

SYSTEM FOR THE VERIFICATION OF LEARNING OUTCOMES

§ 1. Preliminary Provisions

1. The process takes into account the applicable legal regulations and the standards of the accrediting body.
2. The process of verifying learning outcomes ensures their consistency with the study programme, the reliability and comparability of grades, and the use of diverse methods.
3. The verification of learning outcomes includes an analysis of selected quantitative and qualitative measures, together with the definition of alert thresholds and corrective actions.
4. The verification of achieved learning outcomes requires the use of diverse forms of assessment appropriate to the categories of knowledge, skills and social competences to which these outcomes relate.
5. Learning outcomes are verified at different stages of education:
 - 1) partial credits (credits for all forms of classes within individual groups of courses),
 - 2) verification of learning outcomes achieved during work placements,
 - 3) verification of the learning outcomes defined in the study programme at the end of studies, through the diploma seminar and the preparation of the diploma thesis (where provided for in the study programme), as well as during the diploma examination,
 - 4) assessment of clinical skills using the OSCE (*Objective Structured Clinical Examination*).
6. The methods of verifying learning outcomes achieved in programmes preparing students for the professions referred to in Article 68(1) of the Act of 20 July 2018 – Law on Higher Education and Science (Journal of Laws, item 1668) take into account the requirements set out in the education standards.
7. Verification also includes an analysis of indicators such as the distribution of grades and course pass rates, examination and credit results (including average results and the percentage of failing grades), and the degree to which individual learning outcomes have been achieved (at course and programme level). In the event of significant deviations (e.g. more than 30% failing grades or more than 80% very good grades), an in-depth analysis of the causes is carried out and improvement measures are implemented.
8. Learning outcomes are assessed by the instructor or by an appointed committee (e.g. diploma examination, PBL classes), which may also include persons who are not research and teaching staff of WSB University (e.g. representatives of business or the public sector).
9. The process includes an analysis of students' opinions on the quality of education and the methods of verifying learning outcomes, employers' opinions and the results of work placements, the results of graduate tracking surveys, data from e-learning systems (e.g. student activity, progress in completing courses), and the results of qualitative analyses, including reviews of student work and conclusions from class observations.
10. Verification covers all categories of learning outcomes, i.e. knowledge, skills and social competences.
11. The process of verifying learning outcomes ensures the reliability, objectivity and comparability of grades, in particular through the use of uniform assessment criteria.
12. The assessment system is based on transparent and consistent criteria that support not only the verification of learning outcomes but also student development through feedback and a gradual increase in the level of requirements.

13. Learning outcomes are verified in direct contact between the teacher and the student and also, in justified cases, remotely (while ensuring compliance with personal data protection rules and student identification), in particular where a remote form of verification makes it possible to adapt the process to the special needs of the student. The methods of verifying and assessing students' achievement of learning outcomes used in teaching and learning with distance learning methods and techniques guarantee the identification of students.
14. The system for the verification of learning outcomes, after appropriate modifications, may be applied to postgraduate studies and other forms of education provided at WSB University.

§ 2. Transparency, Reliability and Comparability of Assessment

1. The transparency, reliability and comparability of the assessment process are ensured by:
 - providing students at the beginning of classes with clear and detailed information on learning outcomes, the criteria for their verification and the assessment rules, including grade thresholds and forms of credit. These criteria are clearly defined and consistently applied throughout the entire educational process;
 - providing students with access to the assessment tools used (e.g. rubrics, scoring criteria, sample work) that enable them to understand the requirements for passing the course;
 - enabling students to view their assessed work and to receive feedback justifying the grade awarded;
 - using standardised assessment methods appropriate to the learning outcomes that ensure consistency across different forms of classes and groups;
 - taking steps to ensure the comparability of grades, in particular through the use of common criteria, agreements within teaching teams and periodic reviews of grade distributions, and the possibility of involving a second examiner in justified cases;
 - monitoring the reliability of the assessment process, including analysing grade results, identifying possible deviations and implementing improvement measures;
 - ensuring that the assessment process complies with the principles of academic ethics and the applicable internal and external regulations.

§ 3. Appeals Procedure

Students have the right to appeal against an assessment result in accordance with the rules set out in the Study Regulations. The University ensures that the appeals procedure is transparent and impartial.

