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| **Naziv predmeta** | | | | | | | | | | **Temelji radiološke anatomije** | | | | | | | | | | | | | | | | | | |
| **Kod** | MFMI… | | | | | Godina studija | | | | | 1-6 | | | | | | | | | | | | | | | | | |
| **Nositelj/i predmeta** | Profesor Ivica Grković | | | | | Bodovna vrijednost (ECTS) | | | | | 2 | | | | | | | | | | | | | | | | | |
| Suradnici | Izv. prof. Katarina Vukojević, Doc. Natalija Filipović, Doc. Maja Marinović Guić, Dr. Krešimir Kolić, Dr. Nikola Ključevć, Dr. Danica Ivanković | | | | | Način izvođenja nastave (broj sati u semestru) | | | | | P | | | S | V | | | | | T | |  | | | | | | |
| 10 | | | 10 | 5 | | | | |  | |
| Status predmeta | Izborni | | | | | Postotak primjene e-učenja | | | | |  | | | | | | | | | | | | | | | | | |
| **OPIS PREDMETA** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ciljevi predmeta | Do završetka slušanja predmeta student bi trebao moći prepoznati i protumačiti prikaz normalnih anatomskih struktura na nativnim i kontrastnim radiogramima, CT, MRI i ultrazvučnim prikazima. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uvjeti za upis predmeta i ulazne kompetencije potrebne za predmet | Odslušan predmet Anatomija. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Očekivani ishodi učenja na razini predmeta (4-10 ishoda učenja) | Slijedeći ishodi učenja su određeni za navedeni predmet:   1. Znanja i razumijevanja:   -važnosti odličnog poznavanja sistemske i regionalne anatomije za razumijevanje radiološke anatomije (kao primijenjene anatomske discipline),  -specifične terminologije u radiološkoj anatomiji,  -utjecaja anatomskih osobitosti različitih organa i organskih sustava na izbor odgovarajuće radiološke tehnike u dijagnostičke svrhe te mogućnosti usporedbe prikazivanja normalnih tjelesnih struktura različitim radiološkim tehnikama (rutinska radiografija, kontrastne metode, CT, MR i ultrazvuk).   1. Vještine:   -prepoznavanja različitih tehnika radiološkog prikazivanja anatomskih struktura,  -razvijanje tzv. 'trodimenzionalnog' promišljanja neophodnog za mogućnost interpretacija prikazivanja trodimenzionalnih organskih struktura na dvodimenzionalnim medijima.   1. Sposobnosti:   -utvrđivanja normalnih varijacija (korištenjem radioloških tehnika) u građi anatomskih struktura uvjetovanih starošću, spolnoj pripadnosti, tjelesnoj konstituciji, te utjecaju držanja, faza disanja i/ili trudnoće,  -uočavanja čestih anomalija (anatomskih varijacija) koje se razlikuju od klasičnih udžbeničkih prikaza morfologije. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sadržaj predmeta detaljno razrađen prema satnici nastave | Predmet obuhvaća pet cjelina: Temeljni principi radiološke anatomije, Prikazivanje sustava organa za pokretanje, Prikazivanje prsa, Prikazivanje trbuha i zdjelice i Prikazivanje glave i središnjeg živčanog sustava. Svaku nastavnu cjelinu čine dva sata predavanja, dva sata seminara i jedan sat vježbi. Primjena znanja stečenih teorijskom nastavom (predavanja i seminari), demonstrira se i uvježbava se na praktičnim vježbama uz korištenje multimedialnog alata (An@tomedia) koji je instaliran u kompjuterskoj učionici. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vrste izvođenja nastave: | ☐ predavanja  ☐ seminari i radionice  ☐ vježbe  ☐ *on line* u cijelosti  ☐ mješovito e-učenje  ☐ terenska nastava | | | | | | | | | | ☐ samostalni zadaci  ☐ multimedija  ☐ laboratorij  ☐mentorski rad  ☐       (ostalo upisati) | | | | | | | | | | | | | | | | | |
|
| Obveze studenata | Nazočnost na nastavi 80% predavanja, 90% seminari i 100% vježbe | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Praćenje rada studenata *(upisati udio u ECTS bodovima za svaku aktivnost tako da ukupni broj ECTS bodova odgovara bodovnoj vrijednosti predmeta):* | Pohađanje nastave | | | |  | | |  | | | | |  | | |  | | | | | | | | |  | | | |
| Seminarski rad | | | |  | | |  | | | | |  | | | (Ostalo upisati) | | | | | | | | |  | | | |
| Pismeni ispit | | | | 2 | | |  | | | | |  | | | (Ostalo upisati) | | | | | | | | |  | | | |
|  | | | |  | | |  | | | | |  | | | (Ostalo upisati) | | | | | | | | |  | | | |
|  | | | |  | | |  | | | | |  | | | (Ostalo upisati) | | | | | | | | |  | | | |
| Ocjenjivanje i vrjednovanje rada studenata tijekom nastave i na završnom ispitu | Objektivni strukturirani praktični ispit (OSPI) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Obvezna literatura (dostupna u knjižnici i putem ostalih medija) | **Naslov** | | | | | | | | | | | | | | | | | **Broj primjeraka u knjižnici** | | | | | **Dostupnost putem ostalih medija** | | | | | |
| Eizenberg N, Briggs C, Barker P, Grkovic I. **Anatomedia**: Site license anatomy CD-ROM. In. Maidenhead: McGraw Hill Education EMEA; 2014. | | | | | | | | | | | | | | | | | Licenca na 15 kompjutera u učionici na PAK-u | | | | | Individualne licence | | | | | |
| Dopunska literatura | -Moeller TB. Normal Findings in Radiography, Tieme Verlag, Stuttgart, 2000.  -Moeller TB, Reif E. Pocket Atlas of Cross-Sectional Anatomy, Tieme Verlag, Stuttgart, 2000. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Načini praćenja kvalitete koji osiguravaju stjecanje utvrđenih ishoda učenja | -Analiza kvalitete nastave od strane studenata i nastavnika,  -Analiza prolaznosti na ispitima,  -Izvješća Povjerenstva za kontrolu provedbe nastave,  -Izvaninstitucijska evaluacija (posjet timova za kontrolu kvalitete Nacionalne agencije za kontrolu kvalitete, uključenje u TEEP). | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ostalo (prema mišljenju predlagatelja) |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **NAME OF THE COURSE** | | | **Principles of radiological anatomy** | | | | | | | | | | | | | | | | | | | | | | | | |
