



MODULE / SYLLABUS
EDUCATION CYCLE 2024-2027

Module/subject name:	GENETICS		
Direction:	NURSING		
Level of study*:	I degree (bachelor's degree) Second degree (master's)		
Education Profile:	practical		
Type of study*:	full-time / part-time		
Type of activities*:	compulsory <input checked="" type="checkbox"/> supplementary <input type="checkbox"/> elective <input type="checkbox"/> .		
Year and semester of study*:	Year of study*: I <input checked="" type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> .	Semester of study*: 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>	
Number of ECTS credits assigned	1,5		
Language of instruction:	Polish		
PSW Department Name:	Faculty of Health Sciences		
Contact (tel/email):	tel. 55 279 17 68 e-mail: dziekanat@psw.kwidzyn.edu.pl		
Type of module/course relating to professional preparation*:	<ul style="list-style-type: none"> • basic sciences <input checked="" type="checkbox"/> • social sciences and humanities <input type="checkbox"/> • sciences in the fundamentals of nursing <input type="checkbox"/>. • specialty care sciences <input type="checkbox"/> 		
Person responsible for the module/subject:			
Person(s) in charge:	According to the study plan		
Forms of student workload			Student workload (number of teaching hours)
<i>Contact hours with an academic teacher (according to the study plan)</i>			
Lectures (W)			24
Seminar (S)			
Conversations			
Exercise (C)			6
Practical classes (ZP)			
BUNA - independent work of the student (according to the study plan).			7
Student workload related to professional practice (<i>according to the study plan</i>)			
Total student workload - total number of			37
Number of ECTS credits for the subject/module			1.5, including 0 BUNA
Didactic methods	<ul style="list-style-type: none"> • Traditional lecture supported by multimedia techniques, interactive lecture, administering methods, • exercises, case studies, • Self-study, work with the book, independent study of the indicated task. 		
Assumptions and purpose of the subject	To familiarize students with the basics of classical, molecular and medical genetics.		
Teaching tools	Multimedia presentations, laboratory equipment, Models of DNA, chromosomes and other genetic structures.		
Prerequisites:	Knowledge of biology at the high school level.		
The matrix of learning outcomes for the module / subject in relation to methods of verification of achievement of the intended learning outcomes and the form of realization of learning activities			
Symbol learning outcome	Students who pass the module (subject) know/understand/are able to:	Methods of verifying the achievement of the intended learning outcomes	The form of implementation of teaching activities * enter symbol
A.W9.	Characterizes the genetic determinants of human blood types and Rh serological conflict.	<i>Written or oral colloquium</i>	W
A.W10.	Analyzes the issue of genetically determined diseases.	<i>Written or oral colloquium</i>	W/BUNA
A.W11.	Discusses the structure of chromosomes and the molecular basis of mutagenesis.	<i>Written or oral colloquium</i>	W/BUNA