§ 4. Description of Learning Outcomes – General Guidelines

1. Learning outcomes form the basis for determining the scope of educational content, its placement in educational modules and the sequence of courses.
2. Learning outcomes are described using descriptors, understood as general statements defining the intended learning outcomes.
3. Learning outcomes are defined in the areas of knowledge, skills and social competences.
4. The description of the intended learning outcomes for a given programme, level and profile of study takes into account learning outcomes defined in the education standards, defined within the second-level characteristics of the Polish Qualifications Framework, and the universal characteristics of PQF levels defined for the given level of study (levels 6–8). Programme learning outcomes must be defined in such a way that it is possible to determine whether they have been achieved by the student and graduate.
5. Learning outcomes are recorded as programme learning outcomes. They are specified in more detail

in the syllabi. Outcomes should be specific, concrete and measurable.

6. The learning outcomes matrix indicates in which course modules the learning outcomes are achieved.

§ 5. Description of Methods for Verifying Learning Outcomes

1. The choice of methods for verifying learning outcomes should take into account the form of classes and follow from the educational objectives.
2. The rules for assessing students are governed by the *Framework System for Student Assessment* (Annex 1), which sets out detailed requirements for courses ending with an examination, for credit for classes in courses ending with an examination, and for credit in courses that do not end with an examination, as well as the quantitative and qualitative criteria for assessing examinations and assignments and the grading scale used.
3. The methods of verifying the learning outcomes defined for individual modules are specified in the syllabus or course sheet.
4. The method of verifying learning outcomes achieved during a work placement is specified in the relevant Work Placement Regulations and in the work placement syllabus. The course of the work placement is documented by assigning the tasks carried out by the student to each intended learning outcome in the areas of knowledge, skills and social competences. Each entry in the placement log refers directly to specific learning outcomes, which ensures their full traceability and verifiability.
5. The method of verifying the practical skills of students in programmes assigned to disciplines within the field of medical and health sciences by means of the OSCE examination is set out in an Order of the Rector.
6. The Diploma Regulations, together with their annexes, describe the diploma process, including: the submission, announcement, selection and approval of diploma thesis topics, the rules for conducting diploma seminars, the requirements for diploma theses, the submission of diploma theses, the preparation of reviews of diploma theses, and the conduct of the diploma examination.
7. The system for verifying final learning outcomes includes the monitoring and supervision of the diploma process and regular graduate tracking surveys.
8. Methods of verifying learning outcomes are adapted to the needs of students with special needs, in particular by individualising the form, timing and conditions of credits and examinations, while maintaining the substantive requirements and the intended learning outcomes. Adjustments may include, among others, changing the form of the examination (e.g. from written to oral), extending the time allowed, using assistive technologies, providing materials in accessible formats, and organising the examination in conditions that enable the student's full participation in the verification process.
9. The process of verifying learning outcomes defines the rules for the use of artificial intelligence tools, including the scope of their permitted use and the methods for verifying the independence of the student's work.

§ 6. Archiving of Student Work

1. Credit work, examination papers, project work, placement logs and other materials confirming that the student has achieved the learning outcomes defined in the study programme are archived for the duration of the entire study cycle for the purpose of regular reviews. Detailed rules for archiving work are set out in Annex 2 to this document.
2. Documentation is archived electronically in the University's IT systems, which ensure data security and compliance with the GDPR.

§ 7. Mechanisms for Assessing the Degree of Achievement of the Learning Outcomes Defined in

the Programme

1. Teams for Assessing the Degree of Achievement of Learning Outcomes, appointed by the Rector, are responsible for assessing the degree to which learning outcomes have been achieved.
2. Monitoring also includes an ongoing analysis of the methods of verifying learning outcomes as part of reviews of credit and examination papers selected at random by the vice-deans supervising the given programme and audits of test examinations, as well as an analysis of grade statistics and of the opinions of internal and external stakeholders.
3. Guidelines for assessing the degree of achievement of learning outcomes are set out in the document *Rules for the Development, Approval and Review of Study Programmes and Learning Outcomes*.
4. The results of these analyses form the basis for introducing changes to study programmes and teaching methods.