| **Code** | | MFMI… | | | | | | | Year of study | | | | | | | | | | 1-6 | | | | | | | | |
| Course teacher | | Prof. Ivica Grković | | | | | | | Credits (ECTS) | | | | | | | | | | 2 | | | | | | | | |
| Associate teachers | | Assoc. prof. Katarina Vukojević, Asist. prof. Natalija Filipović, Asist. prof. Maja Marinović Guić, Krešimir Kolić, MD., Nikola Ključević, MD, Danica Ivanković, MD: | | | | | | | Type of instruction (number of hours) | | | | | | | | | | L | | S | | | | E | | T |
| 10 | | 10 | | | | 5 | |  |
| Status of the course | | Elective | | | | | | | Percentage of application of e-learning | | | | | | | | | |  | | | | | | | | |
| **COURSE DESCRIPTION** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Course enrolment requirements and entry competences required for the course | | Attendance to all anatomy classes (signature in anatomy) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Learning outcomes expected at the level of the course (4 to 10 learning outcomes) | | Following learning outcomes are identified for this subject:   1. **Knowledge and understanding:**   -understanding of importance of both topographic and systemic anatomy for radiological anatomy (as applied anatomy discipline),  -mastering specialised radiological terminology,  -demonstration of various organ/tissue characteristic in relation to the choice of specific radiological examination and comparison of appearance of different structures using different techniques (plane and contrast radiography, CT, MRI, ultrasound).   1. **Skils:**   -ability to recognise and compare different radiological techniques,  -development of ‘3D thinking’ in order to interpret the appearance of 3D structures on 2D media.   1. **Attitudes**:   **-**appreciation of the *range of normality*of the living human body (*normal variation*) due to age, sex and body build and the effects of posture, phase of respiration and pregnancy  **-**acceptance of common occurrence of *anomalies (anatomical variation),* which differ from ‘text-book descriptions’ of the typical case. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Course content broken down in detail by weekly class schedule (syllabus) | | This subject consists of five units: Principles of radiological anatomy, Musculosceletal imaging, Imaging of thorax, Imaging of abdomen and pelvis, Imaging of head and central nervous system.  There are lectures (2 hours), seminars (2hours) and practical classes (one hour) for each unit. During seminars and practical classes students will be able to use interactive multimedia tool (An@tomedia) installed in computer rooms. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Format of instruction | | ☐ lectures  ☐ seminars and workshops  ☐ exercises  ☐ *on line* in entirety  ☐ partial e-learning  ☐ field work | | | | | | | | | ☐ independent assignments  ☐ multimedia  ☐ laboratory  ☐ work with mentor  ☐       (other) | | | | | | | | | | | | | | | | |
|
| Student responsibilities | | In accordance to Rules of studying and Deontological code for USSM students. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Screening student work *(name the proportion of ECTS credits for each* *activity so that the total number of ECTS credits is equal to the ECTS value of the course)* | | Class attendance | |  | | | Research | | | | |  | | | | | Practical training | | | | | | | | |  | |
| Experimental work | |  | | | Report | | | | |  | | | | | (Other) | | | | | | | | |  | |
| Essay | |  | | | Seminar essay | | | | |  | | | | | (Other) | | | | | | | | |  | |
| Tests | | 2 | | | Oral exam | | | | |  | | | | | (Other) | | | | | | | | |  | |
| Written exam | |  | | | Project | | | | |  | | | | | (Other) | | | | | | | | |  | |
| Grading and evaluating student work in class and at the final exam | |  | | | | | | | | | | | | | | | | | | | | | | | | | |
| Required literature (available in the library and via other media) | | **Title** | | | | | | | | | | | | | | | | | **Number of copies in the library** | | | | | **Availability via other media** | | | |
| Eizenberg N, Briggs C, Barker P, Grkovic I. **Anatomedia**: Site license anatomy CD-ROM. In. Maidenhead: McGraw Hill Education EMEA; 2014. | | | | | | | | | | | | | | | | | Site license on 15 computer stations | | | | | Online subscription | | | |
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| Optional literature (at the time of submission of study programme proposal) | | -Moeller TB. Normal Findings in Radiography, Tieme Verlag, Stuttgart, 2000.  -Moeller TB, Reif E. Pocket Atlas of Cross-Sectional Anatomy, Tieme Verlag, Stuttgart, 2000. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality assurance methods that ensure the acquisition of exit competences | | * Teaching quality analysis by students and teachers * Exam passing rate analysis * Committee for control of teaching reports * External evaluation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other (as the proposer wishes to add) | |  | | | | | | | | | | | | | | | | | | | | | | | | | |