**Incoming student mobility**

**Name of 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** | **Undergraduate University Study Programme in Biology** |

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| **Study level** | **Undergraduate (bachelor)** |

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| **Course title** | **Physical fundamentals of instrumental methods in biology** |
| **Course code (if any)** | **BB0103** |
| **Language of instruction** | **English** |
| **Brief course description** | **The instrumental methods are inevitable subject of every modern research in biology. Student will be introduced and learn basic principles of the most common instrumental methods.**  **Principles of working with light, fluorescent and electron microscope. Microscopy. Principles of weighting. Principles of pH meter, thermometer, oxygen electrode. Principles of spectrometer, spectrometry. UV spectrophotometer. Principles of IR and nearIR spectrometry. Principles of fluorometer, fluorometry and spectrofluorometry. Principles of electrophoresis. Principles of centrifugation. Chromatographic techniques: thin layer chromatography, gas chromatography, liquid chromatography. Principles of atomic absorption, mass spectrometry. Combinations of instrumental methods.** |
| **Form of teaching** | **Lectures, Laboratory exercises** |
| **Form of assessment** | **Written and oral examination** |
| **Number of ECTS** | **4** |
| **Class hours per week** | **2 hours of lectures + 1 hours of laboratory exercises** |
| **Minimum number of students** | **-** |
| **Period of realization** | **winter semester** |
| **Lecturer** | **Vera Cesar, Ph.D., Full Professor**  **Branimir K. Hackenberger, Ph.D., Full Professor** |