§ 8. Involvement of External Stakeholders

The opinions of external stakeholders, in particular employers, are taken into account in improving the system for verifying learning outcomes. These opinions are collected systematically and used to improve study programmes and methods of verifying learning outcomes.

§ 9. Availability of Information on Learning Outcomes

1. The description of learning outcomes is published on the University's website and is available to prospective students.
2. The description of the methods of verifying learning outcomes is published on the University's website and in the Public Information Bulletin.

§ 10. Responsibilities

1. The Senate of WSB University is responsible for establishing the programme learning outcomes for a given programme and level of study, taking into account the profile of study.
2. The programme council is responsible for designing programme learning outcomes and the methods of verifying them, and for developing syllabi (in cooperation with teachers who have the necessary competences in the relevant area of knowledge). In addition, the Chair of the programme council, the members of programme councils and the vice-dean responsible for the given programme are responsible for monitoring the correctness and currency of the learning outcomes for that programme.
3. The Dean is responsible for:
 - 1) monitoring the correctness and currency of the learning outcomes defined for the programmes run by the faculty,
 - 2) overseeing the correctness of the monitoring of learning outcomes in a given programme,
 - 3) publishing the study programmes run by the faculty.
4. Work Placement Coordinators carry out a partial assessment of the achievement of the learning outcomes assigned to work placements, based on an analysis of students' opinions on the course of their placements, entries in placement logs and employers' assessments of the participating students, and then pass the results of this verification on to the vice-deans and programme councils.
5. An academic teacher teaching a given course is responsible for:
 - 1) familiarising themselves with the learning outcomes at programme and course level (the so-called reference matrices),
 - 2) achieving the learning outcomes for the course/module,
 - 3) monitoring the correctness and currency of the learning outcomes defined for the course or module,

- 4) updating the course syllabus by submitting changes to the course/module coordinator or the Chair of the programme council,
 - 5) developing qualitative and quantitative criteria for assessing students' achievement of learning outcomes,
 - 6) developing the rules for obtaining credit in accordance with the recommendations of this procedure,
 - 7) communicating with other instructors in order to ensure consistency of teaching within a given course, e.g. the relationship between the lecturer and the instructor of the classes,
 - 8) developing medical simulation scenarios, in the case of medical programmes,
 - 9) assessing the student's achievements in the course/module in accordance with the credit rules developed on the basis of this procedure,
 - 10) providing students with feedback (appropriate to the form of credit),
 - 11) submitting complete documentation of the student's achievements to the Dean's Office for archiving (where learning outcomes were verified on site). Where some credit work was, for example, submitted via the Online WSB platform, archiving takes place automatically,
 - 12) ensuring that the assessment process complies with the principles of academic ethics and preventing the unauthorised use of AI tools.
6. The Dean's Office staff member is responsible for maintaining and archiving the documentation of the student's achievements.
 7. The Teams for Assessing the Degree of Achievement of Learning Outcomes are responsible for the regular assessment of the degree to which learning outcomes have been achieved in a given programme.

§ 11. Related Documents

1. Study Regulations
2. Diploma Procedure
3. Anti-Plagiarism Procedure
4. OSCE Examination Regulations
5. Work Placement Regulations
6. ECTS Regulations
7. Rules for the Development, Approval and Review of Study Programmes and Learning Outcomes

Annexes

- Annex 1. Framework System for Student Assessment
- Annex 2. Rules for Archiving Student Work
- Annex 3. Rules for Preparing Projects

FRAMEWORK SYSTEM FOR STUDENT ASSESSMENT

I. Preliminary Provisions

1. The basis for obtaining a pass grade is the achievement of the learning outcomes defined in the syllabus, taking into account their importance for the objectives of the course.
2. The qualitative and quantitative criteria presented in the *Framework System for Student Assessment* are recommendations intended to introduce university-wide standards for assessing students' achievement of all the learning outcomes assigned to the study programme.
3. It is assumed that:
 - learning outcomes relating to the category of knowledge are acquired by students primarily in lectures and through independent study, and to a lesser extent through other forms of classes,
 - learning outcomes relating to skills and social competences are acquired by students primarily in seminars, laboratories, practical classes, projects and work placements.
4. Language competences are verified comprehensively and cover all skills (listening and reading comprehension, speaking and writing), including the use of the specialist language appropriate to the discipline, using diverse assessment methods (e.g. tests, oral and written tasks, practical tasks) appropriate to the level of study, ensuring that at least level B2 is achieved in first-cycle studies and B2+ in second-cycle or long-cycle Master's studies.

