

Course title		ECTS code				
Sociomicrobiology (lecture)		13.4.0015				
Name of unit administrating study						
Intercollegiate Faculty of Biotechnology UG-MUG						
Teaching staff						
dr hab. Michał Obuchowski						
Studies						
faculty	field of study	type	form	specialty	specialization	semester
Intercollegiate Faculty of Biotechnology UG-MUG	Biotechnology	second tier studies (MA)	full-time	all	all	1
Forms of classes, the realization and number of hours				ECTS credits		
Forms of classes				2		
Wykład (to translate)						
The realization of activities						
lectures in the classroom						
Number of hours						
Wykład (to translate): 15 hours						
The academic cycle						
2013/2014 winter semester						
Type of course			Language of instruction			
elective (to translate)			polish			
Teaching methods			Form and method of assessment and basic criteria for evaluation or examination requirements			
wykład z prezentacją multimedialną (to translate)			Final evaluation			
			Egzamin (to translate)			
			Assessment methods			
			egzamin pisemny testowy (to translate)			
			The basic criteria for evaluation			
			Exam covers contents contained in the box 'Course Contents'. The assessment is performed according to percentage index (compliant with the Rules and Regulations for Studies at the UG) Exam questions cover all the outcomes shown in the syllabus in the box 'Learning Outcomes'. To pass each learning outcome, correct answers to at least 51% of questions referring to a particular learning outcome are required.			
Required courses and introductory requirements						
A. Formal requirements						
Completed course of Microbiology						
B. Prerequisites						
Aims of education						
Students understand the necessity of adopting a new way of perceiving microorganisms not as single cells but as a community joined functionally (K_W01). They are able to show the necessity of examining some processes and behaviors of microorganisms in the context of whole populations of bacteria, and not single cells (K_W02). They understand limitations in understanding bacterial communities caused by laboratory methods of culturing microorganisms (K_K01). They can plan a sequence of tasks that will enable an analysis of social behaviors of microorganisms (K_K03).						
Course contents						
Re assessment of the dogma of bacteria as single-cell organisms in the light of recent research. The issue of individuality of bacterial cells in a genetically homogenous population. The significance of the sense of density for group behaviors of microorganisms and inter-species communication. Bio-film – a sedentary population of bacteria. Functional specialization within bacterial bio-film. Coordinated bacterial traffic as a sign of collective goal pursuit. Cannibalism as a way of population survival. Altruistic death among bacteria.						
Bibliography of literature						

<p>The learning outcomes</p> <p>K_W01 K_W02 K_K01 K_K03</p>	<p>Knowledge</p> <p>K_W01 Understands complex biological phenomena on the molecular level, knows their significance for biotechnology and their relationships with other areas and disciplines of science</p> <p>K_W02 Possesses a deepened knowledge in the field of related scientific areas and disciplines allowing him to see connections and dependencies in nature, in particular those essential for biotechnology</p> <p>Skills</p> <p>Social competence</p> <p>K_K01 Knows limitations of his/her knowledge, is willing to constantly upgrade and update his/her knowledge and raise qualifications within the field of biotechnology and related scientific areas and disciplines</p> <p>K_K03 Effectively plans his/her work, professional career, organizes his/her work, in particular in the lab or concerning reviews in the field of biotechnology and related scientific areas and disciplines</p>
<p>Contact</p> <p>obuchowk@biotech.ug.gda.pl</p>	