## Information sheet for the course Genetics

University: Alexander Dubček University of Trenčín

**Faculty:** Faculty of Health Care

Course unit code: Gen/d Course unit title: Genetics

Type of course unit: compulsory

Planned types, learning activities and teaching methods:

Lecture: 3 hours weekly/39 hours per semester of study; full-time

Number of credits: 2

**Recommended semester:** 3<sup>rd</sup> semester in the 2<sup>nd</sup> year; full-time,

**Degree of study:** *I (bachelor)* **Course prerequisites:** *none* 

**Assessment methods:** 

Written or oral examination (50 score points)- for obtaining the particular grades it is necessary to achieve:

at least 45 score points for the grade A

at least 40 score points for the grade B

at least 35 score points for the grade C

at least 30 score points for the grade D

at least 25 score points for the grade E

## **Learning outcomes of the course unit:**

Student will extend the basic knowledge of genetics with emphasis on the human organism and its specificities. Teaching uses the knowledge of other subject, especially biochemistry and microbiology. The acquired knowledge is the basis for more detailed education at higher levels of university education in the field of genetic and molecular-biological methods in human diagnostics as well as in biotechnology.

## **Course contents:**

- 1. Nucleic acids, structure and importance
- 2. The structure of the genetic information in the prokaryotic and eukaryotic organisms
- 3. The replication, transcription, translation
- 4. The reproduction of cells, cell-cycle
- 5. Amitosis, mitosis, meiosis
- 6. Mutation and DNA damage
- 7. Mendelian inheritance
- 8. Linkage of genes
- 9. Interactions of genes
- 10. Relationship of inheritance to gender
- 11. Population genetics
- 12. New trends in genetics
- 13. Ethical aspects of the use of human genetics

## Recommended of required reading:

- 1. MELUŠ, V., KRAJČOVIČOVÁ, Z., SLOBODNÍKOVÁ, J. 2011. Genetika pre zdravotnícke odbory. Trenčín 2011, 90 p., ISBN 978-80-89464-04-3.
- 2. SRŠEŇ Š., SRŠŇOVÁ K. 2005. Základy klinickej genetiky a jej molekulárna podstata. Osveta, Martin, 2005, 445 p., ISBN 8080631859.

Language: Slovak

Remarks:

**Evaluation history:** Number of evaluated students: 76

	A	В	С	D	Е	FX
	46.05%	25.0%	13.16%	6.58%	6.58%	2.63%
Lectures: RNDr. Vladimír Meluš, PhD., MPH						

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