

Faculty of Chemistry					
SUBJECT CARD					
Name of subject in Polish	<b>Ekonomiczne i organizacyjne problemy przemysłu biotechnologicznego</b>				
Name of subject in English	<b>Economics and organization of industrial biotechnology</b>				
Main field of study:	Biotechnology				
Specialization (if applicable):	Bioinformatics,				
Profile:	academic				
Level and form of studies:	2nd level, full-time				
Kind of subject:	obligatory				
Subject code	BTC024013				
Group of courses	NO				
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30				
Number of hours of total student workload (CNPS)	90				
Form of crediting	crediting with grade				
For group of courses mark (X) final course					
Number of ECTS points	3				
including number of ECTS points for practical (P) classes					
including number of ECTS points for direct teacher-student contact (BK) classes	1				
SUBJECT OBJECTIVES					
C1 Perspectives for biotechnology development					
C2 the route to create start-up in the biotech sector					
C3 Enterprise management					
SUBJECT EDUCATIONAL EFFECTS					
<b>relating to knowledge:</b>					
PEK_ W01 student knows what is needed to start small enterprise					
<b>relating to skills:</b>					
PEK_ U01 student knows how to prepare business plan					
<b>relating to social competences:</b>					
PEK_K01 student can collaborate within the group					
PROGRAMME CONTENT					
Lectures					Number of hours
Lec 1	Form of enterprises, surroundings, foresight for Poland, critical technologies				222
Lec 2	Finance source, Operational programs, Innovative economy, International programs				2
Lec 3-5	Business plan: Idea, Presentation of SME, Marketing, Structure, Organization, Finance, Competition, Risk Management				2
Lec 6	Application tips: rules in preparation of b-plan, feasibility studies.				2
Lec 7	Case study – presentation of some business plans				2
Lec 8	Indices used for evaluation of enterprise efficiency				2
Lec 9	Production process, operations, marketing, evaluation of risk and work efficiency				2

Lec 10	Management of production, supply optimization, stock minimization	2
Lec 11	Critical chain in project management	2
Lec 12, Lec 13	Intellectual Property, Registered and unregistered IPR, The copyright law and the patent law, Intellectual property systems in the world, Patenting procedures, Patent classification	4
Lec 14	Licensing, Ethics issues, Principles of Research Integrity case	2
Lec 15	Colloquium	2
	Total hours	30
<b>TEACHING TOOLS USED</b>		
N1. Lectures N2. Preparing the draft of business plan		
<b>EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT</b>		
<b>Evaluation</b> (P – concluding (at semester end)	Educational effect number W01, U01	Way of evaluating educational effect achievement written colloquium
C		
<b>PRIMARY AND SECONDARY LITERATURE</b>		
<b><u>PRIMARY LITERATURE:</u></b> [1] P.M. Hawranek, UNIDO [2] L. Bently, B. Sherman, Intellectual Property Law, Oxford University Press, 2008 [3] D. Hoyle, Quality Management Essentials, Elsevier 2007;		
<b>SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)</b>		
Prof. Marek Bryjak ( <a href="mailto:marek.bryjak@pwr.edu.pl">marek.bryjak@pwr.edu.pl</a> ) Prof. Marek Kulazynski ( <a href="mailto:marek.kulazynski@pwr.edu.pl">marek.kulazynski@pwr.edu.pl</a> )		