II. Recommended Methods for Verifying Learning Outcomes:

1. Knowledge

The following methods are recommended for assessing learning outcomes in the category of "knowledge": examinations (written or oral), tests, knowledge tests prepared in accordance with WSB University standards, presentations (oral or written), assessment of student participation in class, written work (essay, article, research report), written project (individual or group), case study analysis, literature review and synthesis, concept maps, formative quizzes and other methods included in the approved course syllabus. It is recommended that the verification methods:

- test the understanding, interpretation and integration of knowledge, not merely its reproduction,
- include both summative and formative assessment,
- be designed in a way that limits the unauthorised use of AI tools (e.g. context-based questions, individualised tasks).

2. Skills

The following methods are recommended for assessing learning outcomes in the category of "skills":

- assessment of the performance of specific practical tasks, practical projects (individual and team), case study analysis, problem solving,
- simulations, including high- and low-fidelity simulations,
- in medical programmes – a practical examination conducted in simulated conditions, including with a simulated patient, or in clinical conditions, using observation sheets or checklists,
- projects carried out using Problem-Based Learning (PBL), Challenge-Based Learning (CBL) or Design Thinking,

- presentations of work results, project reports, research projects/tasks (individual or team) involving the formulation of a research problem, the selection of methods and the analysis of results, and the analysis and interpretation of data (quantitative and qualitative), including work with real datasets,
- critical analysis of the scientific literature and preparation of literature reviews,
- development of research instruments (e.g. questionnaires, interview scenarios) and their pilot testing,
- scientific or applied articles,
- case studies based on real data,
- practical examinations (e.g. OSCE),
- a portfolio of student work, including work placement documentation (e.g. placement log) describing the tasks performed and the skills developed.

It is recommended that the choice of methods for verifying learning outcomes and the way tasks are formulated be adapted to the profile of study (general academic or practical), the specific nature of the programme and the character of the learning outcomes to be achieved, taking into account in particular the development of research skills or practical competences, as appropriate, e.g. so that:

- tasks are applied in nature and reflect real professional contexts (most often in the practical profile),
- tasks develop research skills, including formulating research problems, selecting methods, analysing data and drawing conclusions (most often in the general academic profile),
- assessment takes into account methodological correctness, critical thinking and the ability to interpret results with reference to the scientific literature,
- assessment takes into account both the process and the outcome of the student's work,
- diverse verification methods are used (triangulation), particularly in the case of complex learning outcomes.

3. Social competences

The following methods are recommended for assessing learning outcomes in the category of "social competences":

- observation of student behaviour, assessment of teamwork, assessment of communication, organisational and leadership skills,
- analysis of the approach to problem solving, assessment of ethical attitudes,
- self-evaluation and reflection (e.g. reflective journals),
- peer assessment,
- self-assessment.

It is recommended to:

- use transparent assessment criteria (e.g. rubrics),
- take into account the perspectives of different assessors (e.g. teacher, team, external stakeholder),
- support the development of competences through feedback.

4. Verification of Learning Outcomes in Distance Learning

In order to ensure the diversity and comprehensiveness of the process of verifying learning outcomes, methods of verifying learning outcomes using distance learning tools may be used as a supplementary measure. This increases the flexibility and accessibility of the teaching process, enables the introduction of modern forms of assessment and supports the development of students' digital competences, including the ability to use technology effectively and responsibly.

Recommended methods for verifying learning outcomes achieved through distance learning

include:

- written work prepared independently by the student, including research reports, project reports, case study analyses and essays, which may be submitted on the OnlineWSB e-learning platform,
- multimedia presentations delivered, for example, synchronously on the MS Teams platform,
- oral examinations conducted using online communication tools that enable student identification and, in justified cases, the recording of the examination,

in addition:

- participation in online discussions (forums, chats),
- team project tasks carried out in a digital environment using digital tools and platforms for collaborative project work or project management,
- video recordings presenting the performance of a task, e.g. role-plays, simulations,
- analysis of student activity in e-learning systems (learning analytics).

