosthetic treatment of teeth for the individual types of fixed work, which use instruments, impression materials, distribution of fixed teeth and their detailed laboratory and office construction.

・Extent of the subject :: hours per week 3,3, credits 14 4. sem: 0,5 hr. lecture, 1 hr. practise 5. sem: 0,5 hr. lecture, 1 hr. practise 6. sem: 0,5 hr. lecture, 2 hr. practise 7. sem: 0,5 hr. lecture, 4 hr. practise 8. sem: 0,5 hr. lecture, 3 hr. practise 9. sem: 0,5 hr. lecture, 3 hr. practise Lectures: Examination of the patient and X ray investigation Preparation of the tooth for crown. Preparation and periodontium. Preparation instruments. Impression trays, materials. Protetic plan. Crown and root inlays. Crowns for frontal teeth. Crowns for distal teeths. Full-metal crowns. Indikation and contra-indikation of the crowns nad bridges. Lab and surgery steps. Special preparations.

Literature

・SHILLINGBURG, Herbert T. *Fundamentals of Fixed Prosthodontics*. Illustrated by Suzan E. Stone. 4th ed. Chicago: Quintessence Pub., 2012. x, 574. ISBN 9780867154757.

・SMANIOTTO, Paolo a Alexander BEIKIRCHER. *Aesthetics and techniques for new materials : achieving*

success for the dental team. Markham: Palmeri, 2010. 214 s. ISBN 8889626062.

Teaching methods lecture

Assessment methods exam

aZLTA051p Clinical Anatomy - head, neck - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: k (colloquium).

Supervisor prof. RNDr. Petr Dubový, CSc.

Department of Anatomy - Theoretical Departments - Faculty of Medicine

Contact Person: Dana Procházková

Course objectives The main aim of this course is to acquire deeper knowledge of head and neck structures in connection with clinical practice.

Syllabus

・1. Maxilla widespread description, clinical notes)

・2. Mandible (widespread description, clinical notes)

・3. Temporomandibular joint and muscles of mastication (widespread description, clinical notes)

・4. Muscles of mastication (widespread description, clinical notes)

・5. Basic of craniometry and cephalometry

・6. Functional construction of the skull, fractures of the skull

・7. Odontogenic infection pathway

・8. Overview of anatomical considerations for local anesthesia

Literature

・recommended literature

・FEHRENBACH, Margaret J. a Susan W. HERRING. *Illustrated anatomy of the head and neck*. Illustrated

by Pat Thomas. 3rd ed. St. Louis: Saunders Elsevier, 2007. x, 341. ISBN 978141603403

2.

・*Klinická anatomie pro stomatology*. Edited by Olga Mrázková - Milan Doskočil. 1. vyd. Praha:

Alberta, 1994. 117 s., ba. ISBN 80-85792-02-8.

・Klinická anatomie ve stomatologii Ivo Klepáček a kol. Grada

Teaching methods Lectures

Assessment methods Colloquium - written form

aZLZP051c Medical Psychology and Psychosomatic in Dentistry - practice

Extent and Intensity Seminar: .5 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

z (credit).

Supervisor prof. MUDr. Tomáš Kašpárek, Ph.D.

Department of Psychology and Psychosomatics - Theoretical Departments - Faculty of Medicine

Contact Person: Vlasta Břicháčková

Course objectives The objectives of the subject are to enable students to:

- Help students identify their own sources of motivation for the profession of health care professional

- Through self-experience exercises, help students distinguish different levels of helping professions

(a healthcare worker, such as a social role, a person, a patient)

- Help students identify their own sources of self-support

- Help students to learn the basic methods of stress management

- Link the theoretical background of medical psychology to general human existential themes

through experiential exercises (responsibility, will to sense, meaning of life, hope, humility, gratitude)

- Rehearse essential counselling and psychotherapy skills in various medical contexts and situations

under the direct supervision of clinical psychologist and psychotherapist

- To acquaint students with basic psychotherapeutic techniques in individual and group psychotherapy (demonstration, short self-experience)

- Practice of basic relaxation techniques

Syllabus

・- Motivation of the medical profession

・- External and internal self-support system

・- Autogenic training

・- Mindfulness-based stress reduction

・- The general human existential themes

・- Basic communication skills in communication with children

・- Basic communication skills in communication with chronic disease patient

・- Basic communication skills in communication with children who experience strong emotions

・- Basic communication skills when communicating bad news to patients

・- Principles of collecting anamnesis in psychosomatic patients

・- Principles of conducting the clinical interview

・- Transference and countertransference phenomena

・- Ego defense mechanisms

・- Supervision in medicine

・- Team supervision

Literature

・AYERS, Susan a Richard DE VISSER. *Psychology for medicine*. First published 2011. Los Angeles: Sage, 2011. xiv, 530. ISBN 9781412946902.

Teaching methods Interactive excercice and supervision.

Assessment methods Full attendance is required for credit.

aZLZP051p Medical Psychology and Psychosomatic in Dentistry - lecture

Extent and Intensity Seminar: .5 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

k (colloquium).

Supervisor prof. MUDr. Tomáš Kašpárek, Ph.D.

Department of Psychology and Psychosomatics - Theoretical Departments - Faculty of Medicine

Contact Person: Vlasta Břicháčková

Course objectives The objectives of the subject are to enable students to:

- Integrate psychology into the context of basic medical education for future health care professionals
- Introduce psychology as an essential part of competent medical practice
- Provide a theoretical context / field to integrate the information gained so far about the functioning of the body with the principles of functioning of the psyche
- Present the complex outcomes of psychological science and clinical practice at the level of principles that can be applied in the work of a professional in the health care sector, to the benefit of his / her patients, as well as of the whole health teams
- Enhance students' understanding on the basic psychological and psychotherapeutic principles, whose understanding is necessary not only for the understanding of health and illness but also for communication with patients in these states
- To acquaint students with the bio-psycho-social model of health and illness
- Helping students understand a human being as a psychophysiological unity
- To teach students to work with the basics of field theory, holistic approach and model " Connections and Health" / Autoregulation and Allostasis
- To acquaint students with basic communication algorithms that can be applied in various contexts and situations of medical practice
- Specify the possibilities of application of psychology in various fields of medicine

Syllabus

・- Psychology and medicine, why is psychology important in medical practice

・- Definitions of health, comparison of biomedical and biopsychosocial approaches

・- Motivation, emotion, and health

・- Stress and health

・- Symptoms and illness

・- Health and behavior

・- Chronic illness, death, and dying

・- Developmental psychology in medical context

・- Clinical interviewing

・- Psychotherapeutic approaches, general psychotherapeutic interventions for professionals in medical

practice

・- Psychosomatic paradigm, psychophysiological integration such as “body-mind” integration

・- Basic explanatory models of psychosomatic diseases

・- Psychological assessment

Literature

・required literature

・AYERS, Susan a Richard DE VISSER. *Psychology for medicine*. First published 2011. Los Angeles:

Sage, 2011. xiv, 530. ISBN 9781412946902.

Teaching methods Theoretical preparation, self-experience exercises, training of communication skills.

Assessment methods Full attendance is required. Final Examination - Oral Form. The contact person

is an assistant professor Miroslav Svetlak.

YEAR 3 / SEMESTER 6

aZLED061c Restorative Dentistry - Endodontics I - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 2 credit(s). Type of Completion:

z (credit).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’s Faculty Hospital - Faculty of Medicine

Contact Person: doc. MUDr. Lenka Roubalíková, Ph.D.

Course objectives Aim of this aubject is to gice students practical skills on the field of root canal

treatment.

Syllabus

・Practical training - syllabus: Examination of the patient, making diagnosis and scheme of

endodontic therapy. Importance of radiography in endodontics. Diagnostics of pulpal and

periodontal diseases. Differential diagnostics in endodontics. Access opening, root canal shaping –

manual methods Root canal filling - single cone technique and lateral compaction.

Literature

・recommended literature

・INGLE, John Ide a Leif K. BAKLAND. *Endodontics*. 5th ed. Hamilton: BC Decker, 2002. xvii, 974. ISBN 1550091883.

・*Cohen's pathways of the pulp*. Edited by Louis H. Berman - Kenneth M. Hargreaves - Kenneth M. Hargreaves - Step. 10th ed. St. Louis: Mosby Elsevier, 2011. xvi, 952. ISBN 9780323064897.

Teaching methods Practical training

Assessment methods Participation at practical skills. Final discussion and credit.

aZLED061p Restorative Dentistry - Endodontics I - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: zk (examination).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Contact Person: doc. MUDr. Lenka Roubalíková, Ph.D.

Course objectives Fundamentals of diagnostics of diseases dental pulp and periodontal tissues. Preparation and basic root canal filling. Sealers.

Syllabus

・Lectures: Endodontics I Basic root canal treatment. Anatomical structures: foramen apicale, shape and course of root canals, age-conditioned changes. Diseases of the pulp and apical region. Pulpitides: pathomorphological picture, clinical manifestations. Aetiology of pulpitides: infectious, traumatic, iatrogenic pulpitides. Necrosis of dental pulp. Inner granuloma. Periodontitis: division, causes, clinical manifestations. Differential diagnostics of pulpitides. Differential diagnostics of periodontitides. Scheme of endodontic treatment. Preparation of endodontic treatment. Rubber dam. Opening for trephination and localisation of root canal entrances. Principles of preparation of trephination perforations for individual teeth. Localisation of entrance into root canals. Procedure in individual teeth. Root canal probing and general principles for determination of the working length of instruments. Determination of working length - radiographic methods: odontometry. Instruments used for root canal treatment. Manual (hand-held) instruments, instruments and devices for machine shaping of root canals. General principles of root canal treatment, irrigation

fluids, methods of manual treatment. Medicamentous substances used for root canal disinfection. Materials for temporary root canal sealing. Prerequisites for permanent root canal filling, materials used for root canal sealing, their composition, properties, indication.

Literature

・recommended literature

・INGLE, John Ide a Leif K. BAKLAND. *Endodontics*. 5th ed. Hamilton: BC Decker, 2002. xvii, 974. ISBN 1550091883.

・*Cohen's Pathways of the Pulp Expert Consult*. Edited by Kenneth M. Hargreaves - Louis H. Berman - Ilan Rotstein. Eleventh edition. St. Louis, Mo.: Elsevier, 2016. xiii, 907. ISBN 9780323096355.

・*Cohen's pathways of the pulp*. Edited by Louis H. Berman - Kenneth M. Hargreaves - Kenneth M. Hargreaves - Step. 10th ed. St. Louis: Mosby Elsevier, 2011. xvi, 952. ISBN 9780323064897.

Teaching methods Lectures

Assessment methods Written test 25 questions, partly multiple choice, partly written answer. 17 answers must be correct.

aZLFA0621c Pharmacology I - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Regina Demlová, Ph.D.

Department of Pharmacology - Theoretical Departments - Faculty of Medicine

Contact Person: doc. MUDr. Regina Demlová, Ph.D.

Course objectives After completing of the course the student will be able to use formally correct terminology belonging to the valid Pharmacopoea in prescription and making of drug dosage forms of both individually prepared and bulk preparations. The student should be able to understand principles of " pharmacological thinking" for choosing a drug, dosing regimen, pharmacokinetic parameter calculation, differences in administration routes and specifics of pediatric and geriatric pharmacotherapy including possible impact of drug-drug interactions.

Syllabus

・**Pharmacology - practical courses**

Dentistry

Spring semester 2018

・/1/

・INTRODUCTION TO THE STUDY OF PHARMACOLOGY

・Contents of the study of Pharmacology, contents and organization of theoretical and practical courses and lectures, required and recommended textbooks. The conditions for granting the credit. Pharmacology - definition, basic terminology, subspecializations, drug nomenclature. Introduction to the prescription terminology. Classification of drug preparations. Pharmacopoea, Pharmacopoea Bohemica.

・

・**INTRODUCTION TO THE PHARMACOKINETICS**

・Transport of drugs across biological barriers. Basic pharmacokinetic processes. Pharmacokinetic parameters. Pharmacokinetics of single and repeated intravascular and extravascular drug administration.

Therapeutic drug monitoring (therapeutic monitoring of drug plasmatic concentrations).

・・

/2/

・GENERAL RULES OF THE DRUG PRESCRIPTION

・Medical prescription and its essentials. Prescription of drugs. Legislation of drug prescription. Work with various handbooks and databases (SÚKL database, Pharmindex, AISLP etc.). Prescription and provisions of narcotic and psychotropic substances.

・・

PRESCRIPTION OF READY MADE PREPARATIONS - practice. SOLID DRUG DOSAGE FORMS

・Prescription of selected drug forms (solid drug dosage forms - powders, capsules, tablets, suppositories).

・・

SOFT AND MELTING DRUG DOSAGE FORMS

・Prescription of selected drug forms (soft and melting drug dosage forms - ointments, creams, pastes, gels and other preparations for application to the skin and mucous membranes).

・**FLUID DRUG DOSAGE FORMS**

・Prescription of selected drug forms (fluid drug dosage forms - solutions for rubbing, compresses

and lavages, solutions and drops for oral administration). **SPECIAL PRESCRIPTION OF INDIVIDUALLY PREPARED DRUGS USED IN STOMATOLOGY** (mucoadhesive pastes, solutions, suspensions, gels, ointments, pastes).

. .

/3/

· GLUCOCORTICOIDS

· Physiology and pathophysiology of adrenal cortex hormones. Natural and synthetic adrenocorticosteroids, steroid receptors, mechanism of action, pharmacological use and side effects. Examples of ready-made drug preparations.

. .

H1 ANTIHISTAMINES, ANTIASTHMATICS

· Classification and clinical use of H1 antihistamines. Pathophysiology of bronchial asthma, sites and mechanisms of action of antiasthma drugs. Prescription of antitussives, expectorants, antiasthmatics.

· **ANTIDIABETIC DRUGS**

· *Course content:* Therapy of type 1 and 2. DM. Insulines. Peroral antidiabetics. Examples of ready-made drug preparations.

. .

/4/

· PRESCRIPTION TEST (PRESCRIPTION OF INDIVIDUALLY PREPARED AND READY MADE PREPARATIONS)

· PHARMACOLOGY OF PERIPHERAL NERVOUS SYSTEM - introduction

· Terminology, neurotransmissions in peripheral nervous system, adrenergic and cholinergic receptors,

agonists and antagonists. Functional importance and possibilities of pharmacological affection of sympathetic and parasympathetic system.

· **NORADRENERGIC (SYMPATHETIC) DRUGS - introduction**

· Receptors of noradrenergic (sympathetic) system, pharmacology of drugs activating and blocking noradrenergic (sympathetic) system.

. .

/5/

・MULTIPLE CHOICE FINAL (CREDIT) TEST OF PHARMACOLOGY (MCHQ - topics lessons from days 1 to 4)

・NORADRENERGIC (SYMPATHETIC) DRUGS - completion

・Receptors of noradrenergic (sympathetic) system, pharmacology of drugs activating and blocking noradrenergic (sympathetic) system.

・**CHOLINERGIC (PARASYMPATHETIC) DRUGS**

・Receptors of cholinergic (parasympathetic) system, pharmacology of drugs activating and blocking cholinergic (parasympathetic) system.

・**CREDITS**

Literature

・required literature

・RANG, H. P. *Rang & Dale´s pharmacology*. 8th ed. [Edinburgh]: Churchill Livingstone, 2016. xv, 760. ISBN 9780702053627.

・http://portal.med.muni.cz/clanek-553-zaklady-receptury-lecivych-pripravku.html

・NOVÁKOVÁ, Jana, Barbora ONDRÁČKOVÁ a Alexandra ŠULCOVÁ. *Základy receptury léčivých přípravků*

pro praktická cvičení z farmakologie - obor Zubní lékařství. Brno: Multimediální podpora výuky klinických a zdravotnických oborů: Portál Lékařské fakulty Masarykovy univerzity, 2010. 96 pp. ISSN 1801-6103. URL

・For English speaking students: Practicals in Pharmacology http://portal.med.muni.cz/discipline-13-pharmacology

・recommended literature

・*Pharmaceutical practice*. Edited by Judith A. Rees - Ian Smith - Jennie Watson. 5th ed. Edinburgh: Churchill Livingstone Elsevier, 2014. xvii, 552. ISBN 9780702051432.

・http://elportal.cz/publikace/kazuistiky-farmakologie

・http://portal.med.muni.cz/clanek-621-zivotni-cyklus-leciv-klinicke-hodnoceni-a-registrace-lecivychpripravku-

farmakovigilance-a-stanovovani-cen-a-uhrad-leciv.html

・http://portal.med.muni.cz/clanek-461-farmakovigilance-a-propagace-leciv.html

・http://portal.med.muni.cz/clanek-649-zaklady-farmakoekonomiky.html

・LINCOVÁ, Dagmar a Hassan FARGHALI. *Základní a aplikovaná farmakologie*. 2., dopl. a přeprac.

vyd. Praha: Galén, 2007. xxiv, 672. ISBN 9788072623730.

・not specified

・http://portal.med.muni.cz/clanek-611-zaklady-specialni-receptury-lecivych-pripravku.html

・WHALEN, Karen. *Lippincott illustrated reviews : Pharmacology*. Edited by Richard Finkel - Thomas A. Panavelil. 6th ed. Philadelphia, Pa.: Lippincott Williams & Wilkins, 2015. xi, 664. ISBN 978145 1191776.

・ZELENKOVÁ, Olga a Alexandra ŠULCOVÁ. *Speciální stomatologická receptura pro praktická cvičení z farmakologie (Special stomatological prescriptions for practicals in pharmacology)*. 2. přepracované vydání. Brno: Masarykova univerzita v Brně, 2000. 30 pp. ISBN 80-210-2433-X.

・DOSTÁLEK, Miroslav, Jan JUŘICA, Eva JANOŠTÍKOVÁ a Lucia ZAHRADNÍKOVÁ. *Farmakokinetika (Pharmacokinetics)*.

ČR: Grada, 2006. 220 pp. Farmacie a farmakologie. ISBN 80-247-1464-7.

・*Český lékopis 2009.* Praha: Grada, 2011. 1 DVD. ISBN 8594049240180.

・Waller, Derek - Renwick, Andrew G. - Hillier, Keith. Medical pharmacology and therapeutics. 3rd ed. New York : Elsevier Saunders, 2009. ix, 744 p. ISBN 0-7020-2991-2.

・Ritter, James M. - Lewis, Lionel D. - Mant, Timothy G.K. - Ferro, Albert. A Textbook of Clinical Pharmacology and Therapeutics, 5th Ed., Hodder Arnold, 2008. 465 s. ISBN 978-0-340-90046-8

・http://portal.med.muni.cz/clanek-652-behavioralni-metody-v-neuropsychofarmakologii.html ruda 2016

・http://portal.med.muni.cz/clanek-367-vyzkum-novych-leciv-od-zrodu-k-registraci.html

・https://is.muni.cz/auth/el/1411/podzim2008/ZLFA0722p/um/Zasady_antibioticke_ lecby.pdf?fakulta=1411;obdobi=・ŠULCOVÁ, Alexandra. *Poznámky k přednáškám z farmakologie*. 1. vyd. Brno: Masarykova univerzita, 1993. 97 s. ISBN 80-210-0640-4.

Teaching methods Practicals, the teaching process of include theoretical setting up as well as practical training of knowledge and skills stated in Syllabus. Included are also individual work with specific pharmacological softwares and homeworks on the selected topics, presented and discussed afterward in class.

Assessment methods The participation in practicals is obligatory and registered. To get credits a student has to pass 2 written tests: 1) on drug prescription + translation of selected prescription expressions into Latin (assessed individually by the teacher), 2) the multiple-choice test on knowledge of topics taught. More than half correctly answered questions (usually from 15) are required.

aZLFA0621p Pharmacology I - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Regina Demlová, Ph.D.

Department of Pharmacology - Theoretical Departments - Faculty of Medicine

Contact Person: doc. MUDr. Regina Demlová, Ph.D.

Course objectives At the end of the course student should be able to understand integration in the field of biomedical sciences such as chemistry, physiology, molecular biology, pathology and pathological physiology clarifying mechanisms of xenobiotic (including drugs) effects and under which conditions they and their combinations may elicit therapeutic, adverse, and toxic effects, and what is the relation to the dose given, administration route, status of the organism (differences in pediatrics and geriatrics). They will be familiar with the requirements of ” Good Clinical Practice” for development of new drugs, and duties of physicians in cooperation with the pharmaceutical industry and principles of pharmacovigilance.

Syllabus

・**LECTURES**

・Spring semester 2018 (Friday 1:30-4:00 p.m.)

・Dept. of Pharmacology, A19, Room 231

・

・**1st week**

・Basic pharmacological terms, definitions. Physiological and pathological factors influencing drug effects. Adverse drug effects.

・

・**2nd week**

・Drug delivery approaches, routes of administration, prolonged release preparations. The management of poisoning.

・

・**3rd week**

・Concentration-response relationship. Pharmacokinetic principles. Drug absorption, distribution, metabolism and elimination. Changes of drug effects after the repeated administration. Basic principles of Pharmacogenetics.

・

・4th week

・Mechanisms of drug action, non-specific, specific. Receptors and ligand binding. Receptor subtypes, autoreceptors, heteroreceptors

・

・5th week

・Pharmacogenetics, pharmacogenomics amd their clinical implications.

・

・6th week

・Drug interactions. Assessment of the seriousness of drug interactions.

・

・7th week

・Original drugs, generics, biosimilars, innovative medicinal products for advanced therapy, orphan drugs.

・

・8th week

・Pre-clinical and clinical drug development. Drug registration guidance. Regulation and guidelines for ”Good Clinical Practice”.

・

・9th week

・Basic principles of pharmacoeconomics, types of pharmacoeconomic analyses and their relevant use in clinical practice.

・

・10th week

・_____Drug therapy in children, general principles, pharmacokinetic and pharmacodynamic peculiarities.

Specificities of pharmacotherapy in the elderly.

Literature

・required literature

・RANG, H. P. *Rang & Dale´s pharmacology*. 8th ed. [Edinburgh]: Churchill Livingstone, 2016. xv, 760. ISBN 9780702053627.

・http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=1160493=cs&site=ehost-live

・http://portal.med.muni.cz/clanek-621-zivotni-cyklus-leciv-klinicke-hodnoceni-a-registrace-lecivychpripravku-

farmakovigilance-a-stanovovani-cen-a-uhrad-leciv.html

・http://portal.med.muni.cz/clanek-461-farmakovigilance-a-propagace-leciv.html

・http://portal.med.muni.cz/clanek-649-zaklady-farmakoekonomiky.html

・recommended literature

・LINCOVÁ, Dagmar a Hassan FARGHALI. *Základní a aplikovaná farmakologie*. 2., dopl. a přeprac. vyd. Praha: Galén, 2007. xxiv, 672. ISBN 9788072623730.

・http://portal.med.muni.cz/clanek-553-zaklady-receptury-lecivych-pripravku.html

・http://portal.med.muni.cz/article-491-practicals-in-pharmacology.html

・WHALEN, Karen. *Lippincott illustrated reviews : Pharmacology*. Edited by Richard Finkel - Thomas A. Panavelil. 6th ed. Philadelphia, Pa.: Lippincott Williams & Wilkins, 2015. xi, 664. ISBN 978145 1191776.

・http://elportal.cz/publikace/kazuistiky-farmakologie

・http://portal.med.muni.cz/clanek-611-zaklady-specialni-receptury-lecivych-pripravku.html

・not specified

・*Pharmaceutical practice*. Edited by Judith A. Rees - Ian Smith - Jennie Watson. 5th ed. Edinburgh: Churchill Livingstone Elsevier, 2014. xvii, 552. ISBN 9780702051432.

・DOSTÁLEK, Miroslav, Jan JUŘICA, Eva JANOŠTÍKOVÁ a Lucia ZAHRADNÍKOVÁ. *Farmakokinetika (Pharmacokinetics)*.

ČR: Grada, 2006. 220 pp. Farmacie a farmakologie. ISBN 80-247-1464-7.

・Waller, Derek - Renwick, Andrew G. - Hillier, Keith. Medical pharmacology and therapeutics. 3rd ed. New York : Elsevier Saunders, 2009. ix, 744 p. ISBN 0-7020-2991-2.

・Ritter, James M. - Lewis, Lionel D. - Mant, Timothy G.K. - Ferro, Albert. A Textbook of Clinical Pharmacology and Therapeutics, 5th Ed., Hodder Arnold, 2008. 465 s. ISBN 978-0-340-90046-8

・http://portal.med.muni.cz/clanek-367-vyzkum-novych-leciv-od-zrodu-k-registraci.html

・MARTÍNKOVÁ, Jiřina. *Farmakologie pro studenty zdravotnických oborů*. 2., zcela přeprac. a doplň. Praha: Grada, 2014. ISBN 9788024713564.

Teaching methods According to schedule given students are expected to attend lectures read by habilitated pharmacology teacher.

Assessment methods There is no testing of knowledge in this part of study as students are expected to continue pharmacological course in the subsequent semester.

aZLGE061c Genetics in Dentistry - practice

Extent and Intensity Seminar: .5 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

z (credit).

Supervisor prof. MUDr. Anna Vašků, CSc.

Department of Pathological Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: prof. MUDr. Anna Vašků, CSc.

Course objectives The objective of the practical exercises from genetics is to provide students basic idea about molecular biology methods (PCR, RFLP, analysis of proteins). Students will acquire basic practical skills necessary for their future work.

Syllabus

・Sylabus of practical excercises: 4.week 7:30-10:00 DNA diagnostics－analysis of gene mutation by PCR method. 4.week 10:20-12:45 Electrophoresis, evaluation + credits.

Literature

・recommended literature

・*Essential genetics :a genomics perspective*. Edited by Daniel L. Hartl - Elizabeth W. Jones. 3rd ed. Boston: Jones and Bartlett Publishers, 2002. xxv, 612 s. ISBN 0-7637-1852-1.

Teaching methods Practical training.

Assessment methods Credit. Practical exercises are compulsory (absence can be excused only in case of sick leave). During the term, tutors can continuously test knowledge in written tests or students can be asked to elaborate special papers.Term tuition (blocks) is completed by credit, conditions for awarding credit are: a) participation in the practical exercises, b) elaboration of protocols from experimental practical exercises, c) further individually chosen tutor’ s criteria.

aZLGE061p Genetics in Dentistry - lecture

Extent and Intensity Seminar: .5 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

k (colloquium).

Supervisor prof. MUDr. Anna Vašků, CSc.

Department of Pathological Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: prof. MUDr. Anna Vašků, CSc.

Course objectives Genome structure and its reactions on environmental effects. Mutations in exons, introns and promoters. Monogenic and multigenic diseases. Relations of multigenic diseases and environment. Molecular biology methods - PCR, RFLP, sequencing. Functional genomics, proteomics. Gene therapy and pharmacogenetics. Genetics of developmental defects of enamel and dentine. Genetics of craniofacial malformations. Genetic analysis of oral pathogens. Genetics of periodontal diseases and tooth caries. Genes involved in pathogenesis of diseases manifested in oral cavity.

Syllabus

- 1.week Structure of genome and its interaction with environmental factors. Epigenetics. Exon, intron and promoter mutations. Monogenic and polygenic diseases. Functional genomics. Gene therapy and pharmacogenetics. 2.week Molecular-biological methods (PCR, RFLP, sequencing). Relation between polygenic diseases and environment. The role of genes in the pathogenesis of disease manifestations in the oral cavity. Effect of tissue development on abnormalities of the oral cavity. 4.week Genetics of dentin and enamel anomalies. Genetics of craniofacial malformations. Molecular-genetic analysis of oral bacteria. Genetics of periodontal diseases and dental caries.

Literature

- NUSSBAUM, Robert L., Roderick R. MCINNES, Huntington F. WILLARD, James THOMPSON a Margaret

Wilson THOMPSON. *Klinická genetika : Thompson & Thompson : 6. vyd.* Translated by Petr Goetz. Vyd. 1. Praha: Triton, 2004. 426, lix. ISBN 8072544756.

- *Essential genetics :a genomics perspective*. Edited by Daniel L. Hartl - Elizabeth W. Jones. 3rd ed. Boston: Jones and Bartlett Publishers, 2002. xxv, 612 s. ISBN 0-7637-1852-1.

Teaching methods Lecture.

Assessment methods Oral exam - colloquium. Student respond to 2 questions - one from general and second from special genetics.

aZLCH0631c Surgery I - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Ivan Čapov, CSc.

