

Course Unit Descriptor

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| Study Programme: MSc Biology | | | |
| Course Unit Title: Human genome | | | |
| Course Unit Code: MB35 | | | |
| Name of Lecturer(s): Full Professor Dr. Mihajla Đan | | | |
| Type and Level of Studies: Master Academic Degree | | | |
| Course Status (compulsory/elective): Elective | | | |
| Semester (winter/summer): Winter | | | |
| Language of instruction: English | | | |
| Mode of course unit delivery (face-to-face/distance learning): Face-to-face | | | |
| Number of ECTS Allocated: 7 | | | |
| Prerequisites: None | | | |
| Course Aims: The aim of this course is to introduce students to the human genome organization, distribution and function of genes. | | | |
| Learning Outcomes: After successful fulfilling of pre-exam and exam obligations student can: differ levels of structural and functional human genome organization and understand the mechanisms of gene regulation and expression.. | | | |
| Syllabus: <i>Theory</i> General organization of the human genome. Protein-coding genes. RNA genes. Highly repetitive DNA. Human mitochondrial genome. Human gene expression. Studying gene function. Human genetic variability and its consequences. Genetic mapping of Mendelian characters. Identifying human disease genes and susceptibility factors. Cancer genetics. Gene therapy. <i>Practice</i> Molecular markers: the selection of marker systems in diagnostics, population genetics and forensics. Use of internet sources with information on the human genome organization and function: NCBI, OMIM, GENOME. | | | |
| Required Reading: 1. Strachan T., Read AP. Human Molecular Genetics 4th edition. Garland Publishing, New York, USA. 2011. 2. Lewis R. Human Genetics: Concepts and Applications, 9th edition, McGraw–Hill Primis, USA, 2009. | | | |
| Weekly Contact Hours: 9 | | Lectures: 3 | Practical work: 2+4 |
| Teaching Methods: Lectures, practical work, laboratory work, seminar | | | |
| Knowledge Assessment (maximum of 100 points): | | | |
| Pre-exam obligations | points | Final exam | points |
| Active class participation | | written exam | |
| Practical work | 10 | oral exam | 70 |
| Tests | | | |
| Seminar(s) | 20 | | |
| The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc. | | | |