It is recommended that:

- verification methods are appropriate to the specific nature of distance learning and ensure reliable assessment,
 - solutions are used that increase the credibility and authenticity of the student's work (e.g. project defence, follow-up questions),
 - data from digital systems are used to monitor the learning process and identify students' difficulties early.
5. Methods of verifying learning outcomes are selected appropriately for the level of study, taking into account the intended learning outcomes, their complexity, the expected depth of knowledge processing, the student's level of independence, and the need for a gradual progression from reproducing knowledge to analysing it critically and applying it in complex, practical contexts.

III. Requirements for Courses Ending with an Examination or Credit

1. Examinations and credits may be written, oral or mixed, and may also include practical elements (e.g. a project, case analysis, presentation or simulation), as appropriate to the intended learning outcomes.
2. The instructor is obliged to inform students during the first class about: the form of credit or examination, the scope of material, the assessment criteria (including point or descriptive thresholds), the required forms of activity (e.g. projects, partial assignments), and the conditions for admission to the examination/credit.
This information should also be made available to students in a permanent form (e.g. in the syllabus or on the e-learning platform).
3. Forms of credit and examination should be consistent with the learning outcomes defined for the course and enable their reliable verification. The use of the following is recommended:
 - clear and transparent assessment criteria (e.g. rubrics),
 - more than one assessment method in the case of complex learning outcomes,
 - tasks that test not only the reproduction of knowledge but also understanding, analysis and application of knowledge.
4. In the case of a written examination, the examiner should show the assessed paper to the examinee at their request within 14 days of the examination.
5. The instructor provides the student with feedback that enables them to understand the grade obtained and identifies areas for further development. The form and scope of the feedback are adapted to the nature of the task and may include, among others, an individual comment

- (written or oral), an assessment based on previously defined criteria (e.g. rubrics) or a discussion in class of the most common mistakes and good practice.
6. The process of verifying learning outcomes should ensure the reliability and credibility of assessment. To this end, the following are recommended: the use of diverse verification methods (triangulation); in justified cases, supplementing written work with oral elements (e.g. project defence); designing tasks that limit the possibility of unauthorised use of AI tools (e.g. context-based tasks, individualised work, reference to the classes); and documenting the course of examinations and credits. Recording of the examination is permitted in justified cases, in accordance with applicable regulations.
 7. Credit for practical classes, laboratories and clinical classes should be granted if the student has attended the compulsory classes and was properly prepared for them, i.e. has learned and understood the knowledge contained in the assigned literature, and has duly completed all exercises, projects or other forms of presenting the learning outcomes achieved, as specified in the course syllabus.

IV. Recommended Qualitative and Quantitative Grading Criteria

1. The final grade should be based on an assessment of the quality of the learning outcomes achieved. Where point scales or assessment rubrics are used, the scoring should be directly related to the level of achievement of individual learning outcomes.
2. The basis for obtaining a pass grade (at least a satisfactory grade) is the achievement of all the learning outcomes defined in the syllabus at a level corresponding to the requirements for a satisfactory grade.
3. In order to determine the final grade, it is recommended to use the following example qualitative criteria for the individual grade values:
 - **grade 3.0** – the student has mastered the knowledge conveyed during classes and from the core literature, has a general knowledge of the subject, carries out the assigned task making minor errors and correcting them after prompting by the teacher, and uses appropriate methods and tools, but the result of their work contains minor, insignificant errors. The student does not independently seek additional information and is aware of, for example, the ethical or social consequences of the proposed solutions but does not address them in the task. The student presents the results of their work;
 - **grade 4.0** – the student has a good command of the knowledge conveyed during classes and from the core literature, which enables them to identify problems and indicate solutions; carries out the assigned task making minimal errors that do not affect the result of their work; and correctly uses the methods and tools discussed in class. The student independently seeks additional information but uses it in their work only to a limited extent. When carrying out assigned tasks (including in a group), the student shows independence in seeking solutions. When solving a given problem, the student is aware of, for example, the ethical and social consequences of the proposed solutions and addresses them to a limited extent. The student presents the results of their work simply and clearly;
 - **grade 5.0** – the student has mastered the knowledge conveyed during classes and from the core literature, which enables them to identify and solve problems; presents tasks without errors and explains the methods or procedures used thoroughly. The student has broader knowledge of the problem area than that required for grade 4.0 and demonstrates knowledge drawn from the supplementary literature. The student carries out the assigned task without errors and uses methods and tools correctly. The student independently seeks information and uses it in their work. When carrying out assigned tasks (including in a group), the student seeks solutions fully independently. When solving a given problem, the student is aware of, for example, the ethical and social consequences of the proposed solutions and addresses the most important of them. The