First Department of Surgery - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: doc. MUDr. Lenka Veverková, Ph.D.

Course objectives The main goal of the first semester in surgery is the introduction of the principal topics in the general surgery and with the main principles of the special surgery.

Syllabus

・1. Surgery of the lung, mediastinum and chest wall

・2. Biliodigestive surgery

・3. Colorectal surgery

・4. Vascular surgery, endocrine surgery

・5. Miniinvasive surgery

Literature

・ZEMAN, Miroslav. *Speciální chirurgie*. 1. vyd. Praha: Galén, 2000. 575 s. ISBN 8072620932.

Teaching methods The teaching proceeds in the one week block (daily 2-hours). The seminar follows after the lecture (themes in syllabus). Seminars have a form of discussion with the practical bedside examples.

Assessment methods The week is ended by a written test. The credit is given providing successful test and full attendance in tutorials.

aZLCH0631p Surgery I - lecture

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Ivan Čapov, CSc.

First Department of Surgery - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: doc. MUDr. Lenka Veverková, Ph.D.

Course objectives The main goal of the first semester in surgery is the introduction of the principal topics in the general surgery and with the main principles of the special surgery.

Syllabus

・1. Surgery of the lung, mediastinum and chest wall

・2. Biliodigestive surgery

・3. Colorectal surgery

・4. Vascular surgery, endocrine surgery

・5. Miniinvasive surgery

Literature

・ZEMAN, Miroslav. *Speciální chirurgie*. 1. vyd. Praha: Galén, 2000. 575 s. ISBN 8072620932.

Teaching methods The teaching proceeds in the one week block (daily 2-hours). The seminar follows after the lecture (themes in syllabus). Seminars have a form of discussion with the practical bedside examples.

Assessment methods The week is ended by a written test. The credit is given providing successful test and full attendance in tutorials.

aZLIP061c Clinical Introduction to Internal Medicine - practice

Extent and Intensity Seminar: .5 hour(s) per week. Number of credits: 1 credit(s). Type of Completion:

z (credit).

Supervisor prof. MUDr. Miroslav Souček, CSc.

Second Department of Internal Medicine - Institutions shared with St. Anne’ s Faculty Hospital - Faculty

of Medicine

Supplier department: Second Department of Internal Medicine - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives After the completion of practicals the student will be able to take a complete history of patients perform a general objektive physical examination of patients known laboratory and othe diagnostic tests in individual diseases

Syllabus

・The study will be organized in classes in the Medical Clinics. General history

・Special history according and clinical examination of the lung diseases

・Special history and clinical examination of the heart diseases

・Special history and clinical examination of the renal diseases

・Special history and clinical examination of the gastrointestinal and hepatic diseases

・Special history and clinical examination of the endocrine diseases

・Special history and clinical examination of the hematological diseases

・Special history and clinical examination of the peripheral arteries and veins diseases

・Special history according to rheumatic and immunological diseases

Literature

・Chrobák, Ladislav. Propedeutika vnitřního lékařství a. Illustrated by Josef Bavor. 1. vyd. Praha : Grada Publishing, 1997. 195 s. ISBN 80-7169-274-3.

・Zelenková, Jana. Příručka interní propedeutiky. 1.vydání. : Triton, 2002. 173 s. ISBN 80-7254-227-3.

Teaching methods The practicals are taking place in various clinical departments, the attendance is obligatory. The education is aimed at practical exercise. The konowledge of theory acquired dutiny the lectures are requested.

Assessment methods The credit is given for an aktive approach to the discussed probléme. The final evaluation is oral exam.

aZLIP061p Clinical Introdution to Internal Medicine - lecture

Extent and Intensity Seminar: .5 hour(s) per week. Number of credits: 2 credit(s). Type of Completion:

zk (examination).

Supervisor prof. MUDr. Miroslav Souček, CSc.

Second Department of Internal Medicine - Institutions shared with St. Anne’ s Faculty Hospital – Faculty of Medicine

Course objectives After the completion of practicals the student will be able to take a complete history of patients, known laboratory and othe diagnostic tests in individual diseases in Internal medicine – with stomatological questions first of all.

Syllabus

・The lectures

・History, subjective and objective symptoms

・Examination of head and throat

・Examination of neck and lungs

・Examination of heart

・Exaination of abdomen and alimentary tract

・Examination of locomotion and kidney

Literature

・recommended literature

・Zelenková, Jana. Příručka interní propedeutiky. 1.vydání. : Triton, 2002. 173 s. ISBN 80-7254-227-3.

・not specified

・Chrobák, Ladislav. Propedeutika vnitřního lékařství a. Illustrated by Josef Bavor. 1. vyd. Praha : Grada Publishing, 1997. 195 s. ISBN 80-7169-274-3.

・Náhradní obsah: Davidson s Principles and Practise of Medicine. 20th Edition. N.A. Boon, N.R.Colledge,

B.R.Walker

Teaching methods The practicals are taking place in various clinical departments, the attendance is obligatory. The education lectures, seminars and under way at bed-side.

Assessment methods Credit on the basis of active participation in teaching Required knowledges in the extent of lectures issue. Oral examination.

aZLKM0611c Communication and Selfexperience - practice

Extent and Intensity Seminar: 2 hour(s) per week. Celkem 15 hod. Number of credits: 2 credit(s). Type of Completion: k (colloquium).

Supervisor PhDr. Miroslav Světlák, Ph.D.

Department of Psychology and Psychosomatics - Theoretical Departments - Faculty of Medicine

Contact Person: Vlasta Břicháčková

Course objectives The objectives of the subject are to enable students to:

- Help students identify their own sources of motivation for the profession of health care professional

- Through self-experience exercises, help students distinguish different levels of helping professions (a healthcare worker, such as a social role, a person, a patient)

- Help students identify their own sources of self-support

- Help students to learn the basic methods of stress management

- Link the theoretical background of medical psychology to general human existential themes through experiential exercises (responsibility, will to sense, meaning of life, hope, humility, gratitude)

- Rehearse essential counselling and psychotherapy skills in various medical contexts and situations under the direct supervision of clinical psychologist and psychotherapist

- To acquaint students with basic psychotherapeutic techniques in individual and group psychotherapy (demonstration, short self-experience)

- Practice of basic relaxation techniques

Syllabus

・- Motivation of the medical profession

・- External and internal self-support system

・- Autogenic training

・- Mindfulness-based stress reduction

・- The general human existential themes

・- Basic communication skills in communication with children

・- Basic communication skills in communication with chronic disease patient

・- Basic communication skills in communication with children who experience strong emotions

・- Basic communication skills when communicating bad news to patients

・- Principles of collecting anamnesis in psychosomatic patients

・- Principles of conducting the clinical interview

・- Transference and countertransference phenomena

・- Ego defense mechanisms

・- Supervision in medicine

・- Team supervision

Literature

・required literature

・AYERS, Susan a Richard DE VISSER. *Psychology for medicine*. First published 2011. Los Angeles: Sage, 2011. xiv, 530. ISBN 9781412946902.

Teaching methods Interactive excercice and supervision.

Assessment methods Full attendance is required for credit.

aZLOC0653c Oral Surgery III - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Oliver Bulik, Ph.D.

Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno – Adult Age Medicine - Faculty of Medicine

Contact Person: Blanka Suchá

Course objectives Investigation of the patient focused on surgical treatment; oncological investigation. Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction. Preprosthetic preparations in the oral cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations. Temporomandibular joint disorders and diseases; contractures. Cysts n the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes, classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible. Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will be able to use his knowledge for surgical treatment of patients in dental surgery.

Syllabus

・Surgical interventions on teeth, other tissues of the oral cavity and related organs. Rational, most considerate and professionlly proper way in searching the disease cause, choice and treatment procedure, after-treatment and preventive measures.

・diseases of salivary glands, sialolithiasis

・epidemiology and etiology of precancerous diseases and tumors

・examination methods in oncology

・comprehensive treatment of malign tumors

・dental implants

Literature

・required literature

・PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600.

・not specified

・*Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.

・DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park, IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.

・MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.

・MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha: Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.

・MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.

・TOMAN, Jaroslav a Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.

・KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.

・TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp.

Teaching methods practical training

Assessment methods credit

aZLOC0653p Oral Surgery III - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: -.

Supervisor doc. MUDr. Oliver Bulik, Ph.D.

Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno – Adult Age Medicine - Faculty of Medicine

Contact Person: Blanka Suchá

Course objectives Investigation of the patient focused on surgical treatment; oncological investigation. Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction.

Preprosthetic preparations in the oral cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations. Temporomandibular joint disorders and diseases; contractures. Cysts in the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes, classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible. Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will be able to use his knowledge for surgical treatment of patients in dental surgery.

Syllabus

・Surgical interventions on teeth, other tissues of the oral cavity and related organs. Rational, most considerate and professionlly proper way in searching the disease cause, choice and treatment procedure, after-treatment and preventive measures.

・diseases of salivary glands, sialolithiasis

・epidemiology and etiology of precancerous diseases and tumors

・examination methods in oncology

・comprehensive treatment of malign tumors

・dental implants

Literature

・required literature

・PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600.

・not specified

・*Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.

・DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park, IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.

・MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.

・MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha:

Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.

・MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.

・TOMAN, Jaroslav a Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.

・KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.

・TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp.

Teaching methods lectures

Assessment methods oral exam on the 4th year of study

aZLOP0622p Oral Pathology II - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: zk (examination).

Supervisor prof. MUDr. Markéta Hermanová, Ph.D.

First Pathology Department - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives The main aims fo the course include:

to study causes and effects of oral diseases

to apply knowledge of basic pathologic processes (regressive and progressive changes, inflammation, pathologic immune reactions, oncogenesis, genetic background of diseases) on orofacial diseases

understanding of macroscopic and microscopic correlates of orofacial diseases

knowledge of basic classification of both non-neoplastic and neoplastic orofacial diseases.

Syllabus

・Physical and chemical injuries of the oral mucosa.

・Infections of the oral mucosa I (bacterial, protozoal).

・Infections of the oral mucosa II (fungal, viral).

・Oral ulceration, vesiculobullous and dermatologic diseases.

・Oral manifestation of systemic diseases and other disorders of oral mucosa.

・Hematologic disorders, allergic and immunologic diseases.

・Hyperplastic disorders of oral mucosa; melanocytic lesions and malignant melanoma.

・Keratoses and precancerous (or premalignant) lesions and conditions.

・Oral epithelial tumors.

・Odontogenic tumors.

・Salivary gland pathology.

・Soft tissue tumors and lesions.

・Bone pathology.

・Diseases of the temporomandibular joints; neuromuscular diseases.

Literature

・required literature

・SOAMES, J. V. a J. C. SOUTHAM. *Oral pathology*. 4th ed. Oxford: Oxford University Press, 2005. xii, 278. ISBN 0198527942.

Teaching methods Oral pathology course consists of lectures.

Assessment methods The course is closed by oral exam covering the set of oral pathology topics. The list of topics is available for students in advance. The student answers one question from the set of topics. Lectures are mandatory, knowledge is continuously orally interactivally tested during the lectures.

aZLOR0641c Orthodontics I - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Pavlína Černochová, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Aims: - to recognise and accurately to name individual orthodontic anomalies - to explain possible aetiological factors and possibilities of prevention and prophylaxis - to examine orthodontic patient

Syllabus

・Students will receive information about terminology of orthodontic anomalies, their aetiology, prevention, prophylaxis and basic principles of treatment (application of orthodontic forces and tissue changes). Particular attention is devoted to assessment of orthodontic patient (clinical and radiological assessment, analysis of orthodontic dental casts).

Literature

・KAMÍNEK, Milan a Marie ŠTEFKOVÁ. *Ortodoncie.* 1. vyd. Olomouc: Univerzita Palackého - Lékařská fakulta, 1991. 68 s. ISBN 80-7067-996-4.

・KAMÍNEK, Milan a Marie ŠTEFKOVÁ. *Ortodoncie I*. 1. vyd. Praha: Státní pedagogické nakladatelství, 1990. 76 s.

Teaching methods practical training. Practical training (about 50 % of the total volume of teaching) is complemented by a comprehensive range of simulation teaching methods on simulators with varying degrees of fidelity, trainers and virtual patients. Most of them are equipped with a DentSim software system that allows for every step of preparation, including feedback and test, and objective assessment of the student’ s work. Dental microscopes, CAD / CAM technologies, simulated X-ray teaching and other modern teaching aids are also used. Emphasis is also placed on the development of soft skills, incl. socalled ” 21st century skills”, particularly communication, decision-making skills, critical thinking, crisis communication and teamwork.

Assessment methods class discussion credit. Practical skills will be verified using the Dentsim software system. The course will also focus on the development of the ability to orientate in auxiliary investigative methods, their interpretation, critical thinking and teamwork. This way of evaluating gives students an objective and specific feedback.

aZLOR0641p Orthodontics I - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Pavlína Černochová, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Aims are obtaine knowledge about:

- terminology of orthodontic anomalies
- possible aetiological factors and possibilities of prevention and prophylaxis
- examination of orthodontic patient

Syllabus

・Students will receive information about terminology of orthodontic anomalies, their aetiology, prevention, prophylaxis and basic principles of treatment (application of orthodontic forces and tissue changes). Particular attention is devoted to assessment of orthodontic patient (clinical and

radiological assessment).

Literature

・KAMÍNEK, Milan a Marie ŠTEFKOVÁ. *Ortodoncie.* 1. vyd. Olomouc: Univerzita Palackého - Lékařská fakulta, 1991. 68 s. ISBN 80-7067-996-4.

・KAMÍNEK, Milan a Marie ŠTEFKOVÁ. *Ortodoncie I*. 1. vyd. Praha: Státní pedagogické nakladatelství, 1990. 76 s.

Teaching methods lecture

Assessment methods Discussion

aZLPA0622c Pathology II - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Markéta Hermanová, Ph.D.

First Pathology Department - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives The main aims of the course include:

understanding the basic pathologic processes (regressive and progressive changes, inflammation, pathologic immune reactions, oncogenesis, genetic background of disease)

knowledge of basic classifications of non-neoplastic and neoplastic disorders

application of this knowledge in individual organ systems with focus on morphological substrate od individual disorders from both microscopis and macroscopic point of view

introduction of the role of pathology in clinical practice, of methods of tissue processing, methods of molecular pathology; demonstration of pathological anatomical autopsies and thier evaluation.

Syllabus

・Pathology of the respiratory tract.

・Pathology of the gastrointestinal tract.

・Pathology of the liver, biliary tract, pancreas.

・Pathology of the endocrine system.

・Pathology of the urinary tract (kidneys, collecting system).

・Pathology of the genital system. Pathology of the breast.

・pathology of the central a peripheral nervous system.

・Pathology of soft tissues, bones and skin.

Literature

・required literature

・*Underwood's pathology : a clinical approach*. Edited by J. C. E. Underwood - Simon S. Cross. 6th ed. Edinburgh: Churchill Livingstone, 2013. xviii, 769. ISBN 9780702046735.

・recommended literature

・KUMAR, Vinay. *Robbins and Cotran pathologic basis of disease*. Illustrated by James A. Perkins. 8th ed. Philadelphia: Saunders, 2010. xiv, 1450. ISBN 9781416031215.

Teaching methods Pathology course consists of lectures and practical classes. Practical classes include two parts: histopathological practices (with demonstration of microscopic and macroscopic findings of bioptic and auroptic samples) and autoptical practices (with demonstration of pathological anatomical autopsies).

Assessment methods The course of pathology is closed by oral exam covering three sets of topics: general pathology, systemic pathology and oncology. The list of these topics is available to the students in advance. Attendance is compulsory, knowledge of the students is periodically tested during the practical classes. Testing is oral or by written tests.

aZLPA0622p Pathology II - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: zk (examination).

Supervisor prof. MUDr. Markéta Hermanová, Ph.D.

First Pathology Department - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives The main aims of the course include:

understanding the basic pathologic processes (regressive and progressive changes, inflammation, pathologic immune reactions, oncogenesis, genetic background of disease)

knowledge of basic classifications of non-neoplastic and neoplastic disorders

application of this knowledge in individual organ systems with focus on morphological substrate od individual disorders from both microscopis and macroscopic point of view

introduction of the role of pathology in clinical practice, of methods of tissue processing, methods of molecular pathology; demonstration of pathological anatomical autopsies and thier evaluation.

Syllabus

・The Liver and Biliary Tract; The Pancreas.

・The Gastrointestinal Tract.

・The Kidney.

・Urinary collecting system. The Male Genital Systém.

・The Female Genital Systém.

・Diseases Of The Pregnancy. Pathology of the Fetus and Newborn.

・The Breast.

・The Central Nervous System (congenital abnormalities, vascular diseases, trauma).

・The Skin.

・The Central Nervous System: Tumors. The Peripheral Nervous Systém.

・The Bones and Joints, Skeletal muscle.

・Pathology of the endocrine system.

Literature

・required literature

・*Underwood's pathology : a clinical approach*. Edited by J. C. E. Underwood - Simon S. Cross. 6th ed. Edinburgh: Churchill Livingstone, 2013. xviii, 769. ISBN 9780702046735.

・recommended literature

・KUMAR, Vinay. *Robbins and Cotran pathologic basis of disease*. Illustrated by James A. Perkins. 8th ed. Philadelphia: Saunders, 2010. xiv, 1450. ISBN 9781416031215.

Teaching methods Pathology course consists of lectures and practical classes. Practical classes include two parts: histopathological practices (with demonstration of microscopic and macroscopic findings of bioptic and auroptic samples) and autoptical practices (with demonstration of pathological anatomical autopsies).

Assessment methods The course of pathology is closed by oral exam covering three sets of topics: general pathology, systemic pathology and oncology. The list of these topics is available to the students in advance. Attendance is compulsory, knowledge of the students is periodically tested during the practical classes. Testing is oral or by written tests.

aZLPD0631c Periodontology I - practice

Extent and Intensity Seminar: 1 hour(s) per week. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor MUDr. Hana Poskerová, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives The main goals are:

- to teach the student communication with the patient

- finding history (personal, medical, allergic, dental)

- periodontal examination (indexes PBI, API, CPITN, BOP, description of gingiva, gingival recessions, periodontal pockets, attachment of upper and lower frenulas, examination of occlusion)

- examination of oral mucous membranes

Syllabus

・- periodontal examination (CPITN, PBI, BOP, see above) - description of the X-ray image - the periodontal instruments - classification of perio diseases - clinical signs of perio diseases: gingivitis, periodontitis, atrophy of periodontium - diagnosis of perio diseases and determination of the treatment plan - hygienic instruction - calculus removement

Literature

・SLEZÁK, Radovan. *Preklinická parodontologie*. 1. vyd. Hradec Králové: Nucleus HK, 2007. 77 s. ISBN 9788087009185.

・STAROSTA, Martin. *Plastická chirurgie parodontu*. 1. vyd. Olomouc: Univerzita Palackého, 2003. 114 s. ISBN 8024406640.

・HELLWIG, Elmar, Joachim KLIMEK a Thomas ATTIN. *Záchovná stomatologie a parodontologie*. Translated by Jan Streblov. 1. vyd. Praha: Grada, 2003. 331 s. ISBN 8024703114.

・MUTSCHELKNAUSS, Ralf E. *Praktická parodontologie : klinické postupy*. Edited by Jan Lindhe. [1. vyd.]. Praha: Quintessenz, 2002. 532 s. ISBN 8090211887.

・STAROSTA, Martin a Hana ADÁMKOVÁ. *Repetitorium parodontologie*. 1. vyd. Olomouc: Univerzita Palackého v Olomouci, 2002. 42 s. ISBN 8024405741.

・FASSMANN, Antonín. *Řízená tkáňová a kostní regenerace ve stomatologii (Controlled tissue and bone regeneration in dentistry)*. I. Praha: Grada Publishing a.s., 2002. 199 pp. Avicenum. ISBN 80-247-0316-5.

・*Praktická parodontologie*. Edited by Radovan Slezák. [1. vyd.]. Praha: Quintessenz, 1995. 148 s.

ISBN 80-901024-8-4.

Teaching methods practical training

Assessment methods - credit, 100% attendance at practical trainings - discussions at practical trainings

- record from practice

aZLPF0622c Pathological Physiology II - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Anna Vašků, CSc.

Department of Pathological Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: prof. MUDr. Anna Vašků, CSc.

Course objectives The objective of the practical exercises and seminars from pathological physiology is to provide students basic idea about experimental work during pathological conditions (diseases).

Syllabus

・Practical excercises:

・1. Exp. induced peptic ulcer - quantification of gastric juice secretion in lab. animal

・2. Anaphylactic reaction (seminar)

・3. Statistical evaluations of experiments (advanced methods)

・4. Endocrinology (seminar)

・5. Use of enzyme (and other) markers in diagnostics of selected pathophysiological states - evaluation of LDH isoenzymes

・6. Exp. induced vein thrombosis in lab. animal

・7. Exp. induced diabetes mellitus - diagnosis by glucose tolerance test

・8. Eating disorders (seminar)

・9. Exp. induced haemolytic, hepatotoxic and obstruction jaundice in lab. animal

・10. Neuropathophysiology+ credits

Literature

・KAŇKOVÁ, Kateřina, Julie BIENERTOVÁ VAŠKŮ, Lydie IZAKOVIČOVÁ HOLLÁ, Michal JURAJDA, Michal MASAŘÍK, Lukáš PÁCAL a Anna VAŠKŮ. *Pathophysiology practicals for General Medicine and Dental*

Medicine courses. 1. vyd. Brno: Masarykova univerzita, 2008. 46 pp. Portal of MU’ s Faculty of Medicine [online]. ISSN 1801-6103. URL

・BIENERTOVÁ VAŠKŮ, Julie, Dana BUČKOVÁ, Lydie IZAKOVIČOVÁ HOLLÁ, Michal JURAJDA, Kateřina KAŇKOVÁ, Šárka KUCHTÍČKOVÁ, Lukáš PÁCAL, Anna VAŠKŮ a Vladimír ZNOJIL. Praktikum z patologické

fyziologie. *Elportál*, Brno: Masarykova univerzita, 2007. ISSN 1802-128X. *URL*

Teaching methods Practical training.

Assessment methods Credit. Practical exercises are compulsory (absence can be excused only in case of sick leave). During the term, tutors can continuously test knowledge in written tests or students can be asked to elaborate special papers.Term tuition (blocks) is completed by credit, conditions for awarding credit are: i) participation in the practical exercises, ii) elaboration of protocols from experimental practical exercises, iii) further individually chosen tutor’ s criteria.

aZLPF0622p Pathological Physiology II - lecture

Extent and Intensity Lecture: 2 hour(s) per week. Number of credits: 3 credit(s). Type of Completion: zk (examination).

Supervisor prof. MUDr. Anna Vašků, CSc.

Department of Pathological Physiology - Theoretical Departments - Faculty of Medicine

Contact Person: prof. MUDr. Anna Vašků, CSc.

Course objectives The aim of the subject is to train students in dynamic thinking about etiology and pathogenesis of diseases focused on special pathophysiology themes:

Pathophysiology of cardiovascular system.

Pathophysiology of digestive system, nutrition deficits.

Pathophysiology of endocrine system, metabolic diseases.

Pathophysiology of hemopoietic system, neoplasias.

Rheumatic diseases. Immunologically conditioned diseases.

Pathophysiology of respiratory tract.

Pathofphysiology of kidneys, disturbances in metabolism of water and ions.

Pathophysiology of nervous system.

Pathophysiology of muscles and sensory organs.

Literature

・required literature

・NEČAS, Emanuel. *Patologická fyziologie orgánových systémů.* 1. vyd. Praha: Karolinum, 2003. s. 381-760. ISBN 9788024606743.

・NEČAS, Emanuel. *Patologická fyziologie orgánových systémů.* 1. vyd. Praha: Karolinum, 2003. 379 s. ISBN 9788024606750.

・NEČAS, Emanuel a spol. *Obecná patologická fyziologie*. 1. vyd. Praha: Karolinum, 2000. 377 pp. ISBN 80-246-0051-X.

Teaching methods Lecture.

Assessment methods Oral exam. The final exam is oral; student will answer 4 questions selected by lot from general, special pathophysiology, practicals and lectures. Individual evaluation from practicals (described by assistant) is taken into account.

aZLPL0663c Prosthetic Dentistry III - practice

Extent and Intensity Seminar: 2 hour(s) per week. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Branch content Theoretical knowledges a practical skills at prosthetic dentistry oriented to fixed and full dentures. Basics aims and content of the subject: Students have knowledges about working steps at laboratory and dental office.

Syllabus

・Extent of the subject :: hours per week 3,3, credits 14 4. sem: 0,5 hr. lecture, 1 hr. practise 5. sem: 0,5 hr. lecture, 1 hr. practise 6. sem: 0,5 hr. lecture, 2 hr. practise 7. sem: 0,5 hr. lecture, 4 hr. practise 8. sem: 0,5 hr. lecture, 3 hr. practise 9. sem: 0,5 hr. lecture, 3 hr. practise Lectures: Prosthetic plan, indication and contraindication of the denture. Surgery and lab steps of the denture. Study model. Clasps.Bars.Telescopic crowns. Impression techniques.Materials of the denture. Partial denture and biologic factor.

Literature

・recommended literature

・TVRDOŇ, Martin. *Protetická stomatológia, liečba a prevencia*. 1. vyd. Bratislava: Science, 1999. 580 s. ISBN 8096796151.

・not specified

・SHILLINGBURG, Herbert T. *Fundamentals of Fixed Prosthodontics*. Illustrated by Suzan E. Stone. 4th ed. Chicago: Quintessence Pub., 2012. x, 574. ISBN 9780867154757.

・SMANIOTTO, Paolo a Alexander BEIKIRCHER. *Aesthetics and techniques for new materials : achieving success for the dental team*. Markham: Palmeri, 2010. 214 s. ISBN 8889626062.

・PHOENIX, Rodney D., David R. CAGNA a Charles F. DEFREEST. *Stewart's clinical removable partial prosthodontics*. 4th ed. Chicago: Quintessence, 2008. ix, 517. ISBN 9780867154856.

・*Color atlas of oral diseases*. Edited by George Laskaris. 2nd rev. ed. Stuttgart: Georg Thieme Verlag, 1994. xiii, 372. ISBN 3-13-717002-8.

・GRABER, George, Urs HAENSLER a Peter WIEHL. *Removable partial dentures*. Translated by Richard Jacobi. 1st ed. Stuttgart: Georg Thieme Verlag, 1988. vii, 216. ISBN 3137110017.

Teaching methods practical training

Assessment methods credit

aZLPL0663p Prosthetic Dentistry III - lecture

Extent and Intensity Lecture: 1 hour(s) per week. Number of credits: 0 credit(s). Type of Completion: z (credit).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives Branch content Theoretical knowledges a practical skills at prosthetic dentistry oriented to fixed and partial dentures. Basics aims and content of the subject: Students have knowledges how to produce prosthetic denture and when they can use different types of the dentures.

Syllabus

・Extent of the subject :: hours per week 3,3, credits 14 4. sem: 0,5 hr. lecture, 1 hr. practise 5. sem: 0,5 hr. lecture, 1 hr. practise 6. sem: 0,5 hr. lecture, 2 hr. practise 7. sem: 0,5 hr. lecture, 4 hr. practise 8. sem: 0,5 hr. lecture, 3 hr. practise 9. sem: 0,5 hr. lecture, 3 hr. practise

Lectures: Prosthetic plan, indication and contraindication of the denture. Surgery and lab steps of the denture. Study model. Clasps.Bars.Telescopic crowns. Impression techniques.Materials of the denture. Partial denture and biologic factor.

Literature

・recommended literature

・TVRDOŇ, Martin. *Protetická stomatológia, liečba a prevencia*. 1. vyd. Bratislava: Science, 1999. 580 s. ISBN 8096796151.

・SHILLINGBURG, T. Herbert. Fundamentals of Fixed Prosthodontics. 4th Revised

・not specified

・SHILLINGBURG, Herbert T. *Fundamentals of Fixed Prosthodontics*. Illustrated by Suzan E. Stone. 4th ed. Chicago: Quintessence Pub., 2012. x, 574. ISBN 9780867154757.

・SMANIOTTO, Paolo a Alexander BEIKIRCHER. *Aesthetics and techniques for new materials : achieving*

success for the dental team. Markham: Palmeri, 2010. 214 s. ISBN 8889626062.

・PHOENIX, Rodney D., David R. CAGNA a Charles F. DEFREEST. *Stewart’s clinical removable partial prosthodontics*. 4th ed. Chicago: Quintessence, 2008. ix, 517. ISBN 9780867154856.

・*Contemporary fixed prosthodontics*. Edited by Stephen F. Rosenstiel. 2nd ed. St. Louis: Mosby, 1995. xi, 627. ISBN 0801665280.

・*Color atlas of oral diseases*. Edited by George Laskaris. 2nd rev. ed. Stuttgart: Georg Thieme Verlag, 1994. xiii, 372. ISBN 3-13-717002-8.

・GRABER, George, Urs HAENSLER a Peter WIEHL. *Farbatlanten der Zahnmedizin.* [1 Ausg.]. Stuttgart: Georg Thieme Verlag, 1986. 216 s. ISBN 3136828011.

Teaching methods lecture

Assessment methods Discussion

YEAR 4 / SEMESTER 7

aZLES0711c Restorative Dentistry - Esthetics I - practice

Extent and Intensity Seminar: 2 hour(s) per week. 30. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives The aim is to explain basic principles of aesthetics in dentistry and principles of all direct composite restorations and bonded indirect restorations.

Syllabus

・The notion of aesthetics in dentistry, basic principles of aesthetics; dental, dentofacial, and facial harmony

・Optical qualities of tooth tissues and dental materials. Composite materials as materials for both direct and indirect aesthetic reconstructions

・Adhesive preparation of tooth tissues, composite lamination as the basic prerequisite for durability of aesthetic reconstructions. C-factor

・Instrumentarium

・Surface treatment of aesthetic reconstructions, creation of surface texture. Modelling of a natural shape of reconstruction

・Directly made aesthetic reconstructions in the frontal part of dentition. Matrices

・Directly made aesthetic reconstructions in the lateral part of dentition. Matrices

・Fibre composites and working with them. Aesthetic root canal posts

・Indirectly made aesthetic reconstructions in the lateral and frontal parts of dentition

Literature

・required literature

・Jordi Manuata, Anne Salat. Layers: An atlas of composite stratification. 2012

・recommended literature

・Magne, Pascal, Belser: Bonded Porcelain Restoration in the anterior Dentition. A biomimetic Approach. 2002

・not specified

・SCHMIDSEDER, Josef. *Aesthetic dentistry*. Edited by Arthur F. Hefti - E. P. Allen, Translated by Karl-Johan Söderholm. [1st ed.]. Stuttgart: Thieme, 2000. xii, 297. ISBN 0865779236.

・Sturdevant, C. M.:Operative Dentistry, 1995, Mosby. 5.

Teaching methods Lecture

Assessment methods Oral exam. The condition for the exam admittance is the credit course.

aZLES0711p Restorative Dentistry - Esthetics I - lecture

Extent and Intensity Lecture: 1 hour(s) per week. 15. Number of credits: 3 credit(s). Type of Completion: zk (examination).

Supervisor doc. MUDr. Lenka Roubalíková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Contact Person: doc. MUDr. Lenka Roubalíková, Ph.D.

Course objectives The aim is to explain basic principles of aesthetics in dentistry and principles of all direct composite restorations and bonded indirect restorations.

Syllabus

・The notion of aesthetics in dentistry, basic principles of aesthetics; dental, dentofacial, and facial harmony

・Optical qualities of tooth tissues and dental materials. Composite materials as materials for both direct and indirect aesthetic reconstructions

・Adhesive preparation of tooth tissues, composite lamination as the basic prerequisite for durability of aesthetic reconstructions. C-factor

・Instrumentarium

・Surface treatment of aesthetic reconstructions, creation of surface texture. Modelling of a natural shape of reconstruction

・Directly made aesthetic reconstructions in the frontal part of dentition. Matrices

・Directly made aesthetic reconstructions in the lateral part of dentition. Matrices

・Fibre composites and working with them. Aesthetic root canal posts

・Indirectly made aesthetic reconstructions in the lateral and frontal parts of dentition

Literature

・recommended literature

・Sturdevant, C. M.:Operative Dentistry, 1995, Mosby. 5.

・Jordi Manuata, Anne Salat. Layers: An atlas of composite stratification. 2012

・Magne, Pascal, Belser: Bonded Porcelain Restoration in the anterior Dentition. A biomimetic Approach. 2002

・not specified

・SCHMIDSEDER, Josef. *Aesthetic dentistry*. Edited by Arthur F. Hefti - E. P. Allen, Translated by

Karl-Johan Söderholm. [1st ed.]. Stuttgart: Thieme, 2000. xii, 297. ISBN 0865779236.

Teaching methods Lecture

Assessment methods Oral exam. The condition for the exam admittance is the credit course.

aZLFA0722c Pharmacology II - practice

Extent and Intensity Seminar: 1 hour(s) per week. 15. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Regina Demlová, Ph.D.

Department of Pharmacology - Theoretical Departments - Faculty of Medicine

Contact Person: Renata Bláblová

Course objectives At the end of the course student should know how representatives of individual drug classes in the form of individually prepared pharmaceutical preparation and bulk drugs can be prescribed with the special attention paid to preparations used in dentistry. The student should be familiar with pharmacological profiles of therapeutic and adverse effects of particular drugs with an attention paid to common drug-drug interactions.

Syllabus

· **Day 1**

· **1/ OPIOID ANALGESICS.**

· Analgesics of morphine type. Pharmacotherapy of pain.

· Prescription of narcotic and psychotropic agents - revision. Special prescription and practical use of analgesic preparations.

·

·

· **2/ NON-OPIOID ANALGESICS, NON-STEROIDAL ANTIINFLAMMATORY DRUGS.**

· Classification, modes of action, topically applied antiinflammatory drugs. Special prescription of antiinflammatory drugs and antipyretics.

· **Getting ready for the next lesson:** *Revision of patophysiology of cancer diseases.*

·

·

· **Day 2**

· **3/ ANTICANCER DRUGS**

· Overview, classification and mechanisms of action of anticancer drugs.

.

· **4/ LOCAL AND GENERAL ANAESTHETICS.**

· Overview, classification and mechanisms of action, side effects.

· Special prescription of local anaesthetics.

· **Getting ready for the next lesson:** *Basic psychic functions, receptors of CNS. Physiology of blood pressure regulation. Revision of PNS pharmacology- α1 sympatholytics, α2 sympathomimetics, β sympatholytics. Revision of physiology of Renin – Angiotensin – Aldosterone System.*

.

.

· **Day 3**

· **5/ PSYCHOTROPIC DRUGS.**

· Classification and terminology of psychotropics. Review of their mechanisms of action.Pharmacology of anxiolytics and hypnosedatives. Mechanism of action of benzodiazepines. Drugs used for premedication and to sedate a patient before surgery.

· Special prescription of hypnosedatives and psychostimulants, samples of herbal drugs.

· **Video-programme:** *Benzodiazepines.*

.

· **6/ANTIHYPERTENSIVE AGENTS.**

· Introduction, classification, diuretics, beta blockers, ACE inhibitors, Ca 2+ blockers, and other hypertensives.

· **Getting ready for the next lesson:** *Classification of antimicrobial agents, mechanisms of resistance, mechanisms of effects of antibacterial agents.*

.

.

· **Day 4**

· **7/ DRUGS USED IN DISORDERS OF BLOOD CLOTTING-ANTICOAGULANTS AND THROMBOLYTICSPSYCHOTROPIC**

DRUGS.

· Classification of drugs affecting haemostasis, mechanisms of action, side effects, overview of drugs.

· Prescription of individually prepared and ready made preparations - practice.

.

· **8/ ANTIBACTERIAL AGENTS.**

· Basic classification, mechanisms of action.

· **ANTIBACTERIAL, ANTIVIRAL AND ANTIFUNGAL AGENTS - focusing on the treatment of diseases of the oral cavity.**

· Special prescription of individually prepared and ready made preparations - antibiotics.

· **Getting ready for the next lesson:** *Revision of praescription of selected groups of drugs (lessons 1 - 8 + + semester I). Revision of taught topics (lessons 1 - 8).*

.

.

· **Day 5**

· **9/ FINAL PRESCRIPTION TEST**

· REVIEW OF DRUGS WITH LOCAL ACTION USED IN DENTISTRY (repetition from the spring semester) + SELECTED CASE REPORTS ON DRUGS FROM PREVIOUS LESSONS

· Working on PC: Solving case reports.

· Prescription of individually prepared and ready made preparations used in dentistry.

.

· **10/ FINAL (CREDIT) TEST OF SPECIAL PHARMACOLOGY (groups of drugs from lessons 1 - 8)**

· SELECTED CASE REPORTS ON DRUGS FROM PREVIOUS LESSONS

· Working on PC: Solving case reports.

· **Video-programme:** *EPS, General anaesthetics.*

.

· **CREDITS.**

Literature

・required literature

・RANG, H. P. *Rang & Dale´s pharmacology*. 8th ed. [Edinburgh]: Churchill Livingstone, 2016. xv, 760. ISBN 9780702053627.

・recommended literature

・**Practicals in Pharmacology** http://portal.med.muni.cz/discipline-13-pharmacology

・NOVÁKOVÁ, Jana, Barbora ONDRÁČKOVÁ a Alexandra ŠULCOVÁ. *Základy receptury léčivých přípravků pro praktická cvičení z farmakologie - obor Zubní lékařství*. Brno: Multimediální podpora výuky klinických a zdravotnických oborů: Portál Lékařské fakulty Masarykovy univerzity, 2010. 96 pp. ISSN 1801-6103. URL

・WHALEN, Karen. *Lippincott illustrated reviews : Pharmacology*. Edited by Richard Finkel - Thomas A. Panavelil. 6th ed. Philadelphia, Pa.: Lippincott Williams & Wilkins, 2015. xi, 664. ISBN 978145 1191776.

・ŠVIHOVEC, Jan a kol. Farmakologie, Praha: Grada, 2018. ISBN 978-80-247-5558-8. www.grada.cz/farmakologie-(1)-8687

・http://portal.med.muni.cz/clanek-461-farmakovigilance-a-propagace-leciv.html

・http://portal.med.muni.cz/clanek-367-vyzkum-novych-leciv-od-zrodu-k-registraci.html

・ZELENKOVÁ, Olga a Alexandra ŠULCOVÁ. *Speciální stomatologická receptura pro praktická cvičení z farmakologie (Special stomatological prescriptions for practicals in pharmacology)*. 2. přepracované vydání. Brno: Masarykova univerzita v Brně, 2000. 30 pp. ISBN 80-210-2433-X.

・not specified

・Pharmaceutical Practice. Winfield, A.J. & Richards, R.M.E., eds. Churchill Livingstone. , 3rd Ed. 2004. ISBN 0443 07206 X

・Ritter, James M. - Lewis, Lionel D. - Mant, Timothy G.K. - Ferro, Albert. A Textbook of Clinical Pharmacology and Therapeutics, 5th Ed., Hodder Arnold, 2008. 465 s. ISBN 978-0-340-90046-8

・Vybrané kapitoly z učebnice: http://books.google.cz/books?id=7lNQpLuETq4C&printsec=frontcover&dq=farmakologie&・ http://portal.med.muni.cz/modules.php?name=News&file=article&sid=367

・https://is.muni.cz/auth/el/1411/podzim2008/ZLFA0722p/um/Zasady_antibioticke_ lecby.pdf?fakulta=1411;obdobi=・ http://portal.med.muni.cz/disciplina-13-farmakologie

・Vybrané kapitoly z učebnice: http://books.google.cz/books?ct=result&q=farmakologie&lr=&as_brr=3&sa=・ DOSTÁLEK, Miroslav,

Jan JUŘICA, Eva JANOŠTÍKOVÁ a Lucia ZAHRADNÍKOVÁ. *Farmakokinetika (Pharmacokinetics)*. ČR: Grada, 2006. 220 pp. Farmacie a farmakologie. ISBN 80-247-1464-7.

・HADAŠOVÁ, Eva, Jana NOVÁKOVÁ, Jana PISTOVČÁKOVÁ, Jana VINKLEROVÁ, Alexandra ŠULCOVÁ a Olga STAROBOVÁ. *Praktická cvičení z farmakologie (Practical lessons on pharmacology)*. 2. opravené a doplněné vyd. Brno: Vydavatelství MU Brno-Kraví Hora, 2003. 110 pp. Skripta. ISBN 80-210-2694-4.

・ŠULCOVÁ, Alexandra. *Poznámky k přednáškám z farmakologie*. 1. vyd. Brno: Masarykova univerzita, 1993. 97 s. ISBN 80-210-0640-4.

Bookmarks https://is.muni.cz/auth/ln/tag/LF:aZLFA0722c!

Teaching methods Drug classes specifics from the Syllabus are read firstly by the teacher and presented in video-programmes if available followed by discussion and training of drug prescription with the use of drug compendia. Approaches to ” pharmacotherapeutical decisions” are practiced using the special PC programmes. Reports of students on a specific pharmacological topic followed by discussion are also included.

Assessment methods The participation in practicals is obligatory and registered. To get credits a student has to pass 2 written tests: a) test on special drug presription (assessed individually by the teacher), b) multiple-choice test on knowledge of topics taught, which usually consists of 15 questions. Each question offers one or more correct options. Criterion for successful passing the test is defined as more than half correctly answered questions.

aZLFA0722p Pharmacology – lecture

Extent and Intensity

2/0/0. 3 credit(s). Type of Completion: zk (examination).

Supervisor

doc. MUDr. Regina Demlová, Ph.D.

Department of Pharmacology - Theoretical Departments - Faculty of Medicine

Contact Person: Renata Bláblová

Course objectives

At the end of the course student will be oriented in drug classes according to their main therapeutic indications, in pharmacological profiles of therapeutic and adverse effects of particular drugs with an attention paid to common drug-drug interactions. The student will be able to judge pharmacoeconomic analyses for pharmacotherapy used in practice.

Learning outcomes

At the end of the course student will:

- be oriented in drug classes according to their main therapeutic indications, in pharmacological profiles of therapeutic and adverse effects of particular drugs with an attention paid to common drug-drug interactions.

- be able to judge pharmacoeconomic analyses for pharmacotherapy used in practice.

Syllabus

1. Antihypertensives. Diuretics, antiadrenergics, vasodilators, combinative pharmacotherapy.

2. Pharmacotherapy of ischemic heart disease. Pharmacotherapy of angina pectoris (nitrates, beta blockers, calcium channel blockers).

3. Pharmacotherapy of acute and chronic heart failure. Inotropic drugs (digitalis, amrinone, dobutamine).

4. Introduction to psychopharmacology. Antipsychotics - mechanisms of action, side effects.

5. Drug addiction. Types of drug addiction. Mechanisms, side effects, possibilities of therapy.

6. Principles of biological therapy, monoclonal antibodies, tyrosine kinase inhibitors, use in the treatment of selected diseases.

7. Basic principles of immunotherapy, side effects.

8. Antimycotics, mechanism of action, main indications and adverse effects.

Literature

required literature

RANG, H. P. Rang & Dale's pharmacology. 8th ed. [Edinburgh]: Churchill Livingstone, 2016. xv, 760. ISBN 9780702053627. info

recommended literature

ŠVIHOVEC, Jan a kol. Farmakologie, Praha: Grada, 2018. ISBN 978-80-247-5558-8. www.grada.cz/farmakologie-(1)-8687

http://portal.med.muni.cz/clanek-367-vyzkum-novych-leciv-od-zrodu-k-registraci.html

http://portal.med.muni.cz/clanek-461-farmakovigilance-a-propagace-leciv.html

not specified

Lippincott's Illustrated Reviews : Pharmacology, 4th Ed., Harvey, Richard A. - Champe, Pamela C. - Finkel, Richard - Cubeddu, Luigi - Clarke, Michelle A. 2008. 560 s. ISBN-10: 0-7817-7155-2, ISBN-13: 978-0-7817-7155-9

WHALEN, Karen. Lippincott illustrated reviews : Pharmacology. Edited by Richard Finkel - Thomas A. Panavelil. 6th ed. Philadelphia, Pa.: Lippincott Williams & Wilkins, 2015. xi, 664. ISBN 9781451191776. info

Ritter, James M. - Lewis, Lionel D. - Mant, Timothy G.K. - Ferro, Albert. A Textbook of Clinical Pharmacology and Therapeutics, 5th Ed., Hodder Arnold, 2008. 465 s. ISBN 978-0-340-90046-8

Pharmaceutical Practice. Winfield, A.J. & Richards, R.M.E., eds. Churchill Livingstone. , 3rd Ed. 2004. ISBN 0443 07206 X

https://is.muni.cz/auth/el/1411/podzim2008/ZLFA0722p/um/Zasady_antibioticke_lecby.pdf?fakulta=1411;obdobi=4343;kod=ZLFA0722p

Vybrané kapitoly z učebnice: http://books.google.cz/books?id=7lNQpLuETq4C&printsec=frontcover&dq=farmakologie&lr=&as_brr=3#PPA4,M1

http://portal.med.muni.cz/modules.php?name=News&file=article&sid=367

Vybrané kapitoly z učebnice: http://books.google.cz/books?ct=result&q=farmakologie&lr=&as_brr=3&sa=N&start=0

LINCOVÁ, Dagmar and Hassan FARGHALI. Základní a aplikovaná farmakologie. 2., dopl. a přeprac. vyd. Praha: Galén, 2007. xxiv, 672. ISBN 9788072623730. info

DOSTÁLEK, Miroslav, Jan JUŘICA, Eva JANOŠTÍKOVÁ and Lucia ZAHRADNÍKOVÁ. Farmakokinetika (Pharmacokinetics). ČR: Grada, 2006. 220 pp. Farmacie a farmakologie. ISBN 80-247-1464-7. info

HADAŠOVÁ, Eva, Jana NOVÁKOVÁ, Jana PISTOVČÁKOVÁ, Jana VINKLEROVÁ, Alexandra ŠULCOVÁ and Olga STAROBOVÁ. Praktická cvičení z farmakologie (Practical lessons on pharmacology). 2. opravené a doplněné vyd. Brno: Vydavatelství MU Brno-Kraví Hora, 2003. 110 pp. Skripta. ISBN 80-210-2694-4. info

ZELENKOVÁ, Olga and Alexandra ŠULCOVÁ. Speciální stomatologická receptura pro praktická cvičení z farmakologie (Special stomatological prescriptions for practicals in pharmacology). 2. přepracované vydání. Brno: Masarykova univerzita v Brně, 2000. 30 pp. ISBN 80-210-2433-X. info

Teaching methods

According to schedule given students are expected to attend lectures read by habilitated pharmacology teacher.

Assessment methods

The final exam is guided by the entrance test (the answers to multiple-choice questions, the test contains 30 questions randomly generated for individual student). In case of successful completion of the entrance test the exam continues by oral examination (three randomly selected questions corresponding with Syllabus (general pharmacological principles, drug classes, question of detailed knowledge).

aZLDV0711c Dermatovenerology - practice

Extent and Intensity

0/1/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Vladimír Vašků, CSc.
First Department of Dermatovenerology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Identification with clinical practice in dermatovenereology. Basic of morphology and investigation paradigmas. Mucous membrane changes in some dermatoses. Investigations in in-patients in dermatology department.

Learning outcomes

The student will be able:
- to individual work with patient,
- to interpret of pathological skin and mucous membrane findings, differential diagnose in principal groups of skin and venereal diseases,
- to propose investigation and therapy.

Syllabus

- Ist Day: Examinations in Veneorology. Clinical Dermatology.
- IInd Day: Clinical Dermatology. Evaluation of Clinical Findings in Patients.
- IIIrd Day: Clinical Dermatology. Evaluation of Clinical Findings in Patients. Practical Aspects of Eczema Diseases and Their Differential Diagnostics.
- IVth Day: Clinical Dermatology. Evaluation of Clinical Findings in Patients.
- Vth Day: Clinical Dermatology. Evaluation of Clinical Findings in Patients. Autoimmune Diseases of Connective Tissue.
- VIth Day: Elaboration of Case Record. Evaluation of Clinical Findings in Patients.
- VIIth Day: Evaluation of Case Record. Final Evaluation of the Student. Credit.

Literature

- ŠTORK, Jiří. *Dermatovenerologie*. 1. vyd. Praha: Galén, 2008. xv, 502. ISBN 9788072623716.
- FEIT, Josef, Lukáš HEJTMÁNEK, Luděk MATYSKA, Vladimír ULMAN, Marta JEŽOVÁ, Mojmír MOULIS, Věra FEITOVÁ, Sylva HOTÁRKOVÁ, Ondřej SOUČEK, Katarína MÚČKOVÁ and Pavel VLAŠÍN. Hypertextové atlasy patologie 2007 (Hypertext atlases of pathology 2007). In *MEFANET 2007*. Brno: MSD, 2007. ISBN 978-80-739-2007-4. DITRICHOVÁ, Dagmar a kol. *Repetitorium dermatovenerologie*. Olomouc, 2002.
- VOSMÍK, F. a kol. *Dermatovenerologie*. 1. vydání. Praha: Karolinum, 1999. 396 pp. ISBN 80-7184-633-3.

Teaching methods

Classwork is provided by the combined way through presentations, bedside teaching, seminars with the discussion.

Assessment methods

Giving the course-unit credit is conditioned by 100% attendance of lessons and by ellaborated case record. Credit. Control of knowledge by teachers and by supervisor/head of the department.

aZLDV0711p Dermatovenerology - lecture

Extent and Intensity

1/0/0. 2 credit(s). Type of Completion: zk (examination).

Supervisor

prof. MUDr. Vladimír Vašků, CSc.
First Department of Dermatovenerology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The aim is to acquire actual knowledge of mucous membrane symptomatology in dermatoses, its diagnostics treatment. Understanding of principal skin functions and their examinations. Immune system and the skin in relation to allergic reactions. Skin as a target organ for autoimmunity. Problems in venereal diseases. Psoriasis as a severe medicine and social problem. Drug eruptions as a frequent complication of systemic treatment. The student will be able to use acquired knowledge of skin physiology and patophysiology in comman skin diseases and in diseases with mucous membrane symptomatology.

Learning outcomes

Finally the student will be able to work individually with patient, to interpret the pathological skin and mucous membrane findings, differential diagnose in principal groups of skin and venereal diseases, to propose investigation plan and therapy.

Syllabus

Ist Day: Morphology.

IInd Days: Mucous Membrane Symptomatology and Skin Diseases.

IIIrd Day: Examination of Skin Functions and Allergology.

IVth Day: Autoimmune diseases in dermatology.

Vth Day: Venereology.

VIth Day: Modern Approach to Psoriasis Treatment.

VIIth Day: Drug Eruptions. Credit.

Literature

- VAŠKŮ, Vladimír. Psoriáza. 128 stran. ISBN 9788073454302. info

- ŠTORK, Jiří. Dermatovenerologie. 1. vyd. Praha: Galén, 2008. xv, 502. ISBN 9788072623716.
- FEIT, Josef, Lukáš HEJTMÁNEK, Luděk MATYSKA, Vladimír ULMAN, Marta JEŽOVÁ, Mojmír MOULIS, Věra FEITOVÁ, Sylva HOTÁRKOVÁ, Ondřej SOUČEK, Katarína MÚČKOVÁ and Pavel VLAŠÍN. Hypertextové atlasy patologie 2007 (Hypertext atlases of pathology 2007). In MEFANET 2007. Brno: MSD, 2007. ISBN 978-80-739-2007-4.
- DITRICHOVÁ, Dagmar, Martina JANSOVÁ and Robert OPAVSKÝ. Repetitorium dermatovenerologie. 1. vyd. Olomouc: Epava, 2002. 304 s. ISBN 808629708X.
- VLAŠÍN, Zdeněk and Hana a kol. JEDLIČKOVÁ. Praktická dermatologie v obrazech a schématech. 1. vydání. Brno: Vladerma, 2001. 251 pp. ISBN 80-238-6966-3.
- VOSMÍK, F. a kol. Dermatovenerologie. 1. vydání. Praha: Karolinum, 1999. 396 pp. ISBN 80-7184-633-3.

aZLHE0711c Bases of Hygiene in Dentistry - practice

Extent and Intensity Seminar: 2 hour(s) per week. 30. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Bc. Zuzana Derflerová Brázdová, DrSc.

Department of Public Health - Theoretical Departments - Faculty of Medicine

Contact Person: Zdeňka Jochová

Course objectives At the end of the course, students will have practical skills for the measurements of nutritional behaviors, for the ergonomic approach in the creation of workplaces in stomatology offices and the simple physical exercieses reduced the overload from the non-physiologic positions. Students will be able to offer the primary prevention consulting concerned on the oral health. Students will know the ways of motivation of smokers to quit and possibilities of the special support of the treatment of the dependent smokers.

Students will know the most important respiratory diseases and their speficic influence as the health risk for dentists. They will understand and realize the right approaches for decontamination, desinfection and sterilisation of medical instruments contaminated by the biologic materials. Students will understand and realize the control of nosocomial infectious diseases.

Syllabus

・Seminars, practices, field experience:

・SMOKING AND HEALTH: smoking as the most important preventable single risk factor of premature morbidity and mortality. Smokeless tobacco. Health consequences of involuntary exposure to cigarette smoke. Smoking and dental health (caries, parodontitis, oral cancer): epidemiology,

mechanisms of action.

・SMOKING CESSATION IN THE DENTAL OFFICE: dependence on smoking as the psychiatric disease. 4A Program.

・NUTRITIONAL CONSUMPTION, NUTRITIONAL STATUS: Methods for the evaluation of short - term (recall) and long-term (nutritional behavior)consumption (by questionnaire) use in individual and public health care. Methods for laboratory measurement. Anthropologic, clinical and laboratory methods for the assessment of nutritional status markers with the specific concern about the oral cavity.

・THE MOST IMPORTANT PUBLIC HEALTH PROGRAMMES: Program WHO ” Health 21”, its goals in the

primary prevention and in the dental health. Programs in the Faculty of Medicine MU: Five a Day, Elixir M, Nutrition Pyramid, Non-smoking is a Norm, Smoking and Me.

・Field experience: DENTAL HYGIENE: Students will explain the causes of the dental caries and parodontitis to the pupils at primary schools; using the practical aid they will teach children the right methods of the dental hygiene.

・HEALTH PROFESSIONAL RISKS: toxikology of mercury.

・INFECTIOUS EPIDEMIOLOGY:

・Specific prophylaxis‑active immunization, passive immunization

・Epidemiology and surveillance of nosocomial infections.

・Epidemiological characteristics of airborne infections and prevention of their spreading.

Literature

・Kotulán J aj: Preventivní lékařství I, II. Lékařská fakulta MU, 1991,1992

・Provazník K aj: Manuál prevence v lékařské praxi. 3.LF UK Praha, SZÚ Praha, 2003, 2004

Teaching methods Practical training based on the theoretical knowledge.

Assessment methods Control of the practice tasks, credit

aZLHE0711p Bases of Hygiene in Dentistry - lecture

Extent and Intensity Lecture: 1 hour(s) per week. 15. Number of credits: 3 credit(s). Type of Completion: zk (examination).

Supervisor prof. MUDr. Bc. Zuzana Derflerová Brázdová, DrSc.

Department of Public Health - Theoretical Departments - Faculty of Medicine

Course objectives At the end of the course, the student will be able to understand and to explain the import od the significant protective and risk factors and their attribution to the health protection and promotion on the both individual and public level, with the special concern on the oral health problems. The student will understand the main aims and priorities of primary prevention, especially in the human nutrition and physical activity, control of the autoagressive behaviors (smoking, alcohol and drug abuse) and creation the safe and ergonomic work place and environment. The student will know the markers of occupational diseases manifested clinicaly in the oral cavity. Based on the understanding of the principles of epidemic widespread of communicable diseases, the student will be able create and aplicate the right anti-epidemic control in his/her praxis.

Syllabus

・Hygiene, Preventive medicine ‐ the scope, objectives, main principles. Health determinants, their combined influence and resulting effect. Prevention of diseases: forms, objectives, methods. Main preventable risk factors for cardiovascular diseases and cancer.

・Dietary guidelines. Food pyramid. Specific nutritional factors in the oral health protection and promotion, their natural sources.

・Occupational risks and prevention of occupational diseases: Occupational risk factors with the specific concern about the dental health. Markers of occupational exposure in the oral cavity. Mercury as an environmental and occupational risk; the contribution of dental health care to the total exposure to mercury. Specificity of dental health care during pregnancy. Occupational risks in working places of health professionals. Principles of the health protection of occupationally exposed workers.

