MODULE / SYLLABUS
EDUCATION CYCLE 2023-2026

Module/subject name:	**GENETICS**	
Direction:	**NURSING**	
Level of study*:	**I degree (bachelor's)** II degree (master's degree)	
Profile of education:	**practical**	
Type of studies*:	**stationary** / non-stationary	
Type of classes*:	obligatory **X** supplementary □ to choose from □	
Year and semester of studies*:	Year of study*: I **X** II □ III □	Semester*: 1 **X** 2 □ 3 □ 4□ 5 □ 6□
Number of ECTS credits assigned	**1,5**	
Language of instruction:	**English**	
Name of the PSW Department:	**Faculty of Health Sciences**	
Contact (tel./email):	**Tel.** 55,279 17,68 **e-mail:** dziekanat@psw.kwidzyn.edu.pl	
Type of module/subject relating to apprenticeships*:	• basic sciences **X** • social sciences and humanities □ • science in the basics of nursing care □ • specialist care □	
Presenter(s):	according to the studies plan	

Forms of student workload	**Student charge (number of teaching hours)**
Contact hours with an academic teacher (according to the study plan)	
Lectures (W)	**24**
Seminar (S)	
E-learning (e-L)	
Conversatories	
Exercises (C)	
Practical classes (ZP)	
BUNA - independent student work* (*according to the study plan)	**13**
Student's workload related to work placements (***according to the study plan)***	
Total student workload – total number	**37**
Number of ECTS credits per subject/module	**1.5, including 0.5 BUNA**

Didactic methods	• giving (lecture, talk), • programmatic (using audiovisual tools, boards), • analysis of clinical cases.
Assumptions and aim of the subject	Familiarize students with the basics of classical, molecular and medical genetics.
Teaching tools	Board and multimedia projector, boards.
Prerequisites:	Knowledge of biology at the high school level.

Matrix of learning outcomes for the module / subject in relation to the methods of verifying the achievement of the intended learning outcomes and the form of implementation of didactic classes

Symbol learning outcome	The graduate: knows and understands / is able to / is ready to	Methods for verifying the achievement of the intended learning outcomes	Form of implementation of didactic classes * enter the symbol
A.W9.	genetic determinants of human blood groups and serological conflict of the Rh system;	*Written or oral colloquium*	W
A.W10.	issues related to genetically-determined diseases;	*Written or oral colloquium*	W/BUNA
A.W11.	structure of chromosomes and molecular basis of mutagenesis	*Written or oral colloquium*	W/BUNA
A.W12.	inheritance of a number of traits, inheritance of quantitative traits, independent inheritance of traits, and inheritance of extranuclear genetic information;	*Written or oral colloquium*	W/BUNA

A.U3.	estimate the risk for a given disease on the basis of inheritance principles and the influence of environmental factors;	*Draft, oral response*	BUNA
A.U4.	make use of the knowledge of determinants of genetically-determined diseases in their prevention;	*Draft, oral response*	BUNA
O.K7.	perceive and recognise their own limitations in terms of knowledge, skills and social competences and carry out a self-assessment of their educational deficits and needs.	*Observation, self-assessment*	W/BUNA

*****W-lecture; S-seminar; EL- e-learning; K -conversatories; Ć-exercises; ZP-practical classes; PZ-professional internships; BUNA-independent student work

EXAMPLES OF METHODS FOR THE VERIFICATION OF LEARNING OUTCOMES

in the field of knowledge (lectures/seminars): spoken exam (*non-standardized, standardized, traditional, problem*); written exam – the student generates / recognizes the answer (*essay, report; short structured questions /SSQ/; multiple-choice test /MCQ/; multiple-answer test /MRQ/; match test; T/N test; answer completion test*),

in terms of skills (exercises/seminars): Practical examination; Objective Structured Clinical Examination (OSCE); Mini-CEX (mini – clinical examination); Implementation of the commissioned task; Design, presentation

in the field of social competences: reflective essay; prolonged observation by the tutor / teacher of the teacher; 360° assessment (opinions of teachers, colleagues, patients, other colleagues); Self-assessment (including portfolio)

BUNA – the student's own work is verified by assessing the degree of implementation of the assumed learning outcomes: a test checking the student's knowledge of the subject specified in the syllabus, but also through final papers, projects, presentations and any other mid-term work.