student presents the results of their work simply and clearly and engages in discussion about them.

4. It is within the teacher's competence to define the intermediate grades (3.5, 4.5).
5. In the case of written examinations or tests in which the student can obtain a specified number of points, the teacher should construct the test or the list of questions and tasks to be solved in such a way as to take into account the qualitative criteria set out in item 3. Quantitative criteria indicating a specific percentage of correct answers should be treated as supplementary only. The number of points the student must obtain in the examination or test for a given grade is determined by the teacher.
6. The qualitative criteria assigned to individual grades should be consistent with the learning outcomes defined in the syllabus and enable their reliable and transparent verification.
7. The use of descriptive assessment criteria in the form of rubrics, which clearly define the requirements for each level of achievement of learning outcomes, is recommended.
8. Assessment criteria should be presented to students at the beginning of classes and be available throughout the course.
9. Assessment takes into account not only the final result of the student's work but also the learning process, including engagement, progress and the approach to problem solving.
10. For work prepared independently by the student, the use of solutions that make it possible to verify that the work was done independently is recommended.

V. Grades

1. In accordance with the Study Regulations in force at WSB University, the following grades are used in examinations and credits:
 - very good 5.0
 - good plus 4.5
 - good 4.0
 - satisfactory plus 3.5
 - satisfactory 3.0
 - unsatisfactory 2.0
2. A student who has obtained an unsatisfactory grade for the course credit may take the examination in the resit session only once, after first obtaining credit for the course. If a student obtains an unsatisfactory grade in the examination at the first attempt or fails to sit the examination at that time, the student is entitled to take the examination at a second attempt. If the student fails to obtain a pass grade at the resit, they may be granted conditional permission to continue studies in the following semester, subject to passing the examination (obtaining credit for the course) by a date set by the Dean.
3. A student may request a committee examination. The conditions for organising a committee examination are set out in the Study Regulations.

Annex 2 to the System for the Verification of Learning Outcomes

RULES FOR ARCHIVING STUDENT WORK

1. Students' written work includes:
 - 1) mid-semester written work (tests, quizzes, short tests, project work, etc.),
 - 2) written credit and examination work,
 - 3) diploma theses (Bachelor's, engineering, Master's),
 - 4) publications,
 - 5) other materials confirming the achievement of the learning outcomes defined in the study programme.
2. Mid-semester, credit and examination written work is kept by the instructor of the given course until the end of the current semester. Within 14 days of the announcement of results, the student has the right to view the assessed work if it forms the basis for obtaining credit for the course.
3. The instructor is then obliged to submit all work to the head of the Dean's Office by 31 March (winter semester) and by 31 October (summer semester).
4. If the work was collected via the e-learning platform or the electronic examination system, archiving is carried out automatically by these systems.
5. The work should be submitted by the instructor in a folder, envelope or binder labelled with:
 - the name of the programme,
 - the semester number,
 - the instructor's first name and surname,
 - the name of the course,

In addition, the grading scale and, where applicable, the assessment criteria should be attached.

In the case of an oral examination, the teacher is obliged to provide the list of examination questions answered by each student. In justified cases, the oral examination may be recorded.

The instructor may submit work in electronic form on a CD or other storage medium labelled in the same way as work submitted in written form.

If work is submitted on a CD, a list of the grades for each piece of work should be attached.

6. The work is kept in the archive for the duration of the entire study cycle.
7. Archiving is carried out in a manner that ensures the integrity, confidentiality and availability of data in accordance with applicable law.
8. Diploma theses are submitted, reviewed and checked in the anti-plagiarism system via the Wirtualna Uczelnia (Virtual University) system.

