| NAME OF THE COURSE Population Genetics   |  |        |                       |                          |                     |            |   |   |  |
|--|--|--------|-----------------------|--------------------------|---------------------|------------|---|---|--|
| Code   | PMB726   |        | Year of s             | tudv                     | 2                   |            |   |   |  |
| Course teacher   | Ozren Polašek, PhD,<br>ProfessorCredits (ECTS)3 ECTS   |        |                       |                          |                     |            |   |   |  |
| Associate teachers   |  |        | Type of ir<br>(number | nstruction<br>of hours)  | L<br>15             | S<br>15    | E | F |  |
| Status of the course   | Elective   |        | Percenta              |                          | 10%                 |            |   |   |  |
| COURSE DESCRIPTION   |  |        |                       |                          |                     |            |   |   |  |
| Course objectives<br>Course enrolment<br>requirements and<br>entry competences<br>required for the   | To develop a mix of the knowledge and skills required to understand the basic and<br>advanced concepts in the contemporary population genetics<br>Completed course in genetics, statistics and study design  |        |                       |                          |                     |            |   |   |  |
| course<br>Learning outcomes<br>expected at the<br>level of the course<br>(4 to 10 learning<br>outcomes)  | <ul> <li>Interpret the basic principles of population genetics</li> <li>Explain the concepts that shape population, including evolution, mutation, natural selection</li> <li>Familiarize with the basic concepts of population genetics of small and isolated populations, including drift, founder effect and inbreeding</li> <li>Describe the main principles of mate selection</li> <li>Explain the basics of human evolution</li> </ul> |        |                       |                          |                     |            |   |   |  |
| Course content<br>broken down in<br>detail by weekly<br>class schedule<br>(syllabus)   | <ol> <li>Population genetics – introduction</li> <li>Main genetic forces that shape the population</li> <li>Mutation, selection and evolution</li> <li>Evolution of hominid species</li> <li>Archaeogenetics</li> <li>Partner selection as the main evolutionary force</li> <li>Genetics of isolated human populations</li> <li>Population genetics on a global scale</li> </ol>   |        |                       |                          |                     |            |   |   |  |
| Format of instruction  |  |        |                       | nt assignments<br>nentor |                     |            |   |   |  |
| Student responsibilities   | Participate in the course  |        |                       |                          |                     |            |   |   |  |
| Screening student<br>work (name the<br>proportion of ECTS<br>credits for each<br>activity so that the<br>total number of<br>ECTS credits is<br>equal to the ECTS | Class<br>attendance<br>Experimenta<br>work   | 1<br>I | Research<br>Report    |                          | Practica<br>(Other) | l training | 1 |   |  |
|  | Essay  |        | Seminar<br>essay      |                          | (Other)             |            |   |   |  |
|  | Tests  |        | Oral exam             |                          | (Other)             |            |   |   |  |
| value of the course)   | Written exan   | n 2    | Project               |                          | (Other)             |            |   |   |  |

| Grading and<br>evaluating student<br>work in class and at<br>the final exam             | Grading will be conducted based on activities in class exam.   | , seminar worl                        | kand final written           |  |  |  |  |
|---|--|---------------------------------------|------------------------------|--|--|--|--|
| Required literature<br>(available in the<br>library and via other<br>media)             | Title  | Number of<br>copies in<br>the library | Availability via other media |  |  |  |  |
|   | 1. Hamilton M. Population genetics. Wiley-Blackwell, 2009  | 0                                     |                              |  |  |  |  |
|   | 2. Relethford JH. Human Population Genetics.<br>Wiley-Blackwell, 2012  | 0                                     |                              |  |  |  |  |
| Optional literature<br>(at the time of<br>submission of study<br>programme<br>proposal) | Selected original and review scientific articles.  |                                       |                              |  |  |  |  |
| Quality assurance<br>methods that<br>ensure the<br>acquisition of exit<br>competences   | Students' evaluation via anonymous questionnaires at the end of the course. The survey is conducted according to the rules of the University of Split. |                                       |                              |  |  |  |  |
| Other (as the<br>proposer wishes to<br>add)   |  |                                       |                              |  |  |  |  |