Course description

1. GENERAL INFORMATION				
1.1. Course teacher	Petar Tomev Mitrikeski		1.6. Year of the study	
1.2. Name of the course	Theory of evolution		1.7. ECTS credits	3
1.3. Associate teachers			1.8. Type of instruction (number of hours L + E + S + e-learning)	30 + 0 + 0
1.4. Study programme (undergraduate, graduate, integrated)	Undergraduate and graduate programme		1.9. Expected enrolment in the course	Between 10 and 20
1.5. Status of the course	☐ mandatory	☒ elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	
2.COUSE DESCRIPTION				
2.1. Course objectives	The course is dedicated to a deeper understanding of *biological evolution*. The most common, and at the same time the most usual definition of biological evolution derives from the reach of *modern synthesis*. In this light, evolution represents any *change in the frequency of alleles* within a population over generations. Such a definition, however, necessarily reduces evolution only to micro-evolutionary processes that cannot explain the emergence of new species. Thus, other scholars – hoping to bridge the huge gap between micro- and macro-evolutionary processes – offer different considerations based on a much broader initial definition. According to them, evolution is simply a *change in the characteristics of organisms* (i.e. biological groups) over generations and encompasses everything from slight changes in allele frequency within a population to robust (substantial and long-lasting) changes thought to have led from initial ancient and simple organisms to highly complex organisms like humans. However, no matter how hard we try to define biological evolution as precisely and academically as possible, there will still be – for now – a lack of a definitive definition in the philosophy of biology that will be general enough and thus self-sufficient. A closer goal of this course is for students to gain insight into the historical development and academic achievements of scientific and philosophical thought on biological evolution. In addition, students have the opportunity to engage in their own *in situ* reflection during the lectures.			
2.2. Enrolment requirements and/or entry competences required for the course	There are no prerequisites/competencies for enrolling in this course.			
2.3. Learning outcomes at the level of the programme to which the course contributes	Students who choose this course will be trained to: (i) Connect philosophical ideas with the philosophers to whom they belong, (ii) Take a critical attitude towards various philosophical conceptions and orientations and in that sense towards the possibility of taking their position, (iii) Develop the skill of arguing their own critical opinion, (iv) Formulate scientific hypotheses in this philosophical field.			

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<tr><td>2.4. Expected learning outcomes at the level of the course (3 to 10 learning outcomes)</td><td colspan="9">Students who choose this course will be able to:
(i) Describe historical periods in the development of philosophical thought about biological evolution,
(ii) Recognize relevant philosophical discussions of today that arise from dilemmas within the modern theory of biological evolution.</td></tr>
<tr><td>2.5. Course content (syllabus)</td><td colspan="9">The purpose and goals of the course are achieved through several thematic (teaching) units that achieve conceptual comprehensiveness. Thus, the individual thematic units are grouped through two main subtopics: (i) modes of biological evolution, and (ii) other themes in the philosophy of evolution. Both subtopics cover several teaching units. The first subtopic seeks to describe the ways (mechanisms) through which evolution works, dealing with concepts such as natural selection, sexual selection, and genetic drift. The second subtopic reflects on the existing academic (sometimes very bitter) discussions that evolutionary biologists and philosophers of biology have with sociobiologists, evolutionary psychologists, and even the proponents of creationism. Furthermore, the second subtopic necessarily delves into a more detailed analysis of common dilemmas that are generally interesting in the philosophy of biology such as (i) replicator and transporter issues (instead of genes and organisms), or (ii) what exactly are the units and levels of natural selection or (iii) whether the genotype necessarily transmits some biological information and if so, in what exact sense, etc.</td></tr>
<tr><td>2.6. Format of instruction:</td><td colspan="4">☒ lectures
☒ seminars and workshops
☐ exercises
☐ online in entirety
☐ partial e-learning
☐ field work</td><td colspan="3">☐ independent assignments
☐ multimedia and the internet
☐ laboratory
☐ work with mentor
☐ (other)</td><td colspan="2">2.7. Comments:</td></tr>
<tr><td>2.8. Student responsibilities</td><td colspan="9">Students are expected to attend classes regularly and actively participate in them.</td></tr>
<tr><td rowspan="5">2.9. Monitoring student work</td><td>Class attendance</td><td>YES</td><td></td><td>Research</td><td></td><td>NO</td><td>Oral exam</td><td></td><td></td></tr>
<tr><td>Experimental work</td><td></td><td>NO</td><td>Report</td><td></td><td>NO</td><td>(other)</td><td></td><td></td></tr>
<tr><td>Essay</td><td></td><td>NO</td><td>Seminar paper</td><td>YES</td><td></td><td>(other)</td><td></td><td></td></tr>
<tr><td>Preliminary exam</td><td></td><td>NO</td><td>Practical work</td><td></td><td>NO</td><td>(other)</td><td></td><td></td></tr>
<tr><td>Project</td><td></td><td>NO</td><td>Written exam</td><td></td><td>NO</td><td>ECTS credits (total)</td><td colspan="2">3</td></tr>
<tr><td rowspan="3">2.10. Required literature (available in the library and/or via other media)</td><td colspan="6">Title</td><td>Number of copies in the library</td><td>Availability via other media</td></tr>
<tr><td colspan="6">Mayr, E. (2001). What Evolution Is. New York: Basic Books. (ISBN 978-0-465-04426-9)</td><td></td><td>Possible</td></tr>
<tr><td colspan="6">Mayr, E. (1997). This Is Biology. Cambridge: Belknap Press of Harvard University Press. (ISBN 978-0-674-88469-4)</td><td></td><td>Possible</td></tr>
<tr><td>2.11. Optional literature</td><td colspan="9">• Futuyma, D. J. (2005) Evolution, Sunderland, MA: Sinauer Associates.
• Dobzhansky, T. (1973) Nothing in biology makes sense except in the light of evolution, American Biology Teacher, 35(3): 125-129. doi: 10.2307/4444260
• Maynard, S.J.; Szathmáry, E. (1995). The Major Transitions in Evolution. Oxford, England: Oxford University Press. ISBN 978-0-19-850294-4.</td></tr>
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2.12. Other (as the proposer wishes to add)	