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| **Naziv predmeta** | | | | | **Klinička epidemiologija s medicinom utemeljenom na dokazima** | | | | | | | | | | |
| **Kod** | MFMI… | | Godina studija | | | 6. | | | | | | | | | |
| **Nositelj/i predmeta** | Doc. dr. sc. Ivana Kolčić | | Bodovna vrijednost (ECTS) | | | 2 | | | | | | | | | |
| Suradnici | prof. dr. sc. Zoran Đogaš, izv. prof. Ozren Polašek, doc. dr. sc. Daniela Marasović Krstulović, dr. sc. Zrinka Jurišić, doc. dr. sc. Nataša Boban | | Način izvođenja nastave (broj sati u semestru) | | | P | | S | V | | | T |  | | |
| 10 | | 15 | 0 | | | 25 |
| Status predmeta | Izborni | | Postotak primjene e-učenja | | | 0 | | | | | | | | | |
| **OPIS PREDMETA** | | | | | | | | | | | | | | | |
| Ciljevi predmeta | Osposobiti studente za korištenje metoda kliničke epidemiologije i principa medicine utemeljene na dokazima (Evidence-Based Medicine, EBM) u svakodnevnom kliničkom radu na korist pacijenata | | | | | | | | | | | | | | |
| Uvjeti za upis predmeta i ulazne kompetencije potrebne za predmet | Poznavanje vrsta kliničkih pokusa i prosudbe prikladnosti statističkih metoda. | | | | | | | | | | | | | | |
| Očekivani ishodi učenja na razini predmeta (4-10 ishoda učenja) | **Opći:** Poznavanje kvantitativnih metoda u kliničkim istraživanjima, osposobljenost za svrsishodno i nepristrano pronalaženje dokaza, kritičko prenošenje znanstvenih spoznaja u kliničku primjenu, te nepristrana prosudba uspješnosti kliničkog rada.  **Specifični:** poznavanje pristupa za primjenu kvantitativnih metoda kliničke epidemiologije u kliničkoj praksi, poznavanje postupaka EBM i njihove primjene u svakodnevnom radu | | | | | | | | | | | | | | |
| Sadržaj predmeta detaljno razrađen prema satnici nastave | 1. Uvod u kliničku epidemiologiju: djelokrug rada, načelni postupci. Odnos kvantitativnih i kvalitativnih podataka, Bayesianska logika u tumačenju kliničkih podataka (predavanja 2 sata) 2. Načela kliničkih pokusa: temeljne vrste kliničkih pokusa, novačenje, praćenje i ishod. Pristranost u kliničkim pokusima (predavanja 1 sat, seminar 1 sat) 3. Istraživanje uzročnosti: klinički pokusi i kvantitativna procjena (predavanja 1 sat, seminar 2 sata) 4. Dijagnostičke metode: klinički pokusi i kvantitativna prosudba (predavanja 2 sata, seminar 2 sata) 5. Terapijski postupci: klinički pokusi, procjena uspješnosti i škodljivosti (predavanja 1 sat, seminar 2 sata) 6. Prognoza bolesti: klinički pokusi i kvantitativna prosudba (predavanja 1 sat, seminar 1 sat) 7. Medicina utemeljena na dokazima, dosezi i ograničenja, postupci, postavljanje pitanja, pronalaženja dokaza (predavanja 2 sata, seminar 1 sat) 8. Procjena radova o dijagnostičkim postupcima (seminar 2 sata) 9. Procjena radova o terapijskim postupcima, uspješnosti i škodljivosti (seminar 2 sata) 10. Procjena radova o prognozi i uzročnosti bolesti (seminar 2 sata) | | | | | | | | | | | | | | |
| Vrste izvođenja nastave: | x predavanja  x 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 | 0,5 | |  | | |  | | |  | | | | |  |
| Seminarski rad | 1 | |  | | |  | | | (Ostalo upisati) | | | | |  |
| Pismeni ispit | 0,5 | |  | | |  | | | (Ostalo upisati) | | | | |  |
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| Ocjenjivanje i vrjednovanje rada studenata tijekom nastave i na završnom ispitu | Pisani ispit i seminarski rad | | | | | | | | | | | | | | |
| Obvezna literatura (dostupna u knjižnici i putem ostalih medija) | **Naslov** | | | | | | | | | | **Broj primjeraka u knjižnici** | | | **Dostupnost putem ostalih medija** | |
| 1. Gamulin S. Klinička istraživanja: klinička epidemiologija, Zagreb, Medicinska naklada, 2015. 2. Zadatci za seminare 3. Članci iz kojih su sačinjeni zadatci za seminare 4. Sažetci predavanja | | | | | | | | | |  | | |  | |
| Dopunska literatura | 1. Fletcher W, Fletcher SW. Clinical epidemiology: The essentials, 4th edition. Lippincot Williams and Wilkins, 2005. 2. Sackett DL, Haynes RB, Guyatt GH, Tugwell P. Clinical epidemiology. A basic science for clinical medicine. Boston; Little, Brown and Company, 1991. 3. Haynes RB, Sackett DL, Guyatt GH, Tugwell P, Clinical epidemiology, Lippincott Philadelphia, 2006. 4. Kolčić I, Vorko Jović A (ur). Epidemiologija. Medicinska naklada, Zagreb, 2012. 5. Marušić M i sur. Uvod u znanstveni rad u medicini, Zagreb, Medicinska naklada, 2008, poglavlja 4, 5, 6, 7. | | | | | | | | | | | | | | |
| 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) |  | | | | | | | | | | | | | | |

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| **NAME OF THE COURSE** | | **Clinical epidemiology and Evidence Based Medicine** | | | | | | | | | | | | |
| **Code** | MFMI… | | | | Year of study | | | | 6th | | | | | |
| Course teacher | Assist. Prof. Ivana Kolčić | | | | Credits (ECTS) | | | | 2 | | | | | |
| Associate teachers | Prof. Zoran Đogaš, Prof. Ozren Polašek, Assist. Prof. Daniela Marasović Krstulović, Zrinka Jurišić, MD, PhD, Assist. prof. Nataša Boban | | | | Type of instruction (number of hours) | | | | L | S | | E | | T |
| 10 | 15 | | 0 | | 25 |
| Status of the course | Elective | | | | Percentage of application of e-learning | | | | 0% | | | | | |
| **COURSE DESCRIPTION** | | | | | | | | | | | | | | |
| Course enrolment requirements and entry competences required for the course | Knowledge about the types of clinical trials and basic statistical methods. | | | | | | | | | | | | | |
| Learning outcomes expected at the level of the course (4 to 10 learning outcomes) | General: familiarity with quantitative methods used in clinical trials, capability of literature search process, critical judgement of scientific results and applicability of new knowledge in the clinical practice, and unbiased evaluation of clinical work.  Specific: knowledge of approaches to the application of quantitative methods of clinical epidemiology into clinical practice, knowledge of EBM procedures and their application in everyday work | | | | | | | | | | | | | |
| Course content broken down in detail by weekly class schedule (syllabus) | 1. Introduction to Clinical Epidemiology: scope, principles and procedures. Differences between quantitative and qualitative data, Bayesian logic in the interpretation of clinical data (lecture, 2 hours) 2. Principles of clinical trials: basic types of clinical trials, recruitment, monitoring and outcome. Bias in clinical trials (lecture 1 hour, seminar 1 hour) 3. Causal Investigation: clinical trials and quantitative estimation (1 hour lecture, 2 hours seminar) 4. Diagnostic Methods: clinical trials and quantitative evaluation (2 hours lecture, 2 hours seminar) 5. Therapy: clinical trials, assessment of efficacy and adversity (lecture 1 hour, seminar 2 hours) 6. Prognosis of the disease: clinical trials and quantitative analysis (lecture 1 hour, seminar 1 hour) 7. Evidence-based medicine, achievements and restrictions, procedures, posing clinical questions, finding evidence (2 hours lectures, 1 hour seminar) 8. Assessment of papers on diagnostic procedures (2 hours seminar) 9. Evaluation of papers on therapeutic procedures (seminar 2 hours) 10. Estimation of papers on prognosis and cause of disease (2 hours seminar) | | | | | | | | | | | | | |
| Format of instruction | x lectures  x 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 | | 0.5 | Research | | |  | Practical training | | | | |  | |
| Experimental work | |  | Report | | |  | (Other) | | | | |  | |
| Essay | |  | Seminar essay | | | 1 | (Other) | | | | |  | |
| Tests | |  | Oral exam | | |  | (Other) | | | | |  | |
| Written exam | | 0.5 | Project | | |  | (Other) | | | | |  | |
| Grading and evaluating student work in class and at the final exam | Written exam and seminar essay | | | | | | | | | | | | | |
| Required literature (available in the library and via other media) | **Title** | | | | | | | | **Number of copies in the library** | | **Availability via other media** | | | |
| 1. Gamulin S. Clinical Research: Clinical Epidemiology, Zagreb, Medicinska naklada, 2017 | | | | | | | |  | |  | | | |
| 2. Seminar assignments | | | | | | | |  | |  | | | |
| 3. Articles from which seminar assignments are made | | | | | | | |  | |  | | | |
| 4. Lecture handouts | | | | | | | |  | |  | | | |
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| Optional literature (at the time of submission of study programme proposal) | 1. Fletcher W, Fletcher SW. Clinical epidemiology: The essentials, 4th edition. Lippincot Williams and Wilkins, 2005. 2. Sackett DL, Haynes RB, Guyatt GH, Tugwell P. Clinical epidemiology. A basic science for clinical medicine. Boston; Little, Brown and Company, 1991. 3. Haynes RB, Sackett DL, Guyatt GH, Tugwell P, Clinical epidemiology, Lippincott Philadelphia, 2006. 4. Kolčić I, Vorko Jović A (ur). Epidemiology. Medicinska naklada, Zagreb, 2012. 5. Marušić M i sur. Principles of research in medicine, Zagreb, Medicinska naklada, 2008, poglavlja 4, 5, 6, 7. | | | | | | | | | | | | | |
| 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) |  | | | | | | | | | | | | | |