Journal of Sustainable Development, 2015, vol.8, N6, pages 104-110

Modern requirements to the content selection of teaching physics and mathematics, aimed at the development of design and technical competence of technical university students

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Abstract

© The authors. The research's relevance of the defined in the article problem is due to the fact that when the study of physical-mathematical disciplines the consolidation of the acquired knowledge occurs and the development of skills contribute to their using in manufacture problems' solving in the professional activities of the engineer. In this regard, this article is aimed at the development of modern requirements to the content selection of teaching physics and mathematics, aimed at the development of design and technical competence of technical University students. In the study of this problem the modular competency approach is set out, which allows on the base of the required competencies of future technical specialists to identify the following basic requirements for the selection of the content of teaching physics and mathematics: the disciplines' integrity and fundamentality, systematic and consistent presentation of educational material, problematic and innovativeness of their content, their interdisciplinary, professional orientation, orientation on the formation of logical thinking of students. The article can be useful in selecting and structuring the content of teaching physics and mathematics courses in high school, as well as in the future teachers' training of these disciplines.

http://dx.doi.org/10.5539/jsd.v8n6p104

Keywords

Design and technical competence, Physical-mathematical disciplines, Requirements to the content selection, Technical college students