Evaluation criteria
in subject EAI0010 Descriptive Geometry. Drawing for Civil Engineering

EXAM

EVALUATION METHOD Examination. Grade "0" – ≤ 50 points "1" – 51 – 60 points "2" – 61- 70 points "3" – 71 – 80 points "4" – 81 – 90 points "5" – 91 – 100 points	EVALUATION CRITERIA The examination consists of one descriptive geometry and one civil engineering drawing multipart tasks. Examination tasks are solved by computer graphics (2D drawings) using a computer drawing program which learned during the course. The examination assesses the correctness and accuracy of solving spatial geometric tasks, the ability to analyze and model spatial volumetric forms, knowledge of concepts, constructions and standards, to design and read drawings. „0" — a student's knowledge is insufficient, the ability to read drawings is poor; the tasks are unsolved or the results are incorrect; there are a lot of inaccuracies in a work; the student does not have a knowledge of the basic concepts, constructions and standards; representation of spatial objects along a plane does not satisfy the requirements set for the methods of making drawings, does not meet the requirements of a drawing design (less than 51% of the examination scope). "1" — a student's knowledge is poor, there occur some mistakes in reading a drawing and analyzing spatial-volumetric shapes; the tasks are solved incorrectly or unsolved; the student has, to a small extent, a knowledge of concepts and their application; a drawing's design does not correspond to the set requirements (51-60% of the examination scope). "2" — a student's knowledge is satisfactory, there occur some mistakes in reading a drawing and analyzing spatial-volumetric shapes; the student can solve tasks but makes some mistakes; superficial knowledge of concepts, constructions and standards; accuracy and logical mistakes; a drawing's design does not meet the set requirements (61–70% of the examination scope). "3" — a student's knowledge is good; some accuracy and correctness mistakes occur in analyzing spatial-volumetric shapes and solving tasks; the student has a knowledge of the basic geometric constructions but makes some usage errors; superficial formulation of concepts, constructions and standards; a drawing is designed with isolated shortcomings (71-80% of the examination scope). "4" — a student's knowledge is very good; some isolated accuracy mistake occur in reading a drawing, analyzing spatial-volumetric shapes and solving tasks; the concepts, constructions and standards making only careless mistakes; drawing s are designed according to the set requirements (81- 90 % of the examination scope). "5" — a student's knowledge is excellent, reading of drawings and analyzing of spatial-volumetric shapes is thorough and correct in its essence; the student can without mistakes solve the tasks on the topics studied in the course, knowledge of standards is excellent, designs drawings according to the set requirements (91-100% of the examination scope).
PREREQUISITES FOR BEING ADMITTED TO THE EXAMINATION	The course self-estimation/feedback and classroom activities are done: **Descriptive geometry:** (1) the assignments given in the student's descriptive geometry workbook have been submitted with a positive result, (2) 3 marked graphical home assignments have been submitted with a positive result, (3) 2 tests (100 points each) are passed with a positive result. **Drawing for civil engineering:** (4) the assignments given in the student's civil engineering drawing workbook have been submitted with a positive result, (5) 4 marked graphical home assignments have been submitted with a positive result, (6) 1 test have been submitted with a positive result. **Computer graphics:** (7) computer graphic lesson — assignments and summary test are valued.

FORMULATION OF THE EXAM GRADE	Computer graphics solution of 2 exam tasks contributes 100% to the examination mark.
FORMULATION OF THE FINAL GRADE	The Course Grade is the examination grade.

WRITTEN TEST

EVALUATION METHOD Depending on the knowledge and graphic literacy the student's achievement of learning outcomes may be marked 0, 1, 2, 3, 4, 5: "0" – ≤ 50 points "1" – 51 – 60 points "2" – 61- 70 points "3" – 71 – 80 points "4" – 81 – 90 points "5" – 91 – 100 points	WRITTEN TEST EVALUATION CRITERIA The written test includes tasks similar to the ones solved in class and in independent graphic assignments. The tasks touch mainly upon one field of topics studied in the course. The student has to formulate the presented concepts and analyse geometric objects in the range of the topic, knows standards and how format drawings. In descriptive geometry part is 2 and in civil engineering part is 1 written test. "0" — knowledge insufficient; the solution of tasks is incorrect; the student has no knowledge of the basic concepts, constructions and standards (less than 51% of the test scope). "1" — knowledge sufficient; knowledge of the basic geometric constructions acquired, a lot of mistakes in their application, formulation of concepts superficial and conceptually incorrect, the drawing does not respond to the standards (contributes 51-60% to the test). "2" — knowledge satisfactory; knowledge of the basic geometric constructions and standards acquired several mistakes in their application; formulation of concepts superficial and conceptually incorrect (contributes 61 – 70% to the test). "3" — knowledge good; knowledge of the basic geometric constructions and standards acquired, mistakes in their application; some inaccuracies in formulation of concepts (contributes 71-80% to the test). "4" — knowledge very good; isolated mistakes in solving tasks and knowledge of standards; formulation of descriptive geometry concepts brief and accurate; can analyse geometric objects (contributes 81-90 % to the test). "5" — knowledge excellent; no mistakes in solution of typical tasks studied in the course; formulation of descriptive geometry basic concepts accurate and brief, the drawings have been drawn correctly and according to the standards (contributes 91-100% to the test).
PREREQUISITES FOR BEING ADMITTED TO THE TEST	Are absent.
FORMULATION OF THE FINAL GRADE	Maximum points for every test are 100. If the score is lower than 51 points, it is necessary to repeat a written test.