・Epidemiology of infectious diseases ‐ generally: The basic knowlegde of epidemiology – understanding the epidemiological metodology (descriptive, analytic, experimental epidemiology). Chain of infection ‐ epidemic process . The importance of environmental and social circumstances, intensity levels of the process of spreading. Global epidemiology, epidemiologic surveillance Programme of eradication and elimination of infectious diseases. Characterizing the epidemiological measurements and planing of actions for to facilitate minimalization of the diaseases spread (isolation, supervision). Desinfection, desinsection, deratization.

・Epidemiology ‐ parenteral infections Epidemiological characteristics of blood infections and prevention of their spreading.

Literature

・Provazník K aj.: Manuál prevence v lékařské praxi. 3. LF UK Praha, SZÚ Praha, 2003, 2004

・Kotulán J aj: Preventivní lékařství I, II. Lékařská fakulta MU, 1991, 1992

Teaching methods Lectures, seminars. The important part is the course ” practical exercises”.

Assessment methods Obligatory seminars, continual written tests, oral exam includes both preventive medicine and epidemiology of communicable diseases.

aZLCH0732c Surgery II - practice

Extent and Intensity Seminar: 1 hour(s) per week. 15. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor prof. MUDr. Ivan Čapov, CSc.

First Department of Surgery - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives The tuition in the 7th term is focused on the general surgery in its whole extent. Classwork is provided by the combined way through presentations, bedside teaching, seminars with the discussion.

Syllabus

・Head and neck surgery

・Chest wall, trauma of the chest, breast

・Surgery of the lungs and mediastinum

・Oesophageal surgery

・Vascular surgery: arteries

・Vascular surgery: veins

・Metabolism and critical care in surgery

・General traumatology

・Clavicle, scapula, humeroscapular joint

・Humerus, elbow joint

・Forearm, wrist, hand

・Repetition, questions, discussion

Literature

・PAFKO, Pavel. *Základy speciální chirurgie*. 1. vyd. Praha: Galén, 2008. 385 s. ISBN 9788072624

027.

・ZEMAN, Miroslav. *Speciální chirurgie*. 1. vyd. Praha: Galén, 2000. 575 s. ISBN 8072620932.

Teaching methods Classwork is provided by the combined way through presentations, bedside teaching,

seminars with the discussion.

Assessment methods The lessons attendance is obligatory, credits are given during the termination of the each semester. The tuition in surgery is finished with the exam (oral and practical part) in the end of the 8th term.

aZLCH0732p Surgery II - lecture

Extent and Intensity

0/1/0. 0 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Ivan Čapov, CSc.
First Department of Surgery - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Main objectives of this lecture is to introduce the basic information about head, neck, thoracic (mediastinum, lungs) and abdominal (stomach, duodenum, small intestine, colon, rectum, pancreas, liver, billiary system, abdominal wall hernia) surgery - incidence rate, etiology, patogenesis, diagnosis, treatment, prognosis.

Learning outcomes

After passing the three-semester subject the student will:
- know anatomy of head, neck and chest, including topographic anatomy.
- know the diseases in the individual areas and to diagnose them.
- know the traumatology issues in this area.
- be capable of differential diagnosis of diseases in the three areas and knowledge of the treatment of these diseases.
- be able to handle theoretically the bleeding in the head and neck areas, to know the basics of tissue suturing and the basics of anesthesia.
- be aware of general surgery in its whole entirety

Syllabus

- Head and neck surgery
- Surgery of the breast, trauma of the chest wall
- Lung surgery, mediastinum, oesophagus

- Hernias of the abdomen, diaphragm
- Surgery of the spleen and pancreas
- Stomach, duodenum, intestinal surgery
- Colon, rectum and anus

Literature

- ZEMAN, Miroslav. *Speciální chirurgie*. 1. vyd. Praha: Galén, 2000. 575 s. ISBN 8072620932. info

Teaching methods

lecture

Assessment methods

This lecture is not credited, it is a part of continual preparation for examination in surgery at the end of the 8th term.

aZLOR0742c Orthodontics II - practice

Extent and Intensity Seminar: 1 hour(s) per week. 15. Number of credits: 1 credit(s). Type of Completion: z (credit).

Supervisor doc. MUDr. Pavlína Černochová, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Students are able: - to perform model, cephalometric and OPG analysis in patients with orthodontic anomalies - to understand and to explain development of teeth, occlusion and face, developmental anomalies (clefts and orofacial syndromes) - to describe and to explain principle of action of removable and fixed orthodontic appliances and their particular parts

Syllabus

・The aim of this subject is improvement of knowledge about terminology and diagnosis of orthodontic anomalies. The main topics are model, cephalometric and OPG analysis. Students will receive survey of development of teeth, occlusion and face and developmental anomalies. Particular attention is devoted to removable and fixed orthodontic appliances.

Literature

・KAMÍNEK, Milan a Marie ŠTEFKOVÁ. *Ortodoncie.* 1. vyd. Olomouc: Univerzita Palackého - Lékařská fakulta, 1991. 68 s. ISBN 80-7067-996-4.

・KAMÍNEK, Milan a Marie ŠTEFKOVÁ. *Ortodoncie I*. 1. vyd. Praha: Státní pedagogické nakladatelství,

1990. 76 s.

Teaching methods practical training

Assessment methods class discussion credit

aZLOR0742p Orthodontics II - lecture

Extent and Intensity

0/1/0. 0 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Pavlína Černochová, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The aims of the subject are, to teach students how: - to perform model, cephalometric and OPG analysis in patients with orthodontic anomalies - to understand and to explain development of teeth, occlusion and face, developmental anomalies (clefts and orofacial syndromes) - to describe and to explain principle of action of removable and fixed orthodontic appliances and their particular parts

Learning outcomes

Students are able:
- to perform model, cephalometric and OPG analysis in patients with orthodontic anomalies
- to understand and to explain development of teeth, occlusion and face, developmental anomalies (clefts and orofacial syndromes)
- to describe and to explain principle of action of removable and fixed orthodontic appliances and their particular parts

Syllabus

- The aim of this subject is improvement of knowledge about terminology and diagnosis of orthodontic anomalies. The main topics are model, cephalometric and OPG analysis. Students will receive survey of development of teeth, occlusion and face and developmental anomalies. Particular attention is devoted to removable and fixed orthodontic appliances.

Literature

- *Diagnostika retinovaných zubů*. Edited by Pavlína Černochová. 1. vyd. Praha: Grada, 2006. 191 s. ISBN 8024712695.
- KOŤOVÁ, Magdalena. *Ortodontický průvodce praktického zubního lékaře*. 1. vyd. Praha: Grada, 2006. 114 s. ISBN 8024713055.
- PROFFIT, William R., Raymond P. WHITE and David M. SARVER. *Contemporary treatment of dentofacial deformity*. 1st ed. St. Louis: Mosby, 2003. 751 s. ISBN 9788131214657.

- KOŤOVÁ, Magdalena. *Snímací ortodontické přístroje*. 1. vyd. Praha: Grada Publishing, 1999. 68 s. ISBN 8071698229.
- KAMÍNEK, Milan and Marie ŠTEFKOVÁ. *Ortodoncie.* 1. vyd. Olomouc: Univerzita Palackého - Lékařská fakulta, 1991. 68 s. ISBN 80-7067-996-4.
- KAMÍNEK, Milan and Marie ŠTEFKOVÁ. *Ortodoncie I*. 1. vyd. Praha: Státní pedagogické nakladatelství, 1990. 76 s.

Teaching methods

lecture

Assessment methods

credit

aZLOT0711c Otorhinolaryngology - practice

Extent and Intensity Seminar: 3 hour(s) per week. 45. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor MUDr. Břetislav Gál, Ph.D.

Department of Otorhinolaryngology and Head and Neck Surgery - Institutions shared with St. Anne's

Faculty Hospital - Faculty of Medicine

Contact Person: Bc. Ing. Martina Zatloukalová

Course objectives The course comprises basic otorhinolaryngology knowledge, introduces the students to the organization of out patient room, basic ENT evaluation and surgery. The surgery of ear (incl. cochlear implants), oral cavity, pharynx, larynx and endoscopic surgery of sinonasal region, surgery of thyroid gland and surgery of external neck are also included..

Syllabus

・1st day (Monday, FNUSA) The hearing and balance system, applied anatomy and physiology, methods of investigation, inspection, palpation, otoscopy - practical training. The basic pathological finding on the ear drum I. - slides, demonstrations of patients. Video - function of hearing system, otoacustic emisions (OAE). 2nd day (Tuesday, FNUSA) Radiography of the temporal bone (Schueller ´ s view, Stenvers ´ view, CT), surgical treatment of acute and chronic Otitis Media, reconstructive surgery. Practical course and operating theatre. Stapedotomy - video demonstration. Video: FESS, slides: Ear II, Nose. Nose and paranasal sinuses, applied anatomy and physiology, external inspection and palpation, anterior rhinoscopy - practical course, radiology of the sinuses,

classical radical treatment and functional endoscopic sinus surgery (FESS) - video demonstration. Patologic findings - slides. 3rd day (Wednesday, FNUSA) Nasopharynx and oropharynx - applied anatomy and physiology, posterior rhinoscopy - practical training, investigation of the oral cavity and salivary glands, Waldayer ´ s lymphoepithelial ring, functional assessment of the Eustachian tube. Patologic findings - slides. The correction of saddle nose - videodemonstration 4th day (Thursday, FDN) Congenital anomalies of the ear, types of disorder, possibilities of treatment, slides. Otitis media acuta - etiology, otoscopy, diagnosis, therapy - slides, pathologic findings, video demonstration - paracenthesis. Complications of middle ear inflammation, therapy, video demonstration - antromastoidectomy. Chronic inflammation of the middle ear - focused on children ´ s age - etiology, diagnosis, therapy, video demonstration - implantation of pressure equalizing tube, myringoplasty. Practical training - otoscopy, presence in evaluation of children patient in outpatient room, presence in operating theathre. 5th day (Friday, FDN) Nasopharynx and oropharynx - applied anatomy and physiology, posterior rhinoscopy - practical training, Waldayer ´ s lymphoepithelial ring, - focused on children ´ s age. Acute and chronic inflammations in tonsil ´ s region, obstructive sleep apnoe syndrome, evaluation, therapy. Video demonstration - tonsilotomy. Practical training - evaluation of nasopharynx and oropharynx. 6th day (Monday, FNUSA) Hypopharynx and Larynx - applied anatomy and physiology, methods of investigation - indirect laryngoscopy and hypopharyngoscopy - practical training, functional disorders of the larynx. Dyspnoe, tracheotomy - video demonstration. 7th day (Tuesday, FDN) Functional endoscopic sinus surgery (FESS) focused on children ´ s age, surgery of choanal atresia, dacryocystorhinospage tomy. Development of paranasal sinuses, acute and chronic inflammations, complications and their resolution - video demonstrations. Patologic findings - slides. Foreign bodies in otorhinolaryngology - evaluation, methods of extraction, bronchoscopy. Practical training - evaluation of larynx, hypopharynx, rhinoscopy, external neck. 8th day (Wednesday, FNUSA) Cervical lymphatic system - applied anatomy and physiology, methods of investigation - practical training. Differential diagnosis of tumors of neck. Head and neck cancer - strategy of treatment. Endoscopy (Microlaryngoscopy and bronchoscopy) - in Otolaryngology. Video demonstration - Restoration of the voice by endolaryngeal surgery.

Literature

・BEHRBOHM, Hans, Walter BECKER, Hans Heinz NAUMANN a Carl Rudolf PFALTZ. *Ear, nose, and*

throat diseases : with head and neck surgery. 3rd ed. Stuttgart: Thieme, 2009. x, 461. ISBN 978 3136712030.

Teaching methods Lectures, practical training of basic ENT evaluation, video sessions, presentations by professionals in the inpatient ward and operating theatre.

Assessment methods Attendance in practices and seminars is compulsory; the presence of students is recorded. Teaching methods: lectures, discussion, practical training in ENT evaluation, presentation of individual cases - videos, pictures, watching surgery in operating theatre. Final appreciation- student will prove his ability to provide ENT examination and recognize normal ENT finding.

aZLOT0711p Otorhinolaryngology - lecture

Extent and Intensity Lecture: 1 hour(s) per week. 15. Number of credits: 3 credit(s). Type of Completion: zk (examination).

Supervisor MUDr. Břetislav Gál, Ph.D.

Department of Otorhinolaryngology and Head and Neck Surgery - Institutions shared with St. Anne's

Faculty Hospital - Faculty of Medicine

Contact Person: Bc. Ing. Martina Zatloukalová

Course objectives The course comprises basic otorhinolaryngology knowledge, introduces the students to the organization of out patient room, basic ENT evaluation and surgery. The surgery of ear (incl. cochlear implants), oral cavity, pharynx, larynx and endoscopic surgery of sinonasal region, surgery of thyroid gland and surgery of external neck are also included.

Syllabus

・Odb. as. MUDr. Jan Rottenberg, Phd., odb. as.MUDr. T.Talach: Basic principles of Audiology Hearing disorder; audiometry - fundamental physical and acoustic concepts; Pure-Tone Audiometry, Speech audiometry, Electric response audiomtery, Otoacustic emissions; hearing aids; cochlear implant. As. MUDr. Rottenberg Jan, PhD.: Basics of neurootology odb. as. MUDr. B.Gál, Ph.D., Odb. as. MUDr. Eva Tóthová: Diseases of thyroid gland, espacially tumors, surgical treatment. The lecture summarizes basic methods of investigation in neurootology. It is divided into the four basic themes: 1. Olfactometry - investigation of smell, diferential diagnosis of smell disorders 2. Gustometry - investigation of taste, hypogeusia and ageusia as a symptom, diagnostic consequences 3. Audiometry - summary of methods (this theme is a subject of other lecture) 4. Equilibriometry

- investigation of vestibular organs, diferential diagnosis of vestibular disorders. The lecturer supposes a basic knowledge from anatomy and physiology of sensory organs and basic knovledge of neurology (vestibular disorders) Odb. as. MUDr. Rottenberg Jan, PhD., Odb. as. MUDr. Jan Hanák: Clinical anatomy of anterior and lateral skull base, Up to date concept of diagnosis and treatment of rhinosinusitis (EPOS), Snoring and obstructive sleep apnea The lecture summarizes important data of topographical anatomy of the skull base from clinical point of view and its practical consequences to clinical symptomatology of skull base diseases, operation techniques and approaches and its complications: 1. Anatomy, development and variability of paranasal sinuses, functional endoscopic sinus surgery and its complications 2.Classfification of rhinosinusitis, European position paper on rhinosinusitis and nasal polyposis 3. treatment of Snoring and obstructive sleep apnea 5. Types of facial nerve palsy and their topodiagnostics 6. The subject of skull base surgery The lecturer supposes a basic anatomical knowledge and basic orientation in otolaryngology. Ass. prof. MUDr. P. Smilek, PhD., Odb. as. MUDr. B.Gál, Ph.D.: Emergency and First Aid Procedures 1. Bleeding (nasal, form larynx, trachea, oesophagus and ear) 2. Dyspnea(differential diagnosis, tracheotomy, intubation, care of tracheostomy) 3. Foreign bodies (in the hypopharynx, esophagus, larynx, trachea,bronchi, nose and ear) 4. Corrosion and scalds (in the mouth and oesophagus) Ass. prof. MUDr. P. Smilek, PhD.: Basics principles in ENT Oncology 1. Etiology 2. Prognosis of Head and Neck cancer 3. Basic strategy of treatment 4. Treatment of lymphnode metastasis 5. Cancer of the nose and paranasal sinuses 6. Cancer of the epipharynx 7. Cancer of the Oropharynx 8. Cancer of the Larynx 9. Follow up Odb. as. MUDr. Pavla Urbánková, PhD.: Serious complications of inflammatory disease in ENT; Uniqueness of inflammatory disease in ENT; Primary sources of inflammation; Mastoiditis acuta; Otogenic infective complications; Intracranial complications of I. phase and II. phase; Primary source: Nose – Sinusitis; Nasal furuncle; Orbital sinusitis complications; Possible intracranial complications of sinusitis; Primary source: Oral cavity Base of oral cavity; Cheilitis; Primary source: pharynx; Abscessus et phlegmona peritonsillaris; Abscessus et phlegmona parapharyngealis; Sepsis tonsillogenes (angina septica, sepsis post anginam, trombophlebitis v. jug. int.); Mediastinal complications of deep neck inflammation

Literature

・required literature

・BEHRBOHM, Hans, Walter BECKER, Hans Heinz NAUMANN a Carl Rudolf PFALTZ. *Ear, nose, and throat diseases : with head and neck surgery*. 3rd ed. Stuttgart: Thieme, 2009. x, 461. ISBN 978

3136712030.

Teaching methods Lectures, practical training of basic ENT evaluation, video sessions, presentations by professionals in the inpatient ward and operating theatre.

Assessment methods Attendance in practices and seminars is compulsory; the presence of students is recorded. Final appreciation- student will prove his ability to provide ENT examination and recognize normal ENT finding. Final grade: oral examination

aZLOC0754c Oral Surgery IV - practice

Extent and Intensity

0/2/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Oliver Bulik, Ph.D.
Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine
Contact Person: Blanka Suchá

Course objectives

Investigation of the patient focused on surgical treatment; oncological investigation. Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction. Preprosthetic preparations in the oral cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations. Temporomandibular joint disorders and diseases; contractures. Cysts in the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes, classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible. Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will be able to use his knowledge for practical surgical treatment of patients in dental surgery.

Syllabus

- Surgical interventions on teeth, other tissues of the oral cavity and related organs. Rational, most considerate and professionlly proper way in searching the disease cause, choice and treatment procedure, after-treatment and preventive measures.
- temporomandibular joint disorders
- indication for pre-prosthetic surgical treatment
- pre-prosthetic treatment of the mandible and maxilla
- implantation of autogenous and heterogeouns materials, augmentation
- distraction of alveolar defects of jaws

- epidemiology of malign tumors in oro-facial region
- tumor classification, staging, grading, treatment planning

Literature

required literature

- PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600. info

not specified

- *Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.
- DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park, IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.
- MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.
- MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha: Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.
- MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.
- TOMAN, Jaroslav and Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.
- KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.
- TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp.

Teaching methods

practical training

Assessment methods

credit

aZLOC0754p Oral Surgery IV - lecture

Extent and Intensity

0/2/0. 0 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Oliver Bulik, Ph.D.
Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine
Contact Person: Blanka Suchá

Course objectives

Investigation of the patient focused on surgical treatment; oncological investigation. Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction. Preprosthetic preparations in the oral cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations. Temporomandibular joint disorders and diseases; contractures. Cysts in the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes, classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible. Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will be able to use his knowledge for practical surgical treatment of patients in dental surgery.

Learning outcomes

after passing the subject the student is able to:
- Diagnos and sugges the therapy for orofacial area injuries
- solve the problems of the pathological conditions of the temporomandibular joint

Syllabus

- Surgical interventions on teeth, other tissues of the oral cavity and related organs. Rational, most considerate and professionlly proper way in searching the disease cause, choice and treatment procedure, after-treatment and preventive measures.
- temporomandibular joint disorders
- indication for pre-prosthetic surgical treatment
- pre-prosthetic treatment of the mandible and maxilla
- implantation of autogenous and heterogeouns materials, augmentation
- distraction of alveolar defects of jaws
- epidemiology of malign tumors in oro-facial region
- tumor classification, staging, grading, treatment planning

Literature

- PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600.
- *Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.
- DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park, IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.
- MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.

- MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha: Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.
- MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.
- TOMAN, Jaroslav and Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.
- KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.
- TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp.

aZLPD0732c Periodontology II - practice

Extent and Intensity Seminar: 1 hour(s) per week. 15. Number of credits: 2 credit(s). Type of Completion: z (credit).

Supervisor MUDr. Hana Poskerová, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Main goals of the subject are: - to teach the student communication with the patient - finding history (personal, medical, allergic, dental) - periodontal examination (indexes PBI, API, CPITN, BOP, description of gingiva, gingival recessions, periodontal pockets, attachment of upper and lower frenulas, examination of occlusion) - examination of oral mucous membranes

Syllabus

・- periodontal examination (CPITN, PBI, BOP, see above) - description of the X-ray image - the periodontal instruments - classification of perio diseases - clinical signs of perio diseases: gingivitis, periodontitis, atrophy of periodontium - diagnosis of perio diseases and determination of the treatment plan - hygienic instruction - calculus removement and scaling and root planning

Literature

・SLEZÁK, Radovan. *Preklinická parodontologie*. 1. vyd. Hradec Králové: Nucleus HK, 2007. 77 s. ISBN 9788087009185.

・STAROSTA, Martin. *Plastická chirurgie parodontu*. 1. vyd. Olomouc: Univerzita Palackého, 2003. 114 s. ISBN 8024406640.

・HELLWIG, Elmar, Joachim KLIMEK a Thomas ATTIN. *Záchovná stomatologie a parodontologie*. Translated by Jan Streblov. 1. vyd. Praha: Grada, 2003. 331 s. ISBN 8024703114.

・MUTSCHELKNAUSS, Ralf E. *Praktická parodontologie : klinické postupy*. Edited by Jan Lindhe. [1. vyd.]. Praha: Quintessenz, 2002. 532 s. ISBN 8090211887.

・STAROSTA, Martin a Hana ADÁMKOVÁ. *Repetitorium parodontologie*. 1. vyd. Olomouc: Univerzita Palackého v Olomouci, 2002. 42 s. ISBN 8024405741.

・FASSMANN, Antonín. *Řízená tkáňová a kostní regenerace ve stomatologii (Controlled tissue and bone regeneration in dentistry)*. I. Praha: Grada Publishing a.s., 2002. 199 pp. Avicenum. ISBN 80-247-0316-5.

・*Praktická parodontologie*. Edited by Radovan Slezák. [1. vyd.]. Praha: Quintessenz, 1995. 148 s. ISBN 80-901024-8-4.

Teaching methods practical training

Assessment methods - credit, 100% attendance at practical trainin - discussions at practical trainings - record from practice

aZLPD0732p Periodontology II - lecture

Extent and Intensity

0/1/0. 0 credit(s). Recommended Type of Completion: zk (examination). Other types of completion: z (credit).

Supervisor

MUDr. Hana Poskerová, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Main goals of the subject are: - to teach the student communication with the patient - finding history (personal, medical, allergic, dental) - periodontal examination (indexes PBI, API, CPITN, BOP, description of gingiva, gingival recessions, periodontal pockets, attachment of upper and lower frenulas, examination of occlusion) - examination of oral mucous membranes

Learning outcomes

Student will be able:
- to find important anamnestic data from the patient
- to motivate, educate and instruct oral hygiene at the patient
- to perform a comprehensive periodontal examination (see above)
- to classify perio diseases
- to describe clinical signs of perio diseases: gingivitis, periodontitis, atrophy of periodontium
- to diagnos perio diseases and determin the treatment plan

Syllabus

- - periodontal examination (CPITN, PBI, BOP, see above) - description of the X-ray image - the periodontal instruments - classification of perio diseases - clinical signs of perio diseases: gingivitis, periodontitis, atrophy of periodontium - diagnosis of perio diseases and determination of the treatment plan - hygienic instruction - calculus removement and scaling and root planning

Literature

- SLEZÁK, Radovan. *Preklinická parodontologie*. 1. vyd. Hradec Králové: Nucleus HK, 2007. 77 s. ISBN 9788087009185.
- STAROSTA, Martin. *Plastická chirurgie parodontu*. 1. vyd. Olomouc: Univerzita Palackého, 2003. 114 s. ISBN 8024406640.
- HELLWIG, Elmar, Joachim KLIMEK and Thomas ATTIN. *Záchovná stomatologie a parodontologie*. Translated by Jan Streblov. 1. vyd. Praha: Grada, 2003. 331 s. ISBN 8024703114.
- MUTSCHELKNAUSS, Ralf E. *Praktická parodontologie : klinické postupy*. Edited by Jan Lindhe. [1. vyd.]. Praha: Quintessenz, 2002. 532 s. ISBN 8090211887.
- STAROSTA, Martin and Hana ADÁMKOVÁ. *Repetitorium parodontologie*. 1. vyd. Olomouc: Univerzita Palackého v Olomouci, 2002. 42 s. ISBN 8024405741.
- FASSMANN, Antonín. *Řízená tkáňová a kostní regenerace ve stomatologii (Controlled tissue and bone regeneration in dentistry)*. I. Praha: Grada Publishing a.s., 2002. 199 pp. Avicenum. ISBN 80-247-0316-5.
- *Praktická parodontologie*. Edited by Radovan Slezák. [1. vyd.]. Praha: Quintessenz, 1995. 148 s. ISBN 80-901024-8-4.

Teaching methods

lecture

Assessment methods

Final Examination - oral form

aZLPL0764c Prosthetic Dentistry IV - practice

Faculty of Medicine, autumn 2018

Extent and Intensity Seminar: 1 hour(s) per week. 15. Number of credits: 2 credit(s). Type of

Completion: z (credit).

Supervisor MUDr. Sonia Bartáková, Ph.D.

Department of Stomatology - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of Medicine

Course objectives Branch content Theoretical knowledges a practical skills at prosthetic dentistry

oriented to partial removable dentures. Basics aims and content of the subject: Students have

knowledges how to produce partial removable dentures and when they can use different types of the dentures.

Syllabus

・Extent of the subject :: hours per week 3,3, credits 14 4. sem: 0,5 hr. lecture, 1 hr. practise 5. sem: 0,5 hr. lecture, 1 hr. practise 6. sem: 0,5 hr. lecture, 2 hr. practise 7. sem: 0,5 hr. lecture, 4 hr. practise 8. sem: 0,5 hr. lecture, 3 hr. practise 9. sem: 0,5 hr. lecture, 3 hr. practise

Literature

・SHILLINGBURG, Herbert T. *Fundamentals of Fixed Prosthodontics*. Illustrated by Suzan E. Stone. 4th ed. Chicago: Quintessence Pub., 2012. x, 574. ISBN 9780867154757.

・SMANIOTTO, Paolo a Alexander BEIKIRCHER. *Aesthetics and techniques for new materials : achieving success for the dental team*. Markham: Palmeri, 2010. 214 s. ISBN 8889626062.

・PHOENIX, Rodney D., David R. CAGNA a Charles F. DEFREEST. *Stewart’s clinical removable partial prosthodontics*. 4th ed. Chicago: Quintessence, 2008. ix, 517. ISBN 9780867154856.

・*Contemporary fixed prosthodontics*. Edited by Stephen F. Rosenstiel. 2nd ed. St. Louis: Mosby, 1995. xi, 627. ISBN 0801665280.

・*Color atlas of oral diseases*. Edited by George Laskaris. 2nd rev. ed. Stuttgart: Georg Thieme Verlag, 1994. xiii, 372. ISBN 3-13-717002-8.

・GRABER, George, Urs HAENSLER a Peter WIEHL. *Farbatlanten der Zahnmedizin.* [1 Ausg.]. Stuttgart: Georg Thieme Verlag, 1986. 216 s. ISBN 3136828011.

Teaching methods practical training

Assessment methods credit

aZLPL0764p Prosthetic Dentistry IV - lecture

Extent and Intensity

0/1/0. 0 credit(s). Type of Completion: z (credit).

Supervisor

MUDr. Sonia Bartáková, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The object is the theoretical and practical knowledge of the total full denture at upper and lower jaw, the full immediate denture, laboratory and office working procedures and different material options.

Learning outcomes

Student will:
- know theoretical and practical knowledges of all laboratory and office procedures.
- know basic impressions on total full denture.
- know how to make myodynamic functional impression into the Dentiplast and Repinu or silicones
- know how to do registration of interjaw relationship, trying prostheses at wax and how to give prostheses to the pacient.

Syllabus

- Extent of the subject :: hours per week 3,3, credits 14 4. sem: 0,5 hr. lecture, 1 hr. practise 5. sem: 0,5 hr. lecture, 1 hr. practise 6. sem: 0,5 hr. lecture, 2 hr. practise 7. sem: 0,5 hr. lecture, 4 hr. practise 8. sem: 0,5 hr. lecture, 3 hr. practise 9. sem: 0,5 hr. lecture, 3 hr. practise Lectures: Full denture Patient investigation,alginate impression, zinc-oxide impression, inter jaw relationships, articulation, last visit full denture,immediate denture, denture after resection of the teeth

Literature

- SHILLINGBURG, Herbert T. *Fundamentals of Fixed Prosthodontics*. Illustrated by Suzan E. Stone. 4th ed. Chicago: Quintessence Pub., 2012. x, 574. ISBN 9780867154757.
- SMANIOTTO, Paolo and Alexander BEIKIRCHER. *Aesthetics and techniques for new materials : achieving success for the dental team*. Markham: Palmeri, 2010. 214 s. ISBN 8889626062.
- PHOENIX, Rodney D., David R. CAGNA and Charles F. DEFREEST. *Stewart's clinical removable partial prosthodontics*. 4th ed. Chicago: Quintessence, 2008. ix, 517. ISBN 9780867154856.
- *Contemporary fixed prosthodontics*. Edited by Stephen F. Rosenstiel. 2nd ed. St. Louis: Mosby, 1995. xi, 627. ISBN 0801665280.
- *Color atlas of oral diseases*. Edited by George Laskaris. 2nd rev. ed. Stuttgart: Georg Thieme Verlag, 1994. xiii, 372. ISBN 3-13-717002-8.
- GRABER, George, Urs HAENSLER and Peter WIEHL. *Farbatlanten der Zahnmedizin.* [1 Ausg.]. Stuttgart: Georg Thieme Verlag, 1986. 216 s. ISBN 3136828011.

Teaching methods

Lecture

Assessment methods

Discussion

aZLSD0711s Forensic Medicine in Dentistry - seminar

Extent and Intensity Seminar: 1 hour(s) per week. 15. Number of credits: 2 credit(s). Type of

Completion: k (colloquium).

Supervisor prof. MUDr. Miroslav Hirt, CSc.

Department of Forensic Medicine - Institutions shared with St. Anne’ s Faculty Hospital - Faculty of

Medicine

Contact Person: Květa Blatná

Course objectives At the end of this course, students: have basic skills in thanatology, should be oriented to the problems of the origin of a lot of kinds of injuries and sudden death, have basic skills in forensic toxicology, genetics and serology including their use in practice, should be oriented in Medical and criminal law in medicine, should be able to examine a dead person

Syllabus

・During lessons there will be presented: the theoretical basis of forensic thanatology including changes after death

・Sudden and unexpected death

・Blunt injuries including problems of traffic accidents

・Knife wounds

・Firearms injuries

・Forensic toxicology, genetics and serology

・Injury due to heat, cold and electricity

・Suffocation

Literature

・required literature

・HIRT, Miroslav, Dalibor STRATIL, Tomáš PEXA a M. PEŠTÁLOVÁ. *Forensic Medicine*. Brno: Masarykova

univerzita Brno, 1999. 76 pp. ISBN 80-210-2094-6.

・recommended literature

・PAYNE-JAMES, Jason. *Simpson’s forensic medicine*. 13th ed. London: Hodder Arnold, 2011. x, 253. ISBN 9780340986035.

・JASON, Payne-James, W.Byard ROGER, S Corey TRACEY a Henderson CAROL. *Encyklopedia of Forensic and Legal Medicine*. 2005. ISBN 0-12-547970-0.

Teaching methods seminar

Assessment methods Colloquium

aZLVL7X61 Internal Medicine block 1 - practice

Extent and Intensity Seminar: 2 hour(s) per week. 30. Number of credits: 1 credit(s). Type of

Completion: z (credit).

Supervisor prof. MUDr. Miroslav Souček, CSc.

Department of Pulmonary Diseases and Tuberculosis - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Course objectives The lessons are focused on gaining both theoretical and practical experience covering the entire area of pulmonology. The practice is done at the bedside and by demonstrating different methods of examination. The theory is discussed in seminars organized in the Departments classroom.

Day 1: Lung cancer. Day 2: COPD, asthma. Day 3: Tuberculosis. Day 4: Pneumonia. Day 5: Interstitial lung diseases.

Syllabus

・The lessons are focused on gaining both theoretical and practical experience covering the whole field of pneumology. The pactice takes a course at the patient’ s bedside and by demonstrating particular examination methods, the theory is discussed in seminaires organized in the Departmen’ s

seminair room. day 1: bronchogenic carcinoma day 2: COPD, bronchial asthma day 3: tuberculosis day 4: pneumonia day 5: interstitial lung diseases

Literature

・Skřičková, Jana. Nozokomiální a oportunní infekce (47-48) V. Kolek a kol. In Pneumologie pro magistry a bakaláře. Olomouc : LF Univerzita Palackého, 2005. 82 s. ISBN 80-244-1175X.

・Skřičková, Jana. Pneumologie (163-192): V.Kolek a kol. In Vnitřní lékařství pro stomatology. Praha : Grada Publishing a.s., 2005. od s. 380. ISBN 80-247-1367-5.

・Dítě, Petr - et al. Vnitřní lékařství. Druhé vydání. Praha : GALÉN, Na Bělidle 34, 2007. 586 s. ISBN 978-80-7262-496-6.

・Hrazdirová, Anna - Merta, Zdeněk - Skřičková, Jana. Vyšetření hrudníku a plic. In Propedeutika a vyšetřovací metody vnitřních nemocí. Praha : Grada, 2008. od s. 51-58, 8 s. I.vydání. ISBN 978-80-247-1749-4.

Teaching methods practical skills exercise

Assessment methods Course is completed by course-unit credit. Full attendance in all lessons and pasing the final test are necessary conditions for giving credit.

aZLVL7X66 Internal Medicine block 6 - practice

Extent and Intensity

0/1/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Miroslav Souček, CSc.
Department of Occupational Medicine - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Teaching is focused on the occupational medicine, occupational diseases and accidents at work. Students will learn to exposure to environmental factors working in various sectors of economic activity (including health and dentistry), with their monitoring and evaluation and the subsequent health risks. Receive information about the most common types of damage to health from work - occupational diseases, job related injuries, work related diseases. Students become familiar with the diagnosis, treatment and prevention of selected occupational diseases. There are well informed abouth the field of legal issues (the list of occupational diseases, reporting, social and legal consequences of recognition). After successful completion of the course the student is able to: - Assess and explain the relationships and connections between work activity, factors in the work environment and health risks. - Apply the acquired knowledge and skills in occupational medicine in practice - for the protection of health at work, assessing fitness for work, the implementation of preventive examinations of workers at risk, prevention of occupational diseases. - Interpret results of basics investigatives techniques (X-ray, spirometry, audiometry, EMG, skin and allergy tests) in relation to the criteria of professional disease.

Syllabus

- 1 Introduction: The impact of work and working conditions on the health of workers. The prevention diagnostics, treatment, and medicolegal aspects of diseases caused or exacerbated by working conditions: occupational diseases, accidents at work, work-related diseases. 2 Occupational health services in the Czech Republic. Occupational health ethics. Knowledge of the work environment, specific workplace hazards Medical examinations: pre-placement, periodic and special medical examinations, occupational history, biological monitoring, medical records. Treatment. Health education Rehabilitation and resettlement. 3 Occupational diseases and toxicology. List of occupational diseases (appendix of government decree no. 290/1995) Occupational diseases due to chemical agents. Occupational diseases due to physical agents (work-related cumulative trauma disorders of the hand and arm, hand-arm vibration syndrome, noise induced hearing loss, non-stochastic and stochastic health effects of ionizing radiation). Occupational lung disorders, pneumoconioses,asthma, malignancy. Occupational dermatoses, primary irritant contact dermatitis, allergic contact dermatitis, neoplasms. Occupational infections. 4 Mental health at work 5 The main areas of law relevant to occupational health , workers compensation law

Literature

recommended literature

- Brhel P., Manoušková M., Hrnčíř E., Pracovní lékařství. Základy primární pracovnělékařské péče, 1. vydání, Brno, NCO NZO, 2005, 338 s., ISBN 80-7013-414-3

- Pelclová D. a kol. Nemoci z povolání a intoxikace. 3., doplněné vydání. Praha: Karolinum, 2014, 316 s. ISBN 978-80-246-2597-3.
- BRHEL, Petr and Viera VALKOVÁ. *Occupational Disorders. (An Overview for Foreign Students; in English) (Ocupational Disorders)*. 1. vydání. Brno: Masarykova Universita, 1997. 40 pp. ISBN 80-210-1559-4.

Teaching methods

The teaching contains class exercises.

Assessment methods

100% presence is required. The end of classes as a class discussion.

aZLVL7X62 Internal Medicine block 2 - practice

Extent and Intensity

0/1/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Miroslav Souček, CSc.
Department of Internal Cardiology Medicine - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Course objectives

The student should know the basic physical examination and functional tests in cardiology. He/she must be able to describe basic examination in cardiology. He/she must be able to describe signs and symptoms of the most frequent cardiovascular disease, namely acute myocardial infarction, arrhythmias, pulmonary embolism. He/she must know essential the cardiovascular pharmacology as well as non-pharmacological treatment including pacing, resynchronisation and defibrillation. He/she must know the cardiovascular risk factors and to describe the pathophysiology of atherosclerosis.

Learning outcomes

The student have to know the basic physical examination and functional tests in cardiology. He/she must be able to describe basic examination in cardiology. He/she must be able to describe signs and symptoms of the most frequent cardiovascular disease, namely acute myocardial infarction, arrhythmias, pulmonary embolism. He/she must know essential the cardiovascular pharmacology as well as non-pharmacological treatment including pacing, resynchronisation and defibrillation. He/she must know the cardiovascular risk factors and to describe the pathophysiology of atherosclerosis.

Syllabus

- **Cardiology**

Chronic coronary artery disease

stable angina pectoris, silent ischemia angina pectoris inversa, etiology, pathophysiology, differential diagnosis of the chest pain, methods of examination, risk factors, primary and secondary prevention, complications, therapy, prognosis, classification (CCSC)

Acute coronary artery disease

nonstable angina pectoris, acute myocardial infarction, sudden death, etiology and pathophysiology, methods of examination, complications, therapy, prognosis

Myocarditis

virus, bacterial and parainfectious etiology, pathophysiology, methods of examination, complications, relation to dilated cardiomyopathy, prognosis, therapy

Endocarditis

noninfectious, bacterial endocarditis , etiology and pathophysiology, typical forms, high risk population (valvular disease, after valvular replacement, intravenous drug users, imunocompromised patients), methods of exmaination, differential diagnosis, surgical vs. nonsurgical treatment, indications, prognosis.

Tachyarrhythmias

supraventricular (atrial fibrillation, atrial flutter, other supraventricular tachcardias), ventricular (ventricular tachycardia, fast ventricular tachycardia, ventricular fibrillation), premature beats, etiology, pathophysiology, differentila diagnosis, farmacologic, nonfarmacologic treatment including radiofrequency catether ablations and implantable cardiovertors-defbillators.

Bradyarrhythmias

sinus bradycardia, rythm of AV junction, sinoatrial arrest and block, AV block II. and III. ventricular asystole, etiology and pathophysiology, differential diagnosis, syncope, methods of examination, HUT test, farmacologic treatment, cardiac pacemaker implantation.

Left ventricular insufficiency

acute (Killip classiffication) etiology, pathophysiology, therapy, chronic, NYHA classiffication, etiology, pathophysiology, treatment (including heart transplantation), prognosis.

Cor pulmonale

acute (incl. acute pulmonary embolism), chronic, etiology, pathophysiology, differential diagnosis primary pulmonary hypertension, therapy, prognosis

Heart valvular disease

etiology and pathophysiology, congenital, febris rheumatica, single valvular disease, multiple valvular disease, differential diagnosis, complications, farmacologic, surgical, cathetrization therapy, prognosis

Congenital valvular disease in adults

defect of atrial septum, defect of ventricular septum, Fallot tetralogy, Ebstein's anomalia, transpozition of main vessels, dustus arteriosus perzistens, etiology, pathophysiology, therapy, prognosis

Venous disease

acute vein thromboflebitis (flebothrombosis), etiology and pathophysiology, extraordinary forms (phlegmasia alba and coerulea dolens) differential diagnosis, methods of examination, complications,

therapy, prevention, varicous complex, consequencies of recurrent thromboflebitis, superior and inferior vena cava syndrome.

Arterial disease

ischemic arterial disease, thrombangitis obliterans, acute peripherial artery strokes (embolisation and thrombosis). coarctation of the aorta, aortal dissection, etiology, pathophysiology, diferential diagnosis, methods of examination, complications, therapy, prognosis.

Arterial hypertension

essential and secondary hypertension, etiology, pathophysiology, classiffication methods of examination, complications, therapy, prognosis

Pericarditis and pericardial effusion

virus, bacterial malignant and noninfectious etiology, pathophysiology, differential diagnosis, methods of examination, complications, therapy, prognosis

Cardiomypathy

deffinition, primary (idiopathic), secondary (specific), morfologic stratification, hypertrofic, dilated and restrictive), arrhythmogenic right ventricle dysplazia, etiology pathophysiology, differential diagnosis, methods of examination, complications, therapy, prognosis

Methods of examination in cardiology

anamnesis, laboratory assesment, noninvasive methods (electrocardiography, X ray methods, NMR, echocardiography, radionuclear methods, stress examinations, signal averaged ECG, Holter monitoring, heart rate variability, baroreflex senzitivity), invasive (right and left heart cathetrization, coronary angiography, eledtrophysiology, heart biopsy)

Literature

required literature

- SOUČEK, Miroslav, Jindřich ŠPINAR, Jiří VORLÍČEK, Zdeněk ADAM, Dagmar ADÁMKOVÁ KRÁKOROVÁ, Lenka BABIČKOVÁ, Karola BALŠÍKOVÁ, Drahomíra BARTOŠOVÁ, Otakar BEDNAŘÍK, Richard BERGER, Šárka BOHATÁ, Petr BRHEL, Tomáš BRYCHTA, Yvona BRYCHTOVÁ, Alena BULIKOVÁ, Petr BURKOŇ, Ivan ČAPOV, Aleš ČERMÁK, Eva ČEŠKOVÁ, Milan DASTYCH, Regina DEMLOVÁ, Petr DÍTĚ, Jiří DOLINA, Michael DOUBEK, Martina DOUBKOVÁ, Lenka DUBSKÁ, Ladislav DUŠEK, Pavel FABIAN, Vuk FAIT, Zdeněk FOJTÍK, Lenka FORETOVÁ, Tomáš FREIBERGER, Renata GAILLYOVÁ, Roman GÁL, Ladislav GROCH, Marek HAKL, Jana HALÁMKOVÁ, Aleš HEP, Jitka HILLOVÁ MANNOVÁ, Ota HLINOMAZ, Ivo HOFÍREK, Jan HOLČÍK, Alena HOLČÍKOVÁ, Alena HONDLOVÁ, Anna HRAZDIROVÁ, Jan HRUDA, Petr HUSA, Libuše HUSOVÁ, Richard CHALOUPKA, Václav CHALOUPKA, Josef CHOVANEC, Stanislav JANOUŠEK, Jana JURÁNKOVÁ, Ladislav KABELKA, Zdeněk KADAŇKA, Bohdan KADLEC, Zdeněk KALA, Bohuslav KIANIČKA, Dagmar KINDLOVÁ, Igor KISS, Jarmila KISSOVÁ, Martin KLABUSAY, Ivo KOCÁK, Jiří KÖNIG, Jana KOPTÍKOVÁ, Zdeněk KOŘÍSTEK, Zdeněk KRÁL, Milan KRATOCHVÍL, Lenka KRBKOVÁ, Marta KREJČÍ, Petr KRIFTA, Petr KROUPA, Darja KRUSOVÁ, Lucie KŘIKAVOVÁ, Růžena LÁBROVÁ, Radek LAKOMÝ, Jan LATA, Jolana LIPOLDOVÁ, Jiří LITZMAN, Ondřej LUDKA, Jan MALÁSKA, Hana MATĚJOVSKÁ KUBEŠOVÁ, Jiří MATOUŠEK, Pavel MATUŠKA, Miloslava MATÝŠKOVÁ, Jaroslav MELUZÍN, Hana MELUZÍNOVÁ, Zdeněk MERTA, Blanka MIČÁNKOVÁ ADAMOVÁ, Miroslav MORÁŇ, Vojtěch MORNSTEIN, Jan MUŽÍK, Tomáš

NEBESKÝ, Anna NEČASOVÁ, Marta NEDBÁLKOVÁ, Miroslava NEKULOVÁ, Petr NĚMEC, Jiří NEUBAUER, Pavel NOHEL, Jana BĚLOBRÁDKOVÁ, Miroslav NOVÁK, Bronislava NOVOTNÁ, Petr ŠTOURAČ and Vojtěch THON. *Vnitřní lékařství (Internal Medicine)*. 1.vyd. Praha, Brno: Grada, 2011. 1788 pp. Vnitřní lékařství. ISBN 978-80-247-2110-1.

Teaching methods

Course is organized as intership at cardiological clinics. Course is composed of collective seminars to the given topics and practical bed-side demonstrations in small groups.

Assessment methods

The condition for giving course unit credit is full attendance and completition of final test.

aZLVL7X63 Internal Medicine block 3 - practice

Extent and Intensity

0/1/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Miroslav Souček, CSc.
Second Department of Internal Medicine - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

4 days block training takes place at the 2nd Cliníc of Internal medicine. Attendance at the tuition is obligatory. After the completion of lessons the student will understand the probleme of diseases taught in the block No. 3: diabetology, nephrology, endokrinology, rheumatology. diseases of water, elektrolyte, mineral and acid-base metabolism. He/she will be able to discern symptoms of these disorders.

Learning outcomes

After completing the internal block 3, the student will be able to recognize the symptoms of the disease that is taught in this block, ie diabetology, nephrology, endocrinology, rheumatology, internal environment issues. He will know the investigation procedures and principles of treating these diseases. He will also know the correct principles of preventing these diseases

Syllabus

- Kidney and urinary disease. Glomerular diseases. Nefrotic syndrome. Tubulointerstitial disease. Renal vascular disease. Acute and chronic renal failure. Renal replacemet therapy. Haemodialysis. Renal transplantation. Tumorous of the kidney and urinary tract.Urolithiasis. Endokrine disease. Diabetes insipidus.Acromegaly. Thyroid and parathyroid glands diseases. Adrenal glands diseases. Cushing s syndrome. Adrenal sufficiency. Phaeochromocytoma. Diabetes mellitus typ 1 Diabetes mellitus typ 2 Diabetic ketoacidosis, Nonketotic hyperosmolar diabetic coma. hypohlycaemia. Management of the diabetes. Dietary management. Oral-antidiabetic drugs . Inzulin. Long-term complications of diabetes Inflamatory point disease. Rheumatoid arthritis. Systemic connective tissue disease.

Osteoarthrosis. Spinal and back disease. Metabolic disease. Obesity. Hyperlipidemia. Metabolic bone disease. Malabsorption. Disorders of acid-base balance

Literature

- Navrátil L. a kol: Vnitřní lékařství pro nelékařské zdravotnické obory, Grada Publ. 2008
- 3. Češka R. a kol. Interna Praha, Triton 2015, p. 870, ISBN 978-80-7387-423-0
- Souček M., et all: Vnitřní lékařství pro stomatology. Praha. Grada publishing 2005, 380s. ISBN 80-247-1367-5

Teaching methods

Lessons are taking place in blocks of 4 days: Attendance at the practicals is obligatory. Students are working in groups of 5-6 members at the patients bed. In the course of lessons the student go through a practical instruction in specialized clinical departments. The part of tuition are special seminars

Assessment methods

The qualification for getting the credit is active 100% attendance and regularly tested konwledge and skills of students.

aZLVL7X64 Internal Medicine block 4 - practice

Extent and Intensity

0/1/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Miroslav Souček, CSc.
Department of Internal Gastroenterology - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Course objectives

The main objectives of block IV of Internal medicine are to teach these students in form of seminars and practical education basic information about gastroenterologic diseases and hematologic diseases and to stress thair manifestation in oral cavity. The block IV consists of seminars and practical education at the Clinic of Internal Medicine, - Gastroenterology and the Clinic of Internal Medicine Hematooncology.

Learning outcomes

The main outcomes of block IV of Internal medicine are to teach these students in form of seminars and practical education basic information about gastroenterologic diseases and hematologic diseases and to stress thair manifestation in oral cavity. The block IV consists of seminars and practical education at the Clinic of Internal Medicine, - Gastroenterology and the Clinic of Internal Medicine Hematooncology.

Syllabus

- Internal medical education, block IV, for stomatologic students at Clinic of Internal Medicne Hematoonkolgy consists of 2 seminars and practical case presentation in patients. 1. Malignant hematologic diseases and 2. coagulation problems, bleeding disordes and trombophilia. Patients with these diseases will demonstrated to students. At Clinics of Internal Medicine Gastroenterology take block IV for stomatologic students consists of 3 seminars and practical educations on the clinic. The aim of the gastroenterologic educations is to demonstrate the most frekvent diseases of gastrointerinal track.

Literature

- ADAM, Zdeněk, Marta KREJČÍ and Jiří VORLÍČEK. *Hematologie : přehled maligních hematologických nemocí*. 2., dopl. a zcela přeprac. Praha: Grada, 2008. 390 s.,x. ISBN 9788024725024.
- ADAM, Zdeněk and Jiří VORLÍČEK. *Hematologie : pro praktické lékaře*. 1. vyd. Praha: Galén, 2007. 314 s. ISBN 9788072624539.
- DÍTĚ, Petr. *Vnitřní lékařství*. Praha: Galén, 2007. 586 pp.

Teaching methods

exercise, case discussion

Assessment methods

test and credit

aZLVL7X65 Internal Medicine block 5 - practice

Extent and Intensity

0/1/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Miroslav Souček, CSc.
Department of Sports Medicine and Rehabilitation - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The course unit provides detailed information about key diagnostic functional tests in clinical medicine. Students can further understand the human body’s ability to perform exercise, to adapt to stressful conditions, to improve the exercise performance and to evaluate the outcomes. All the topics are presented using a variety of teaching methods, including lectures, seminars, group activities, practical work and a tutorial. All lectures and seminars offer also the comprehensive resource that frames the latest and most significant research findings and makes it easier for students to learn.

Syllabus

- 1. Basic concepts

- - reaction and adaptation to physical stress (aerometabolic capacity - respiration and circulation)
- - energy metabolism and acid-base balance
- 2. Stress tests
- - characteristics, indications and contraindications,
- - stress testing procedure, criteria of evaluation and interpretation
- 3. Fundamentals of exercise therapy and rehabilitation
- - exercise therapy as a part of rehabilitation
- - prescription of exercise therapy

Literature

- PLACHETA, Zdeněk. *Zátěžové vyšetření a pohybová léčba ve vnitřním lékařství*. 1. vyd. Brno: Masarykova univerzita, 2001. 179 s. ISBN 8021026146.
- PLACHETA, Zdeněk, Jarmila SIEGELOVÁ and Miloš ŠTEJFA. *Zátěžová diagnostika v ambulantní a klinické praxi (Exercise testing in patients in clinic and out patients)*. první. Praha: Grada Publishing, 1999. 276 pp. ISBN 80-7169-217-9.

Teaching methods

Classwork is provided by the combined way through presentations, bedside teaching, seminars with the discussion.

Assessment methods

test

YEAR 4 / SEMESTER 8

aZLOC0855c Oral Surgery V - practice

Extent and Intensity

0/1/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Oliver Bulik, Ph.D.
Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine
Contact Person: Blanka Suchá

Course objectives

Investigation of the patient focused on surgical treatment; oncological investigation. Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction. Preprosthetic preparations in the oral

cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations. Temporomandibular joint disorders and diseases; contractures. Cysts in the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes, classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible. Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will be able to use his knowledge for practical surgical treatment of patients in dental surgery.

Learning outcomes

After completing the subject the student is able to:
• be oriented in the treatment of maxillofacial anomalies
• control the basics of diagnosis and therapy of tumors in the orofacial area

Syllabus

- Surgical intervention on teeth, other tissues of the oral cavity and related organs. Rational, most considerate and professional proper waz in searching the disease cause, choice and treatment procedure, after-treatment and preventive measures.
- tooth injuries in adults
- soft tissue injuries of the oral cavity and face
- fractures of the mandible - diagnostics, classification, treatment methods
- diagnostics and classification of the mid-facial third fractures
- rigid osteosynthesis of facial and cranial fractures
- tooth injuries in children
- fracture treatment in edentulous jaws
- fracture healing disorders
- jaw luxation
- multiple injuries

Literature

required literature

- PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600.

not specified

- *Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.
- DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park, IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.

- MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.
- MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha: Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.
- MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.
- TOMAN, Jaroslav and Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.
- KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.
- TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp. i

Teaching methods

practical training

Assessment methods

credit

aZLOC0855p Oral Surgery V - lecture

Extent and Intensity

1/0/0. 2 credit(s). Type of Completion: zk (examination).

Supervisor

doc. MUDr. Oliver Bulik, Ph.D.
Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine
Contact Person: Blanka Suchá

Course objectives

Investigation of the patient focused on surgical treatment; oncological investigation. Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction. Preprosthetic preparations in the oral cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations. Temporomandibular joint disorders and diseases; contractures. Cysts in the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes, classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible. Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will be able to use his knowledge for practical surgical treatment of patients in dental surgery.

Learning outcomes

After completing the subject the student is able to:
• be oriented in the treatment of maxilofacial anomalies
• control the basics of diagnosis and therapy of tumors in the orofacial area

Syllabus

- Surgical intervention on teeth, other tisues of the oral cavity and related organs. Rational, most considerate and professionallz proper waz in searching the disease cause, choice and treatment procedure, after-treatment and preventive measures.
- tooth injuries in adults
- soft tissue injuries of the oral cavity and face
- fractures of the mandible - diagnostics, classification, treatment methods
- diagnostics and classification of the mid-facial third fractures
- rigid osteosynthesis of facial and cranial fractures
- tooth injuries in children
- fracture treatment in edentulous jaws
- fracture healing disorders
- jaw luxation
- multiple injuries

Literature

required literature

- PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600.

not specified

- *Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.
- DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park, IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.
- MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.
- MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha: Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.
- MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.
- TOMAN, Jaroslav and Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.
- KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.

- TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp.

Teaching methods

lectures

Assessment methods

oral exam

aZLPL0865c Prosthodontics in Dentistry V - practice

Extent and Intensity

0/2/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

MUDr. Sonia Bartáková, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Branch content Theoretical knowledges a practical skills at prosthetic dentistry oriented to fixed and partial dentures. Basics aims and content of the subject: Students have knowledges how to produce prosthetic denture and when they can use different types of the dentures.

Learning outcomes

Students can:
- made practically and theoretically normal impressions to the alginate and silicone materials,
- can do preparation on temporary crowns and bridges,
- will know all working phases of crowns and fixed bridges, as well as partly removable and total removable dentures.

Syllabus

- Extent of the subject :: hours per week 3,3, credits 14 4. sem: 0,5 hr. lecture, 1 hr. practise 5. sem: 0,5 hr. lecture, 1 hr. practise 6. sem: 0,5 hr. lecture, 2 hr. practise 7. sem: 0,5 hr. lecture, 4 hr. practise 8. sem: 0,5 hr. lecture, 3 hr. practise 9. sem: 0,5 hr. lecture, 3 hr. practise Lectures: Special dentures. Special preparations.

Literature

recommended literature

- TVRDOŇ, Martin. *Protetická stomatológia, liečba a prevencia*. 1. vyd. Bratislava: Science, 1999. 580 s. ISBN 8096796151.
- SHILLINGBURG, T. Herbert. Fundamentals of Fixed Prosthodontics. 4th Revised

not specified

- SMANIOTTO, Paolo and Alexander BEIKIRCHER. *Aesthetics and techniques for new materials : achieving success for the dental team*. Markham: Palmeri, 2010. 214 s. ISBN 8889626062.
- PHOENIX, Rodney D., David R. CAGNA and Charles F. DEFREEST. *Stewart's clinical removable partial prosthodontics*. 4th ed. Chicago: Quintessence, 2008. ix, 517. ISBN 9780867154856.
- *Contemporary fixed prosthodontics*. Edited by Stephen F. Rosenstiel. 2nd ed. St. Louis: Mosby, 1995. xi, 627. ISBN 0801665280.
- *Color atlas of oral diseases*. Edited by George Laskaris. 2nd rev. ed. Stuttgart: Georg Thieme Verlag, 1994. xiii, 372. ISBN 3-13-717002-8.
- GRABER, George, Urs HAENSLER and Peter WIEHL. *Removable partial dentures*. Translated by Richard Jacobi. 1st ed. Stuttgart: Georg Thieme Verlag, 1988. vii, 216. ISBN 3137110017.

