**Incoming student mobility**

**UNIOS University Unit: Department of Biology**

**COURSES OFFERED IN FOREIGN LANGUAGE**

**FOR ERASMUS+ INDIVIDUAL INCOMING STUDENTS**

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| **Department or Chair within the UNIOS Unit**  | **Department of Biology** |

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| **Study program**  | Master of Science Graduate Program in Biology |

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| **Study level** | **Graduate (master)** |

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| **Course title** | **Molecular Genetics** |
| **Course code (if any)** | BM758 |
| **Language of instruction** | **English** |
| **Brief course description** | **The molecular basis of heredity, DNA and RNA as genetic material. Genetic code and genes. Genomic projects. Prokaryotic and eukaryotic genome. Distribution of DNA sequences in the genome, copy number, the proportion and distribution of genetic and non-genetic sequences. "DNA identity", minisatellite and microsatellites. Genome size and C value paradox. Genomic reorganization: recombination mechanisms. Transposons and their role in genome evolution. DNA in the eukaryotic genome: nucleosomes, chromatin and chromosomes. Centromere and telomeres, epigenetic inheritance. The importance in the regulation of transcription and the formation of the genome: mechanism of RNAi. Main characteristics of the human genome, comparisons with sequenced genomes of other organisms.**  |
| **Form of teaching** | **Lectures, laboratory practices** |
| **Form of assessment** | **Written examination (test) and oral exam**  |
| **Number of ECTS** | **4** |
| **Class hours per week** | **30 hours of lectures + 15 hours of laboratory practice in block** |
| **Minimum number of students**  | **1** |
| **Period of realization**  | **winter semester** |
| **Lecturer** | **Dr. Vera Cesar, Full Professor** |