TABLE OF PROGRAMME CONTENTS

Program content	**Number of hours**	**Reference of learning** outcomes **to CLASSES**
LECTURES, semester I		
1. Basics of classical genetics. The history of discoveries of the principles of inheritance, Mendel's laws. Molecular structure of DNA, RNA. Principles of gene functioning. The phenomenon of transcription and translation. Gene mutations and chromosomal aberrations of their biological significance and clinical aspect.	7	A.W9. A.W11. O.K7.
2. Principles of inheritance of a different number of traits, inheritance of quantitative traits, independent inheritance of traits, and inheritance of extraterrestrial genetic information.	5	A.W12. O.K7.
3. Genetic diseases inherited autosomal recessively and dominantly. Neoplastic diseases with a genetic basis. Breast and colon cancer.	7	A.W10. A.W12. O.K7.
4. Prenatal diagnosis. Defects. Gene therapy.	5	A.W12. O.K7.
BUNA – independent student work, semester I		
1. Principles of genetic diagnosis.	4	U.S. A.U4. O.K7.
2. PCR technique in laboratory diagnostics.	3	A.U3. A.U4.
3. The use of genetic tests in medical diagnostics.	3	U.S. A.U4. O.K7.
4. Cell cloning rules.	3	A.U3. A.U4.

LIST OF LITERATURE

Basic literature:

1. Jorde L.B., Carey J.C., Bamshad M.J.: Medical *Genetics. 6th Edition*. Elsevier 2019.

Suplementary literature:

1. Killian D., Klug W., Palladino M., Cummings M., Spencer C., *Essentials of Genetics*, Global Edition, Pearson Education Limited, cop. 2020.

Method of passing and forms and basic assessment criteria/examination requirements

Method of credit

- Passing with grade – lectures
- Passing without a grade – BUNA

Forms and criteria for passing

Lecture:

The basis for obtaining credit is:

- presence of 100%; confirmed by an entry on the attendance list,
- possible 10% absence balanced in a manner individually agreed with the lecturer,
- active participation in lectures (joining the discussion initiated by the lecturer, showing interest in the issues

discussed during the lecture),
- obtaining a positive assessment from the colloquium
- BUNY pass

Written colloquium:

- takes the form of a written test, a multiple-choice test /MCQ/ with one correct answer (each correct answer is 1 point, no answer or incorrect answer 0 points, a minimum of 60% of correct answers qualify for a positive assessment.

Test evaluation criteria

Assessment	Very good (5.0)	Good plus (4.5)	Good (4.0)	Sufficient plus (3.5)	Sufficient (3.0)	Insufficient (2.0)
% of correct answers	93-100%	85-92%	77-84%	69-76%	60-68%	59% and less

- and/or reply orally

Evaluation criteria – oral answer

Assessment	**Criterion**
Very good	Correct, full, independent answer to 3 questions asked to the student by the lecturer
Endorsement	Correct, requiring little orientation by the teacher, answer to the 3 questions asked to the student
Sufficient	Correct, incomplete, requiring significant orientation by the teacher answer to the 3 questions asked to the student
Insufficient	No answer or incorrect answer to each of the 3 questions asked to the student

Project

BUNA evaluation criteria - independent student work

Evaluation criteria	**Assessment: zal/nzal**	
Compliance of the content of the work with the subject of education		
Substantive assessment of work		
Evaluation of the selection and use of sources		
Assessment of the formal side of the work (footnotes, language)		
	**(recommendations for work)*	
	(rating)	*(signature)*

* if any of the criteria are not met, the work should be corrected according to the lecturer's recommendations

Conditions for making up classes abandoned for justified reasons:

Making up for abandoned classes is possible only in the case of a student's illness documented by sick leave or other random reasons. Justification of classes and passing of the material being the subject of exercises during the period of absence is made by the lecturer conducting the classes.

Both a student returning from dean's leave and a student repeating the year is obliged to attend all classes and take the exam. Only if the exam in a given year has been obtained with at least a sufficient grade (3.0), a student repeating the year due to another subject may be exempted from the need to attend classes and pass and pass the subject.

Acceptance: Vice-Rector for Teaching and Student Affairs