

Module name	Evolutionary Biology for Cognitive Science
Erasmus code	
ISCED code	
Language of instruction	English
Website	
Prerequisites	None
ECTS points hour equivalents	Contact hours (work with an academic teacher): 30 Total number of hours with an academic teacher: 60 Non-contact hours (students' own work): 60 Total number of non-contact hours: 60 Total number of ECTS points for the module: 4 ECTS
Educational outcomes verification methods	Multiple choice test
Description	The module covers the knowledge in the area of evolutionary biology and its connections with cognitive science. Students will have an opportunity to understand main research methods, fields of interests, and some unsolved problems of evolutionary biology. Special emphasis will be put on the evolution of nervous system, sense organs and social behaviour – topics of particular importance for every cognitive scientist.
Reading list	1) Bergstrom, C.T., Dugatkin, L.A. (2012). Evolution 2) Herron, J.C., Freeman, S. (2014). Evolutionary Analysis 3) Cowen, R. (2013). History of Life 4) Glaeser G., Paulus, H.F. (2015). The Evolution of the Eye 5) Dial, K.P., Shubin, N., Brainerd, E.L. (2015). Great Transformations in Vertebrate Evolution
Educational outcomes	<p>KNOWLEDGE</p> <p>The student will acquire a detailed insight into the main research areas of evolutionary biology, with particular reference to the evolution of nervous system, sense organs, and social behaviour. The student will gain a knowledge of scientific terminology in the field of evolutionary biology, genetics and neurobiology.</p> <p>SKILLS</p> <p>The student is able to apply biological knowledge to the description of cognitive processes on genetic, organismal and populational level.</p> <p>The student can identify the common misconceptions regarding the process of evolution.</p> <p>ATTITUDES</p> <p>The student seeks to deepen his/her knowledge of evolutionary biology by reading scientific journals and books, as well as discussing various evolutionary topics with the teacher and peers.</p>
Practice	None

Information about classes in the cycle

Website	
Educational outcomes verification methods	Multiple choice test
Comments	
Reading list	1) Bergstrom, C.T., Dugatkin, L.A. (2012). Evolution 2) Herron, J.C., Freeman, S. (2014). Evolutionary Analysis

	3) Cowen, R. (2013). History of Life 4) Glaeser G., Paulus, H.F. (2015). The Evolution of the Eye 5) Dial, K.P., Shubin, N., Brainerd, E.L. (2015). Great Transformations in Vertebrate Evolution
Educational outcomes	<p>KNOWLEDGE</p> <p>The student will acquire a detailed insight into the main research areas of evolutionary biology, with particular reference to the evolution of nervous system, sense organs, and social behaviour. The student will gain a knowledge of scientific terminology in the field of evolutionary biology, genetics and neurobiology.</p> <p>SKILLS</p> <p>The student is able to apply biological knowledge to the description of cognitive processes on genetic, organismal and populational level.</p> <p>The student can identify the common misconceptions regarding the process of evolution.</p> <p>ATTITUDES</p> <p>The student seeks to deepen his/her knowledge of evolutionary biology by reading scientific journals and books, as well as discussing various evolutionary topics with the teacher and peers.</p>
A list of topics	1) An outline of evolutionary thinking 2) The pattern of evolution 3) Evolution by natural selection 4) Evolutionary trees 5) Types of speciation 6) The sources of genetic variation. Mutations 7) Migration, drift and non-random mating 8) Sexual selection 9) History of life on Earth I 10) History of life on Earth II 11) The evolution of sense organs 12) The evolution of nervous system 13) The evolution of social behaviour 14) Human evolution 15) The science of evolutionary medicine
Teaching methods	Lecture
Assessment methods	Multiple choice test