

| Faculty of Chemistry | | | | | |
|---|---|---------|------------|---------|-----------------|
| SUBJECT CARD | | | | | |
| Name of subject in Polish | Ekonomiczne i organizacyjne problemy przemysłu biotechnologicznego | | | | |
| Name of subject in English | Economics and organization of industrial biotechnology | | | | |
| 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 | | | | | |
| 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 (BU) classes | 1,3 | | | | |
| SUBJECT OBJECTIVES | | | | | |
| C1 Perspectives for biotechnology development | | | | | |
| C2 the route to create start-up in the biotech sector | | | | | |
| C3 Enterprise management | | | | | |
| SUBJECT LAERNING OUTCOMES | | | | | |
| relating to knowledge: | | | | | |
| PEK_ W01 student knows what is needed to start small enterprise | | | | | |
| relating to skills: | | | | | |
| PEK_ U01 student knows how to prepare business plan | | | | | |
| relating to social competences: | | | | | |
| 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 |

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|---|---|--|
| 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 |
| TEACHING TOOLS USED | | |
| N1. Lectures | | |
| N2. Preparing the draft of business plan | | |
| EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT | | |
| Evaluation (P – concluding (at semester end) | Educational effect number W01, U01 | Way of evaluating educational effect achievement written colloquium |
| C | | |
| PRIMARY AND SECONDARY LITERATURE | | |
| <u>PRIMARY LITERATURE:</u> | | |
| [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; | | |
| SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS) | | |
| Prof. Marek Bryjak (marek.bryjak@pwr.edu.pl) | | |
| Prof. Marek Kulazynski (marek.kulazynski@pwr.edu.pl) | | |