

# CREDIT SYSTEM

## Subject: IT project management in business

Degree programme: Data Engineering, semester: 6., full-time course

Subject hours: 15 (lectures), 30 (labs), credit-based pass, including final test

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## Components of final grade

The final grade consists of three components:

- 1) total credits from laboratory classes – **maximum: 60 credits**, including:
  - a) credits obtained for individual research on and presentation of a specific topic within the scope of the final report – scale: **0–10**;
  - b) credits obtained for reports from the most recent laboratory classes – 10 partial reports scored on a scale of 0 to 2 with increments of 0.5 (in total: **0–20**);
  - c) credits obtained for individual preparation of the final report from laboratory classes – implementation of the student’s own project – scale: **0–30**.
- 2) total credits from the final test – **maximum: 40 credits**;
- 3) total credits for attendance at lectures – **maximum: 5 credits**.

## Grading scale

The final grade will be determined based on the sum of credits from the final test, credits from laboratory classes and credits for attendance, according to the following table:

Credits	Final grade
0–59	2.0
60–67	3.0
68–75	3.5
76–83	4.0
84–92	4.5
>93	5.0

## Exemption from the final test

Each laboratory teacher may (but does not have to) exempt from the final test a maximum of 2 students per each lab group. Exemption can be granted to students with the highest total number of credits from laboratory classes.

Students who want to apply for exemption must submit their final report from laboratory classes not later than 2 weeks before the last lecture. Laboratory teachers will make an exemption decision as regards the final test not later than one week before the last lecture.

Exemption from the final test is tantamount to the final grade: “very good” for the subject as a whole.

## Credits for laboratory classes

### Preparation and presentation of the selected topic

Each student must individually work on and present one of the topics.

#### Topics to choose from

The following topics are available for individual research and presentation:

- 1) Defining and measuring project goals according to the SMART methodology.
- 2) Building a business case for the project (with particular emphasis on the payback period and the rate of return).
- 3) Project charter.
- 4) Work Breakdown Structure (WBS).
- 5) Estimating the duration of tasks (PERT method, parametric assessment, expert assessments, and other methods).
- 6) Critical path determination and analysis (with the focus on: total time reserve, free time reserve, early and late start and end dates). The critical path calculation method. Methods for presenting the critical path using the MS Project application.
- 7) Responsibility matrix. Matrix creation and verification rules.
- 8) Stakeholder analysis and stakeholder assessment matrix. Stakeholder management plan.
- 9) Risk analysis. Risk assessment and risk matrix. Possible risk responses.
- 10) EV analysis (EV indicator, PV CPI, SPI, and other).

## Evaluation of the presentation in terms of its content and delivery

The content and delivery of presentations will be evaluated as follows:

- both the content of the presentation and the manner of its delivery are subject to evaluation;
- simple reading of the notes or the screen text should be avoided;
- the presentation should be interesting and engaging for the group;
- the presentation should include theoretical aspects and practical examples;
- the presentation should end with discussing the topic based on the student's own project;
- presentations must not infringe copyright or intellectual property;
- the presentation content must not copy the content of lectures;
- students are required to cite the sources for their presentations. A basic reference material for presentations is the PMBOK Guide (A Guide to the Project Management Body of Knowledge);
- whenever there are different literature approaches to the issues discussed in the presentation, the prevailing approach should be that included in the PMBOK;
- before class presentation, the student must upload his/her presentation to the e-nauczanie portal.

## Partial reports

- 1) Partial reports should be submitted by students to the laboratory teacher starting from the 3rd laboratory classes and for the next 10 classes; they will present the material from the most recent classes.
- 2) If the student is absent from laboratory classes and fails to submit a relevant partial report, he/she must provide an excuse note. In this case, the student's total credits for a given partial report are reduced by 2.
- 3) If no excuse note is provided for the absence from laboratory classes, the student gets 0 credits for a given partial report.
- 4) If the student is absent from classes, he/she is obliged to catch up on his/her own.

## Final report

### Basic rules

- 1) The final project is completed individually by each student; the project topic cannot be repeated within a given lab group.
- 2) The list of projects selected by individual students must be submitted by the group representative to the laboratory teacher during the 3rd classes at the latest.
- 3) Papers submitted after the deadline will receive a grade lower by one, so not higher than 4.0.
- 4) Credits and grades cannot be upgraded.
- 5) The MS Project file, which is the basis for creating the final report, should meet the following technical requirements:
  - a. The project should consist of:
    - i. at least 50 normal tasks,
    - ii. at least 4 milestones,
    - iii. at least 1 recurring task;
  - b. own calendar must be defined in the file;
  - c. parent and child relationships must exist between tasks, at least to level 3 of the WBS;
  - d. tasks should be properly related by dependencies, with at least 2 types of dependencies between tasks to be used;
  - e. constraints should be applied to selected tasks, with at least 3 types of constraints to be used;
  - f. at least 10 resources must be defined (the total of 10 should include all three types of resources);
  - g. resources must be allocated to tasks.
  - h. a baseline must be created.

