KARTA PRZEDMIOTU

Nazwa przedmiotu: Cell Biology

Dane dotyczące przedmiotu:

Jednostka oferująca przedmiot: Katedra Inżynierii i Biologii Systemów

Język wykładowy:
angielski
Strona WWW:
https://platforma.polsl.pl/rch/course/view.php?id=156
Skrócony opis:
In the initial stage of the course students will be required knowledge from the construction of prokaryotes and eukaryotes, as well as knowledge about the function and construction of cellular components, especially in the molecular, biological and physiological aspects.
Opis:
During the course cell structure and interactions between particular components will be also discussed. The main topics for lectures: - Examples of molecular biotechnology methods, and equipment of research laboratories. - Nuclear organization, genomes structure and organization. - Gene structure and transcription process. - Transcription and translation processes. - Gene expression study, a novel method for exploring functional aspects of information transfer. - Cell structure: molecular and metabolic compartments inside the cell (plasma membrane, cytosol, nucleus, endoplasmic reticulum, Golgi apparatus, mitochondria, lysosomes, peroxisomes, and cytoskeleton). - Methods for studying the structure and function of cells (flow cytometry, microscopy, light, electron microscopy, AFM).
Literatura:
1.Bruce Alberts, Dennis Bray, Karen Hopkin, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter. Essential Cell Biology, Second Edition; 2005. 2.David Boal. Mechanics of the cell. Cambridge University Press. 2002.
Efekty uczenia się:
Student has knowledge of: cell structure and function of cellular structures (organelles) (K2A_W01). Has knowledge about the techniques and methods for separation of cellular components (K2A_W09). Has knowledge about new research techniques, trends and directions of development for this discipline and can use it (K2A_W10, K2A_W1, K2A_W13; K2A_U13, K2A_U24, K2A_U26). Obtains information from literature, databases and other sources related to the life sciences, biochemical and medical, integrates them, interprets and draws conclusions also formulates opinions (K2A_U01, K2A_U02). Has the ability to self-learning (K2A_U05). Possess ability to experiments and research projects planning to investigate cellular processes; interprets the results and draws correct conclusions (K2A_U09, K2A_U12).
Metody i kryteria oceniania:
Quizzes, presentations, exercise reports (at least 2) - 20% of the final grade. Lecture test - written test with 40-50 questions (single or multiple choice answers) or written answers to open questions (5-10) - 80% of the final grade.

Przynależność do grup przedmiotów w cyklach:

Opis grupy przedmiotów	Cykl pocz. First term	Cykl kon. Last term
Biotechnologia, Biotechnologia przemysłowa rok 2 semestr 1, przedmioty obowiązkowe IIst,	2020/2021-L	

Punkty przedmiotu w cyklach:

Biotechnologia, stacjonarne II stopnia magisterskie 2 sem.			
Typ punktów	Liczba Number	Cykl pocz. First term	Cykl kon. Last term
Europejski System Transferu Punktów (ECTS)	2	2020/2021-L	

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Podpis / Signature