JOHN WESLEY THEOLOGICAL COLLEGE
COURSE TEMATICS

Course:	Course type:	Credits:	Course ID:
Basic Biology	Lecture	3	KTAK103
Course responsible: Dr. TÖRÖK Zsolt Csaba	**Programme type:** full time	**Hours/Semester:** 42	**Assessment:** exam

Course objectives:

Study the structures of biological entities, the biological phenomena and processes.

Competencies to be improved:

Knowledge:

T3 (familiar with the theories, principles and paradigms of Biology/Biological Sciences)

T7 (knowledge on the living matter, biological phenomena and biological processes)

Ability:

K3 (able to apply in practice the theories, principles and paradigms of Biology)

Attitude:

A4 (seeks to make self-education one of the means to achieve his/her professional goals)

Autonomy and responsibility:

F2 (aware of the value of professional statements and of their applicability and limitations)

Compulsory literature:

Downloadable course materials provided by the lecturer in the time of the classes indicated in the timetable.

Recommended literature:

Clark (Mary Ann), Choi (Jung), Douglas (Mathew), 2000 – Biology 2e (2nd edition). 1427 pages. Publishing house: OpenStax, Rice University, Texas, USA.

Course content:

Introductory aspects: **definitions** and main features of **domains, branches and fields** of biological sciences.
The **cell theory**, main characteristics of **life** and **levels of organization of life** on Earth.
Study-methods, **progression in methodology** and **experimental design** in biological sciences.
Level of **atoms** (nature of matter, structure of atom, features of the atom types constantly present in the living matter), level of **molecules** (types of linkages / chemical bonds, examples and biological functions of monomers and polymers), level of **organelles** (main types of organelles, their structure and function/functions), level of **cells** (prokaryotic and eukaryotic cells, unicellular and multicellular organisms), level of **tissues** (tissue types, main features and functions), level of **organs** (organ types, main features and functions), level of **organ systems** (main organ systems, their features and functions) and level of **organisms** (classification of living beings based on their external/internal features).
Basic aspects of the **supra-individual levels of organisation**: population, community, ecosystem and biosphere.
The **energy use** and the **homeostasis**.
The **reproduction** (types of reproduction), the **development** of organisms (ontogenesis) and the **evolution** of species (phylogenesis, theories and examples).
History of biological sciences and **personalities** contributing to their development.

Course requirements:

Completion of the course requires active participation in the classes (minimum 90%), preparation of course assignments (on the topics given by the lecturer at the end of the classes) and the final exam. Based on interim activities in the classes and the evaluations of course assignments offered exam grade can be obtained.
If, due to objective reasons, a course has to (and will) be held online, the participation requires stable internet connection, a switched-on webcam, and the use of a microphone at the lecturer's request. In the absence of any of these, the student is considered missing the class.

Grading scale:

Control test (assignment) grades: 91-100%: excellent; 75-90%: good; 60-74%: satisfactory; 50-59%: pass;
Exam grades: 91-100%: excellent; 75-90%: good; 60-74%: satisfactory; 50-59%: pass;

Course Programme:	Semester:	Lecturers:
WJLF ENVIRONMENTAL SCIENCE	2022/2023 – 1st semester	Dr. TÖRÖK Zsolt Csaba