



<b>Course title</b>	<b><i>Methodology of experimental research</i></b>
<b>Course code</b>	<b><i>Biol6008</i></b>
<b>Credit points</b>	4
<b>ECTS creditpoints</b>	6
<b>Total Contact Hours</b>	

<b>Course developer (s)</b>
Natalja Škute Antoņina Žilinska Inese Kokina

<b>Prerequisite knowledge</b>
Biol1038, Current issues in biology I

<b>Course abstract:</b> Experimental methods of research in biology and the history of the methods development. Pilot studies, the general principles: Randomisation (by accident), replication and pseudoreplication, control. Biological process modeling principles. Laboratory research methods. Research methods for plant cell biology. Research methods in physiology. Ecological experiments methodology.
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<b>Compulsory reading:</b>
1.Plant Gene Isolation. Principles and practice. Ed. by G.D. Foster and D.Twell. John Wiley& Sons New York, 1996 425.p 2.Quinn G.P. Keough M.J. Experimental Design and Data Analysis for Biologists. Cambridge University Press; 1st edition 2002 3.Scheiner S.M., Gurevitch J. Design and Analysis of Ecological Experiments. Oxford University Press; 2nd edition, 2001, 432 p. 4.Мортон Д.,Хеллер П. Физиология сердечно-сосудистой системы – Сан-Питербург,2000, стр.256
<b>Further reading:</b>
Klaus Hinkelmann (2012) Design and Analysis of Experiments, Design and Analysis of Experiments (Wiley Series in Probability and Statistics) (Volume 3), Wiley, 624 pages

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