Annex 3 to the System for the Verification of Learning Outcomes

RULES FOR PREPARING PROJECTS

I. Basic Requirements:

1. A project is carried out by the student as part of the classes provided for in the study programme and is one of the methods of verifying learning outcomes, in particular in the areas of skills and social competences.
2. A project may take the form of written work such as a problem analysis, a solution concept, a case study, a research report, an implementation project, technical documentation or another form appropriate to the specific nature of the classes. Detailed requirements are set by the academic teacher in the course programme.
3. An engineering and technical project may take, in particular, the form of a design, technological, IT, implementation, organisational-technical, automation, logistics or design-and-research project, technical documentation, a model, prototype, simulation, application, test bench or a solution improving a process, product, service or system. The form of the project should be appropriate to the specific nature of the programme, the intended learning outcomes and the organisational and technical capabilities of the University.
4. The scope of the project prepared by the student is linked to the student workload required to complete it, as reflected in the ECTS credits included in the study plan.
5. The project is prepared independently by the student. Group projects are permitted. In the case of group projects:
 - the instructor determines the size of the team,
 - the contribution of individual team members must be indicated,
 - grades may be differentiated according to individual engagement.
6. The project is subject to assessment.
7. The project should be applied, design-oriented, research-based or implementation-oriented in nature and, where possible, relate to real problems of socio-economic, economic, industrial, technological, organisational or environmental practice. In the case of engineering and technical projects, the project should take into account functional and technical requirements, design constraints, the selection of methods, tools, materials, technologies or IT solutions, as well as an assessment of the possibility of applying the proposed solution in practice.
8. The use of digital tools, including tools based on artificial intelligence, is permitted in carrying out the project, provided that the principles of independent work are respected and the extent of their use is transparently disclosed. In the case of projects using specialist software, digital tools, simulation environments, CAD/CAM/CAE systems, programming tools, measurement systems or computing platforms, the student should indicate the extent of their use and the method of verifying the results obtained.

II. Objectives and Outcomes of the Project

1. Preparing the project should develop the following skills:
 - the practical application of knowledge acquired during classes,
 - identifying and analysing problems and formulating proposals for solving them,
 - obtaining, selecting, interpreting and critically analysing information from various sources,
 - integrating knowledge, drawing conclusions and formulating reasoned opinions,
 - presenting a logical and coherent argument,
 - preparing written work and presenting the results of work,
 - using precise and correct specialist language.
2. Depending on the specific nature of the project, its completion may additionally develop the following skills:
 - effective teamwork and communication,
 - planning and organising project work,
 - diagnosing and assessing complex problems,
 - applying analytical, research, simulation or experimental methods,
 - making decisions under conditions of uncertainty,
 - reflecting on the ethical, social and environmental aspects of the proposed solutions,
 - planning scientific research and synthesising the results obtained,
 - using appropriately selected methods for project management and process optimisation.
3. In the case of engineering and technical projects, preparing the project should additionally develop the following skills:
 - identifying the needs of a user, client, process, organisation or technical system,
 - formulating functional, technical, usability, environmental, economic or safety requirements,
 - selecting design methods, technologies, materials, tools, components, algorithms or organisational solutions,
 - performing basic calculations, analyses and simulations, and preparing models, schematics, technical drawings, diagrams, design documentation or code documentation,
 - designing, testing, verifying and improving technical solutions,
 - assessing the technical, economic, organisational and environmental feasibility of the proposed solution,
 - identifying technical, operational, organisational, environmental and safety-related risks,
 - applying relevant norms, standards, industry good practice and the principles of engineering ethics,
 - presenting project results in a form understandable to both technical and non-technical audiences.