Teaching methods

practical training

Assessment methods

credit

aZLPL0865p Prosthodontics in Dentistry V - lecture

Extent and Intensity

1/0/0. 3 credit(s). Type of Completion: zk (examination).

Supervisor

MUDr. Sonia Bartáková, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The object is to teach students to patients with complicated health conditions, cleft palates, the total after cancer treatment, and patients with implants.

Learning outcomes

Student
- learn how to do design different types of treatment to patients with complicated health conditions, cleft palates, the total after cancer treatment.
- will know how to do open and close impression technique for pants with dental implants.

Syllabus

- Extent of the subject :: hours per week 3,3, credits 14 4. sem: 0,5 hr. lecture, 1 hr. practise 5. sem: 0,5 hr. lecture, 1 hr. practise 6. sem: 0,5 hr. lecture, 2 hr. practise 7. sem: 0,5 hr. lecture, 4 hr. practise 8. sem: 0,5 hr. lecture, 3 hr. practise 9. sem: 0,5 hr. lecture, 3 hr. practise Lectures: Special dentures. Special prepararations.

Literature

- SHILLINGBURG, Herbert T. *Fundamentals of Fixed Prosthodontics*. Illustrated by Suzan E. Stone. 4th ed. Chicago: Quintessence Pub., 2012. x, 574. ISBN 9780867154757.
- SMANIOTTO, Paolo and Alexander BEIKIRCHER. *Aesthetics and techniques for new materials : achieving success for the dental team*. Markham: Palmeri, 2010. 214 s. ISBN 8889626062.
- *Contemporary fixed prosthodontics*. Edited by Stephen F. Rosenstiel. 2nd ed. St. Louis: Mosby, 1995. xi, 627. ISBN 0801665280.
- GRABER, George, Urs HAENSLER and Peter WIEHL. *Removable partial dentures*. Translated by Richard Jacobi. 1st ed. Stuttgart: Georg Thieme Verlag, 1988. vii, 216. ISBN 3137110017.

Teaching methods

lecture

Assessment methods

exam

aZLOR0843c Orthodontics III - practice

Extent and Intensity

0/2/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Pavlína Černochová, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Aims are:
- to describe and to explain aetiology, prevention, prophylaxis and treatment of particular anomalies
- to substantiate of suitable treatment method with respect to patient age
- to perform diagnostic analysis and to decide on need for orthodontic extractions

Learning outcomes

Students are able:
- to describe and to explain aetiology, prevention, prophylaxis and treatment of particular anomalies
- to substantiate of suitable treatment method with respect to patient age
- to perform diagnostic analysis and to decide on need for orthodontic extractions

Syllabus

- The aim of this subject is improvement of acquired orthodontic knowledge. Special emphasis is given to obtaining of complex knowledge about particular anomalies, such as II. and III. Angle class anomalies, open and deep bite, transversal anomalies, crowding, skeletal anomalies, anomalie of single teeth. Students will obtain information about planning of orthodontic treatment including extraction treatment. Students assist in orthodontic treatment. Students take impressions of patients.

Literature

- KOŤOVÁ, Magdalena. *Ortodontický průvodce praktického zubního lékaře*. 1. vyd. Praha: Grada, 2006. 114 s. ISBN 8024713055.
- PROFFIT, William R., Raymond P. WHITE and David M. SARVER. *Contemporary treatment of dentofacial deformity*. 1st ed. St. Louis: Mosby, 2003. 751 s. ISBN 9788131214657.
- KOŤOVÁ, Magdalena. *Snímací ortodontické přístroje*. 1. vyd. Praha: Grada Publishing, 1999. 68 s. ISBN 8071698229.
- KAMÍNEK, Milan and Marie ŠTEFKOVÁ. *Ortodoncie.* 1. vyd. Olomouc: Univerzita Palackého - Lékařská fakulta, 1991. 68 s. ISBN 80-7067-996-4.
- KAMÍNEK, Milan and Marie ŠTEFKOVÁ. *Ortodoncie I*. 1. vyd. Praha: Státní pedagogické nakladatelství, 1990. 76 s.

Teaching methods

practical training. Practical training (about 50 % of the total volume of teaching) is complemented by a comprehensive range of simulation teaching methods on simulators with varying degrees of fidelity, trainers and virtual patients. Most of them are equipped with a DentSim software system that allows for every step of preparation, including feedback and test, and objective assessment of the student's work. Dental microscopes, CAD / CAM technologies, simulated X-ray teaching and other modern teaching aids are also used. Emphasis is also placed on the development of soft skills, incl. so-called "21st century skills", particularly communication, decision-making skills, critical thinking, crisis communication and teamwork.

Assessment methods

class discussion credit. Practical skills will be verified using the Dentsim software system. The course will also focus on the development of the ability to orientate in auxiliary investigative methods, their interpretation, critical thinking and teamwork. This way of evaluating gives students an objective and specific feedback.

aZLOR0843p Orthodontics III - lecture

Extent and Intensity

1/0/0. 0 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Pavlína Černochová, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The aim of this subject is improvement of acquired orthodontic knowledge. Special emphasis is given to obtaining of complex knowledge about particular anomalies, such as II. and III. Angle class anomalies, open and deep bite, transversal anomalies, crowding, skeletal anomalies, anomalie of

single teeth. Students will obtain information about planning of orthodontic treatment including extraction treatment.

Learning outcomes

Students are able:
- to describe and to explain aetiology, prevention, prophylaxis and treatment of particular anomalies
- to substantiate of suitable treatment method with respect to patient age
- to perform diagnostic analysis and to decide on need for orthodontic extractions

Syllabus

- Lecture topics: surgical-orthodontic treatment of great skeletal anomalies, anomalies of tooth and jaws, adverse effects of orthodontic treatment, adult orthodontic treatment, retention as a part of orthodontic treatment.

Literature

- KOŤOVÁ, Magdalena. *Ortodontický průvodce praktického zubního lékaře*. 1. vyd. Praha: Grada, 2006. 114 s. ISBN 8024713055.
- PROFFIT, William R., Raymond P. WHITE and David M. SARVER. *Contemporary treatment of dentofacial deformity*. 1st ed. St. Louis: Mosby, 2003. 751 s. ISBN 9788131214657.
- KOŤOVÁ, Magdalena. *Snímací ortodontické přístroje*. 1. vyd. Praha: Grada Publishing, 1999. 68 s. ISBN 8071698229.
- KAMÍNEK, Milan and Marie ŠTEFKOVÁ. *Ortodoncie.* 1. vyd. Olomouc: Univerzita Palackého - Lékařská fakulta, 1991. 68 s. ISBN 80-7067-996-4.
- KAMÍNEK, Milan and Marie ŠTEFKOVÁ. *Ortodoncie I*. 1. vyd. Praha: Státní pedagogické nakladatelství, 1990. 76 s.

Teaching methods

lectures

Assessment methods

discussion during lectures

aZLPD0833c Periodontology III - practice

Extent and Intensity

0/2/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

MUDr. Hana Poskerová, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The main goals are:
- to teach the student communication with the patient
- finding history (personal, medical, allergic, dental)
- periodontal examination (indexes PBI, API, CPITN, BOP, description of gingiva, gingival recessions, periodontal pockets, attachment of upper and lower frenulas, examination of occlusion)
- examination of oral mucous membranes

Learning outcomes

Student will be able:
- to find important anamnestic data from the patient
- motivate, educate and instruct oral hygiene at the patient
- to perform a comprehensive periodontal examination (see above)
- to perform basic periodontal activities (removal of supragingival calculus, teeth polishing)
- to do an examination record in the card and establish the treatment plan.

Syllabus

- - periodontal examination (CPITN, PBI, BOP, see above) - description of the X-ray image - the periodontal instruments - classification of perio diseases - clinical signs of perio diseases: gingivitis, periodontitis, atrophy of periodontium - diagnosis of perio diseases and determination of the treatment plan - hygienic instruction - calculus removement and scaling and root planning - periodontal surgary - prosthetic reconstruction at periodontal compromised teeth, splinting.

Literature

- SLEZÁK, Radovan. *Preklinická parodontologie*. 1. vyd. Hradec Králové: Nucleus HK, 2007. 77 s. ISBN 9788087009185.
- STAROSTA, Martin. *Plastická chirurgie parodontu*. 1. vyd. Olomouc: Univerzita Palackého, 2003. 114 s. ISBN 8024406640.
- HELLWIG, Elmar, Joachim KLIMEK and Thomas ATTIN. *Záchovná stomatologie a parodontologie*. Translated by Jan Streblov. 1. vyd. Praha: Grada, 2003. 331 s. ISBN 8024703114.
- MUTSCHELKNAUSS, Ralf E. *Praktická parodontologie : klinické postupy*. Edited by Jan Lindhe. [1. vyd.]. Praha: Quintessenz, 2002. 532 s. ISBN 8090211887.
- STAROSTA, Martin and Hana ADÁMKOVÁ. *Repetitorium parodontologie*. 1. vyd. Olomouc: Univerzita Palackého v Olomouci, 2002. 42 s. ISBN 8024405741.
- FASSMANN, Antonín. *Řízená tkáňová a kostní regenerace ve stomatologii (Controlled tissue and bone regeneration in dentistry)*. I. Praha: Grada Publishing a.s., 2002. 199 pp. Avicenum. ISBN 80-247-0316-5.
- *Praktická parodontologie*. Edited by Radovan Slezák. [1. vyd.]. Praha: Quintessenz, 1995. 148 s. ISBN 80-901024-8-4.

Teaching methods

practical training

Assessment methods

- credit, 100% attendance at practical trainings - discussions at practical trainings - record from practice

aZLPD0833p Periodontology III - lecture

Extent and Intensity

1/0/0. 3 credit(s). Type of Completion: zk (examination).

Supervisor

MUDr. Hana Poskerová, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The main goals are:
- to teach the student communication with the patient
- finding history (personal, medical, allergic, dental)
- periodontal examination (indexes PBI, API, CPITN, BOP, description of gingiva, gingival recessions, periodontal pockets, attachment of upper and lower frenulas, examination of occlusion)
- examination of oral mucous membranes

Learning outcomes

Student will be able:
- to find important anamnestic data from the patient
- motivate, educate and instruct oral hygiene at the patient
- to perform a comprehensive periodontal examination (see above)
- to perform basic periodontal activities (removal of supragingival calculus, teeth polishing)
- to do an examination record in the card and establish the treatment plan.

Syllabus

- - periodontal examination (CPITN, PBI, BOP, see above) - description of the X-ray image - the periodontal instruments - classification of perio diseases - clinical signs of perio diseases: gingivitis, periodontitis, atrophy of periodontium - diagnosis of perio diseases and determination of the treatment plan - hygienic instruction - calculus removement and scaling and root planning - periodontal surgary - prosthetic reconstruction at periodontal compromised teeth, splinting.

Literature

- Repetitorium onemocnění sliznic dutiny ústní (vybrané kapitoly), 2003-Hollá,L.,Fassmann,A.
- CLEREHUGH, V. *Periodontology at a Glance*. : Wiley, 2009.
- *Clinical Periodontology and Implant Dentistry.* Edited by Niklaus P. Lang - Jan Lindhe. Oxford: Blackwell Munksgaard, 2008. xx, 574-13. ISBN 9781405160995.

- SLEZÁK, Radovan. *Preklinická parodontologie*. 1. vyd. Hradec Králové: Nucleus HK, 2007. 77 s. ISBN 9788087009185.
- WOLF, Herbert F. and Thomas M. HASSELL. *Color atlas of dental hygiene : periodontology*. 1st ed. Stuttgart: Thieme, 2006. xi, 339. ISBN 1588904407.
- FASSMANN, Antonín. *Kostní tkáňové inženýrství v orofaciální oblasti (Bone Tissue engineering in orofacial area)*. 1. vyd. Hradec Králové: Nucleus HK, 2006. 105 pp. edice zubního lékařství. ISBN 80-86225-82-8.
- SLEZÁK, Radovan and Ivo DŘÍZHAL. *Atlas chorob ústní sliznice*. 1. vyd. Praha: Quintessenz, 2004. 336 s. ISBN 8090318150.
- MUELLER, H P. *Periodontology - The Essentials*. Stuttgart: Thieme, 2004.
- HELLWIG, Elmar, Joachim KLIMEK and Thomas ATTIN. *Záchovná stomatologie a parodontologie*. Translated by Jan Streblov. 1. vyd. Praha: Grada, 2003. 331 s. ISBN 8024703114.
- MUTSCHELKNAUSS, Ralf E. *Praktická parodontologie : klinické postupy*. Edited by Jan Lindhe. [1. vyd.]. Praha: Quintessenz, 2002. 532 s. ISBN 8090211887.
- FASSMANN, Antonín. *Řízená tkáňová a kostní regenerace ve stomatologii (Controlled tissue and bone regeneration in dentistry)*. I. Praha: Grada Publishing a.s., 2002. 199 pp. Avicenum. ISBN 80-247-0316-5.
- SLEZÁK, Radovan. *Infekční choroby ústní sliznice*. 1. vyd. Praha: Grada, 1997. 166 s. ISBN 8071692212.

Teaching methods

lectures

Assessment methods

exam subject is completed by an oral examination, condition for participation at the exam is passing the course-unit credit of periodontology 1,2,3 - practical trainings

aZLCH0833c Surgery III - practice

Extent and Intensity

0/2/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Ivan Čapov, CSc.
First Department of Surgery - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The tuition in the 8th term is focused on the general surgery in its whole extent, Classwork is provided by the combined way through presentations, bedside teaching, seminars with the discussion.

Learning outcomes

After passing the three-semester subject the student will:
- know anatomy of head, neck and chest, including topographic anatomy.
- know the diseases in the individual areas and to diagnose them.
- know the traumatology issues in this area.
- be capable of differential diagnosis of diseases in the three areas and knowledge of the treatment of these diseases.
- be able to handle theoretically the bleeding in the head and neck areas, to know the basics of tissue suturing and the basics of anesthesia.
- be aware of general surgery in its whole entirety

Syllabus

- Hernias
- Stomach and Duodenum
- Liver and biliary system
- Pancreas, Spleen
- Small intestine
- Colon, rectum & anus
- Acute Abdomen
- Traumatology (spine, pelvis)
- Coxa, proximal femur
- Diaphysis, distal femur
- Knee, leg shin and calf)
- Ankle, foot

Literature

- HOCH, Jiří and Jan LEFFLER. *Speciální chirurgie : učebnice pro lékařské fakulty*. 2. vyd. Praha: Maxdorf, 2003. 224 s. ISBN 8085912066.
- ZEMAN, Miroslav. *Speciální chirurgie*. 1. vyd. Praha: Galén, 2000. 575 s. ISBN 8072620932.

Teaching methods

The teaching is realized through presentations and following discussions, with the practical bedside demonstrations.

Assessment methods

The credit is given if the full attendance in lessons is fulfiled. The 8th term is terminated by the exam in surgery. Exam consist of practical (clinical case, case history, case analysis) and theoretical part.

aZLCH0833p Surgery III - lecture

Extent and Intensity

1/0/0. 3 credit(s). Type of Completion: zk (examination).

Supervisor

prof. MUDr. Ivan Čapov, CSc.
First Department of Surgery - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine
Contact Person: doc. MUDr. Lenka Veverková, Ph.D.

Course objectives

Main objectives of this lecture is to introduce the basic information about acute abdomen, vascular surgery and complete traumatology - incidence rate, etiology, patogenesis, diagnosis, treatment, prognosis.

Learning outcomes

After passing the three-semester subject the student will:
- know anatomy of head, neck and chest, including topographic anatomy.
- know the diseases in the individual areas and to diagnose them.
- know the traumatology issues in this area.
- be capable of differential diagnosis of diseases in the three areas and knowledge of the treatment of these diseases.
- be able to handle theoretically the bleeding in the head and neck areas, to know the basics of tissue suturing and the basics of anesthesia.
- be aware of general surgery in its whole entirety

Syllabus

- Acute abdomen I
- Acute abdomen II
- Cardiovascular surgery I
- Cardiovascular surgery II
- Traumatology I-IV

Literature

- HOCH, Jiří and Jan LEFFLER. *Speciální chirurgie : učebnice pro lékařské fakulty*. 1. vyd. Praha: MAXDORF-JESSENIUS, 2001. 224 s. ISBN 8085912449.
- ZEMAN, Miroslav. *Speciální chirurgie*. 1. vyd. Praha: Galén, 2000. 575 s. ISBN 8072620932.

Teaching methods

lecture

Assessment methods

The lectures from surgery are not classified. The 8th semester is terminated by the exam from surgery, which consists of 2 parts: practical(clinical investigation of the patient, case history, patients record, patients case) and the theoretical part.

aZLFT0811c Physiotherapy and Exercise Therapy Programme - practice

Extent and Intensity

0/0.7/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Jarmila Siegelová, DrSc.
Department of Physioterapy and Rehabilitation - Departments of Non-medical Branches - Faculty of Medicine

Course objectives

The course is focused on the diagnostics and physiotherapy of disorders in the area of head and neck, especially on functional disorders of the temporo-mandibular junction, chewing muscles and upper cervical spine, disorder of nerve facialis. Neurophysiological methods and reflex therapy is also used.

Learning outcomes

Student knows after completing the subject:
- basics of diagnostics and treatment in the field of physiotherapy, balneotherapy and therapeutic rehabilitation
- basic physiotherapy procedures
- selected special methods of treatment of functional disorders
- diagnosis and rehabilitation treatment of head and neck disorders, especially functional disorders of the temporomandibular joint, chewing muscles and upper cervical spine, innervation of n. facialis

Syllabus

- Physiotherapy as a term – definition, tasks, goals, history, parts of clinical rehabilitation
- International classification – disorders – handicaps, limits – disability, handicap
- Stages of prevention – primary, secondary, tertiary
- Clinical rehabilitation and its forms – therapeutic, social, occupational therapy, psychological, pedagogical
- Clinical rehabilitation – therapeutic exercise, occupational therapy
- Clinical rehabilitation – tools and methods – therapeutical tools – flexibility therapeutic exercise / therapy – physical therapy, occupational therapy, balneo-therapy and climatic therapy, psychotherapy – the most used examination methods in therapeutic rehabilitation –

case history, motion (active, passive), motion extent (goniometry), muscle power (muscle testing), testing of rest motion functions

- Team of clinical rehabilitation
- Clinical rehabilitation as team work, members of the team, status of physiotherapist
- Clinical rehabilitation in a hospital, rehabilitation institutes, outpatient rehabilitation
- Physiotherapy in spa, clinical rehabilitation process and program, documentation in rehabilitation

Literature

- KOLÁŘ, Pavel and Miloš MÁČEK. *Základy klinické rehabilitace*. První vydání. Praha: Galén, 2015. 167 stran. ISBN 9788074922190.
- VOTAVA, Jiří. *Ucelená rehabilitace osob se zdravotním postižením*. 1. vyd. Praha: Karolinum, 2005. 207 s. ISBN 8024607085.

Teaching methods

seminar

Assessment methods

oral exam

aZLFT0811p Physiotherapy and Exercise Therapy Programme - lecture

Extent and Intensity

0.3/0/0. 2 credit(s). Type of Completion: k (colloquium).

Supervisor

prof. MUDr. Petr Dobšák, CSc.
Department of Physioterapy and Rehabilitation - Departments of Non-medical Branches - Faculty of Medicine
Contact Person: prof. MUDr. Jarmila Siegelová, DrSc.

Course objectives

The course is focused on the diagnostics and physiotherapy of disorders in the area of head and neck, especially on functional disorders of the temporo-mandibular junction, chewing muscles and upper cervical spine, disorder of nerve facialis. Neurophysiological methods and reflex therapy is also used.

Learning outcomes

Student knows after completing the subject:
- basics of diagnostics and treatment in the field of physiotherapy, balneotherapy and therapeutic rehabilitation
- basic physiotherapy procedures
- selected special methods of treatment of functional disorders

- diagnosis and rehabilitation treatment of head and neck disorders, especially functional disorders of the temporomandibular joint, chewing muscles and upper cervical spine, innervation of n. facialis

Syllabus

- Physiotherapy as a term – definition, tasks, goals, history, parts of clinical rehabilitation
- International classification – disorders – handicaps, limits – disability, handicap
- Stages of prevention – primary, secondary, tertiary
- Clinical rehabilitation and its forms – therapeutic, social, occupational therapy, psychological, pedagogical
- Clinical rehabilitation – therapeutic exercise, occupational therapy
- Clinical rehabilitation – tools and methods – therapeutical tools – flexibility therapeutic exercise / therapy – physical therapy, occupational therapy, balneo-therapy and climatic therapy, psychotherapy – the most used examination methods in therapeutic rehabilitation – case history, motion (active, passive), motion extent (goniometry), muscle power (muscle testing), testing of rest motion functions
- Team of clinical rehabilitation
- Clinical rehabilitation as team work, members of the team, status of physiotherapist
- Clinical rehabilitation in a hospital, rehabilitation institutes, outpatient rehabilitation
- Physiotherapy in spa, clinical rehabilitation process and program, documentation in rehabilitation

Literature

- KOLÁŘ, Pavel and Miloš MÁČEK. *Základy klinické rehabilitace*. První vydání. Praha: Galén, 2015. 167 stran. ISBN 9788074922190.
- VOTAVA, Jiří. *Ucelená rehabilitace osob se zdravotním postižením*. 1. vyd. Praha: Karolinum, 2005. 207 s. ISBN 8024607085.

Teaching methods

lecture

Assessment methods

oral exam

aZLNE0811c Neurology - practice

Extent and Intensity

0/2/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Irena Rektorová, Ph.D.
First Department of Neurology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

At the end of the course students should be able to: understand and explain the basics and principles of neurology; work with information on the neurological examination to create the symptoms, syndromes of the neurological disorders; make reasoned decisions about the topical diagnosis and differential diagnosis based on the symptomatology. make deductions based on acquired knowledge in the field of neurology interpret paraclinical examinations.

Learning outcomes

At the end of the course students should be able to:
- understand and explain the basics and principles of neurology;
- work with information on the neurological examination to create the symptoms, syndromes of the neurological disorders;
- make reasoned decisions about the topical diagnosis and differential diagnosis based on the symptomatology.
- make deductions based on acquired knowledge in the field of neurology
- interpret paraclinical examinations.

Syllabus

- General neurology, day 1 and 2. neurological syndromology and neurological evaluation. The practical lectures in the lecture hall and bedside examination of the patients. Day 1. neurological history taking. Reflexology. Palsies, pyramidal signs, cranial nerves examination. Sesnzitivity and its affections.. Day 2. Extrapyramidal and cerebellar signs. Spine examination. Disorders of the stance and walking. Meningeal syndrome. Uncousciosness. Special Neurology Day 3-5. Focus on main nosological units and syndromes in neurology. The practical lectures in the lecture hall and bedside examination of the patients. Day 3. Neurological examination and notes. neurological diagnosis, stroke. Day 4. Epilepsy, tumours, vertebrogenic disorders, movement disorders, headache, dementia. Day 5. Neuromuscular disorders, critical illness patient. Classified credit (practical exam with written neurological examation of the patient).

Literature

required literature

- *Učebnice speciální neurologie*. Edited by Zdeněk Kadaňka. 3., přeprac. vyd. Brno: Masarykova univerzita, 2010. 302 s. ISBN 9788021053205.
- ŠTOURAČ, Pavel, Josef BEDNAŘÍK, Milan BRÁZDIL, Zdeněk KADAŇKA, Petr KAŇOVSKÝ, Marek MECHL, Jiří PRÁŠEK, Ivan REKTOR, Irena REKTOROVÁ and Radomír ŠLAPAL. *Učebnice obecné neurologie (Textbook of General Neurology)*. 2., přepracované. Brno: Masarykova universita v Brně, 2003. 197 pp. ISBN 80-210-3309-6.
- ŠPINAR, Jindřich and Ondřej LUDKA. *Propedeutika a vyšetřovací metody vnitřních nemocí*. 2., přeprac. a dopl. vyd. Praha: Grada, 2013. 336 s. ISBN 9788024743561.

recommended literature

- John Morris, Joseph Jankovic: Neurological Clinical Examination, Hodler Arnold Co, 2012
- International Neurology: A clinical approach: by Robert P. LIsak, Daniel D Truong, William M Carroll, Roongroj Bhidayasiri, Blackwell Publishing Ltd 2010, ISBN 9781444317008
- Merritt's Neurology, 13th Edition is edited by by Elan D. Louis MD MS (Author), Stephan A. Mayer MD (Author), Lewis P. Rowland MD (Author) ISBN-13: 978-1451193367, ISBN-10: 145119336X
- *Učebnice speciální dětské neurologie : pro studenty 4. a 5. ročníku LF MU s rozšířenou výukou pediatrie (Special Pediatric Neurology for students of the 4th and 5th years, Medical Faculty, Masaryk University, with extended education in pediatrics)*. Edited by Hana Ošlejšková. 1. vyd. Brno: Masarykova univerzita, 2011. 123 s. ISBN 9788021056596.

Teaching methods

internship, seminars

Assessment methods

credit, classfied. Oral exam.

aZLNE0811p Neurology - lecture

Extent and Intensity

1/0/0. 3 credit(s). Type of Completion: zk (examination).

Supervisor

prof. MUDr. Irena Rektorová, Ph.D.
First Department of Neurology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

At the end of the course students should be able to: understand and explain syndromological diagnosis based on various neurological symptoms. work with information on neurology to make correct topical diagnosis to create differential diagnosis; make reasoned decisions about diagnosis make deductions based on acquired knowledge in the field of neurology

Learning outcomes

At the end of the course students should be able to:
- understand and explain syndromological diagnosis based on various neurological symptoms.
- work with information on neurology to make correct topical diagnosis
- create differential diagnosis;
- make reasoned decisions about diagnosis
make deductions based on acquired knowledge in the field of neurology

Syllabus

- Oral lectures on different and updated topics in neurology: Neurological complications of spondylosis Epilepsy Subarachnoid hemorrhage Behavioral Neurology Stroke Parkinsons

disease Migraine Myasthenia gravis Autoimmune neuropathies Multiple sclerosis Developmental Neurology Dementia Brain Tumors Pain

Literature

required literature

- ŠTOURAČ, Pavel, Josef BEDNAŘÍK, Milan BRÁZDIL, Zdeněk KADAŇKA, Petr KAŇOVSKÝ, Marek MECHL, Jiří PRÁŠEK, Ivan REKTOR, Irena REKTOROVÁ and Radomír ŠLAPAL. *Učebnice obecné neurologie (Textbook of General Neurology)*. 2., přepracované. Brno: Masarykova universita v Brně, 2003. 197 pp. ISBN 80-210-3309-6.
- *Učebnice speciální neurologie*. Edited by Zdeněk Kadaňka. 3., přeprac. vyd. Brno: Masarykova univerzita, 2010. 302 s. ISBN 9788021053205.
- ŠPINAR, Jindřich and Ondřej LUDKA. *Propedeutika a vyšetřovací metody vnitřních nemocí*. 2., přeprac. a dopl. vyd. Praha: Grada, 2013. 336 s. ISBN 9788024743561.

recommended literature

- International Neurology: A clinical approach: by Robert P. LIsak, Daniel D Truong, William M Carroll, Roongroj Bhidayasiri, Blackwell Publishing Ltd 2010, ISBN 9781444317008
- Merritt's Neurology, 13th Edition is edited by by Elan D. Louis MD MS (Author), Stephan A. Mayer MD (Author), Lewis P. Rowland MD (Author) ISBN-13: 978-1451193367, ISBN-10: 145119336X
- John Morris, Joseph Jankovic: Neurological Clinical Examination, Hodler Arnold Co, 2012
- *Učebnice speciální dětské neurologie : pro studenty 4. a 5. ročníku LF MU s rozšířenou výukou pediatrie (Special Pediatric Neurology for students of the 4th and 5th years, Medical Faculty, Masaryk University, with extended education in pediatrics)*. Edited by Hana Ošlejšková. 1. vyd. Brno: Masarykova univerzita, 2011. 123 s. ISBN 9788021056596.

Teaching methods

lectures

Assessment methods

credit, classified oral exam

aZLOL0811c Ophthalmology - practice

Extent and Intensity

0/1/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Eva Vlková, CSc.
Department of Ophthalmology and Optometry - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine
Contact Person: prof. MUDr. Eva Vlková, CSc.

