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| **Naziv predmeta** | | | | | **Populacijska genetika** | | | | | | | | | | |
| **Kod** | MFMI… | | Godina studija | | | 1-6 | | | | | | | | | |
| **Nositelj/i predmeta** | Izv. prof. dr. sc. Ozren Polašek | | Bodovna vrijednost (ECTS) | | | 2 | | | | | | | | | |
| Suradnici | Doc. dr. sc. Ivana Kolčić | | Način izvođenja nastave (broj sati u semestru) | | | P | | S | V | | | T |  | | |
| 10 | | 10 | 5 | | | 0 |
| Status predmeta | Izborni | | Postotak primjene e-učenja | | | 0 | | | | | | | | | |
| **OPIS PREDMETA** | | | | | | | | | | | | | | | |
| Ciljevi predmeta | Usvajanje osnovnih znanja o populacijsko genetici | | | | | | | | | | | | | | |
| Uvjeti za upis predmeta i ulazne kompetencije potrebne za predmet | Položen predmet Biologija (s prve godine) | | | | | | | | | | | | | | |
| Očekivani ishodi učenja na razini predmeta (4-10 ishoda učenja) | Usvajanje glavnih proces populacijske genetike, shvaćanje mutacije, selekcije i evolucije, razumijevanje osnovnih procesa koji oblikuju populaciju, određuju odabir partnera i definiraju odnosa spolova u populaciji. Razumijevanje genetske prošlosti ljudske vrste, shvaćanje koncepta ljudskih rasa te pojava genetskog pomaka i učinka osnivača kao osnovnog mehanizma za nastajanje razlika među populacijama. Razumijevanje koncepta haploskupina i njihovo značenja za medicinu | | | | | | | | | | | | | | |
| Sadržaj predmeta detaljno razrađen prema satnici nastave | *Ponedjeljak*  13:50-15:25 Pojam populacijske genetike (P2h; doc. dr. sc. Ozren Polašek)  15:30-17:05 Mutacija, selekcija i evolucija (P2h; doc. dr. sc. Ozren Polašek)  17:10-17:55 Evolucija ljudske vrste (P1h; doc. dr. sc. Ozren Polašek)  18:00-18:45 Haploskupine i njihovo značenje (P1h; doc. dr. sc. Ozren Polašek)  *Utorak*  13:50-15:25 Otvorene i izolirane populacije (P2h; dr. sc. Ivana Kolčić)  15:30-16:15 Demografija i genetika (P1h; dr. sc. Ivana Kolčić)  16:20-17:55 Genetika moderne ljudske populacije (P2h; dr. sc. Ivana Kolčić)  18:00-18:45 Genetska prošlost i budućnost ljudi (P1h; dr. sc. Ivana Kolčić)  *Srijeda*  13:50-15:25 Odabir partnera (P2h; doc. dr. sc. Ozren Polašek)  15:30-16:15 Budućnost korištenja genomike (P1h; doc. dr. sc. Ozren Polašek)  16:20-17:55 Modeli evolucije ljudi (S2h; doc. dr. sc. Ozren Polašek)  18:00-18:45 Analiza etničkog porijekla (S1h; doc. dr. sc. Ozren Polašek)  *Četvrtak*  13:50-14:35 Migracije (S1h; doc. dr. sc. Ozren Polašek)  14:40-15:25 Genetička struktura populacije (V1h; dr. sc. Ivana Kolčić)  15.30-17:05 Projekt 10,001 Dalmatinac (V2h; dr. sc. Ivana Kolčić)  17:10-17:55 Arheogenetika (S1h; doc. dr. sc. Ozren Polašek)  *Petak*  13:50-15:25 Projekt 10,001 Dalmatinac (V2h; dr. sc. Ivana Kolčić)  15:30-16:15 Ispit | | | | | | | | | | | | | | |
| 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 | 20 | |  | | |  | | |  | | | | |  |
| Seminarski rad | - | |  | | |  | | | (Ostalo upisati) | | | | |  |
| Pismeni ispit | 80 | |  | | |  | | | (Ostalo upisati) | | | | |  |
|  |  | |  | | |  | | | (Ostalo upisati) | | | | |  |
|  |  | |  | | |  | | | (Ostalo upisati) | | | | |  |
| Ocjenjivanje i vrjednovanje rada studenata tijekom nastave i na završnom ispitu | Pisani ispit | | | | | | | | | | | | | | |
| Obvezna literatura (dostupna u knjižnici i putem ostalih medija) | **Naslov** | | | | | | | | | | **Broj primjeraka u knjižnici** | | | **Dostupnost putem ostalih medija** | |