A.W12.	Analyzes the principles of inheritance of different numbers of traits, inheritance of quantitative traits, independent inheritance of traits and inheritance of extra-nuclear genetic information.	<i>Written or oral colloquium</i>	W/BUNA
A.U3.	Estimates the risk of manifestation of a given disease based on the principles of inheritance and the influence of environmental factors.	<i>Written or oral colloquium</i>	Ć
A.U4.	Uses genetic disease determinants in disease prevention.	<i>Written or oral colloquium</i>	Ć
O.K7.	Recognizes and recognizes his own limitations in knowledge, skills and social competence, and makes a self-assessment of deficits and educational needs.	<i>Observation, self-assessment</i>	W/BUNA
<p>*W-lecture; S-seminar; K-conversations; Ć-exercises; ZP-practical; PZ-practical; BUNA-student independent work.</p>			
<p>SAMPLE METHODS FOR VERIFICATION OF LEARNING OUTCOMES In terms of knowledge (lectures/lectures): oral examination (<i>non-standardized, standardized, traditional, problem-based</i>); written examination - the student generates / recognizes the answer (<i>essay, report; short structured questions /SSQ/; multiple choice test /MCQ/; multiple response test /MRQ/; matching test; T/N test; answer completion test</i>), In terms of skills (exercises/conversations): Practical exam; Objective Structured Clinical Examination /OSCE/; Mini-CEX (mini - clinical examination); Completion of an assigned task; Project, presentation. In terms of social competence: reflective essay; prolonged observation by supervisor/teacher-in-charge; 360° assessment (feedback from teachers, colleagues, patients, other colleagues); Self-assessment (including portfolio) BUNA - the student's own work is verified through an assessment of the degree of realization of the established learning outcomes: a test verifying the student's knowledge of the topics specified in the syllabus, but also through credit work, projects, presentations and any other mid-semester work.</p>			
TABLE OF PROGRAM CONTENT			
Program content		Number of hours	Relation of learning outcomes to ACTIVITIES
LECTURES, semester I			
1. Fundamentals of classical genetics. History of the discovery of the principles of inheritance, Mendel's laws. Molecular structure of DNA, RNA. Principles of gene function. The phenomenon of transcription and translation. Gene mutations and chromosomal aberrations their biological significance and clinical aspect.		7	A.W9. A.W11. O.K7.
2. Principles of inheritance of different numbers of traits, inheritance of quantitative traits, independent inheritance of traits, and inheritance of extranuclear genetic information.		5	A.W12. O.K7.
3. Genetic diseases inherited autosomal recessively and dominantly. Cancer diseases with a genetic basis. Cancer of the breast and colon.		7	A.W10. A.W12. O.K7.
4. Prenatal diagnosis. Birth defects. Gene therapy.		5	A.W12. O.K7.
EXERCISES, semester I			
1. Principles of genetic diagnosis. 2. PCR technique in laboratory diagnostics. 3. Principles of cell cloning. 4. Application of genetic testing in medical diagnosis.		6	A.U3. A.U4. O.K7.
BUNA, semester I			
Development of a project as part of the student's independent work on the issues indicated by the instructor.		7	A.W10-12., O.K7.
LITERATURE LIST			
Primary Literature:			
1. Drewa G., Ferenc T., <i>Medical genetics. Textbook for students</i> , Urban & Partner, Wrocław 2022.			
2. Węgrzyn P., <i>Genetics in gynecology and obstetrics. Selected issues</i> , PZWL, Warsaw 2018.			
Supplementary literature:			
1. Bamshad M. J., Carey J. C., Jorde L. B., <i>Medical genetics</i> , Urban & Partner, Wrocław 2019.			
2. Fletcher H. L., Hickey G. I., Winter P. C., <i>Genetics - short lectures</i> , PWN, Warsaw 2021.			
3. Węgleński P., <i>Molecular genetics</i> , PWN, Warsaw 2022 (print).			
Manner of passing and forms and basic evaluation criteria/examination requirements			
Method of crediting			
— Exam - lectures			

- Passing grade - exercises
- Credit without grade BUNA

Forms and criteria for passing

CREDIT FOR THE SUBJECT - THE SUBJECT ENDS WITH AN EXAM

Lecture:

The basis for obtaining a pass/fail is:

- Attendance 100%; confirmed by an entry on the attendance list,
- possible 10% absence balanced in a manner individually agreed with the class instructor,
- Active participation in lectures (joining the discussion initiated by the lecturer, showing interest in the issues discussed during the lecture).

Exercises

The basis for obtaining credit for a grade is:

- Attendance 100%; confirmed by an entry on the attendance list,
- Active participation in exercises (joining the discussion initiated by the lecturer, showing interest in the issues discussed during the exercises,)
- Positive evaluation of the colloquium - a test containing single-choice, multiple-choice and completion questions For a complete, correct answer, the student receives 1 point, incorrect or no answer 0 points, a minimum of 60% of correct answers qualifies for a passing grade.

BUNA evaluation criteria - independent student work,

Project preparation.

Evaluation criteria	Evaluation: zal/nzal	
Compliance of the content of the work with the subject of education		
Substantive evaluation of the work		
Evaluation of the selection and use of sources		
Evaluation of the formal side of the work (footnotes, language)		
<i>*(recommendations for work).</i>		
	<i>(evaluation)</i>	<i>(signature)</i>

* if any of the criteria is not met, correct the work according to the lecturer's recommendations.

FINAL EXAM IN THE SUBJECT

- In order to be admitted to the exam, it is necessary to obtain a pass in exercises and lectures and to pass BUNA (project).
- The exam is in the form of a written test, 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% correct answers qualifies for a passing grade.

Grading criteria for the test

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

FINAL COURSE GRADE:

- Exam grade

Conditions for making up classes missed for excused reasons:

Making up missed classes is possible only in the case of a student's illness documented by a medical exemption or other fortuitous reasons. Excuses for classes and credit for the material covered during the period of absence are made by the lecturer conducting the class.

Both a student returning from dean's leave and a student repeating a year are required to attend all classes and take the exam. Only in the case of obtaining a grade of at least satisfactory (3.0) on an exam in a given year, a student repeating a year due to another subject may be exempted from having to attend classes and pass and pass the subject.

**Acceptance:
pro-rector for teaching
affairs**