Course objectives

The aim of subject is the understading and application of diagnostic examination methods in ophthalmology and the understading of treatment procedures essential for the doctor of dental medicine.

Learning outcomes

Student will be able to:

Syllabus

- The 1day Introduction, the ophthalmology and relation of ophthalmology to other omedical fields, the review of anatomy and physiology of the eye and the orbit, practical lesson –basic examintaion ethods in ophthalmology. The 2day The diseases of the orbit, the diagnosis and therpy of orbital diseases, practical lesson- exophtalmometry, sonography of the orbit and the eye, diseases of conjunctiva, corneae, lens and uvea, diffrential diagnosis of the red eye, demonstration of patients. The 3day Glaucoma-diagnosis,therapy, diseases of retina, ocular and orbital trauma, practical lesson- intraocular pressure measurement, perimetry, ophthalmoscopy, demonstration of patients.

Literature

- Kanski, J.: Clinical Ophtalmology 5th ed., Butterrworth-Heineman 2003, ISBN 07506554410
- Myron Yanoff, Ben S. Fine Ocular Pathology ISBN: 0323014038 Rok vydání: 2002
- ROZSÍVAL, Pavel. *Oční lékařství*. Vyd. 1. Praha: Karolinum, 2006. 373 s. ISBN 8024612135.
- LANG, Gerhard K. *Ophthalmology : a short textbook*. 1st ed. Stuttgart: Thieme, 2000. xviii, 586. ISBN 3131261617.
- KRAUS, Hanuš. *Kompendium očního lékařství*. Vyd. 1. Praha: Grada, 1997. 341 s. ISBN 8071690791.

Teaching methods

practical lessons

Assessment methods

Class discussion on the base of materials in the textbook. Giving the course-unit credit is conditioned by full atendance in the lessons.

aZLRK0811c Restorative Dentistry - Tooth Crown Reconstruction - practice

Extent and Intensity

0/2/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Lenka Roubalíková, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Reconstructions of crowns of vital as well as non vital teeth using direct and indirect techniques.Adhesive cementation.

Learning outcomes

Students are able to indicate and practise reconstructions of crowns of vital as well as non vital teeth using direct and indirect techniques.They can prepare teeth for all kinds of plastic reconstructions and choose the right material. They are able to prepare teeth for all kinds of inlays. They are well oriented in adhesive cementation.

Syllabus

- Investigation of patients,diagnosis, possibilities of reconstructions in particular cases
- Plastic reconstruction using amalgam
- Plastic reconstruction using composite
- Using of FRC post with a composite reconstruction
- Preparation for inlay, impression technique
- Adhesive cementation, model situation, focused on practical fabrication of composite inlays with discussion

Literature

recommended literature

- Jordi Manuata, Anne Salat. Layers: An atlas of composite stratification. 2012
- Sturdevant, C. M.:Art of Science of Operative Dentistry, 2002, Mosby.

Teaching methods

Practical training.Investigation of patients,diagnosis, possibilities of reconstructions in particular cases

Assessment methods

Credit.

aZLRK0811p Restorative Dentistry - Tooth Crown Reconstruction - lecture

Extent and Intensity

1/0/0. 0 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Lenka Roubalíková, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Students get theoretical basis of tooth reconstruction using various materials and technologies

Learning outcomes

Students are able to indicate and practise reconstructions of crowns of vital as well as non vital teeth using direct and indirect techniques.They can prepare teeth for all kinds of plastic reconstructions and choose the right material. They are able to prepare teeth for all kinds of inlays. They are well oriented in adhesive cementation

Syllabus

- Loss of hard tooth tissues, congenital and acquired defects
- Direct reconstructions of vital teeth: choice of materials
- possibilities of treatment using plastic materials
- Reconstruction of nonvital teeth I.Direct reconstructions without posts
- Reconstruction of nonvital teeth IIDirect reconstructions with posts. Inlay systems: division, indications, contraindications. Cast inlays. Composite inlays: preparation, procedure of their making. Ceramic materialsand indirect reconstructions.

Literature

- Sturdevant, C. M.:Operative Dentistry, 2002, Mosby.
- Schmidseder, J.: Aesthetic Dentistry, 2000, Thieme Stuttgart.
- Jordi Manuata, Anne Salat. Layers: An atlas of composite stratification. 2012

Teaching methods

Lecture

Assessment methods

Final discussion

aZLED0811c Restorative Dentistry - Endodontics II - practice

Extent and Intensity

0/2/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Lenka Roubalíková, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Fundaments of power driven endodontics. Indications for condensation techniques of root canal filling. Materials, equipment, devices. Thermocondensation techniques.

Learning outcomes

After completion of the course students are able to shape root canal using power driven instruments and fill it using vertical compaction technique.

Syllabus

- Practical training - syllabus: Machine treatment of root canal. Repeated endodontic therapy. Techniques of root canal filling: lateral technique. Thermocondensation techniques of root canal filling.

Literature

recommended literature

- *PDQ endodontics*. Edited by John Ide Ingle. 2nd ed. Shelton, CT: People's Medical Publishing House--USA, 2009. xxviii, 33. ISBN 1607950367.
- *Cohen's Pathways of the Pulp Expert Consult*. Edited by Kenneth M. Hargreaves - Louis H. Berman - Ilan Rotstein. Eleventh edition. St. Louis, Mo.: Elsevier, 2016. xiii, 907. ISBN 9780323096355.

Teaching methods

Practical training

Assessment methods

Credit.

aZLED0811p Restorative Dentistry - Endodontics II - lecture

Extent and Intensity

1/0/0. 3 credit(s). Type of Completion: zk (examination).

Supervisor

doc. MUDr. Lenka Roubalíková, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Widening of knowledge on the field of power driven endodontics, thermocondensation techniques of root canal filling and microscopic endodontics.

Learning outcomes

At the end of the course students understand power driven endodontics using rotary and reciprocating techniques. They are able to fill the root canal system using thermocondensation techniques. They have basic knowledge of microscopic endodontics.

Syllabus

- Lectures: Endodontics II Power driven treatment of root canal I.Rotary instruments. Machine treatment of root canal II.Reciprocating instruments. Reendodontic therapy, indications,

realisation. Scheme of endodontic therapy (indication, contraindications for canal treatment, indication for root canal revision). Root filling materials. Techniques of root canal filling: classification, material equipment, devices. Lateral and vertical condensation techniques. Thermocondensation machined techniques: lateral thermocondensation, McSpaden technique, Thermafil, injection technique. Surgical methods complementary to endodontic therapy. Microscope in endodontics.

Literature

recommended literature

- INGLE, John Ide and Leif K. BAKLAND. *Endodontics*. 5th ed. Hamilton: BC Decker, 2002. xvii, 974. ISBN 1550091883.
- *Cohen's Pathways of the Pulp Expert Consult*. Edited by Kenneth M. Hargreaves - Louis H. Berman - Ilan Rotstein. Eleventh edition. St. Louis, Mo.: Elsevier, 2016. xiii, 907. ISBN 9780323096355.

Teaching methods

Lecture

Assessment methods

Oral exam

aZLDL0821p Pediatric Dentistry I - lecture

Extent and Intensity

1/0/0. 2 credit(s). Type of Completion: zk (examination).

Supervisor

prof. MUDr. Martina Kukletová, CSc.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Short annotation of the subject: Branch content: Education of restorative dentistry, prosthetics, surgery, periodontics and preventive dentistry regarding childhood differences from birth to adolescence. Regarding specialities of permanent or primary dentition treatment as well as child mental development. Basics of orthodontic diagnostic. Basic aims of subject education: To teachs students psychological approach to children and proper selection of treatment method and material for both primary and pernament dentition in children. Emphasis is on regarding age differences,development of orofacial system and system approach to organism. Subject content: Education is aimed on child exploration, X-rays examination ad various X-rays techniques assessment, communication with the child, ways of caries prevention, caries treatmet both in primary and permanent dentition, regarding of tooth development stages, endodontics both in temporary and pernament dentition. Attendance of dental injuries, possibilities and fundamentals of prosthetic reconstruction, periodontics and oral mucous membrane diseases. Surgical treatment of children is also educated.

Learning outcomes

Student will after finishing the course:
- obtain basis of treatment in children in operative dentistry, endodontics, prosthetic dentistry, periodontology and oral surgery.
- be acquainted wit teeth defects and their treatment in primary and permanent dentition.

Syllabus

- Pediatric dentistry - introduction, treatment philosophy. Fluorides in caries prevention. Psychological approach to patients in pediatric dentistry. Management of anxious patients. Restorative materials in pediatric dentistry. Calcium hydroxide in pediatric dentistry. Anomalies of the tooth development. Caries in the deciduous dentition and in permanent teeth with incompletely formed apices. Dental pulp diseases in deciduous dentition, diagnosis, treatment procedures. Dental pulp diseases in permanent teeth with incompletely formed apices. Diagnosis, treatment procedures. Prosthetics in pediatric dentistry. Diseases of the periodontium affecting infants and children. Injuries of dental hard tissues, diagnosis, treatment procedures. Injuries of periodontal ligament, diagnosis, treatment procedures. Anesthesia in pediatric dentistry. Basic surgical interventions in children age. Child in the stomatological surgery. X-ray in pediatric dentistry.

Literature

- *The art and science of operative dentistry*. Edited by Clifford M. Sturdevant - Theodore M. Roberson. 3rd ed. St. Louis: Mosby, 1995. xxi, 824 s. ISBN 0-8016-6366-0.

Teaching methods

lecture

Assessment methods

oral exam

YEAR 5 / SEMESTER 9

ZLPL0966c Prosthetic Dentistry VI - practice

Extent and Intensity

0/4/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

MUDr. Sonia Bartáková, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Branch content Theoretical knowledges a practical skills at prosthetic dentistry oriented to fixed and partial dentures. Basics aims and content of the subject: Students have knowledges how to produce prosthetic denture and when they can use different types of the dentures.

Learning outcomes

Students can made practically and theoretically normal impressions to the alginate and silicone materials, can do preparation on temporary crowns and bridges, they will know all working phases of crowns and fixed bridges, as well as partly removable and total removable dentures.

Syllabus

- Extent of the subject :: hours per week 3,3, credits 14 4. sem: 0,5 hr. lecture, 1 hr. practise 5. sem: 0,5 hr. lecture, 1 hr. practise 6. sem: 0,5 hr. lecture, 2 hr. practise 7. sem: 0,5 hr. lecture, 4 hr. practise 8. sem: 0,5 hr. lecture, 3 hr. practise 9. sem: 0,5 hr. lecture, 3 hr. practise

Literature

- JOHNSON, Tony, David G. PATRICK, Christopher William STOKES, David G. WILDGOOSE and Duncan J. WOOD. *Basics of dental technology : a step by step approach*. Second edition. Chichester: Willey Blackwell, 2016. ix, 187. ISBN 9781118886212.

Teaching methods

practical training

Assessment methods

credit

ZLOR0944c Orthodontics IV - practice

Extent and Intensity

0/2/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Pavlína Černochová, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Students will have complex knowledge about all type orthodontic anomalies. Students are able: - to explain their aetiology and consequences - to suggest appropriate treatment method with respect to patient age and efficiency of orthodontic appliances - to use of orthodontic knowledge in interdisciplinary treatment planning

Syllabus

- The aim is concentratation on complex utilization of obtained orthodontic knowledge in interdisciplinar cooperation with pedostomatology, prosthetics, dentoalveolar surgery, implantology and paradentology. Students will obtain information about teeth eruption anomalies (ectopic eruption, impacted teeeth, supernumerary teeth).

Literature

- KOŤOVÁ, Magdalena. *Ortodontický průvodce praktického zubního lékaře*. 1. vyd. Praha: Grada, 2006. 114 s. ISBN 8024713055.
- KOŤOVÁ, Magdalena. *Snímací ortodontické přístroje*. 1. vyd. Praha: Grada Publishing, 1999. 68 s. ISBN 8071698229.
- KAMÍNEK, Milan and Marie ŠTEFKOVÁ. *Ortodoncie.* 1. vyd. Olomouc: Univerzita Palackého - Lékařská fakulta, 1991. 68 s. ISBN 80-7067-996-4.
- KAMÍNEK, Milan and Marie ŠTEFKOVÁ. *Ortodoncie I*. 1. vyd. Praha: Státní pedagogické nakladatelství, 1990. 76 s.

Teaching methods

practical training

Assessment methods

class discussion credit

ZLOR0944p Orthodontics IV - lecture

Extent and Intensity

1/0/0. 3 credit(s). Type of Completion: zk (examination).

Supervisor

doc. MUDr. Pavlína Černochová, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Students will have complex knowledge about all type orthodontic anomalies. Students are able: - to explain their aetiology and consequences - to suggest appropriate treatment method with respect to patient age and efficiency of orthodontic appliances - to use of orthodontic knowledge in interdisciplinary treatment planning

Syllabus

- The aim is concentration on complex utilization of obtained orthodontic knowledge in interdisciplinar cooperation with pedostomatology, prosthetics, dentoalveolar surgery, implantology and paradentology. Students will obtain information about teeth eruption anomalies (ectopic eruption, impacted teeeth, supernumerary teeth).

Literature

- KAMÍNEK, Milan. *Ortodoncie*. První vydání. Praha: Galén, 2014. xi, 246. ISBN 9788074921124.
- KAMÍNEK, Milan and Marie ŠTEFKOVÁ. *Ortodoncie I*. 1. vyd. Praha: Státní pedagogické nakladatelství, 1990. 76 s.
- KAMÍNEK, Milan and Marie ŠTEFKOVÁ. *Ortodoncie.* 1. vyd. Olomouc: Univerzita Palackého - Lékařská fakulta, 1991. 68 s. ISBN 80-7067-996-4.

- KOŤOVÁ, Magdalena. *Ortodontický průvodce praktického zubního lékaře*. 1. vyd. Praha: Grada, 2006. 114 s. ISBN 8024713055.
- KOŤOVÁ, Magdalena. *Snímací ortodontické přístroje*. 1. vyd. Praha: Grada Publishing, 1999. 68 s. ISBN 8071698229.
- *Diagnostika retinovaných zubů*. Edited by Pavlína Černochová. 1. vyd. Praha: Grada, 2006. 191 s. ISBN 8024712695.
- 1. W.R.Proffit. Contemporary orthodontics. Third edition. Mosby.
- 2. J.K.Williams, P.A.Cook, K.G.Isaacson, A.R.Thom. Fixed orthodontic appliances. Principles and practice. Wright.
- A.Richardson. Interceptive orthodontics. 1995, British Dental Journal
- F.P.G.M.van der Linden. Diagnosis and Treatment Planning in Dentofacial Orthopedics.1987, Quintessence
- T.Rakosi, I.Jonas. Farbatlanten der Zahnmedizin 8. Kieferorthopadie Diagnostik. 1989, Thieme.

Teaching methods

lecture

Assessment methods

oral exam

ZLDL0922c Pediatric Dentistry II - practice

Extent and Intensity

0/2/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Martina Kukletová, CSc.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Branch content: Education of restorative dentistry, prosthetics, surgery, periodontics and preventive dentistry regarding childhood differences from birth to adolescence. Regarding specialities of permanent or primary dentition treatment as well as child mental development. Basics of orthodontic diagnostic. Basic aims of subject education: To teachs students psychological approach to children and proper selection of treatment method and material for both primary and pernament dentition in children. Emphasis is on regarding age differences,development of orofacial system and system approach to organism. Subject content: Education is aimed on child exploration, X-rays examination ad various X-rays techniques assessment, communication with the child, ways of caries prevention, caries treatmet both in primary and permanent dentition, regarding of tooth development stages, endodontics both in temporary and pernament dentition. Attendance of dental

injuries, possibilities and fundamentals of prosthetic reconstruction, periodontics and oral mucous membrane diseases. Surgical treatment of children is also educated.

Learning outcomes

Students will be able to make fillings in primary and permanent dentition in children, preparation of primary teeth for both prefabrikated and casted crowns.

Syllabus

- Seminary: Admission test. Repetition: development of primary and permanent dentition, teeth with incompletely formed apices, x-ray evaluation. Injuries of hard tissues of permanent teeth in children, injury of periodontium of permanent teeth in children, injuries of primary teeth, consequences of primary teeth injuries in permanent dentition. Practical training in phantom room: Preparations for all type sof filling materials in primary dentition. Miniinvasive techniques in primary and permanent dentition, preparation for crowns in primary dentition. Clinical practical training: Morphological differences between deciduous and permanent teeth. Communication, investigation of the child patient. Principles of caries treatment in deciduous dentition. Principles of caries treatment in permanent teeth with incompletely formed apices. Fissure sealing, indication, working procedures. Local fluoridation method - practical training. Endodontic therapy in deciduous dentition. Endodontic therapy in permanent teeth with incompletely developed apices. Prosthetic treatment in children. Management of dental hard tissues injuries. Management of luxation injuries. X-ray. Diagnosis nand treatment of periodontal and oral mucous membrane disease.

Literature

- MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů :učební texty*. 1. vyd. Brno: Masarykova univerzita-Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.
- *The art and science of operative dentistry*. Edited by Clifford M. Sturdevant - Theodore M. Roberson. 3rd ed. St. Louis: Mosby, 1995. xxi, 824 s. ISBN 0-8016-6366-0.

Teaching methods

practical training in the dental surgery centered on investigatioon of the child, differential diagnostics of pain in the orofacial region, basic dental treatment, preparation of primary teeth on simulatores.

Assessment methods

Conditions for the credit: 100% presence and finishing of all prescribed preparations.

ZLDL0922s Pediatric Dentistry II - seminar

Extent and Intensity

0/1/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Martina Kukletová, CSc.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Treatment of dental injuries, possibilities and fundamentals of prosthetic reconstruction, periodontics and oral mucous membrane diseases. Surgical treatment of children is also educated.

Learning outcomes

Student will be able to understand mechanism of teeth injuries in children and will be able to manage their diagnostics with the following treatment.

Syllabus

- Seminary: Admission test. Repetition: development of primary and permanent dentition, teeth with incompletely formed apices, x-ray evaluation. Injuries of hard tissues of permanent teeth in children, injury of periodontium of permanent teeth in children, injuries of primary teeth, consequences of primary teeth injuries in permanent dentition.

Literature

- MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů :učební texty*. 1. vyd. Brno: Masarykova univerzita-Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.
- *The art and science of operative dentistry*. Edited by Clifford M. Sturdevant - Theodore M. Roberson. 3rd ed. St. Louis: Mosby, 1995. xxi, 824 s. ISBN 0-8016-6366-0.

Teaching methods

seminary

Assessment methods

Credit is given on the basis of 100% presence.

ZLOM0911s Oral Medicine - seminar

Extent and Intensity

0/1/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

MUDr. Hana Poskerová, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The main goals are to teach the student: - Morphology, physiology and patophysiology of the oral mucosa. - Pathological anatomy of the oral mucosa, - Etiology of the disorders of oral mucosa. - Clinical picture of the affection of mucosa. - General principles of the therapy. - Affections of the lips, gingiva, tongue. Stomatitis. - Illnesses of the salivary glands. Manifestations of the systemic and

infectious diseases in oral mucosa. - Differential diagnosis of the affections in oral mucosa: a) stomatitis with main symptom ulcus, b) stomatitis with main symptom erosion c) differential diagnosis of the affections with main symptom „white area“. Important symptoms and their relation to general and local illnesses: a) defect in salivary secretion, b) plaque in the tongue, c) oral malodour, d) defects in perception of the taste, e) glossodynia and stomatodynia. - Systemic syndromes with manifestations in maxillofacial area. - Sexually transmitted diseases and their manifestation in oral cavity. - Treatment of the patients after transplantation of the organs.

Learning outcomes

Student will be able: - to diagnose basic diseases of oral membrane mucous - to distinguish common mucosal diseases from oral manifestations of systemic diseases - to determine defferential diagnostic of oral membrane mucous diseases - propose treatment for common mucosal diseases

Syllabus

- - Mucous manifestations of infectious diseases (viral, bacterial and mycotic etiology) in oral cavity. Herpes simplex, stomatitis herpetica, gingivostomatitis herpetica, herpes zooster, infectious mononucleosis, AIDS, necrotizing ulcerative gingivitis, oral candidosis). - Diseases with possible immunopathogenesis (reccurent aphtous ulcers, erythema exsudativum multiforme, lichen planus). Autoimmune diseases (bullous diseases, pemphigus, pemfigoid). Allergo - toxic mucous changes. - Oral lesions due to external causes (traumatic ulcer, burn injury, acid burn, alkali burn, stomatitis electrogalvanica). Precancerous lesions and conditions (leukoplakias). Pigmented lesions in oral cavity. - Disturbance of the salivary flow rate, Sjőgrens syndrome. Glossodynia, stomatodynia. - Manifestation of the systemic diseases in oral cavity (haematologic disorders, metabolic disorders, endocrine diseases).

Literature

- SLEZÁK, Radovan. *Malé ilustrované repetitorium*. 1. vyd. Hradec Králové: Nucleus, 2004. 231 s. ISBN 8086225550.
- SLEZÁK, Radovan, Otakar KOPECKÝ and Jan KREJSEK. *Recidivující afty*. 1. vyd. Praha: Galén, 2000. 103 s. ISBN 8072620495.
- SLEZÁK, Radovan. *Infekční choroby ústní sliznice*. 1. vyd. Praha: Grada, 1997. 166 s. ISBN 8071692212.

Teaching methods

seminar

Assessment methods

credit 100% attendance at seminars

ZLOM0911p Oral Medicine - lecture

Extent and Intensity

1/0/0. 1 credit(s). Type of Completion: k (colloquium).

Supervisor

MUDr. Hana Poskerová, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The main goals are to teach the student: - Morphology, physiology and patophysiology of the oral mucosa. - Pathological anatomy of the oral mucosa, - Etiology of the disorders of oral mucosa. - Clinical picture of the affection of mucosa. - General principles of the therapy. - Affections of the lips, gingiva, tongue. Stomatitis. - Illnesses of the salivary glands. Manifestations of the systemic and infectious diseases in oral mucosa. - Differential diagnosis of the affections in oral mucosa: a) stomatitis with main symptom ulcus, b) stomatitis with main symptom erosion c) differential diagnosis of the affections with main symptom „white area“. Important symptoms and their relation to general and local illnesses: a) defect in salivary secretion, b) plaque in the tongue, c) oral malodour, d) defects in perception of the taste, e) glossodynia and stomatodynia. - Systemic syndromes with manifestations in maxillofacial area. - Sexually transmitted diseases and their manifestation in oral cavity. - Treatment of the patients after transplantation of the organs.

Learning outcomes

Student will be able: - to diagnose basic diseases of oral membrane mucous - to distinguish common mucosal diseases from oral manifestations of systemic diseases - to determine defferential diagnostic of oral membrane mucous diseases - propose treatment for common mucosal diseases

Syllabus

- - Mucous manifestations of infectious diseases (viral, bacterial and mycotic etiology) in oral cavity. Herpes simplex, stomatitis herpetica, gingivostomatitis herpetica, herpes zooster, infectious mononucleosis, AIDS, necrotizing ulcerative gingivitis, oral candidosis). - Diseases with possible immunopathogenesis (reccurent aphtous ulcers, erythema exsudativum multiforme, lichen planus). Autoimmune diseases (bullous diseases, pemphigus, pemfigoid). Allergo - toxic mucous changes. - Oral lesions due to external causes (traumatic ulcer, burn injury, acid burn, alkali burn, stomatitis electrogalvanica). Precancerous lesions and conditions (leukoplakias). Pigmented lesions in oral cavity. - Disturbance of the salivary flow rate, Sjőgrens syndrome. Glossodynia, stomatodynia. - Manifestation of the systemic diseases in oral cavity (haematologic disorders, metabolic disorders, endocrine diseases).

Literature

- SLEZÁK, Radovan. *Malé ilustrované repetitorium*. 1. vyd. Hradec Králové: Nucleus, 2004. 231 s. ISBN 8086225550.
- SLEZÁK, Radovan, Otakar KOPECKÝ and Jan KREJSEK. *Recidivující afty*. 1. vyd. Praha: Galén, 2000. 103 s. ISBN 8072620495.
- SLEZÁK, Radovan. *Infekční choroby ústní sliznice*. 1. vyd. Praha: Grada, 1997. 166 s. ISBN 8071692212.

Teaching methods

lectures

Assessment methods

colloquium condition for participation at the colloquium is 100% attendance at seminars

ZLMC0911s Oral and Maxillo-facial Surgery - seminar

Extent and Intensity

0/1/0. 3 credit(s). Type of Completion: k (colloquium).

Supervisor

doc. MUDr. Oliver Bulik, Ph.D.
Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine
Contact Person: Blanka Suchá

Course objectives

Investigation of the patient focused on surgical treatment; oncological investigation. Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction. Preprosthetic preparations in the oral cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations. Temporomandibular joint disorders and diseases; contractures. Cysts in the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes, classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible. Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will manage all skills necessary for surgical treatment of patients in dental surgery.

Learning outcomes

po absolvování předmětu je student schopen:
- Vyšetřit pacienta s problematikou v orofaciální oblasti
- Má základní znalosti z orofaciální traumatologie
- Diagnostikovat a navrhnout terapii maxilofaciálních anomálií
- Ovládá základy diagnostiky a léčby různých nádorů v orofaciální oblasti

Syllabus

- Surgical intervention on teeth, other tisues of the oral cavity and related organs. Rational, most considerate and professionallz proper waz in searching the disease cause, choice and treatment procedure, after-treatment and preventive measures.
- pre-prosthetic surgery
- eruption and tooth position disorders
- orthognathic surgery

- gnathic anomalies
- pre-operation analysis and treatment planning in gnathic anomalies
- surgical treatment methods
- after-treatment and rehabilitation
- collaboration of surgeon and orthodontist

Literature

- PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600.
- *Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.
- DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park, IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.
- MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.
- MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha: Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.
- MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.
- TOMAN, Jaroslav and Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.
- KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.
- TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp.

Teaching methods

seminary. Practical training (about 100 % of the total volume of teaching) is complemented by a comprehensive range of simulation teaching methods on simulators with varying degrees of fidelity, trainers and virtual patients. Most of them are equipped with a DentSim software system that allows for every step of preparation, including feedback and test, and objective assessment of the student's work. Dental microscopes, CAD / CAM technologies, simulated X-ray teaching and other modern teaching aids are also used. Emphasis is also placed on the development of soft skills, incl. so-called "21st century skills", particularly communication, decision-making skills, critical thinking, crisis communication and teamwork.

Assessment methods

colloquium. Practical skills will be verified using the Dentsim software system. The course will also focus on the development of the ability to orientate in auxiliary investigative methods, their interpretation, critical thinking and teamwork. This way of evaluating gives students an objective and specific feedback.

ZLOC0966c Oral Surgery VI - practice

Extent and Intensity

0/2/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Oliver Bulik, Ph.D.
Department of Oral, Jaw and Facial Surgery - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine
Contact Person: Blanka Suchá

Course objectives

Investigation of the patient focused on surgical treatment; oncological investigation. Anesthesia. Tooth extraction; simple and complicted extractions. Extraction of impacted tooth, treatment of hardly erupting tooth. Complications after the extraction. Preprosthetic preparations in the oral cavity. Surgical treatment of inflammations: inflammations in the oral cavity, periosteal inflammations, inflammations of jawbones, maxillary sinus and lymph nodes. Specific inflammations. Temporomandibular joint disorders and diseases; contractures. Cysts in the orofacial region. Epidemiology and etiology of precancerous lesions and tumours. Prevention in oncology. Benign and malign tumours of the oral cavity. Tumour classification. Comprehensive treatment of malignances. Injuries of both the teeth and alveolar process of the jaw. Fractures of the jaws: causes, classifications, treatment methods. Treatment of soft tissue injuries of the oral cavity and face. Luxation of the mandible. Orthognathous surgery: disorders of tooth eruption and position, maxillary anomalies. On successful completion of the course student will manage all skills necessary for surgical treatment of patients in dental surgery.