III. Project Structure (Recommended)

The structure of the project may be adapted to the specific nature of the task, the character of the learning outcomes and the type of final product, while remaining consistent with the intended educational objectives and assessment criteria. Depending on the specific nature of the

classes, the project may take different forms; for example, it may include the following elements:

1. Title page (attached)
2. Introduction
 - statement of the project's aim,
 - definition of the problem or issue,
 - justification for the choice of topic.
2. Context and problem analysis
 - description of the phenomenon / organisation / case analysed,
 - identification of key factors,
 - data analysis (if applicable),
 - reference to literature or theory.
3. Methodology / approach
 - description of the methods, tools or approach used (e.g. analysis, research, modelling, Design Thinking, etc.),
 - justification for the choice of methods.
4. Solution / concept
 - presentation of the proposed solution,
 - variants (if applicable),
 - justification for the choice.
5. Implementation / application
 - plan for implementing or applying the solution,
 - identification of risks and limitations,
 - resources required for implementation.
6. Evaluation of results / conclusions
 - expected results,
 - assessment of the effectiveness of the solution,
 - conclusions and recommendations.
7. Bibliography / sources
8. Appendices (optional) – (e.g. data, tools, additional materials)

IV. Sample Project Assessment Rubric

Sample assessment rubrics are presented below. It is recommended that the rubrics be adapted to the specific nature of the project and the learning outcomes that the project is intended to verify.

Criterion	Grade 3.0	Grade 4.0	Grade 5.0
Understanding of the problem	Problem described in general terms, partly imprecise	Problem correctly defined and justified	Problem accurately and thoroughly defined, set in context

Analysis and use of knowledge	Limited analysis, mainly reproductive	Sound analysis, use of knowledge from classes	In-depth analysis, integration of different sources and concepts
Application of methods	Methods partly appropriately selected	Methods correctly and appropriately selected	Methods selected deliberately, with justification and reflection
Proposed solution	Solution correct but formulaic	Solution appropriate and logical	Solution innovative, well justified and coherent
Conclusions and recommendations	General conclusions, partly justified	Correct and logical conclusions	In-depth, critical and well-argued conclusions
Applied value / usefulness of the solution	The solution has limited practical value or requires significant refinement before it can be applied	The solution is practical, appropriate and applicable in a specific context	The solution has high applied value, is realistic, well suited to the context and can generate measurable benefits
Form and communication	Work legible, minor errors	Work well organised and clear	Work exemplary, consistently organised, coherent and professional
Definition of technical and functional requirements	Requirements defined in general terms or partially	Requirements correctly defined and linked to the project aim	Requirements precisely defined, complete, justified and verifiable
Selection of methods, tools, technologies or materials	Selection partly appropriate, poorly justified	Selection correct and appropriate to the project aim	Selection deliberate and justified, taking into account alternatives, constraints and industry good practice
Technical correctness of the solution	Solution essentially correct but contains significant simplifications or gaps	Solution technically correct and consistent with the requirements	Solution refined, coherent, efficient and technically justified
Calculations, analyses, simulations or tests	Performed to a limited extent or with gaps	Performed correctly and appropriately to the nature of the project	Performed rigorously, in depth, properly

			interpreted and used to evaluate the solution
Technical documentation	Documentation incomplete or partly illegible	Documentation well organised, correct and sufficient to understand the solution	Documentation complete, professional, coherent and compliant with the adopted standards
Verification and validation of the solution	Method of checking the solution described in general terms	Solution verified using appropriate methods	Verification carried out rigorously, with analysis of results, limitations and opportunities for improvement
Safety, reliability and environmental aspects	Taken into account to a limited extent	Taken into account correctly, appropriately to the nature of the project	Taken into account comprehensively, with identification of risks and proposed mitigation measures
Independence / contribution	Requires support, limited independence	Work largely independent	High level of independence and initiative
Teamwork (for team projects)	Collaboration within the team was limited; uneven engagement or difficulties in organising work were evident	The team collaborated properly; tasks were divided and completed in a coordinated manner	The team demonstrated a high level of collaboration, effective communication, responsibility and mutual support in achieving the goal

V. Final Provisions

Projects prepared by students are archived in accordance with the rules set out in the document *Rules for Archiving Student Work*.

Annex 1 to the Rules for Preparing Projects

WSB University

Faculty.....
Programme:
Mode of study:
Semester:
Student ID number:

Student's first name and surname

PROJECT TITLE:

Project written under the supervision of:

Academic title/degree, first name and surname

Place of submission (depending on the University faculty), date 20XX:

Dąbrowa Górnicza,