INDEPENDENT GRAPHICAL HOME ASSIGNMENT (pencil and computer drawing)

EVALUATION METHOD Written independent graphical home assignment. Grade M – fail, grade A – pass.	EVALUATION CRITERIA FOR THE INDEPENDENT GRAPHICAL HOME ASSIGNMENT By doing the independent graphical assignment, knowledge of necessary concepts and use of reference books and study materials is acquired, analysis and modelling of spatial-volumetric images as well as creation and reading drawings are learned, format drawings, knowing the standards and using computer graphics program for design home assignments. 3 independent graphical assignments of descriptive geometry and 4 drawings for civil engineering have to be presented, each of which has one multipart task. Grade M — the independent graphical assignment is not solved correctly and/or their amount is insufficient and format not properly; grade A — the independent graphical assignment is solved correctly, their amount is sufficient and format properly.
PREREQUISITES FOR BEING ADMITTED TO INDEPENDENT GRAPHIC ASSIGNMENT	Are absent.
FORMULATION OF THE FINAL GRADE	Grade “A“ for independent assignment is a prerequisite for admission to the exam.

EXERCISE BOOK

EVALUATION METHOD FOR THE EXERCISE BOOK Written pass/fail task. Grade M – fail, grade A – pass.	EVALUATION CRITERIA FOR THE EXERCISE BOOK Grade M — the required assignments in the exercise book are not solved correctly and/or their amount is insufficient and format not properly; grade A — the required assignments in the exercise book are solved correctly and their amount is sufficient and format properly.
PREREQUISITES FOR BEING ADMITTED TO GRADING THE EXERCISE BOOK	Are not required.
FORMULATION OF THE FINAL GRADE	Grade “A“ for the exercise book is a prerequisite for the exam.

WRITTEN PASS/FAIL TEST OF COMPUTER GRAPHICS

EVALUATION METHOD Written pass/fail test grade M, ≤50 points grade A, 51-100 points	EVALUATION CRITERIA Ability to solve a task (90 min) is at least satisfactory. A student can use the CAD program’s commands in amount/volume learned on the course, format and print drawings. Grade M — the practical lesson task is not solved correctly and/or their amount is insufficient and format not properly; grade A — the practical lesson task is solved correctly, their amount is sufficient and format properly.
PREREQUISITES FOR BEING ADMITTED TO EVALUATION	Active participation in the practical lessons. The practical lessons tasks are passed.
FORMULATION OF THE FINAL GRADE	The passed computer graphics written test is a prerequisite for being admitted to the exam.

PRACTICAL LESSON TASK OF COMPUTER GRAPHICS

EVALUATION METHOD Written pass/fail task assesses learning outcomes 1, 2, 3, 6, 9.	EVALUATION CRITERIA FOR THE PRACTICAL LESSON TASKS Grade M — the practical lesson task is not solved correctly and/or their amount is insufficient and format not properly; grade A — the practical lesson task is solved correctly, their amount is sufficient and format properly.
PREREQUISITES FOR BEING ADMITTED TO GRADING PRACTICAL LESSON TASKS	Are not required.
FORMULATION OF THE FINAL GRADE	Grade “A“ for practical lesson tasks is a prerequisite for being admitted to the exam.

SELF-EVALUATION AND FEEDBACK

EVALUATION METHOD Written pass/fail task	EVALUATION CRITERIA FOR SELF-EVALUATION AND FEEDBACK QUESTIONNAIRE Result M — the self-evaluation and feedback questionnaire is not answered; result A — the self-evaluation and feedback questionnaire is answered.
PREREQUISITES FOR BEING ADMITTED TO THE QUESTIONNAIRE	Are not required.
FORMULATION OF THE FINAL GRADE	Result “A“ for the questionnaire is a prerequisite for being admitted to the exam.