**Appendix No.9 to the Regulations of participation in the project and participation in the paid professional internships**

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University stamp

**INTERNSHIP PROGRAMME**

1. **Extract from the educational outcomes in the field of – BIOTECHNOLOGY, 1st degree (B.Sc.)**

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| ***PROFESSIONAL KNOWLEDGE (PK)*** |
| The student has the knowledge in mathematics in the scope sufficient to apply mathematical methods to describe biological phenomena and technological processes as well as perform calculations required in engineering practice |
| The student has the knowledge in physics and biophysics required for the understanding and quantitative description of phenomena taking place in living organisms, particularly processes applied in biotechnology |
| The student has general knowledge in inorganic, organic, physical and analytical chemistry |
| The student knows dependencies between chemical, biological and physical processes taking place in nature |
| The student shows knowledge concerning basic techniques and tools applied in studies on natural phenomena |
| The student knows principles for the hierarchic organisation of biological processes and understands biochemical, molecular and cellular foundations of functioning of living organisms |
| The student has knowledge on cell structure and understands relationships between the organisation of subcellular structures and their functions |
| The student knows the structure and properties of basic macromolecule types (nucleic acids, proteins, polysaccharides, lipids) |
| The student knows principles governing transmission and expression of genetic information |
| The student knows basic principles of running cell and tissue cultures |
| The student knows basic principles governing the design and introduction of genetic information |
| The student has the knowledge concerning the potential and scope of applications for biotechnology |
| The student understands the importance of experimentation and is able to describe the importance of molecular and instrumental analyses in biotechnological research |
| The student has the knowledge on ecological aspects of biotechnology |
| The student knows potential applicability of biological diversity in biotechnology |
| The student knows basic unit processes in biotechnology |
| The student knows foundations of kinetics, thermodynamics and catalysis of biotechnological processes |
| The student has basic knowledge on principles of design and operation of technological systems used in biotechnology |
| The student knows basic legal and socio-economic aspects related with the establishment and operation of biotechnological companies |
| The student has basic knowledge on management, including quality management and business activity |
| The student knows basic principles of intellectual property protection |
| The student knows basic concepts and terminology applied in biotechnology and can indicate the most important discoveries promoting development of this science |
| ***PROFESSIONAL SKILLS (PS)*** |
| The student knows how to search for and analyse information from literature, data bases and other sources related to biotechnology |
| The student knows how to prepare a well-documented study concerning problems in the field of biotechnology and how to discuss these problems with specialists in various fields also in the English language |
| The student knows how to prepare and deliver an oral presentation in Polish and in a foreign language concerning problems related to biotechnology |
| The student has language skills in the fields and disciplines of science related to biotechnology, following requirements specified for the B2 level of the Common European Framework of Reference for Languages |
| The student performs assigned simple research tasks or expert opinions under the guidance of a scientific supervisor |
| The student knows how to identify and conduct standard analyses of phenomena and processes applied in biotechnology as well as factors affecting them |
| The student performs standard procedures, using appropriate methods, techniques, technologies, tools and materials, facilitating execution of tasks in biotechnology |
| The student knows how to collect biological materials and select appropriate research methods for their analyses |
| The student performs simple physical, chemical and biological measurements in situ and under laboratory conditions |
| The student knows how to plan simple experiments in molecular biology and genetic engineering, interpret obtained results and formulate conclusions |
| The student identifies unit operations and selects the category and type of apparatus used in typical biotechnological processes |
| Based on an experiment or mathematical calculations the student knows how to indicate the type and optimal parameters of unit operations used in a given biotechnological process |
| The student recognises the design and functions of typical and special-purpose apparatus used in biotechnology |
| When solving tasks connected with biotechnological processes the student understands their systemic character, integrating basic knowledge coming from various sources and areas |
| The student knows how to analyse investment and operating costs of a biotechnological process |
| The student knows how to design and perform a simple measurement device, a unit operation or an analytical method following the assigned specifications |
| ***SOCIAL COMPETENCES (SC)*** |
| The student understands the need of lifelong learning |
| Being aware of rapid advances in biotechnology the student understands the need to continuously upgrade professional qualifications. The student knows how to evaluate information publicised in mass media while exercising an adequate measure of skepticism |
| The student knows how to cooperate and work as part of a team, assuming various roles, including that of the leader |
| The student knows how to appropriately identify priorities in the execution of a task specified by themselves or others |
| The student identifies and solves dilemmas related with their profession |
| The student is aware of the ethical and social responsibility for the consequences of their actions in the area of biotechnology |
| The student is aware of the risk and is capable of evaluating consequences of their actions, including risks/hazards to their own safety, the safety of co-workers and the environment |
| The student shows creativity, the student knows how to think and act showing an entrepreneurial attitude |

**B. Personal data of the Intern and Employer**

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| NAME AND SURNAME OF THE INTERN | ………………………………………………………………………………………………….… |
| NAME OF THE EMPLOYER | ………………………………………………………………………………………………….… |
| INTERNSHIP LOCATION | ………………………………………………………………………………………………….…  *(address of the company / institution headquarters / branch)* |
| ASSIGNED INTERSHIP SUPERVISOR | ………………………………………………………………………………………………….… *(Name and surname, position)*  ………………………………………………………………………………………………….… *(phone number, email)* |

**C. Information about the internship**

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| INTERNSHIP PERIOD[[1]](#footnote-1)1 | **from:** | *dd-mm-yyyy* | |
| **to:** | *dd-mm-yyyy* | |
| WORK TIMETABLE[[2]](#footnote-2)2 | Scheduled working hours: | |  |
| Scheduled number of internship hours daily: | |  |
| Days of the week, when the internship is done: | |  |
| TOTAL NUMBER OF INTERNSHIP HOURS | **240 hours** | | |
| NAME OF THE PROFESSION OR SPECIALISATION | ………………………………………………………………………………………………….… | | |
| SCOPE OF ACTIVITIES PERFORMED DURING THE INTERNSHIP | ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ……………………………………………………………………………………………………… | | |
| **PROFESSIONAL KNOWLEDGE** REQUIRED DURING THE RELATION  *(based on the Extract from the educational outcomes in the field of Biotechnology – in part A, PK)* | ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ……………………………………………………………………………………………………… | | |
| **PROFESSIONAL SKILLS** REQUIRED DURING THE INTERNSHIP  *(based on the Extract from the educational outcomes in the field of Biotechnology – in part A, PS)* | ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ……………………………………………………………………………………………………… | | |
| **SOCIAL SKILLS** REQUIRED DURING THE INTERNSHIP  *(based on the Extract from the educational outcomes in the field of Biotechnology – in part A, SS)* | ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ………………………………………………………………………………………………………  ……………………………………………………………………………………………………… | | |

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| *……………………………………………………*  *SIGNATURE OF THE INTERNEE* | *……………………………………………………*  *SIGNATURE OF THE EMPLOYER* | *……………………………………………………*  *SIGNATURE OF THE INTERNSHIP ORGANISER (UNIVERSITY)* |

1. 1The internship has to take place between November 1, 2018 and October 31, 2020. [↑](#footnote-ref-1)
2. 2The internship has to match the following timetable: maximum 8 hours daily and 40 hours weekly; minimum 20 hours weekly. [↑](#footnote-ref-2)