### Deadline for submission of the final report

The final project should be delivered (uploaded to the e-nauczanie portal) in electronic form (MS Project + Word/PDF) during the last classes in the semester at the latest.

## Content of the final report

The final project should consist of chapters that confirm a practical implementation of individual topics of laboratory classes in the project selected by the student as an example. It is recommended to supplement and update the report with the following chapters:

- 1) Title page.
- 2) Table of contents.
- 3) Introduction.
- 4) Executive Summary containing in particular a brief discussion of each of the elements in the project management triangle.
  - It is recommended to present the Executive Summary in the form of one pager.
- 5) Project goals (defined according to the SMART methodology).
- 6) Business justification for the project, including in particular:
  - a) All elements specified in the PMBOK.
  - b) Calculation of the payback period.
  - c) Calculations of the rate of return for year 1, 3 and 5 after the project completion.
  - d) Recommendation regarding the project feasibility or non-feasibility.
- 7) Project charter including the elements specified in the PMBOK.
- 8) Stakeholder analysis.
  - a) Stakeholder list with a description;
  - b) Stakeholder matrix;
  - c) Management plan for each of the stakeholders.
- 9) Risk analysis.
  - a) List of risks with a description and a breakdown into opportunities and threats;
  - b) Location of risks on the risk matrix and their prioritization.
  - c) Identification of responses to each risk and the risk response plan.
- 10) Project scope.
  - a) Work Breakdown Structure (WBS) as a tree structure;
  - b) Project phases;
    1. List of project phases.
    2. Overview of project phases.

- c) Milestones;
  - 1. List of milestones and their description.
  - 2. List of key project deliverables and criteria for their acceptance.
- d) Assumptions;
- e) Exclusions.
- 11) Task duration estimation.
  - a) Selecting an estimation method;
  - b) Estimation of duration.
- 12) Time constraints for tasks and final deadlines.
  - a) List of time constraints and final deadlines;
  - b) Justification for time constraints and final deadlines.
- 13) Network diagram; critical path and time inventory analysis.
- 14) Project team.
  - a) Overview of key roles:
    - 1. Project Sponsor
    - 2. Steering Committee and Chairman of the Steering Committee
    - 3. Project Manager
    - 4. Project Team members
    - 5. Suppliers
    - 6. Other
  - b) Project Team and its structure. Division of responsibilities.
  - c) Scope of responsibilities – RACI matrix.
- 15) Definition of project resources.
- 16) Allocation of resources to tasks.
- 17) Project optimisation and elimination of resource overallocation (resource balancing or other methods).
  - a) Description of any known overallocation and imperfections;
  - b) Suggestions for mitigation of overallocation and suggestions for improvements.
- 18) Cost analysis.
  - a) Project budget;
  - b) Cash flows;
  - c) Costs of tasks;

- d) Costs of resources.
- 19) Creating a baseline.
- 20) Work progress analysis:
  - a) Actual start and end dates, duration and costs.
  - b) Deviation analysis.
  - c) Analysis of EV, CPI, SPI and other factors to evaluate the progress of the project. Data import and export.
- 21) Suggested templates for own reports.
  - a) A periodic work progress report.
  - b) A report to help detect threats in the project (such as project delays or overallocation).
  - c) Reports from the “lessons learned” session.
  - d) Acceptance reports.
  - e) Other.
- 22) Project summary. Final conclusions.

The final report should comply with the Detailed Requirements for Editing Theses and Diploma Projects that are available at the website of the Faculty of Management and Economics at Gdańsk University of Technology or here: <https://zie.pg.edu.pl/documents/10693/29403149/Detailed%20Requirements%20for%20Editing%20Theses%20since%202001-10-2019.docx>

#### Final report evaluation criteria

##### Credits:

- 1) below 15 – there are some serious errors or omissions in the paper or it has not been submitted at all(or it has not been submitted by the deadline)
- 2) from 15 and up to 18 – poor quality of the paper; just compliant with the scope of the task, minor errors/omissions allowed;
- 3) more than 18 and up to 21 – the paper is mediocre and complete; correct but conventional; no broader analysis included;
- 4) more than 21 and up to 24 – the paper is good; out of the box thinking is noticeable; accurate analysis of problems included;



- 5) more than 24 and up to 27 – the paper is more than good; out of the box thinking is evident; thorough analysis of problems included;
- 6) more than 27 and up to 30 – the paper is exceptional; it stands out from the rest; done at a professional level.

### Additional credits for laboratory classes

The laboratory teacher may award additional credits to lab participants for their activity or exceptional knowledge. Nevertheless, total laboratory credits cannot exceed 60.

### Credits from the final test

Credits from the final test include credits for answering 8 questions scored on a scale of 0 to 5 (**maximum: 40 credits**). The questions cover the content of lectures and related reference readings. The final test takes 45 minutes.

### Credits for lecture attendance

The lecturer may (but does not have to) award credits for attendance at lectures: 1 credit to each person present at 1 lecture, but not more than 5 credits per person in total. The lecturer selects, at his/her own discretion, the lectures at which the attendance will be checked for credit award purposes.