Course title	***Evolutionary ecology***
Course code	***Biol6009***
Credit points	6
ECTS creditpoints	9
Total Contact Hours	96
Number of hours for lectures	96
Course developer (s)	
Artūrs Škute Nataļja Škute Zinaīda Sondore	

Prerequisite knowledge
Biol1007, General ecology

Course abstract:
Organism and environmental cross-compliance. Convergence and parallelism. Ecotype, genetic polymorphism, and biological diversity. Life as an ecological phenomenon. Unitary and modular organisms. Life-cycle dynamics and differences between different organisms. Potential and realized ecological niche. Biotic interactions and co-evolution concept. Genotype analysis. Different systematic groups of similarities. Saltation in zoology and botany. Mechanism for the emergence of complex behavior. Self-evolution in different levels of the organization. Modern concepts of the origin of Life.

Wilson E.O., 1995. Sociobiology. Harvard Univ. Press, Cambirge
Wouter T. de Groat, 1992. Environmental Science. Theory, Concepts and Methods in a One World Problem. Studies in Environmental Science , 583p.
Wynne-Edvards V.C., 1968. Animal Dispersion in Relations to social Behavior.
Николов Т. 1986. Долгий путь жизни. Москва, Мир,
Современные проблемы теории эволюции. М., Наука, 1993 Шноль С. 1979Физикохимические факторры биологической эволюции.// М., Наука.

Periodicals and other sources
Perodika: Acta Biologica Universitatis Daugavpilensis; Oikos; DU abonētās datu bāzes: Cambridge Journals Online; EBSCO; Science Direct; Springer Link

Compulsory reading:

1.Boughey A.S., 1968. Ecology of Populations. Macmilan, New York
2.Bresh C., Hausmann R., 1972. Klassishe und molekulare Genetik, 3.Aufl., Springer, Berlin
3.Cielēns E. 1996. Molekulārā evolūcija. Rīga, Zinātne
4.Fox, S., Dose, K., 1977. Molecular evolution and origin of life, Freeman, San Francisko
5.Krebs C.J., 1999. Ecology. Harper&Row, New York
6.Margaleff R., 1988. Perspectives of Ecological Theory. Univ. Press Chicago Oliver&Boyd, Edinburgh
7.Penelope Re Velle, 1988. The Environment Issues and Choises for Society. 3-rd ed. Jones and Battet Publishers, Boston, 749 p.
8.Pianka E.R, 2000. Evolutionary ecology. –6th ed. Addison Wesley Educational Publishers., 431.p
9.Radd, R.A. and Kaufman T.C. 1986. Embryos, Genes and Evolution, London, Macmillan,
10.Rutten, M.G., 1971. The Origin of Life, Elsevier, London
11.Simpson G.G., 1968 The Meaning of Evolution. Yale Univ. Press. New Haven
12.Sperlich D., 1973. Populationsgenetik. Fischer, Stutgart 13.Waddington C.H., 1976. Principles of Embryology. Allen&Unwin, London

Further reading: