



Innovative Methods in Teaching of Mathematics at the University

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Abstract

The article arose in the frame of Project “Implementation of the internal quality assurance system in education.” For assuring the quality of mathematics education we prepared a database of tests from selected parts of mathematics based on requirements summary of students' knowledges and skills. Before test preparation the analysis of the content of the curriculum was needed, the identification of key competencies, setting of standards and also the analysis of students classworks to determine the inappropriate answers. From prepared database, we generated tests appropriate to verify the students' knowledge of the chosen thematic units in terms of continuous verification, proposed an effective test integration into education process and then applied them in the compulsory course of Mathematics 1.

The objective of the this course Mathematics 1 is to provide an understanding of solving algebraic equations, some basics of matrix calculation, of analytic geometry, limit calculation, understanding of differential and integral calculus. The goal of this course is to learn how to apply these knowledges in solving problems, to acquire knowledges and skills necessary for studying technical subjects.

Data were collected from students attending the first year of Bachelors degree at the Faculty of Materials Science and Technology of the Slovak University of Technology. For the analysis of the collected data, the similarity and implicative statistical methods were carried out using computer software called C.H.I.C (Cohesitive and Hierarchical Implicative Classification).