Syllabus

- Surgical intervention on teeth, other tisues of the oral cavity and related organs. Rational, most considerate and professionallz proper waz in searching the disease cause, choice and treatment procedure, after-treatment and preventive measures.
- pre-prosthetic surgery
- eruption and tooth position disorders
- orthognathic surgery
- gnathic anomalies
- pre-operation analysis and treatment planning in gnathic anomalies
- surgical treatment methods
- after-treatment and rehabilitation
- collaboration of surgeon and orthodontist

Literature

required literature

- PAZDERA, Jindřich. *Základy ústní a čelistní chirurgie*. 2., rozš. a dopl. vyd. Olomouc: Univerzita Palackého v Olomouci, 2011. 309 s. ISBN 9788024426600.

not specified

- *Local anaesthesia in dentistry*. Edited by J. A. Baart - H. S. Brand. Ames, IA: Blackwell, 2009. xvii, 171. ISBN 9781405184366.
- DIMITROULIS, George. *Illustrated lecture notes in oral and maxillofacial surgery*. Hanover Park, IL: Quintessence Pub., 2008. ix, 333. ISBN 9780867154788.
- MAZÁNEK, Jiří. *Traumatologie orofaciální oblasti*. 2. přepr. a dopl. vyd. Praha: Grada, 2007. 177 s. ISBN 9788024714448.
- MACHÁLKA, Milan. *Chirurgie dolních zubů moudrosti (Mandibular third molar surgery)*. Praha: Avicenum Grada, 2003. 60 pp. Grada Publishing, 1819. ISBN 80-247-0605-9.
- MACHÁLKA, Milan. *Traumatologie obličejového skeletu a zubů : učební texty*. 1. vyd. Brno: Masarykova univerzita - Lékařská fakulta, 1996. 52 s. ISBN 80-210-1325-7.
- TOMAN, Jaroslav and Jiří MAZÁNEK. *Nádory úst a obličeje*. 1. vyd. Praha: Avicenum, 1982. 276 pp.
- KUFNER, Josef. *Chirurgie čelistních a obličejových anomálií*. Praha: Avicenum, 1981. 508 pp.
- TOMAN, Jaroslav. *Ústní a čelistní chirurgie*. 2. přepr. vyd. Praha: Avicenum, 1976. 474 pp.

Teaching methods

practical training

Assessment methods

credit

ZLDD0911c Restorative Dentistry, Differential Diagnostics - practice

Extent and Intensity

0/2/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

doc. MUDr. Lenka Roubalíková, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine
Contact Person: Milena Prudíková

Course objectives

Clinical treatment of the caries, pulpitis, periodontitis, filling of the root canals, filling before surgical interventions. Aesthetical fillings of the frontal and lateral section –reconstructions of crowns.

Learning outcomes

After receiving the subject, students will be able to:
- Understand pathophysiology and treatment of pain of the odontogenic origin
- Diagnose pulpitis, including differential dg.
- Diagnose periodontitis, including differential dg.
- Diagnose focal infection of the non-odontogenic origin
- Propose treatment of the handicapped patients

Syllabus

- Clinical treatment of the caries, pulpitis, periodontitis, filling of the root canals, filling before surgical interventions. Aesthetical fillings of the frontal and lateral section –reconstructions of crowns.

Literature

recommended literature

- *Orofacial pain : from basic science to clinical management : the transfer of knowledge in pain research to education*. Edited by James P. Lund. [1st ed.]. Chicago: Quintessence, 2001. xi, 300. ISBN 0867153814.

Teaching methods

practical exercises. Practical training (about 20 % of the total volume of teaching) is complemented by a comprehensive range of simulation teaching methods on simulators with varying degrees of fidelity, trainers and virtual patients. Most of them are equipped with a DentSim software system that allows for every step of preparation, including feedback and test, and objective assessment of the student's work. Dental microscopes, CAD / CAM technologies, simulated X-ray teaching and other modern teaching aids are also used. Emphasis is also placed on the development of soft skills, incl. so-called "21st century skills", particularly communication, decision-making skills, critical thinking, crisis communication and teamwork.

Assessment methods

100% attendance in exercises. Practical skills will be verified using the Dentsim software system. The course will also focus on the development of the ability to orientate in auxiliary investigative methods, their interpretation, critical thinking and teamwork. This way of evaluating gives students an objective and specific feedback.

ZLDD0911 Restorative Dentistry, Differential Diagnostics - lecture

Extent and Intensity

0/0/0. 2 credit(s). Type of Completion: zk (examination).

Supervisor

doc. MUDr. Lenka Roubalíková, Ph.D.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Contact Person: Milena Prudíková

Course objectives

The aim of the study field clinical and dental medicine – differential diagnostics – is to acquire theoretical and practical knowledge from diagnostics and differential diagnostics of diseases of caries and pulp, selection of working procedures, filling materials and techniques. Practicing differential diagnostics in patients with systemic disease/ handicap (risky patients).

Learning outcomes

After receiving the subject, students will be able to:
- Understand pathophysiology and treatment of pain of the odontogenic origin
- Diagnose pulpitis, including differential dg.
- Diagnose periodontitis, including differential dg.
- Diagnose focal infection of the non-odontogenic origin
- Propose treatment of the handicapped patients

Syllabus

- 1. Pathophysiology of pain
- 2. Diagnosis and differential diagnosis of pulpitis. Synalgy.
- 3. Diagnosis and differential diagnosis of periodontitis.
- 4. Focal infection. Pain in orofacial region non-dental origin, differential diagnosis.
- 5. Treatment of risky patients.

Literature

recommended literature

- *Orofacial pain : from basic science to clinical management : the transfer of knowledge in pain research to education*. Edited by James P. Lund. [1st ed.]. Chicago: Quintessence, 2001. xi, 300. ISBN 0867153814.

Teaching methods

lecture

Assessment methods

oral exam - description of x-ray images with dif. dg. and question from the given topic. Practical skills will be verified using the Dentsim software system. The course will also focus on the development of the ability to orientate in auxiliary investigative methods, their interpretation, critical thinking and teamwork. This way of evaluating gives students an objective and specific feedback.

ZLDI0911s Dental Implantology - seminar

Extent and Intensity

0/0.5. 1 credit(s). Type of Completion: k (colloquium).

Supervisor

prof. MUDr. Jiří Vaněk, CSc.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Short annotation of the subject: Students are introduced with basics of implantology. Basic aims and content of course: Learn to treat difficult defects by dental implants, to know rules of choice of patients, to know how to make the right diagnosis and therapeutic plan, to know application procedures of different types of implants, with following prosthetic therapy.

Learning outcomes

Dental implantology history Types of dental implants The use of dental implants The methodology of dental implants The introduction of dental implants

Syllabus

- Lectures: Dental implantology Implant materials Enosseal imlants. Augmentation Augmentation material Discussion - credit

Literature

- FASSMANN, Antonín. *Řízená tkáňová a kostní regenerace ve stomatologii (Controlled tissue and bone regeneration in dentistry)*. I. Praha: Grada Publishing a.s., 2002. 199 pp. Avicenum. ISBN 80-247-0316-5.

Teaching methods

Seminar

Assessment methods

colloquium

ZLMG0911s Management in Dentistry - seminar

Extent and Intensity

0/1/0. 2 credit(s). Type of Completion: k (colloquium).

Supervisor

prof. MUDr. Jiří Vaněk, CSc.
Department of Stomatology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

Short annotation of the subject: Conception of Dental Medicine, relationship to health care insurance office, efficiency evaluation, management of agenda in dental office.

Learning outcomes

1. Mannagement of the dental office 2. Ekonomical aspekt at dentistry 3. Dental doctor and Dental Chamber 4. Coordination dental office and dental laboratory.

Syllabus

- Short annotation of the subject: Conception of Dental Medicine, relationship to health care insurance office, efficiency evaluation, management of agenda in dental office. Method of control: colloquium Literature: Conception of stomatology – Ministry of health of the Czech Republic (2001) Law rules Materials of the Czech Dental Chamber

Literature

- ZÁKON č. 95/2004 Sb. o podmínkách získávání a uznávání odborné způsobilosti a specializované způsobilosti k výkonu zdravotnického povolání lékaře, zubního lékaře a farmaceuta
- ZÁKON č. 220/1991 Sb. o České lékařské komoře, České stomatologické komoře a České lékárnické komoře
- ZÁKON č. 160/1992 Sb. o zdravotní péči v nestátních zdravotnických zařízeních

Teaching methods

Seminar

Assessment methods

colloquium

ZLVL0922p Public Health in Dentistry - lecture

Extent and Intensity

1/0/0. 2 credit(s). Type of Completion: zk (examination).

Supervisor

prof. MUDr. Bc. Zuzana Derflerová Brázdová, DrSc.
Department of Public Health - Theoretical Departments - Faculty of Medicine

Course objectives

The course in Health Care and Policy introduces the students to the analysis of health care systems, managerial and policy issues and techniques for decision-making in health care. The subjects covered include health services research, health policy, health economics, and law.

Learning outcomes

By the end of this course student should be able to:
- describe the term Public Health, describe theoretical framework and practice of Public Health;
- identify managerial and policy issues and techniques for decision-making in health care;
- demonstrate knowledge and understanding of a diverse range of global and national health policies, including current and emerging trends and also of disciplines relevant to the study of health policy, planning and financing (epidemiology, health economic and other social sciences);

- apply his knowledge and skills using a multidisciplinary approach to formulate and evaluate health policies and plans.

Syllabus

- 1. Information on the course Public health in dentistry II.
- 2. The health situation in the country.
- 3. Demographic and epidemiological transit transformation.
- 4. Social determinants of health.
- 5. The system of healthcare and the health system.
- 6. Health needs.
- 7. Health services.
- 8. Reasons of increasing spending in health care.
- 9. Health economy.
- 10. Market and health care (market failure).
- 11. Financing of health care.
- 12. Basic principles of health insurance.
- 13. Basic types of healthcare systems in the world.
- 14. Evaluation of activities of the health system.
- 15. Availability of health care.
- 16. Ethics in health care.
- 17. Fairness in health and health care.
- 18. Health policy.
- 19. The role of law in health care.
- 20. The state involvement in health care.
- 21. European health policy.
- 22. WHO.
- 23. Prevention and its obstacles.
- 24. Health education and health literacy.
- 25. Building, support and development of health.

Literature

required literature

- HOLČÍK, Jan. *Systém péče o zdraví a zdravotní gramotnost (System of health care and health literacy)*. 1. vydání. Brno: Masarykova univerzita, 2010. 293 pp. Škola a zdraví pro 21. století. ISBN 978-80-210-5239-0.
- HOLČÍK, Jan, Adolf ŽÁČEK and Ilona KOUPILOVÁ. *Sociální lékařství*. 3. nezměn. vyd. Brno: Masarykova univerzita, 2006. 137 s. ISBN 9788087192153.
- ŽÁČEK, A. and J. HOLČÍK. *Sociální lékařství II, Úvod do veřejného zdravotnictví*. Brno: Masarykova univerzita, 1992. 130 pp. ISBN 80-210-0375-8.
- TĚŠINOVÁ, Jolana, Roman ŽĎÁREK and Radek POLICAR. *Medicínské právo*. Vyd. 1. V Praze: C.H.Beck, 2011. xxxiii, 41. ISBN 9788074000508.
- *
- *
- REQUIRED LITERATURE
- *
- 1. Study material for public health and healthcare administration (20 chapters / questions) CAN BE BORROWED at the Department of Public Health A21, office 321. Students MUST return it back the day of examination in good condition.
- 2. Bonita R, Beaglehole R, Kjellström: Basic epidemiology. 2nd edition. Geneva - Switzerland: World Health Organization; 2006. pp 83-114, 165-177.
- 3. Varkey P: Mayo clinic preventive medicine and public health board review. Edited by Prathibha Varkey. New York - United States: Mayo Clinic Scientific Press - Oxford University Press; 2010. pp 253-299.
- *
- RECOMMENDED LITERATURE
- *
- 4. Farmer R, Lawrenson R, Miller D: Epidemiology and public health medicine. 5th edition. Oxford - U.K.: Blackwell Publishing; 2004. pp 143-177.

Teaching methods

Lectures.

Reading and studying ALL REQUIRED LITERATURE.

For those who will have to write research projects and seminar papers during third, fourth and fifth year, it is strongly recommended to enrol the following courses:

VSIL021 - Information literacy - (3 credits) - e-learning.
VSKP041 - A course of working with information sources and tools (4 credits).

Assessment methods

EXAMINATION INFORMATION:

1. To sit for examination, it will be required to successfully complete the prerequisite subjects.

2. Each student must register in the Information System (IS) in one of the offered examination terms. The examination has fixed examination terms / dates - (Only during the examination period, except the examination pre-term). No extra-terms will be given.

3. Students registered to an examination term will fail the term if:
 a-) arrive late the examination day.
 b-) they are not present and previously did not cancel the term in the stipulated periods (see IS).

4. In case of failure, EACH STUDENT CAN RETAKE THE EXAMINATION TWO MORE TIMES, only in given terms (according to Masaryk University study rules).

5. In case of failure during the third term (second resit), the student must repeat the course in the following school year.

6. All examination questions are based on ALL REQUIRED LITERATURE, seminars and lectures.

Examination → Oral examination → 3 questions.

SCORE:

Passed → Successfully answering three questions.
Failed → Failing one, two or three questions.

ACADEMIC MISCONDUCT, PLAGIARISM DETECTION AND ETHICAL ISSUES:

1. Any attempts of ACADEMIC MISCONDUCT, such as cheating or assisting someone else to cheat during the colloquium, will result in disciplinary actions, such as:
 a-) You will be required to hand over your examination paper and asked to leave the examination room. This means, you failed the examination (examination term), with the respective score F / 4, on your academic records in the information system.
 b-) Opening disciplinary proceedings.
 c-) Failing the subject / course.
 d-) Expulsion from university.

2. During the colloquium, it is forbidden to use items such as:
 a-) Smart phones / Tablets.
 b-) Laptops.
 c-) To wear earphones or headphones (if not medical prescribed).
 d-) To talk.

*In such cases, disciplinary actions will be taken (See above numeral 1).

ZLAM0911s Intensive Care Medicine - practice

Extent and Intensity

0/1/0. 2 credit(s). Type of Completion: k (colloquium).

Supervisor

MUDr. Jan Maláska, Ph.D.
Department of Anaestesiology and Intensive Care Medicine - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Course objectives

The aim of the course is practical training of advanced cardiopulmonary resuscitation on simulator SimMan and diagnostics and treatment of life threatening conditions in intensive care.

Learning outcomes

At the end of the course the student will be able:
- to perform basic cardiopulmonary resuscitationand and will understand how to perform advance cardiopulmonary resuscitation.
- The student will be able to asses the critical ill patient.

Syllabus

- **The course of Intensive medicine of Dentistry student in english is at Anesteziologicko-reuscitační klinika FN u sv. Anny v Brně in 5th week**
- monday: Introduction, CPR I
- tuesday: Advanced CPR II, training on simulator
- wednesday: Anaphylaxis
- thursday: Shocs
- friday: Diagnostic a therapeutic measures in critically ill. Credit, ARK

Literature

- *Kapesní vydání doporučených postupů v resuscitaci 2005*. Edited by Peter J. F. Baskett - Jerry Nolan. 1. vyd. Praha :: Česká rada pro resuscitaci, 2006. 196 s. ISBN 8023976761.
- ŠEVČÍK, Pavel, Vladimír ČERNÝ and Jiří VÍTOVEC. *Intenzivní medicína (Intenzive Care Medicine)*. I.vydání. Praha: Galén, 2000. 393 pp. ISBN 80-7262-042-8.

Teaching methods

Lectures and discussions, training on simulator, presentation of patients by consultant.

Assessment methods

The course is completed by colloquium, prerequisite is full participation in course.

ZLKG0911s Bases of Clinical Genetics - seminar

Extent and Intensity

0/1/0. 1 credit(s). Type of Completion: k (colloquium).

Supervisor

MUDr. Renata Gaillyová, Ph.D.
Department of Internal Medicine, Hematology and Oncology - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine
Contact Person: MUDr. Renata Gaillyová, Ph.D.

Course objectives

The aim of the subject is to make acquaintance with the problematic of genetic consultations, principles and approaches, ethic problems, basic classification of genetic diseases, the possibility of prenatal and postnatal diagnostics of inherited development disorders and genetic diseases, basic legal norms in genetic consultations. The lessons are also oriented to the possibility of collaboration of dental physicians and stomatologists with the subject Clinical genetics by the summary of basic problematic of inherited development defects and genetically conditioned diseases of head and neck regions and syndromes with craniofacial manifestations

Learning outcomes

The student knows the basic concepts in medical genetics The student is able to recommend genetic testing to a patient with suspected hereditary disease

Syllabus

- clinical genetics, genetic counselling – approaches, principles, indication for investigation in genetic advice centre,primary and secondary genetic prevention, clinical symptoms of the most often occurring inherited chromosomal aberrations,acquired chromosomal aberrations, prenatal screening,indications for prenatal and postnatal cytogenetic investigation, prenatal diagnostic methods, preimplantation genetic diagnostic, genetic consultation by reproduction disorders, monogenic heredity, basic types of Mendelian inheritance,examples of diseases with monogenic heredity, possibility of postnatal and prenatal DNA diagnostics, principles of oncogenetics, complex inheritance, the most common inherited development disorders with complex heredity, well-known teratogens in gravidity, ethics and legal norms in genetic counselling, anomaly of dentice, jaw-bone, congenital malformations of head and neck, craniofacial syndromes

Literature

- HARPER, Peter S. *Practical genetic counselling*. 7th ed. London: Hodder Arnold, 2010. 407 p. ISBN 9780340990698.
- PRITCHARD, D. J. and Bruce R. KORF. *Základy lékařské genetiky*. první české vydání. Praha: Galén, 2007. 182 stran. ISBN 9788072624492.

- NUSSBAUM, Robert L., Roderick R. MCINNES, Huntington F. WILLARD, James THOMPSON and Margaret Wilson THOMPSON. *Klinická genetika : Thompson & Thompson : 6. vyd.* Translated by Petr Goetz. Vyd. 1. Praha: Triton, 2004. 426, lix. ISBN 8072544756.
- ŽIŽKA, Jan. *Diagnostika syndromů a malformací*. 1. vyd. Praha: Galén, 1994. 414 s. ISBN 80-85824-04-3.

Teaching methods

seminar, the seminar courses are conducted as lectures on the given theme with following discussion

Assessment methods

colloquium take place as written test, the condition is 100 % attendance at the seminar courses

ZLPD0911c Paediatrics - practice

Extent and Intensity

0/1/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Zdeněk Doležel, CSc.
Department of Pediatrics - Institutions shared with the Faculty Hospital Brno (paediatric medicine) - Faculty of Medicine
Contact Person: MUDr. Lenka Dostalová Kopečná, Ph.D.

Course objectives

The goal of practical lessons is to acquaint the students with problematics of treatment and prevence nursing in the field. The student will be acquainted with the organization of the paediatric care. The student knows standard diagnostic procedures and tests for individual clinical conditions of the child and is able to apply them in practice. After the participation in the course students will be able to attend the most common children diseases, especially with accent on the oral cavity. Student will be able to safely recognize and treat various acute conditions occurring by providing dental care for children

Learning outcomes

The student understands the specifics of communication with children.
The student knows the most common childhood illnesses.
The student knows the clinical manifestations of urgent conditions in pediatrics

Syllabus

- 1.day Seminar: Growth and developement of healthy child
- 2.day Seminar: Hematology, bleeding disorders in childhood
- 3.-5.day Practical training with tutor.
- Examination children of specific age groups – newborn, infant, toddler, preschool, school children and adolescent. Assessment of growth and developement. Examination children with typical diseases in childhood.

Literature

recommended literature

- LEBL, Jan, Kamil PROVAZNÍK and Ludmila HEJCMANOVÁ. *Preklinická pediatrie*. 2., přeprac. vyd. Praha: Galén, 2007. 248 s. ISBN 9788072624386.
- MICHÁLEK, Jaroslav. *Pediatrická propedeutika : vybrané kapitoly*. 1. vyd. Brno: Masarykova univerzita, 2008. 159 s. ISBN 9788021046955.
- LEBL, Jan, Jan JANDA, Petr POHUNEK and Jan STARÝ. *Klinická pediatrie*. Druhé vydání. Praha: Karolinum, 2014. xix, 698. ISBN 9788024626970.

not specified

- HRODEK, Otto and Jan VAVŘINEC. *Pediatrie*. 1. vyd. Praha: Galén, 2002. xxxii, 767. ISBN 8072621785.

Teaching methods

seminar, internship

Assessment methods

Credit

ZLPD0911p Pediatrics - lecture

Extent and Intensity

1/0/0. 2 credit(s). Type of Completion: zk (examination).

Supervisor

prof. MUDr. Zdeněk Doležel, CSc.
Department of Pediatrics - Institutions shared with the Faculty Hospital Brno (paediatric medicine) - Faculty of Medicine
Contact Person: MUDr. Lenka Dostalová Kopečná, Ph.D.

Course objectives

The goal of lessons is to acquaint the students with problematics of treatment and prevence nursing in the field. The student will be acquainted with the organization of the paediatric care. The student knows standard diagnostic procedures and tests for individual clinical conditions of the child and is able to apply them in praktice. After the participation in the course students will be able to attend the most common children diseases, especially with accent on the oral cavity. Student will be able to safely recognize and treat various acute conditions occurring by providing dental care for children.

Learning outcomes

The student understands specifics of communication with children. The student knows the most frequent diseases in childhood.The student knows standard diagnostic procedures and tests for individual clinical conditions of the child. The student will know clinical manifestations of urgent conditions in paediatrics

Syllabus

- Introduction to organization and contemporary issues of pediatry
- Neonatology
- Diseases of digestive system
- Diseases of kidneys and urinary system
- Diseases of respiratory system
- Heart diseases, diseases of blood circulation
- Diseases of immunity and alergic diseases
- Sudden state in pediatry
- Growth and developement of healthy child

Literature

recommended literature

- LEBL, Jan, Jan JANDA, Petr POHUNEK and Jan STARÝ. *Klinická pediatrie*. Druhé vydání. Praha: Karolinum, 2014. xix, 698. ISBN 9788024626970.
- LEBL, Jan, Kamil PROVAZNÍK and Ludmila HEJCMANOVÁ. *Preklinická pediatrie*. 2., přeprac. vyd. Praha: Galén, 2007. 248 s. ISBN 9788072624386.
- MICHÁLEK, Jaroslav. *Pediatrická propedeutika : vybrané kapitoly*. 1. vyd. Brno: Masarykova univerzita, 2008. 159 s. ISBN 9788021046955.

not specified

- MUNTAU, Ania Carolina. *Pediatrie (Pediatrics)*. 1st. Praha: Grada Publishing a.s., 2009. 608 pp. ISBN 978-80-247-2525-3.
- HRODEK, Otto and Jan VAVŘINEC. *Pediatrie*. 1. vyd. Praha: Galén, 2002. xxxii, 767. ISBN 8072621785.
- ŠAŠINKA, Miroslav and Tibor ŠAGÁT. *Pediatria.* 1. vyd. Košice: SATUS, 1998. 620 s. ISBN 8096796305.

Teaching methods

lectures

Assessment methods

oral exam

ZLPG0911p Obstetrics and Gynaecology - lecture

Extent and Intensity

1/0/0. 1 credit(s). Type of Completion: k (colloquium).

Supervisor

prof. MUDr. Pavel Ventruba, DrSc., MBA
Department of Gynecology and Obstetrics - Institutions shared with the Faculty Hospital Brno - Institutions of Reproductive Medicine - Faculty of Medicine

Course objectives

Obstetrics and Gynecology course involves the supervision and appropriate intervention during, normal and complicated pregnancy and delivery, as well as the recognition, prevention, management and surveillance of diseases affecting reproductive health in women. The course gives students understanding, basic knowledge and skills in epidemiology, pathogenesis, diagnosis, treatment and prevention of common problems in obstetrics and gynecology; reproductive health matters, including family planning, infertility and maternal care, emphasizing wellness and prevention in addition to treatment of disease. The aim of the course is to attain standards of knowledge and practical skills adequate to start postgraduate training in medicine and reach level of competence defined in the Log Book. The course graduates should be able to keep with international standards of patient care by reaching high level of clinical skills, bedside care skills, surgical skills, in addition to updated medical knowledge. The students learning outcomes and competences mainly cover medical knowledge and skills to evaluate the data about the follow-up of pregnancy and birth, and the management of the gynecological diseases, to get the new information and to make decisions for similar situations, to perform the gynecological procedures. The students will achieve the appropriate attitude.

Syllabus

- OBSTERICS Pysiological changes during pregnancy Antenatal care Drugs use during pregnancy and lactation Abortion Ectopic pregnancy Gestational Trophoblastic Disease Hypertension in pregnancy Preeclampsia Diabetes in pregnancy Bleeding disorders with pregnancy Multiple pregnancy Analgesia & anaesthesia in labour Breech presentation Uterine action in pregnancy (normal and abnormal) Perineal vaginal & cervical injuries Rupture uterus Antepartum hemorrhage (Placenta previa) Antepartum hemorrhage (Abruptio placentae) Shock in obstetrics Normal puerperium Venous thrombosis in obstetrics Caesaria Section Induction of abortion & labour Dysmaturity and Prematurity Perinatal asphyxia Ultrasound in obstetrics Prenatal diagnosis of congenital anomalies
- GYNAECOLOGY Functional uterine bleeding Amenorrhoea Amenorrhoea Climacteric and HRT Dysmenorrhoea, Premenstrual syndroma Infertility Assisted reproductive techniques ART Vaginitis and vulvitis Salpingitis Cervivitis Sexually Transmitted diseases AIDS Tumours & masses of vulva & vagina Cancer cervix Malignant diseases of body of uterus – carcinoma Fibromyomata treatment and modern trends Endometriosis Ovarian tumors Endoscopy Vaginal smear and colposcopy Urinary incontinence Contraception (pills) Contraception (I.U.D) Contraception (other methods)

Literature

recommended literature

- ROZTOČIL, Aleš. *Moderní gynekologie*. 1. vydání. Praha: Grada Publishing, 2011. xviii, 508. ISBN 9788024728322.

- HÁJEK, Zdeněk, Evžen ČECH and Karel MARŠÁL. *Porodnictví*. 3., zcela přepracované a d. Praha: Grada, 2014. 538 stran. ISBN 9788024745299.
- OATS, Jeremy and Suzanne ABRAHAM. *Llewellyn-Jones fundamentals of obstetrics and gynaecology*. 8th ed. Edinburgh: Mosby, 2005. x, 365. ISBN 0723433291.
- 1. Procházka M., Pilka R. a kol. Porodnictví pro studenty všeobecného lékařství a porodní asistence. Olomouc: AED - Olomouc s.r.o., 2016, 243 s., ISBN 978-80-906280-0-7

Teaching methods

Teaching and learning is scheduled into three blocks. Each block is planned for 5 working days in the inpatients and outpatients facilities of the Ob/Gyn department. The teaching process starts from 07h00 and lasts to 13h00. Teaching schedule includes theoretical session, teaching and learning with simulators and patients and students formative assessment of clinical case.

Assessment methods

Theoretical Assessment

Continuous - Ten true/false and/or short-answer questions, on the day after each daily theoretical session, to be answered in 15 minutes.

Final - Twenty multiple choice and/or matching questions, to be answered in 20 minutes, on the last day of each block.

ZLAZ0911s Atomic Energy Act - seminar

Extent and Intensity

0/0.5/0. 2 credit(s). Type of Completion: k (colloquium).

Course objectives

Students are learning about principles of the X-.ray radiation, X-ray generation, ways of interaction of radiation with the matter, effects of radiation on the vital matter, principles and ways of radiation protection and about the basic legislative valid in radiation protection in Czech republic.

Learning outcomes

1. Atomic law at WHO
2. Atomic law No.263
3. The 409, 422 in 2016
4.X ray radiation
5.Biological effects of ionising radiation
6.The procedure for obtaining professional competence
7.Compliance with the limits with X-ray

Syllabus

- X-ray tube, generation of X-ray radiation, construction and function of X-ray apparatuses, traditional and contemporary attitudes, main values and units in radiation protection, interaction of photon radiation with the matter (tissues) practical impacts of ionizing

radiation –stochastic and non stochastic effects, principles of radiation protection, ways of ionizing radiation protection, limits, diagnostic reference levels and further standards in radiation protection, what is necessary to know and respect in a out-patient practice. Ways of obtaining the special qualified competences , significance. Form of control: credit, colloquium, requirement is 100% presence

Literature

- KODL, Otto. *Radiační ochrana při zubních radiodiagnostických vyšetřeních*. Vyd. 3., přeprac. Praha: Česká stomatologická komora, 2007. 80 s. ISBN 9788087109045.

Teaching methods

Seminar

Assessment methods

colloquium