Course Syllabus

I. General Information

Course name	Basics of taxonomy
Programme	Biotechnology
Level of studies (BA, BSc, MA, MSc, long-cycle MA)	BSc
Form of studies (full-time, part-time)	part-time
Discipline	Biological sciences
Language of instruction	English

Course coordinator/person responsible	dr Agnieszka Kuźniar

Type of class *(use only the types mentioned below)*	Number of teaching hours	Semester	ECTS Points
lecture			1
tutorial	30	I	
classes			
laboratory classes			
workshops			
seminar			
introductory seminar			
foreign language classes			
practical placement			
field work			
diploma laboratory			
translation classes			
study visit			

Course pre-requisites	knowledge of biology at the high school level

II. Course Objectives

Presentation of basic concepts and taxonomic methods used in microbiology, botany and zoology.	
Identify research problems in modern microbiological testing, botanical and zoological	
Introduction to the example applications taxonomic methods based on molecular data (identification of species phylogeny).	

III. Course learning outcomes with reference to programme learning outcomes

Symbol	Description of course learning outcome	Reference to programme learning outcome
KNOWLEDGE		
W_01	presents knowledge about the development of taxonomy and its relation to other scientific disciplines	K_W04
W_02	presents knowledge in the field of laboratory techniques and research tools used in taxonomy	K_W05
W_03	presents knowledge in the field of genetics and molecular techniques and describes their practical use, in particular in taxonomy	K_W06
W_04	presents issues related taxonomy required for practical use in biotechnological processes which are applied in food and pharmaceutical industry as well as in agriculture	K_W08
SKILLS		
U_01	applies techniques and research tools in the field of biotechnology	K_U01
U_02	participates in the debate on taxonomy of live organisms issues using scientific language	K_U11
U_03	learns independently in a targeted manner in the field of taxonomy, updates his knowledge and skills, applies new research techniques and plans his professional development	K_U17

IV. Course Content

Taxa and rank taxonomic and biological nomenclature. Species in taxonomy of miroorganisms, animals and plant (morphological, biological, historical). The methods used to identify the species of organisms. Microbial systematics, and botanical and biological evolution (phenograms, parsimonious trees). Taxonomy and phylogenetic fenetyczna - basic terms and assumptions. Genetic markers and their application in the system of microorganisms, plants and animals. Estimating biodiversity of organisms. An overview of taxonomic groups of microorganisms, plants and animals including species used in industry and agriculture Visualization of data obtained in the next generation sequencing in taxonomy (Past program).

V. Didactic methods used and forms of assessment of learning outcomes

Symbol	Didactic methods *(choose from the list)*	Forms of assessment *(choose from the list)*	Documentation type *(choose from the list)*
KNOWLEDGE			
W_01	discussion	test	Completed and evaluated test
W_02	discussion	test	Completed and evaluated test
W_03	discussion	test	Completed and evaluated test

W_04	discussion	test	Completed and evaluated test
SKILLS			
U_01	Case study	test	Completed and evaluated test
U_02	discussion	observation	multimedia presentation evaluation card
U_03	discussion	test	Completed and evaluated test

VI. Grading criteria, weighting factors.....

3 tests – 80%, preparation and evaluation multimedia presentation – 15%; active participation in the classes - 5%,

Mark	Evaluation criteria	
very good (5)	the student realizes the assumed learning outcomes at a very good level	the student demonstrates knowledge of the education content at the level of 91-100%
overgood (4.5)	the student accomplishes the assumed learning outcomes an over good level	the student demonstrates knowledge of the education content at the level of 86-90 %
good (4)	the student accomplishes the assumed learning outcomes at a good level	the student demonstrates knowledge of the education content at the level of 76-85%
quite good (3.5)	the student accomplishes the assumed learning outcomes at a quite good level	the student demonstrates knowledge of the education content at the level of 66-75%
sufficient (3)	the student accomplishes the assumed learning outcomes at a sufficient level	the student demonstrates knowledge of the education content at the level of 51-65%
insufficient (2)	the student accomplishes the assumed learning outcomes at an insufficient level	the student demonstrates knowledge of the education content below the level of 51%

VII. Student workload

Form of activity	Number of hours
Number of contact hours (with the teacher)	30
Number of hours of individual student work	-

VIII.   Literature

Basic literature
Baltz R.H., Demain A.L., Davies J.E. 2010 Industrial Microbiology and Biotechnology. ASM Press Washington. Section 3.
Additional literature
Specialist literature (source materials).