



## SUBJECT DATASHEET

<b>Semester:</b>	2010/11/1
<b>Subject:</b>	Infraindividual biology
<b>Code:</b>	VEMKLIB112B
<b>Responsible department:</b>	Department of Limnology
<b>Responsible department code:</b>	MKLI
<b>Responsible lecturer:</b>	dr. Szabolcs Nagy

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### Educational objectives:

To learn and understand the basic concepts and contexts of biology and to equalize the knowledge level of students with different background.

### Detailed content of the subject:

1 Introduction, requirements, the concept of infraindividual biology 2 Prokaryotes, eukaryotes. Animal cell, plant cell 3 Organelles: nucleus. Genome, chromatin organization 4 Cell cycle, mitosis 5 Replication of DNA 6 Transcription, translation 7 Control of gene expression in prokaryotes and eukaryotes 8 Organelles: endoplasmic reticulum, Golgi apparatus 9 Organelles: cytoskeleton, plasma membrane 10 Vesicular transport. Membrane transport 11 Organelles: mitochondria. Origin, stucture, function. Mitochondrial DNA 12 Cellular basis of reproduction. Meiosis 13 Developmental biology 14 Cell death: apoptosis and necrosis 15 Histology

### Requirements:

The half-hour oral examination is about 20-25 minutes after preparing the student with the exam questions / themes to express. Insufficient (1) the answer is, if the candidate has either a short outline of the topic or the topic is not able to provide definitions of basic concepts. Satisfactory (2) the answer is, if the candidate can interpret basic concepts of the issue. Fair (3) the answer is, if the candidate is aware of the basic concepts of issues and is able to help teachers present the topic in a logical context. Good (4) the answer is, if the candidate's response to a logical structure alone explains the item (exam) all relevant facts and relationships, but the compulsory literature associated with item is no or incomplete knowledge. Excellent (5) the answer, if the candidate has all the items, as well as the required knowledge of literature, logically structured, independent, detail is excellent, fully exploring the relationships within bears witness to answer.

### Required and suggested references:

Szeberényi J.: Molekuláris sejtbiológia. Dialóg Campus Kiadó, 2004. Csaba Gy.: Sejtbiológia. Medicina, 1993. Rudas P., Frenyó V. L.: Az állatorvosi élettan alapjai. Springer Hungarica, 1995.