| Prezentacije s nastave | | | | | | | | | | - | | | *On-line* | |
| Dopunska literatura | - | | | | | | | | | | | | | | |
| 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** | | **Population genetics** | | | | | | | | | | | | |
| **Code** | MFMI… | | | | Year of study | | | | 1-6 | | | | | |
| Course teacher | Assistant Professor Ozren Polašek | | | | Credits (ECTS) | | | | 2 | | | | | |
| Associate teachers | Assistant Professor Ivana Kolčić | | | | Type of instruction (number of hours) | | | | L | S | | E | | T |
| 10 | 10 | | 5 | | 0 |
| Status of the course | Elective | | | | Percentage of application of e-learning | | | | 0 | | | | | |
| **COURSE DESCRIPTION** | | | | | | | | | | | | | | |
| Course enrolment requirements and entry competences required for the course | Completed course in medical biology (1st year) | | | | | | | | | | | | | |
| Learning outcomes expected at the level of the course (4 to 10 learning outcomes) | Acquiring of the main processes in the field of population genetics, including mutation, selection and evolution as the main population shaping forces, partner selection and gender balance. Understanding of the genetic history of human kind, main ideas underlying human races, genetic drift and the founder effect as the main mechanisms underlying inter-population variability. Understanding of the concept of haplogroups and their importance in medicine | | | | | | | | | | | | | |
| Course content broken down in detail by weekly class schedule (syllabus) | *Monday*  15:30-16:15 Basics of population genetics (O. Polašek)  16:20-17:50 Mutation, selection and evolution (O. Polašek)  18:00-19:30 Human evolution and archaeogenetics (O. Polašek)  *Tuesday*  15:30-16:15 Open and isolated population (O. Polašek)  16:20-17:50 Demography and genetics (I. Kolčić)  18:00-19:30 Modern vs. archaeological population genetics (I. Kolčić)  *Wednesday*  15:30-16:15 Sexual partner selection (O. Polašek)  16:20-17:05 Future of genomics (O. Polašek)  17:10-17:55 Haplogroup analysis (O. Polašek)  18:00-19:30 Genome-wide association and exome analysis (O. Polašek)  *Thursday*  15:30-16:15 Human migrations and spread around the globe (O. Polašek)  16:20-17:50 Three crucial steps of human evolution (I. Kolčić)  18:00-19:30 10,001 Dalmatians research resource (I. Kolčić)  *Friday*  15:30-16:15 Practical (5th floor, 10,001 Dalmatians laboratory; O. Polašek)  18:00-18:45 Exam | | | | | | | | | | | | | |
| 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 | | 20 | Research | | |  | Practical training | | | | |  | |
| Experimental work | |  | Report | | |  | (Other) | | | | |  | |
| Essay | |  | Seminar essay | | |  | (Other) | | | | |  | |
| Tests | |  | Oral exam | | |  | (Other) | | | | |  | |
| Written exam | | 80 | Project | | |  | (Other) | | | | |  | |
| Grading and evaluating student work in class and at the final exam | Written exam, 30 questions | | | | | | | | | | | | | |
| Required literature (available in the library and via other media) | **Title** | | | | | | | | **Number of copies in the library** | | **Availability via other media** | | | |
| Course presentations | | | | | | | | - | | On-line | | | |
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| Optional literature (at the time of submission of study programme proposal) | - | | | | | | | | | | | | | |
| 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) | - | | | | | | | | | | | | | |